



Infor LN Warehousing User Guide for the Outbound and Shipment Goods Flows

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About this Guide

This guide describes the setup and use of the outbound and shipment procedures.

Intended Audience

This book is intended for those who want to learn how to use outbound, inspections and shipments and to set up the delivery note functionality in the way that best serves their purposes. Both end users and users on administrator level will find the information they require.

Assumed Knowledge

Familiarity with the business processes involved in handling outbound goods in the warehouse, and general knowledge of the LN functionality will help you understand this book. In addition, Warehousing training courses are available to give you a head start.

References

Use this guide as the primary reference for the outbound and shipment goods flows. Use the current editions of these documents for information that is not covered in this guide:

- *User Guide for Warehousing Procedures*
- *User Guide for Warehousing Orders*
- *User Guide for Warehouses*
- *User Guide for Handling Units (U8938 US)*
- *User Guide for the Inbound Goods Flow (U9788 US)*
- *User Guide for Warehousing Inspections (U9875 US)*
- *User Guide for Warehousing Quarantine Handling (U9876 US)*
- *User Guide for Delivery Notes and Shipments (U8982 US)*
- *LN Warehousing User Guide for Shipping Material Accounting (Uwhsmaug)*

How to read this document

This document is assembled from online Help topics.

Text in italics followed by a page number represents a hyperlink to another section in this document.

Underlined terms indicate a link to a glossary definition. If you view this document online, clicking the underlined term takes you to the glossary definition at the end of this document.

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Chapter 1: Introduction

The outbound goods flow

The outbound process is used to issue goods from the warehouse. To issue and ship goods from a warehouse, warehouse processing is either based on handling units or outbound shipments and warehousing outbound order lines. If you use handling units to process goods, the order lines and/or shipments related to the handling units are updated in the background. Both outbound order lines and handling units are processed according to user-defined *warehousing procedures*.

For more information about:

- Warehousing procedures, see *LN Warehousing User Guide for Warehousing Procedures*
- Handling units, see *LN Warehousing User Guide for Handling Units*

Inspection and quarantine handling

In LN, you can add warehousing inspection and quarantine handling functionality to both the inbound and outbound goods flows. Although briefly referred to in this guide, for more information please refer to *LN Warehousing User Guide for Warehousing Inspections* and *User Guide for Quarantine Handling*.

Chapter 2: Setup

To define warehousing order types

Warehousing order types determine how warehousing orders are handled. Warehousing order types are classified by *inventory transaction type*. The inventory transaction type that you add to a warehousing order type determines the type of *warehousing procedure* that you can link to the warehousing order type. The activities that must be carried out in order to handle warehousing orders are, by default, determined by the warehousing procedures that are linked to the warehousing order types.

Warehousing order types are linked to warehousing orders when warehousing orders are generated from other packages or when you manually create a warehousing order in the **Warehousing Orders (whinh2100m000)** session.

Define warehousing order types

In the **Warehousing Order Types (whinh0110m000)** session, you can specify warehousing order types for the following *inventory-transaction types*:

- **Receipt**
Use a warehousing order type of inventory transaction type **Receipt** to receive goods in a warehouse. You can link a **Receipt Procedure** and, optionally, an **Inspection Procedure** to a warehousing order type of inventory transaction type **Receipt**.
- **Issue**
Use a warehousing order type of inventory transaction type **Issue** to issue goods from a warehouse. You can link a **Outbound Procedure** and a **Shipment Procedure** to a warehousing order type of inventory transaction type **Issue**. **Note:** LN allows you to modify the outbound order line data based on the value the Allow Updating Outbound Order Lines up to and including field is set to in the **Warehousing Order Types (whinh0110m000)** session.
- **Transfer**
Use a warehousing order type of inventory transaction type **Transfer** to transfer goods between warehouses, locations, business partners, projects, or work centers.
You must link these procedures to a warehousing order type of inventory transaction type **Transfer**:
 - **Receipt Procedure**
 - **Inspection Procedure**
 - **Outbound Procedure**
 - **Shipment Procedure**A transfer involves either one or two warehouses. If items are transferred between two different warehouses, all activities of the warehousing procedures must be carried out. However, if a transfer takes place between two locations within the same warehouse, the receipt activities are not carried out. You

can use transfer orders to define a replenishment system within a single warehouse. This system controls replenishment from bulk locations to pick locations. **Note:** LN allows you to modify the outbound order line data based on the value the Allow Updating Outbound Order Lines up to and including field is set to in the **Warehousing Order Types (whinh0110m000)** session.

- Inspections in LN Quality are possible for warehouse orders having order origin **Transfer (Manual)** only if the QM Implemented parameter is selected for the order type **Warehouse Transfer** in the **Quality Management Parameters (qmptc0100m000)** session.
- **WIP Transfer**
Use a warehousing order type of inventory transaction type **WIP Transfer** to transfer work from one costing work center to another.

Warehousing procedures

To model the inbound, storage, and outbound goods flows in your warehouse, you can define warehousing procedures in LN.

These warehousing procedure types are available:

- **Receipt Procedure**
This procedure controls the receipts of goods
- **Inspection Procedure**
The inspection procedure controls the inspection of goods received at the warehouse.
- **Outbound Procedure**
The outbound procedure controls the issue of goods. This procedure can include outbound inspections.
- **Shipment Procedure**
The shipment procedure controls staging and shipping of goods.

A *warehousing procedure* includes various steps called *activities* that control the way warehousing orders and/or handling units are processed. An activity is performed using a particular LN session.

Link warehousing procedures to inbound and outbound goods

Initially, you define a warehousing procedure and link this procedure to a particular *warehousing order type*. As a result, the warehousing procedure is the default procedure for the warehousing orders to which the order type is allocated, and the goods are processed according to the procedure of the order on which the goods are listed.

If you use handling units to process goods into and/or out of the warehouse, the goods are processed according to the warehousing procedure of the warehousing orders that list the goods contained in the handling units.

You can adjust the default procedure for individual warehousing orders and warehousing order lines of this warehousing order type. If you adjust the default procedure for an individual warehousing order of this order type, the adjusted procedure applies to the inbound and/or outbound order lines of the warehousing order. You can also adjust the warehousing procedure for an individual inbound or outbound order line.

Automatic or manual execution of activities

You can specify whether an *activity* of a warehousing procedure must be carried out manually or automatically. Manually means that the user must perform the activity using the session related to the activity. Automatic means that the activity is carried out automatically after the preceding activity is finished. If the first activity is automatic for warehousing orders generated from orders originating from other packages, this activity is carried out the moment the warehousing order is generated.

However, to trigger warehouse processing for warehousing orders whose first activity is set to automatic processing and that are manually created or generated from Project, you must click Process.

The Process command is available in the following sessions:

- **Warehousing Orders (whinh2100m000)**
- **Warehousing Order (whinh2100m100)**
- **Warehouse Manager Dashboard (whinh2300m000)**
- **Warehousing Assembly Orders (whinh2101m000)**
- **Inbound Order Lines (whinh2110m000)**
- **Outbound Order Lines (whinh2120m000)**

Planned status for warehousing orders and order lines

For each *warehousing order type*, you can determine whether the initial status of the warehousing orders and inbound and/or outbound order lines must be **Planned** or **Open**. In some cases, however, the originating order determines the initial status of a warehousing order.

Initial status of warehousing orders determined by originFor warehousing orders originating from the following packages, the originating package determines whether the initial status is **Planned** or **Open**:

- **Service**
- **Maintenance Sales**
- **Maintenance Work**
- **JSC Production**
- **Production Schedule**
- **ASC Production**
- **Production Kanban**

The **Planned** status is meant for order data entry, you cannot process planned warehousing orders. To make a planned warehousing order available for order processing, you must activate the warehousing order. An activated warehousing order obtains the **Open** status. If Warehousing is integrated with a Warehouse Management System, activated warehousing orders are automatically uploaded to the WMS system for processing.

For a newly created warehousing order line with the **Planned** status, you can:

- Define *advance shipment notices*
- Create *freight orders*
- Create *cross-dock orders*
- Generate *handling units*

- Specify Inventory commitment

In addition, for planned warehousing orders, LN:

- Generates *planned inventory transactions*
- Checks whether planned order lines are *blocked* or marked as *rush orders*.
- Creates history records

Setting parameters for the **PLanned** statusIn the **Warehousing Order Types (whinh0110m000)** session:

- To specify that new inbound order lines obtain the **PLanned** status, select the **Generate Planned Inbound Order Lines** check box.
- To specify that new outbound order lines obtain the **PLanned** status, select the **Generate Planned Outbound Order Lines** check box.

New inbound or outbound order lines are either generated from other packages or created manually.

How to activate **PLanned** warehousing ordersTo activate warehousing orders with the **PLanned** status, you can use the **Activate Warehousing Orders (whinh2203m000)** session to activate a range of warehousing orders, or you can select individual orders and click **Activate**. The **Activate** option is available in the following sessions:

- **Warehousing Orders (whinh2100m000)**
- **Warehousing Order (whinh2100m100)**
- **Warehouse Manager Dashboard (whinh2300m000)**

In the **Activate Warehousing Orders (whinh2203m000)** session, you can also deactivate manually created warehousing orders.

Note that after you have activated a planned warehousing order for which the first activity is set to Automatic, you must use the Process button to trigger automatic processing or manually perform the first activity. For more information, refer to Inbound and outbound procedures.

Chapter 3: Outbound

The outbound procedure

The outbound procedure comprises the activities that you must perform in LN to issue goods from the warehouse and prepare these goods for shipment or *transfer*. The outbound procedure can include outbound inspections, if required.

This topic describes all steps, also called *activities*, of the outbound procedure and shows how you can perform these steps.

If a step is mandatory, this is indicated in the step description. You are not required to include non-mandatory activities in your warehousing procedures. In addition, you can specify whether an activity must be performed manually or automatically. For information on how to define warehousing procedures, see *To define warehousing procedures*.

After the outbound advice is generated for the outbound order line, LN allows you to modify the outbound advice. If the **Full Packages Only** functionality is implemented and the modified advised quantity is not in multiples of full packages, LN displays a warning message. During the confirmation of shipments, you can modify the advised quantity to multiples of full packages.

The outbound procedure includes these steps:

1 Generate outbound advice

The **Outbound Advice** activity is a mandatory step of the outbound procedure.

The first step of the outbound procedure is to generate *outbound advice* for the goods that you want to issue from the warehouse. You can generate outbound advice as soon as outbound order lines have been created for the goods that you want to issue. If the warehouse has no locations, the outbound advice does not list locations, but only lists the quantities to be issued.

To generate outbound advice, in the **Generate Outbound Advice (whinh4201m000)** session, select the order lines that list the goods that you want to issue and click **Advise**. Alternatively, you can generate outbound advice for individual outbound order lines in the **Outbound Order Lines (whinh2120m000)** session or the **Outbound Line Status Overview (whinh2129m000)** session.

The initial status of an outbound order line is either **Planned** or **Open**, which is determined by parameter settings. If the initial status is **Planned**, the order line must be activated to obtain the **Open** status before you can generate outbound advice. For more information, refer to *Planned status for warehousing orders and order lines*. After the outbound advice is generated, the status of the outbound order lines that list the goods selected for the outbound advice changes to **Advised**. For more information, refer to *Outbound advice*.

2 Release outbound advice

The **Release Outbound Advice** activity is a mandatory step of the outbound procedure.

After the outbound advice is generated, you must release the outbound advice for these reasons:

- To enable picking lists to be generated, if picking lists are included in the warehousing procedure of the outbound order lines related to the outbound advice.
- To indicate that the goods are ready for shipment, if the warehousing procedure includes no picking lists.
- To indicate that the goods are ready for inspection, if the warehousing procedure includes inspections.

After the outbound advice is released, the related outbound order lines and handling units obtain these statuses:

- **Released**

If picking lists are included in the outbound warehousing procedure of the outbound order lines. For further information on picking lists, see the following step, Generate picking list.

- **Staged**

If picking lists are not included in the outbound warehousing procedure of the outbound order lines. This status implies that the goods have been moved to the loading area of the warehouse and are about to be shipped. For **Staged** order lines, LN creates shipment lines. You can perform the shipment procedure for these lines.

- **To be Inspected**

If outbound inspections are included in the outbound warehousing procedure of the outbound order lines and the items requires outbound inspections. For further information on outbound inspections, see step Inspect outbound goods.

To release outbound advice, in the **Release Outbound Advice (whinh4202m000)** session, select the order lines that list the goods that you want to release and click **Release Advice**. Alternatively, you can release outbound advice for individual order lines in the **Outbound Order Lines (whinh2120m000)** session or the **Outbound Line Status Overview (whinh2129m000)** session.

3 Generate picking list

A picking list is a document that shows the locations from which you must collect the goods that you want to issue. A picking list shows the preferred order in which to pick the goods from the warehouse. You can generate picking lists after the outbound advice is released. The picking list activity is not mandatory and is only available for location-controlled warehouses. After you generate a picking list for an outbound order line, the status of the order line remains **Released**.

You can generate picking lists in the **Generate Picking List (whinh4415m000)** session.

4 Adjust picking list

Optionally, you can change the picking list, if you want to pick other goods than those originally advised, or you can change the locations. Thus, you can change lot numbers, serial numbers, item quantities, or locations.

5 Confirm picking list

To confirm that the goods on the picking list are picked, in the **Picking List (whinh4525m100)** session, select the **Pick Run** option, the **Pick Mission** option, or the **Pick Advice** option from the *appropriate* menu. The status of the related outbound order lines changes to **Staged**. This status implies that the goods have been moved to the loading area of the warehouse and are about to be shipped. For **Staged** order lines, LN creates shipment lines. You can perform the shipment procedure for these lines. If outbound inspections are included in the warehousing procedure, however, the status changes to **To be Inspected**.

6 Inspect outbound goods

Unlike inbound inspections, the outbound inspection is not a warehousing procedure in its own right, but an activity that you can add to the outbound procedure. You can add the outbound inspection step to a warehousing procedure if the setup for the warehouse, supplier, or item requires item inspection.

If the inspection activity is included in the warehousing procedure, LN creates an inspection record in the **Warehouse Inspections Overview (whinh3122m000)** session after the outbound advice is released or the picking list is confirmed as described in the previous steps, and the status of the related outbound order lines changes to **To be Inspected**.

You can then approve, reject, or scrap and process the items in the Warehouse Inspections Overview (whinh3122m000) session or the Warehouse Inspection (whinh3622m000) session.

Outbound order lines related to approved and processed items obtain the **Staged** status. This status implies that the goods have been moved to the loading area of the warehouse and are about to be shipped. For **Staged** order lines, ERP LN creates shipment lines. You can perform the shipment procedure for these lines. Rejected and processed item quantities are removed from inventory or sent to the quarantine warehouse or quarantine location without using the outbound procedure. The rejected quantities are updated on the outbound order lines.

Outbound order lines

Outbound order lines deal with activities that relate to the issue of goods from a warehouse and the preparation of these goods for shipment.

Outbound-order line characteristics

You can link an outbound order line to a warehousing order with one of the following *inventory-transaction types*:

- **Issue**
- **Transfer**
- **WIP Transfer**

An outbound order line is generated either automatically by another package or module, or created manually in Warehousing. The order type determines the default warehousing procedure steps that must or can be taken to process the order lines. You can adjust the default warehousing procedure for an individual order header. As a result, the adjusted procedure applies to the order lines that belong to the order header. In addition, you can adjust the procedure for an individual order line.

To modify the outbound warehousing order data

To change data for the sales order or sales schedule fields at a later stage during the outbound process.

LN allows you to modify the outbound warehousing order data related to warehousing orders with origin:

- **Sales**

- **Sales Schedule**
- Manual origins

You can use the Allow Updating Outbound Order Lines up to and including field in the **Warehousing Order Types (whinh0110m000)** session to determine up to which outbound procedure step you can change the outbound order data.

Modify manual warehousing order

You can change the data of manually created warehousing orders. If manual warehouse order header data is changed, the change is applicable for all the order lines that belong to the header.

Modify sales order

You can change the sales order data of a warehouse order header or line. The changes are applicable to the corresponding warehousing order.

Modify outbound order data

You can change this outbound order data:

- The *item*
- The *item* quantity
- The planned dates

Changing the item

LN allows you to change the item on an order line only until the picking list is generated. The existing outbound advice is removed. After the picking list is generated, you cannot change the item. The generation of picking list implies the physical movement of the inventory.

Changing the quantity

LN allows you to increase or decrease the quantity of the item on the outbound order when the outbound advice is created and when the picking list is created.

Example

The ordered quantity is 3 boxes which each holds 100 pieces. There are two advices. The first with 1 box and the second with 2 boxes. You have to change the order quantity from 3 boxes into 225 pieces. The advised quantity is 300 pieces, so this has to be decreased with 75 pieces. LN considers the advice with the highest sequence. This is the advice with 2 boxes (200 pieces). LN removes the existing outbound advice.

Changing the planned dates

You can change the planned dates and the receipt date of the warehousing order header.

For *transfer orders*, you can change the planned receipt date until the moment a *receipt* line is created for an inbound order line of the transfer order. The changed planned receipt date is also displayed on the inbound and outbound order lines of the transfer order, with the exception of shipped outbound order lines.

Outbound advice

Outbound advice comprise instructions to move items to be issued out of the warehouse. Therefore, an individual line of an outbound advice might read as follows: Take 10 of item A from location Pick3 and put them in location Staging 5.

Generate outbound advice

Outbound movement of goods is initiated and controlled by a warehousing order of one of the following *inventory-transaction types*:

- **Issue**
- **Transfer**
- **WIP Transfer**

Outbound movement of goods can also be triggered by a *warehousing assembly order*.

These warehousing orders can be generated automatically by other packages or modules in LN, or manually created in Warehousing.

A warehousing order has one or more *outbound order lines*. You can generate *outbound advice* for an outbound order line in the **Generate Outbound Advice (whinh4201m000)** session. This advice shows where the goods must be taken from and where they must go. You can group several outbound advice lines to be run at the same time. You can view the outbound advice in the **Outbound Advice (whinh4525m000)** session.

Release outbound advice

You can release outbound advice in the **Release Outbound Advice (whinh4202m000)** session. After the advice is released, you can put the advice on a *picking list* by generating the picking list for a run. On the picking list, the outbound advice lines are grouped by run and picking mission. You can confirm an individual advice line, picking mission, or an entire run.

Approve/reject picked inventory

After you (partially) confirm the picking list, you can approve or reject the picked inventory. For the approved advice lines, LN creates shipment lines, which you can confirm.

To generate picking lists

To generate a picking list from the **Handling Units (whwmd5130m000)** session, proceed as follows:

- 1 On the *appropriate* menu, select the **Execute Inbound** sub-menu.
- 2 From the **Execute Inbound** sub-menu, click **Generate Picking List**. As a result, the **Generate Picking List (whinh4415m000)** session opens.
- 3 In the **Generate Picking List (whinh4415m000)** session, select the required options and settings and click **Generate**. As a result, the picking list is generated. The status of the handling unit remains **ReLeased**.

Run numbers

A run number is a code that is assigned to a selection range. Run numbers can be used to reuse selection ranges.

A run number is inbound or outbound.

Inbound run numbers are used in these processes:

Process	Session
Generate inbound advice	Generate Inbound Advice (whinh3201m000)
Put away inbound advice	Put Away Inbound Advice (whinh3203m000)
Generate storage list	Generate Storage List (whinh3415m000)
Put away storage list	Storage List (whinh3525m100)

Outbound run numbers are used in these processes:

Process	Session
Generate outbound advice	Generate Outbound Advice (whinh4201m000) Process Outbound Advice (whinh4200m000)
Release outbound advice	Release Outbound Advice (whinh4202m000) Process Outbound Advice (whinh4200m000)
Generate picking list	Generate Picking List (whinh4415m000)
Pick picking list	Picking List (whinh4525m100)

For picking lists and storage lists, run numbers are manually specified.

For inbound and outbound advice, run numbers are generated or manually specified.

If you manually specify a run number and define a selection range, the run number is assigned to the selection range after saving the selection range or launching the process.

A run number is generated when you specify a selection range and launch the process. The generated run number is automatically assigned to the selection range. To generate run numbers for outbound advice, additional steps are required, see the next section.

Generate run number for outbound advice

If you do not specify a run number, you are asked if a run number must be created if required.

If you click Yes, a run number is generated if no default run number is present for any of the orders within the selection range.

If a default *kanban* run number is present in the **Default Order Types by Origin (whinh0120m000)** session or, failing that, in the **Warehouses (whwmd2500m000)** session for any of the selected orders, this run number is used. The run number is used for both the kanban orders and the non-kanban orders within the selection range.

If you click No, and no default run number is found for any of the selected orders, no outbound advice is generated. If a default run number is found, this run number is used to generate outbound advice for both the kanban orders and the non-kanban orders within the selection range.

Reuse

A selection range is reused if the corresponding run number is specified.

For example, if you specify a selection range in the **Generate Outbound Advice (whinh4201m000)** session and generate outbound advice, a run number is generated and assigned to the selection range.

When you subsequently specify the run number in the **Release Outbound Advice (whinh4202m000)** session, the selection range values of the run number are filled.

Message: “Reuse the run? YES, NO, ALWAYS ALLOW REUSE”

If you are generating inbound or outbound advice and you specify a run number corresponding to outbound or inbound advice that is not fully processed, a message to that effect is displayed. You are asked whether to reuse the run, not reuse the run, or always reuse the run.

The selection range fields are filled with the values of the selection range corresponding to the run number if you select Reuse or Always allow reuse. If required, you can change the selection. The changes are saved for the run number, provided that the **Overwrite Selection Range** check box is selected.

Change selection range

If you specify a run number and change the selection range, the changes are saved for the run number. Subsequently, the changed selection will be used. For inbound and outbound advice, the **Overwrite Selection Range** check box must be selected for the changed selection to be used.

Note:

When you specify a run number in the **Release Outbound Advice (whinh4202m000)** session, the selection range fields are filled with the selection criteria corresponding to the run number.

If the selection criteria of the same run number are changed in the **Generate Outbound Advice (whinh4201m000)** session while working in the **Release Outbound Advice (whinh4202m000)** session, the changes are not updated to the **Release Outbound Advice (whinh4202m000)** session until you close and reopen the **Release Outbound Advice (whinh4202m000)** session.

Get run defaults

The **Get Run Defaults** option in the **Release Outbound Advice (whinh4202m000)**, **Process Outbound Advice (whinh4200m000)**, or **Generate Outbound Advice (whinh4201m000)** session is used to restore the original settings of the selection range of the run number.

For example, a selection range and a corresponding run number are created in the **Generate Outbound Advice (whinh4201m000)** session. Next, this run number is specified in the **Release Outbound Advice (whinh4202m000)** session and, consequently, the corresponding selection range settings are filled.

Next, the user changes the selection range. But then the user changes his mind, and to restore the original selection range settings, he selects the **Get Run Defaults** option.

How changes in component lines affect outbound order lines and shipment lines

If outbound advice does not yet exist, LN automatically updates warehousing outbound order lines with changes in sales order lines or component lines. These changes include:

- Item quantity changes
- BOM structure changes:
 - New sales order line and component line if new subkit is added to BOM, which results in new warehousing order sets and outbound order lines
 - New component lines if components are added to subkits of BOM, which results in new outbound order lines
- Cancellation of component or sales order lines, which results in the automatic removal of the corresponding outbound order lines

If outbound advice or picking lists exist, a component line can be:

- Changed or deleted after manually removing the relevant outbound advice or picking lists.
- Cancelled, LN then automatically removes the outbound advice or picking lists.

If shipment lines exist, to cancel, delete, or change a component line, for the shipment lines:

- 1** Set the shipped quantity to 0.
- 2** Confirm.
- 3** Use the Inventory Movement (whinr1250m000) session or the Inventory Movement (Range) (whinr1252m000) session to transfer the unshipped goods from the staging location back to the storage location.

Chapter 4: Update or Cancel Outbound Order Lines

Update, cancel or remove outbound order lines

When the originating order or order line of an outbound order line is canceled or changed, this affects the outbound order line and may affect the related outbound advice, shipments, or shipment lines.

For most order origins, warehousing order-type parameters determine whether these actions are allowed:

- Update the outbound order line if the originating order is changed.
- Cancel the originating order line and the outbound order line.
- Delete the canceled outbound order line.

If updating is allowed, changes made to the originating order are updated to the outbound order line, and the related outbound advice, and, if present, picking lists, are deleted.

If updating is not allowed, a message to that effect is displayed, and the input is blocked when you try to change the originating order line.

If canceling is allowed, the outbound order line is deleted or set to **Canceled** when the originating order line is canceled.

When a canceled outbound order line is deleted, if present, the related outbound advice and picking list are also deleted. Outbound order lines originating from manual order origins cannot be deleted when canceled.

To process an outbound order line that is not deleted but set to **Canceled**, the outbound order line must be set to **Shipped**. The status of the outbound order line determines whether all steps of the outbound and shipment procedures must be completed to process the outbound order line.

When a canceled outbound order line is set to **Shipped**, the shipped quantity is automatically set to 0. You can create a transfer order to return the not-shipped goods to inventory.

If canceling is not allowed, you cannot cancel the originating order line or the outbound order line. A message to that effect is displayed when you try to cancel the originating order line.

To prevent the goods from being shipped when canceling is not allowed, you must complete the outbound and shipment procedures. When confirming the shipment line, you must set the shipped quantities to 0 and create a transfer order to return the not-shipped goods to inventory.

Manufacturing

You cannot cancel outbound order lines originating from Job Shop Control orders, but the setting of the Correct Outbound Quantity for JSC/RPT up to and including parameter determines whether changes made

to the quantities of material requirements for Job Shop Control production orders are added to the canceled quantities or the ordered quantities of the related outbound order lines.

Order origins and options for canceling or updating outbound order lines

On the **Outbound Process** tab of the **Warehousing Order Types (whinh0110m000)** session, these options are available to determine the stage at which outbound order lines can be updated, canceled, or deleted:

- **Allow Updating Outbound Order Lines up to and including**
- **Allow Canceling Outbound Order Lines up to and including**
- **Remove Canceled Outbound Order Lines up to and including**

The impact of these options is not the same for each order origin.

Service

Updating outbound order lines is not allowed after outbound advice is generated for warehousing orders of these origins:

- **Service**
- **Maintenance Sales**
- **Maintenance Work**

Canceling outbound order lines or removing canceled outbound order lines is controlled by these options if the originating Service object is a:

- Work order material line that is canceled
- Supplier claim delivery line that is terminated
- Customer claim delivery line that is terminated

Order Management

For Order Management, these options only apply to the **Sales** and **Sales Schedule** origins.

Note:

For various order origins, the input fields of the originating order that affect the outbound order lines are still available after the status has been reached at which updates are no longer allowed according to the **Allow Updating Outbound Order Lines up to and including** option.

If in such cases data is specified in these fields, a message is displayed to the effect that the input is not allowed according to the setting of this option, and the input is blocked.

Manufacturing

The options in the **Warehousing Order Types (whinh0110m000)** session do not apply to warehousing orders that originate from Manufacturing.

For warehousing orders of origin Job Shop Control, updating the planned dates and quantities of outbound order lines is controlled by the Correct Outbound Quantity for JSC/RPT up to and including and Correct Outbound Dates for JSC/RPT up to and including parameters in the **Inventory Handling Parameters (whinh0100m000)** session.

To update outbound order lines

Outbound order lines can be updated with changes made to the originating order lines.

If updating outbound order lines is allowed and outbound advice is generated, LN deletes the outbound advice if any of these fields are updated in the related outbound order lines:

- **Warehouse**
- **Item**
- **Serial Number**
- **Serial Status**
- **Lot**
- **Lot**
- **Effectivity Unit**
- **E-item Revision**
- **Unit Binding**
- **Hard Stop on Quantity**
- **Inventory Handling**
- **Package Definition**
- **Payment**
- **Internal Payment**
- **Ownership**
- **Issue Strategy**
- **Issue from Business Partner**
- **From Project**
- **From Element**
- **From Activity**
- **From Extension**
- **From Cost Component**
- The contents of the **Specification** fields.

If outbound advice is released and picking lists are generated, LN deletes the outbound advice and the picking lists if any of the fields of the previous list are updated.

If **Generate Picking List** is specified in the Allow Updating Outbound Order Lines up to and including option but picking lists are not used in the warehousing procedure, shipments and shipment lines have been generated already, therefore updating the outbound order lines is not allowed. However, you can set the quantities of these shipment lines to **Not Shipped**.

Projected shipments

If projected shipments are present and any of these fields of the outbound order line are changed, new projected shipments are generated:

- **Warehouse**
- **Item**
- **Inventory Handling**
- **Package Definition**
- **Set**
- **Reference**
- **Ordered Quantity**
- **Order Unit**
- **Ship-to Address**
- **Extra Intrastat Info**
- **Shipment Reference**
- **Customer Order**
- **Acceptance Point**
- **Intermediate Consignee**
- **Delivery Point**

Update outbound order line not allowed

If updating the outbound order lines is not allowed, a message is displayed on the originating order line to the effect that the input is not allowed, and the input is blocked.

To cancel outbound order lines

Orders can be canceled for various reasons. For example, you can cancel sales orders if contracts are broken, or credit limits are exceeded.

If canceling is allowed, the outbound order line is deleted or set to **Canceled** when the originating order line is canceled.

When a canceled outbound order line is not deleted but set to **Canceled**, the **Canceled** check box is selected in the **Outbound Order Lines (whinh2120m000)** session.

Canceled outbound order lines with statuses up to **Advised** are automatically deleted by default. You can change the default setting so that order lines with statuses up to **Released** are deleted.

For most order origins, cancellation of outbound order lines is controlled by the **Allow Canceling Outbound Order Lines up to and including** parameter in the **Warehousing Order Types (whinh0110m000)** session. In this field, you must specify up to which step in the outbound procedure it is allowed to cancel the originating order line and the related outbound order line.

For example, if **Generate Outbound Advice** is selected in the **Allow Canceling Outbound Order Lines up to and including** field, canceling is allowed for outbound order lines with status **Open** or **Advised**.

Delete canceled outbound order line

The **Remove Canceled Outbound Order Lines up to and including** parameter in the **Warehousing Order Types (whinh0110m000)** session determines up to which stage of the outbound procedure canceled outbound order lines are deleted. These options are available:

- **Generate Outbound Advice**
LN deletes canceled outbound-order lines with status **Open** or **Advised**. Canceled outbound order lines with other outbound order line statuses are set to **Canceled**.
- **Release Outbound Advice**
LN deletes canceled outbound-order lines with the **Open**, **Advised**, or **Released** statuses. Canceled outbound order lines with other outbound order line statuses are set to **Canceled**.

Delete related outbound advice, picking lists, and shipment lines

If canceled outbound order lines are deleted and outbound advice is present, LN deletes the outbound advice.

If outbound advice is released and picking lists are generated, LN deletes the outbound advice and the picking list when the canceled outbound order lines are deleted. If picking lists are not used in the applicable warehousing procedure, shipments and shipment lines are generated when the outbound advice is released. The quantities of these shipment lines are set to 0 (zero) when the canceled order lines are deleted.

Manual order origins

The **Remove Canceled Outbound Order Lines up to and including** setting does not apply to outbound order lines based on manual order origins. Therefore, the outbound and shipment procedures must be completed as described in the next section.

To cancel an outbound order line that originates from a manual order origin, select the **Cancel** option on the *appropriate menu* of the **Outbound Order Lines (whinh2120m000)** session.

Cancel outbound order lines

If the outbound order cannot be deleted according to the setting of the **Remove Canceled Outbound Order Lines up to and including** parameter, the outbound order line is set to **Canceled**. When an outbound order line is set to **Canceled**, the **Canceled** check box is selected in the **Outbound Order Lines (whinh2120m000)** session and the **Outbound Line Status Overview (whinh2129m000)** session.

To process a canceled outbound order line, the outbound order line must be set to **Shipped**.

When a canceled outbound order line is set to **Shipped**, the shipped quantity is automatically set to 0 and the order line quantity is set to **Not Shipped Quantity in Inventory Unit**. You can create a transfer order to return the not-shipped goods to inventory.

The status of the outbound order line at the moment the outbound order line is canceled determines whether all steps of the outbound and shipment procedures must be carried out to set the outbound order line to **Shipped**.

Advised

If the outbound order line has the Advised status when it is canceled, you are asked if the outbound advice must be deleted.

If yes, the outbound advice is deleted, and the outbound order line is set to **Shipped** and the shipped quantity is set to 0.

If no, you must continue the outbound procedure or select the **Undo Advice/Release** option in the **Outbound Order Lines (whinh2120m000)** session as described in the next section.

Released

If the outbound order line has the Released status when it is canceled, you can select the **Undo Advice/Release** option in the **Outbound Order Lines (whinh2120m000)** session to remove the picking list and automatically set the outbound order line to **Shipped** with shipped quantity 0.

Picking list

If a picking list is generated for a canceled outbound order line, a message to the effect that the order line is canceled and the goods will not be shipped is printed on the picking list.

In the **Outbound Order Lines (whinh2120m000)** session, you can select the **Undo Advice/Release** option to remove the picking list and automatically set the outbound order line to **Shipped** with shipped quantity 0.

Inspection

If you approve an inspection for a canceled outbound order line, you must confirm the related shipment line. This will set the status to **Confirmed**, and the order line quantity to not-shipped. If you reject the inspected order line, an adjustment order is generated, and the outbound order line is set to **Shipped**. The quantity of the order line is set to rejected.

Canceling not allowed

If you try to cancel an originating order line when canceling is not allowed according to the **Allow Canceling Outbound Order Lines up to and including** parameter in the **Warehousing Order Types (whinh0110m000)** session, a message to that effect is displayed.

For outbound order lines that originate from manual order origins, the **Cancel** option on the *appropriate menu* of the **Outbound Order Lines (whinh2120m000)** session is unavailable.

To prevent the goods from being shipped when the outbound order line cannot be canceled, you must complete the outbound and shipment procedures in LN. When confirming the shipment line, you must set the shipped quantities to 0 and create a transfer order to return the not-shipped goods to inventory.

Update and cancel outbound order lines of JSC origin

Job Shop Control can correct and cancel the quantities on outbound order lines related to warehouse production orders. Warehouse production orders are used to handle the supply of material requirements for production orders.

The **Correct Outbound Quantity for JSC/RPT up to and including** parameter in the **Inventory Handling Parameters (whinh0100m000)** session determines the stage in the outbound process up to which you can decrease quantities of outbound order lines that originate from production warehouse orders.

If decreasing the quantities is allowed, the decreased quantity specified in the **To Cancel** field of the **Production Warehouse Orders (timfc0101m000)** session is updated to the ordered quantity of the outbound order line.

If decreasing the quantities is not allowed according to this parameter setting, the decreased quantity is updated to the canceled quantity of the outbound order line.

The canceled quantities are displayed in the **Canceled** field of the **Outbound Order Lines (whinh2120m000)** session and the **Outbound Line Status Overview (whinh2129m000)** session. When the outbound order line is shipped, the canceled quantity is automatically set to **Not Shipped Quantity in Inventory Unit**.

Note: Canceling a quantity for a production warehouse order does not set the related outbound order line to **Canceled**, even if the entire order line quantity is canceled. This means that the **Canceled** check box is not selected for the order line, but the canceled quantities are displayed in the **Canceled Quantity** fields of the **Outbound Order Lines (whinh2120m000)** session and the **Outbound Line Status Overview (whinh2129m000)** session.

Example

In the **Correct Outbound Quantity for JSC/RPT up to and including** parameter in the **Inventory Handling Parameters (whinh0100m000)**, the **Generate Outbound Advice** option is selected.

When 10 items X are canceled for the originating production warehouse order of outbound order line JSC001/10, whose status is **open**, the ordered quantity of outbound order line JSC001/10 is decreased accordingly.

When 10 items X are canceled for the originating production warehouse order of outbound order line JSC021/10, whose status is **Released**, the canceled quantity of outbound order line JSC021/10 is increased by 10.

Chapter 5: Inventory Commitments

Inventory commitment

Inventory commitment allows you to reserve inventory for specific orders. Committed inventory is not available for other orders. You can also cancel inventory commitments, if required.

In addition to the inventory commitment method, you can also use the allocation and hard pegging functionality to allocate inventory to orders, provided that this functionality is in use in your organization. For more information, refer to Demand pegging overview.

Inventory commitment generation or creation

In general, you can generate or create inventory commitments for orders of the origins that result in a warehouse order of inventory transaction type **Issue**. However, some exceptions exist:

- **Orders with specifications**
You cannot generate or create inventory commitments for orders with *specifications*. Specifications are available if the allocation and hard pegging functionality is used. For more information, refer to Demand pegging overview.
- **Sales Order**
Whether and how commitments for sales orders are generated or created depends on the value of the Commitment Policy field in the **Items - Sales (tdisa0501m000)** session.
- **Production Order**
You can only generate or create an inventory commitment for a production order with status **Created**, **Printed**, **Released**, or **Active**.
- **Maintenance Work Order**
Whether and when inventory must be committed for maintenance work orders depends on the value of the Commitment Required field in the **Work Order Parameters (tswcs0100m000)** session.

You can:

- Manually create inventory commitments in the **Inventory Commitments (whinp2100m000)** session.
- Generate inventory commitments with the **Generate Inventory Commitments (whinp2200m000)** session.

Commitment for sales orders

For manually created or generated inventory commitments for sales orders, LN takes into account the **Minimum Quantity to Commit** and **Minimum Rate for Commitment** as specified in the **Items - Sales (tdisa0501m000)** session. Based on the values of these fields, LN determines the quantity to commit.

You cannot update inventory commitment for sales orders if:

- The sold-to business partner is blocked.
- The ship-to business partner is blocked.
- The sales order is blocked and the **Allow Inventory Commitment** check box in the **Sales Order Parameters (tdsls0100s400)** session is cleared.

Creating buffers

In LN you can reserve inventory, that is not (yet) specifically assigned to an order, by creating an *inventory buffer* or an *allocation buffer*. Allocation buffers are available if the allocation and hard pegging functionality is used. For more information, refer to Demand pegging overview.

In the **Inventory Commitments (whinp2100m000)** session, to create an inventory buffer or an allocation buffer, create a new inventory commitment with order origin **Inventory Buffer Or Allocation Buffer**, respectively.

You can directly commit inventory that is reserved by an inventory buffer to an order line in the **Consumption of the Inventory Buffers (whinp2202m000)** session. For further information on allocation buffers, see Allocation buffers.

Updates after changing the inventory commitment orders

If you change an inventory commitment, the **Committed** field in the **Warehouse - Item Inventory (whwmd2115s000)** session is updated with the changes in the committed quantity.

In the **Company - Item Inventory (whwmd4100m100)** session, the **Committed** field is updated with the changes in the committed quantity.

If the order origin is **Sales Order** the **Committed Quantity** field in the **Sales Order Lines (tdsls4101m000)** session is updated with the committed quantity

Issue of committed inventory

If you generate or create an outbound advice for an outbound order line with committed inventory, LN increases the **Inventory Committed in Process** in the following sessions with the part of the committed quantity that is advised:

- **Inventory Commitments (whinp2100m000)**
- **Warehouse - Item Inventory (whwmd2115s000)**
- **Inventory by Warehouse, Item and Effectivity Unit (whwmd2116s000)**

If you issue committed inventory and finish the outbound procedure or the shipment procedure, LN decreases the **Committed** and **Inventory Committed in Process** with the issued committed inventory. When LN decreases the **Committed** and **Inventory Committed in Process** depends on the warehousing order type:

- If a shipment procedure is linked to the warehousing order type, LN decreases the **Committed** and **Inventory Committed in Process** when the shipment line is confirmed.
- If no shipment procedure is linked to the warehousing order type, and the last specified activity in the warehousing order type's outbound advice procedure is the **Picking List (whinh4525m100)** session, LN decreases the **Committed** and **Inventory Committed in Process** if you indicate that picking can take place for a picking list.

- If no shipment procedure is linked to the warehousing order type, and the last specified activity in the warehousing order type's outbound advice procedure is the **Warehouse Inspections Overview (whinh3122m000)** session, LN decreases the **Committed** and **Inventory Committed in Process** if during outbound inspection you approve the inspected items.

Outbound advice for committed inventory

By default, outbound advice is based on the ordered quantity of the outbound order lines. Outbound advice can also be based on the committed inventory that is present for the outbound order lines.

For this purpose, you must select the **Committed Inventory only** check box in the **Generate Outbound Advice (whinh4201m000)** session or the **Process Outbound Advice (whinh4200m000)** session.

Inventory commitments do not apply to all order origins. See Inventory commitment.

If the **Committed Inventory only** check box is selected, generating outbound advice for committed inventory is subject to these rules:

- Outbound advice is based on the ordered quantity if inventory commitments do not apply to the selected order lines.
- If inventory commitments apply to the order lines, but no committed inventory is present, no outbound advice is generated.
- If inventory commitments apply, and the available committed inventory is less than the ordered quantity, outbound advice is based on the committed quantity.

Note: You cannot generate outbound advice based on committed inventory in the **Outbound Order Lines (whinh2120m000)** session, because the **Committed Inventory only** check box is unavailable in this session.

Automatically generate outbound advice based on committed inventory

Specify these settings to automatically generate outbound advice based on committed inventory:

- In the **Activities by Procedure (whinh0106m000)** session, select the **Automatic** check box for the **Generate Outbound Advice (whinh4201m000)** activity.
- In the **Generate Outbound Advice (whinh4201m000)** session, select the **Committed Inventory only** only check box and click Save Defaults.
- In the **Warehousing User Profiles (whwmd1140s000)** session, select the **Apply User Defaults of Sessions during Automatic Processing** check box.

Calculation of the quantity to be advised

The table shows how the quantity to be advised is calculated, based on the ordered or the committed quantity:

Add or subtract	Quantity type
	Ordered or committed
-	Cancelled

Add or subtract	Quantity type
-	Advised previously
-	Cross-docked
+	Rejected
+	Expected not shipped
+	Not shipped

Example

The table shows how the advised quantity is calculated, based on an ordered quantity of 100:

Add or subtract	Quantity	Quantity type
	100	Ordered
-	8	Cancelled
-	7	Advised previously
-	6	Cross-docked
+	5	Rejected
+	4	Expected not shipped
+	3	Not shipped
	91	Advised

If the ordered quantity is 100, but the committed quantity is 90 and inventory commitments are applicable for the order line, the advised quantity is calculated as displayed in the this table:

Add or subtract	Quantity	Quantity type
	100	Ordered
	90	Committed
-	8	Cancelled
-	7	Advised previously
-	6	Cross-docked
+	5	Rejected
+	4	Expected not shipped
+	3	Not shipped
	91	Advised

Chapter 6: Customer Owned Lot or Serialized Inventory

Outbound advice for customer owned low volume lot-controlled or serialized inventory

To create outbound advice for project pegged customer owned inventory that is *low volume* serialized or *low volume* lot controlled, the lot or serial numbers of the inventory must match those of the outbound order lines. If the order that initiated the outbound advice is related to the receipt order of the inventory, LN also uses this order number.

Related receipt orders

The application uses the lot or serial numbers and the order number of the related receipt order to create outbound advice. The related receipt order initiated the receipt of the inventory to be issued and is linked to the order for which the outbound advice is created.

These types of orders are related to a receipt order:

- **Maintenance Sales Order to Maintenance Work Order**
- **Maintenance Work Order to Maintenance Sales Order**
- **Customer Claim to Supplier Claim**
- **Supplier Claim to Customer Claim**

It is allowed to issue lot or serialized inventory for different projects. Therefore, the project of the available inventory for the lot or serial and the related order is not required to match the project of the outbound advice.

No related receipt orders

To create outbound advice for orders not related to receipt orders, the application ignores inventory received through orders related to other issuing orders.

Examples of orders with or without related receipt orders

Examples of related receipt orders

- **Maintenance Work Order with related Maintenance Sales Order**

Lot A containing cell phones is received for **Maintenance Sales Order A**. **Maintenance Work Order B**, with instructions to check and replace the batteries, is created from **Maintenance Sales Order A**. Therefore, **Maintenance Sales Order A** is the related receipt order of **Maintenance Work Order B**.

When the repairs for **Maintenance Work Order B** are due, the cell phones must be issued to the repair shop. For this purpose, the application creates outbound advice for lot A that was received with **Maintenance Sales Order A**.

Items belonging to lot A received with orders other than **Maintenance Sales Order A** are ignored for the outbound advice.

- **Maintenance Sales Order** with related **Maintenance Work Order**

Lot A consisting of the repaired cell phones is received again in the warehouse for **Maintenance Work Order B**. Outbound advice is created for **Maintenance Sales Order A** to issue lot A in order to return the cell phones to the customer.

- **Supplier Claim** with related **Customer Claim**

Based on **Customer Claim C**, a damaged compressor pump is received in the warehouse of wholesaler D. Wholesaler D creates **Supplier Claim E** to send the damaged pump to their supplier.

- **Customer Claim** with related **Supplier Claim**

A new compressor pump is received in wholesaler D's warehouse based on **Supplier Claim E**. Wholesaler D completes **Customer Claim C** by shipping the new compressor pump to the customer.

Example of an order without a related receipt order

To fulfill a customer demand for cell phone batteries, outbound advice is created for sales order X, which is not related to a receipt order. For sales order X, the application must ignore the inventory received with **Maintenance Sales Order A** in the previous example.

Sessions displaying customer owned order related inventory

To create outbound advice for project pegged customer owned inventory that is *low volume* serialized or *low volume* lot controlled, the lot or serial numbers of the inventory must match those of the outbound order lines. If the order that initiated the outbound advice is related to the receipt order of the inventory, LN also uses this order number.

Order related customer owned inventory is displayed in these sessions:

- **Customer Owned Receipts (whwmd2550m100)**

Displays all customer owned inventory, but lot or serial numbers are not displayed if the inventory is project pegged and low volume lot-controlled or serialized. This is because the application also uses the information from this session to determine the financial value of project pegged inventory.

Storing the low volume lot and serial numbers of project pegged inventory in this session would hamper the proper creation of financial integration transactions, because the value of project pegged inventory is based on the project, and not on the low volume lot or serial number.

Therefore, in these cases the low volume lot and serial numbers are displayed in the **Order related Customer Owned Inventory by Warehouse and Lot (whltc1509m000)** session. You can access the **Order related Customer Owned Inventory by Warehouse and Lot (whltc1509m000)** session from the **Customer Owned Receipts (whwmd2550m100)** session.

- **Order related Customer Owned Inventory by Warehouse and Lot (whltc1509m000)**

Displays customer owned lot-controlled inventory that is received with Service related orders such as **Maintenance Sales Order** and **Maintenance Work Order**.

- **Warehouse - Item - Lots Inventory (whltc1505m000)**

Displays high and low volume lot inventory by warehouse. From this session, you can access the **Order related Customer Owned Inventory by Warehouse and Lot (whltc1509m000)** session.

- **Item - Serials and Warehouses (whltc5100m000)**

Displays low volume serialized inventory and the orders that initiated the receipt of the inventory. The application uses the serial numbers and the related receipt orders from this session when creating outbound advice for outbound orders with related receipt orders.

Chapter 7: Intermediate Consignee

Intermediate consignees

Various customers require their suppliers to ship their goods to an *intermediate consignee*, where the goods are repacked or redistributed before being sent on to the final destination at the customer's. All logistics, and, if applicable, tax and customs handling are taken care of by the customer.

Process flow

If intermediate consignees are applicable, the intermediate consignee code is transmitted from the customer (the OEM) to the supplier using *EDI* and the Schedule *BOD*.

When the Schedule BOD information is transferred to LN, the intermediate consignee code is added to the *sales release* line details and then transferred to the *sales schedule* lines in Sales Control. From there, this code is transferred to the *outbound-order lines* and the *loads* in Warehousing.

Because the intermediate consignee code from the customer's EDI message does not include an address, the intermediate consignee address from the Intermediate Consignees (tccom1161m000) session is added to the sales release line detail when the intermediate consignee code from the BOD is added to the sales release line detail.

If the information from the supplier includes a ship-from warehouse, LN looks for a matching ship-from warehouse in the **Intermediate Consignees (tccom1161m000)** session. If found, the intermediate consignee that is linked to the ship-from warehouse in the **Intermediate Consignees (tccom1161m000)** session is used. See Ship-from warehouse determines intermediate consignee.

Next, when the intermediate consignee information is transferred to the sales schedule line, LN checks whether the intermediate consignee code is specified for the sold-to or ship-to business partner.

If not specified, that is, the customer sent an intermediate consignee code that is unknown to the supplier, the sales release cannot be processed. The user must manually specify a matching intermediate consignee code to continue processing.

Setup

Intermediate consignees are defined in the **Intermediate Consignees (tccom1161m000)** session. For each intermediate consignee, you must specify the address and the ship-to business partner, sold-to business partner, or both, who require their suppliers to use the intermediate consignee.

If a customer has various locations, for example, production plants, and goods destined for these locations must pass through the same intermediate consignee, this setup is required:

- 1 Define the customer as a *sold-to business partner*.
- 2 Define the locations as *ship-to business partners*.
- 3 Define the intermediate consignee.
- 4 Define the intermediate consignee's address.
- 5 Link the sold-to business partner of the customer to the intermediate consignee.

Consequently, all ship-to business partners of the sold-to business partners can use the specified intermediate consignee.

If not all ship-to business partners of the sold-to business partner use the same intermediate consignee, you must specify the relevant intermediate consignee for each ship-to business partner.

Note: If intermediate consignee codes are not provided by the customer through EDI, you can manually specify intermediate consignees in the relevant sessions in Sales Control and Warehousing.

In these sessions, you can specify an intermediate consignee by zooming to the **Intermediate Consignees (tccom1161m000)** session:

- **Sales Release Line Details (tdsls3515m000)**
- **Sales Release Lines - Sequence Shipping Schedule (tdsls3116m000)**
- **Sales Release Line Details - Pick-up Sheet (tdsls3116m100)**
- **Sales Release Lines - Sequence Shipping Schedule (tdsls3116m200)**
- **Sales Contract Lines (tdsls3501m000)**
- **Sales Contract Lines (tdsls3501m100)**
- **Sales Schedule Lines (tdsls3107m000)**
- **Pick-up Sheet (tdsls3107m200)**
- **Sales Schedule Lines (tdsls3107m300)**
- **Pick-up Sheet (tdsls3107m400)**
- **Sales Schedule Planned Delivery Lines (tdsls3520m000)**
- **Sales Schedule Planned Delivery Line Links (tdsls3521m000)**
- **Sales Schedule Planned Delivery Line Links (tdsls3521m100)**
- **Outbound Order Lines (whinh2120m000)**
- **Loads (whinh4140m000)**
- **Load (whinh4640m000)**

Warehousing

The intermediate consignee is used in load building to consolidate the goods that must be shipped to the same intermediate consignee.

Freight

In Freight, intermediate consignees are not supported. The *pooling* points provided by the Freight *load building* functionality are not used as intermediate consignees.

Note: For a Warehousing load that includes a shipment line based on a *freight order*, an intermediate consignee cannot be specified.

Ship-from warehouse determines intermediate consignee

Sometimes, the warehouse from which an item is issued determines the *intermediate consignee* location to which the item must shipped.

Example

Usually item A is shipped from supplier S to intermediate consignee X. If item A is issued from supplier S's warehouse W2, item A must be sent to intermediate consignee X1.

Setup

To set this up, in the Intermediate Consignees (tccom1161m000) session, specify an intermediate consignee, ship-to, and sold-to business partner to model the regular flow. Next, specify an intermediate consignee, ship-to, sold-to business partner, and a ship-from warehouse to define the intermediate consignee to whom the item must be shipped if the item is issued from the specified ship-from warehouse.

Process flow

If the ship-from warehouse is included in the *BOD* sent from the supplier, LN checks whether a matching ship-from warehouse is present for the sold-to or ship-to business partner in the **Intermediate Consignees (tccom1161m000)** session.

If yes, the intermediate consignee related to the ship-from warehouse in this session is passed on to these objects:

- The *sales schedule* lines in Order Management.
- The *outbound-order lines* and the *loads* in Warehousing.

LN checks the **Intermediate Consignees (tccom1161m000)** session for a matching ship-from warehouse as follows:

- 1 Check if the ship-from warehouse is present for the ship-to business partner.
- 2 If yes, pass on the intermediate consignee that is linked to the ship-from warehouse to the sales schedule line, the *outbound-order lines*, and the *loads*.
- 3 If no, check if an intermediate consignee is present for the ship-to business partner.
- 4 If yes, pass on the intermediate consignee to the sales schedule line, the *outbound-order lines*, and the *loads*.
- 5 If no, check if the ship-from warehouse is present for the sold-to business partner.
- 6 If yes, pass on the intermediate consignee that is linked to the ship-from warehouse to the sales schedule line, the *outbound-order lines*, and the *loads*.
- 7 If no, check if an intermediate consignee is present for the sold-to business partner.
- 8 If yes, pass on the intermediate consignee to the sales schedule line, the *outbound-order lines*, and the *loads*.

Chapter 8: Project Cost Peg Distribution

Peg distribution in the outbound process

During the outbound process, issuing project pegged goods from a warehouse results in inventory transactions that are based on the peg distribution.

During the outbound advice and during inspections, the outbound order line cost peg distribution is updated with the advised quantities, approved quantities and the rejected quantities. When the goods arrive at the staging location and are shipped, the actual pegs are created. During the confirmation process, the shipment line peg distribution is created.

Generating outbound advice

While generating an outbound advice for a pegged outbound order line, additional inventory checks are performed to determine the pegged inventory that must be advised. LN first searches for the available stock points. If the stock point is identified, the outbound order line cost peg distribution is advised based on the available quantity at the stock point and the available quantity in the project pegged inventory. The peg distribution is based on the earliest required date.

When determining the quantity that must be advised for each separate peg line, this calculation is performed before searching for the project pegged inventory:

$$\text{Quantity to be advised} = \text{Required Quantity} - \text{Advised Quantity} - \text{Rejected Quantity} - \text{Shipped Quantity} - \text{Not Shipped Quantity} - \text{Expected Not Shipped Quantity}$$

$$\text{Quantity to be advised} = \text{Minimum (To be distributed (Stock point Quantity), To be Advised)}$$

This table explains the quantity that must be advised:

Required Quantity	Advised Quantity	Shipped Quantity	Not Shipped Quantity	To be Advised Quantity
10	10	10	0	0 (10 - (10 - 0))
20	10	10	0	10 (20 - (10 - 0))
20	20	10	10	10 (20 - (20 - 10))
20	20	10	0	0 (20 - (20 - 0))
20	20	15	5	5 (20 - (20 - 5))
20	20	0	20	20 (20 - (20 - 20))

After the to be advised quantity is retrieved, the project pegged inventory search engine is activated.

These scenarios exist:

- No shortages, full advise
- Shortage on project pegged inventory
- Shortage on stock point inventory
 - Part that can be advised has no shortage in project pegged inventory
 - Part that can be advised has a shortage in project pegged inventory

No shortages, full advise

Initial position of the inventory:

Warehouse - Item Inventory (whwmd215)

Ware-house	Item	Inventory on hand	Location Allocated Quantity	Available Quantity
WH01	item001	100	0	100

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Extension	Cost Component	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1			40	0	40
WH01	item001	proj2	elem2	acti2			40	0	40
WH01	item001	proj2	elem3	acti2			20	0	20

Outbound Order Line (whinh220)

Order Origin	Order	line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Open

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	line	Sequence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Required Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	0	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	20	0	11/1/2011
Sales	SLS000001	10	1	30	proj2	elem3	acti2	10	0	10/29/2011

In the example, you can see that the outbound order line can be advised because the inventory levels are sufficient.

This example displays results after an outbound advice is created:

Warehouse - Item Inventory (whwmd215)

Ware-house	Item	Inventory on hand	Location Allocated Quantity	Available Quantity
WH01	item001	100	40	60

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Extension	Cost Component	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1			40	10	30
WH01	item001	proj2	elem2	acti2			40	20	20
WH01	item001	proj2	elem3	acti2			20	10	10

Outbound Order Line (whinh220)

Order Origin	Order	line	Sequence	Item	Ware-house	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Advised

Outbound Advice (whinh225)

Order Origin	Order	line	Sequence	Item	Ware-house	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	40

Outbound Order Line Cost Peg Distribution (whinh290)

Order Origin	Order	line	Sequence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Required Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	10	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	20	20	11/1/2011
Sales	SLS000001	10	1	30	proj2	elem3	acti2	10	10	10/29/2011

Note: Only one outbound advice is created. The outbound order line cost peg distribution is updated with the advised quantity for each peg.

Shortage on project pegged inventory

The cost peg transfer functionality enables you to track the shortages in project pegged inventory. For more information, refer to Cost peg transfers in Warehousing.

Initial position of the inventory:

Warehouse - Item Inventory (whwmd215)

Ware-house	Item	Inventory on hand	Location Allocated Quantity	Available Quantity
WH01	item001	100	60	40

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Extension	Cost Component	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1			20	0	20
WH01	item001	proj2	elem2	acti2			10	0	10
WH01	item001	proj2	elem3	acti2			70	60	10

Outbound Order Line (whinh220)

Order Origin	Order	line	Sequence	Item	Ware-house	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Open

Outbound Order Line Cost Peg Distribution (whinh290)

Order Origin	Order	line	Sequence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Required Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	0	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	20	0	11/1/2011
Sales	SLS000001	10	1	30	proj2	elem3	acti2	10	0	10/29/2011

In the example, peg line 20 has a higher priority, because the required date is earlier.

The resulting inventory after the outbound advice is created (without the use of transfer logic) is listed in these tables:

Warehouse - Item Inventory (whwmd215)

Ware-house	Item	Inventory on hand	Location Allocated Quantity	Available quantity
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Warehouse - Item Inventory (whwmd215)

WH01	item001	100	90	10
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Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Extension	Cost Component	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1			20	10	10
WH01	item001	proj2	elem2	acti2			10	10	0
WH01	item001	proj2	elem3	acti2			70	70	0

Outbound Order Line (whinh220)

Order Origin	Order	line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Partially Advised

Outbound Order Line Cost Peg Distribution (whinh290)

Order Origin	Order	line	Sequence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Required Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	10	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	20	10	11/1/2011
Sales	SLS000001	10	1	30	proj2	elem3	acti2	10	10	10/29/2011

Outbound Advice (whinh225)

Order Origin	Order	line	Sequence	Item	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	30

Shortage on stock point inventory

The possible scenarios for stock point inventory shortage:

The part that can be advised has no shortage in the project pegged inventory

In this example, there is not enough inventory available. However, the part of the inventory that can be advised must also be handled.

Initial position of the inventory:

Warehouse - Item Inventory (whwmd215)

Ware-house	Item	Inventory on hand	Location Allocated Quantity	Available quantity
WH01	item001	50	20	30

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Extension	Cost Component	Inventory on Hand	Location Allocated Quantity	Available quantity
WH01	item001	proj1	elem1	acti1			10	0	10
WH01	item001	proj2	elem2	acti2			30	20	10
WH01	item001	proj2	elem3	acti2			10	0	10

Outbound Order Line (whinh220)

Order Origin	Order	line	Sequence	Item	Ware-house	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Open

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	line	Sequence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Required Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	0	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	20	0	11/1/2011
Sales	SLS000001	10	1	30	proj2	elem3	acti2	10	0	10/29/2011

A shortage of 10 pieces is present on the inventory level. The advice can be created only for the available pegged inventory. LN generates a message for shortage and an outbound advice of the available inventory is created. Following is the resulting inventory after the outbound advice is generated:

Warehouse - Item Inventory (whwmd215)

Ware-house	Item	Inventory on hand	Location Allocated Quantity	Available quantity
WH01	item001	50	50	0

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Extension	Cost Component	Inventory on Hand	Location Allocated Quantity	Available quantity
WH01	item001	proj1	elem1	acti1			10	10	0
WH01	item001	proj2	elem2	acti2			30	30	0
WH01	item001	proj2	elem3	acti2			10	10	0

Outbound Order Line (whinh220)

Order Origin	Order	line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Partially Advised

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	line	Sequence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Required Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	10	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	20	10	11/1/2011
Sales	SLS000001	10	1	30	proj2	elem3	acti2	10	10	10/29/2011

Outbound Advice (whinh225)

Order Origin	Order	line	Sequence	Item	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	30

The part that can be advised has a shortage in the project pegged inventory

There is a shortage in the project pegged inventory.

Initial position of the inventory:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location Allocated Quantity	Available quantity
WH01	item001	50	20	30

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Extension	Cost Component	Inventory on Hand	Location Allocated Quantity	Available quantity
WH01	item001	proj1	elem1	acti1			10	0	10
WH01	item001	proj2	elem2	acti2			5	0	0
WH01	item001	proj2	elem3	acti2			35	20	15

Outbound Order Line (whinh220)

Order Origin	Order	line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Open

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	line	Sequence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Required Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	0	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	20	0	11/1/2011
Sales	SLS000001	10	1	30	proj2	elem3	acti2	10	0	10/29/2011

There is a shortage of 10 pieces on the inventory level. In the part that can be advised, a shortage of 5 pieces is also identified on the project pegged inventory. In this situation, LN determines that 30 pieces can be advised. However, an additional shortage of 5 pieces is identified. Hence, only 25 pieces are available to be advised. The resulting inventory is explained in these examples:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location Allocated Quantity	Available quantity
WH01	item001	50	45	5

Project Pegged Inventory (whwmd260)

Warehouse	Item	Project	Element	Activity	Extension	Cost Component	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1			10	10	0
WH01	item001	proj2	elem2	acti2			5	5	0
WH01	item001	proj2	elem3	acti2			35	30	5

Outbound Order Line (whinh220)

Order Origin	Order	line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Partially Advised

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	line	Sequence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Required Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	10	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	20	5	11/1/2011
Sales	SLS000001	10	1	30	proj2	elem3	acti2	10	10	10/29/2011

Outbound Advice (whinh225)

Order Origin	Order	line	Sequence	Item	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	25

Create outbound advice despite inventory shortage

LN does not allow you to generate an outbound advice with an advised quantity higher than the total advised quantities of the related outbound order line cost peg distribution.

Outbound advice ownership

LN automatically generates the outbound advice ownership when the outbound advice is created if the outbound line is project pegged. LN does not allow you to change the ownership distribution for the project pegged order lines. The ownership distribution is based on the issue ownership set on the outbound order line.

LN does not allow you to generate ownership distribution or insert, modify, delete records for pegged outbound order lines in the **Outbound Advice Ownership (whinh4128m000)** session.

Inventory search engine

Inventory selection during the process of generating an outbound advice must be changed to support the project pegged inventory. When demand for a pegged item is advised, the process takes care of these peg distribution lines. So, the inventory search engine logic is extended to support the project pegged inventory.

The initial point of these steps is that the inventory on item warehouse level is found. The search sequence for inventory:

- Search for available inventory with the required peg.

- Search for available cost peg transfer orders (cost peg transfer orders created by Enterprise Planning or manually entered).
- Search for available excess.
- Search for available to transfer (non-excess inventory).
- Unpegged inventory.
- Alternative Items.

Manual outbound advice

For a manually created outbound advice, when there is insufficient inventory to allocate for the manually entered advised quantity, LN displays an error message. The cost peg transfer logic is also executed.

Manual changes on outbound advice

When you modify the outbound advice quantity, LN updates the advised quantity on the underlying peg distribution.

In case of a decrease in the quantity, a peg redistribution is initiated. The decrease in advised quantity must be based on the latest required date. For example:

Warehouse - Item Inventory (whwmd215)

Ware-house	Item	Inventory on hand	Location Allocated Quantity	Available quantity
WH01	item001	50	50	0

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Extension	Cost Component	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1	100	100	20	20	0
WH01	item001	proj2	elem2	acti2	100	100	30	30	0

Outbound Order Line (whinh220)

Order Origin	Order	line	Sequence	Item	Ware-house	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	50	Advised

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	line	Sequence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Required Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	20	20	10/30/2011

Outbound Order Line cost peg Distribution (whinh290)

Sales	SLS000001	10	1	20	proj2	elem2	acti2	30	30	11/1/2011
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Outbound Advice (whinh225)

Order Origin	Order	line	Sequence	Item	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	50

When you change the advised quantity to 45, the following is the result:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location	Allocated Quantity	Available quantity
WH01	item001	50		45	5

Outbound Advice (whinh225)

Order Origin	Order	line	Sequence	Item	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	60

Undo outbound advice

When an advice is removed, the advised quantity on the deleted outbound advice line must be removed from the outbound order line cost peg distribution.

Process pick

When the user processes the picking list, LN also processes the pending cost peg transfers for the outbound advice that is picked.

Outbound advice for returns

Advising is done based on the latest required date; the pegs with the latest required date are advised first.

Creation of shipment line cost peg distribution

When the shipment lines are confirmed, the shipment line cost peg distribution is created for shipment lines related to an outbound order line that is pegged. The shipped quantities are distributed over the pegs for the shipment lines. The distribution is explained in these examples:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location	Allocated Quantity	Available quantity
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Warehouse - Item Inventory (whwmd215)

WH01	item001	50	50	0
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Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Extension	Cost Component	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1			20	20	0
WH01	item001	proj2	elem2	acti2			10	10	0
WH01	item001	proj2	elem3	acti2			20	20	0

Outbound Order Line (whinh220)

Order Origin	Order	line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	50	Open

Outbound Advice (whinh225)

Order Origin	Order	line	Sequence	Item	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	50

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	line	Sequence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Required Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	20	20	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	10	10	11/1/2011
Sales	SLS000001	10	1	30	proj2	elem3	acti2	20	20	10/29/2011

For this situation the following shipment lines are created:

Shipment Lines (whinh431)

Shipment	Shipment Line	Order Origin	Order	line	Sequence	Item	Shipped Quantity
SHIP00001	10	Sales	SLS000001	10	1	item001	30
SHIP00002	10	Sales	SLS000001	10	1	item001	20

Shipment Lines (whinh428)

Shipment	Shipment Line	Peg Line	Project	Element	Activity	Required Date	Shipped Quantity
SHIP00001	10	10	proj1	elem1	acti1	10/30/2011	10
SHIP00001	10	30	proj2	elem2	acti1	10/29/2011	20

When the shipment is confirmed, the shipped quantity is updated on the outbound order line cost peg distribution

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	line	Sequence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Required Date	Shipped Quantity
Sales	SLS000001	10	1	10	proj1	elem1	acti1	20	20	10/30/2011	10
Sales	SLS000001	10	1	20	proj2	elem2	acti2	10	10	11/1/2011	0
Sales	SLS000001	10	1	30	proj2	elem3	acti2	20	20	10/29/2011	20

Underdeliveries and overdeliveries

For underdeliveries, the quantity not delivered must be distributed on the peg distribution, beginning with the peg line with the latest required date. For overdeliveries, the quantity overdelivered must be distributed equally over the available peg lines for the outbound order line.

Not shipped quantities

The peg line distribution data is transferred to the transfer order / adjustment order only if a not-shipped quantity exists on peg distribution. During the confirmation process the not-shipped quantity is updated on the outbound order line cost peg distribution and the shipment line cost peg distribution.

Shipments for returns

When the items are not shipped to the destination, but are shipped back to the origin, a reverse required date priority is applied when generating the shipment line cost peg distribution during the confirmation of the return shipment line. As item inventory is decreased, LN changes the pegged inventory with the latest required dates.

Cost peg transfers

Cost peg transfers enable transfer of costs between two different pegs (pegged to unpegged and vice versa). The cost peg transfers do not physically move the inventory but only transfer the costs of the inventory. Cost peg transfers are performed within the same warehouse. It is not possible to transfer the goods across warehouses. For more information, refer to Cost peg transfers in Warehousing

Transfer (manual) orders / Transfer orders

LN allows you to use an inbound and outbound cost peg distribution to specify transfer manual orders to transfer actual goods between warehouses. LN generates the outbound order line cost peg distribution based on the project pegged inventory. The cost peg distribution can also be created manually and transferred to the inbound line cost peg distribution.

Change warehouse order at a later stage

LN allows you to modify the outbound warehousing order data related to the sales order/schedule. The data can be modified for warehousing orders of all origins. You can also define up to which outbound procedure step the data can be modified. For more information, refer to *To modify the outbound warehousing order data*.

Additional costs on shipment header/line

When the cost item that is mandatory pegged is added as additional cost to the shipment, the cost item is not displayed because LN cannot decipher which pegs must be added to the additional cost line.

When the cost item that is mandatory pegged is added as additional costs on the shipment line, or when the parent shipment line has a peg distribution, LN copies the peg distribution data to the additional cost line. The cost peg distribution of this additional cost line is transferred to the sales cost order. For more information, refer to *Additional costs - shipment based*

Chapter 9: Shipment and Load Building

The shipment procedure

The shipment procedure comprises the activities that you must perform in LN to ship goods that were issued from the warehouse through the outbound procedure.

The shipment procedure includes these steps, also called *activities*:

- 1 Freeze**
- 2** Print shipping documents. These types of shipping documents are available:
 - Print Bills of Lading (whinh4470m000)
 - Print Packing Slips (whinh4475m000)
 - Print Packing Lists (whinh4476m000)
 - Print Delivery Notes (whinh4477m000)
 - Print Shipping Manifest (whinh4478m000)
- 3 Confirm** (mandatory)
- 4** Process Pro Forma Invoices (whinh4279m000)

You are not required to include non-mandatory activities in your warehousing procedures. In addition, you can specify whether an activity must be performed manually or automatically. For information on how to define warehousing procedures, see *To define warehousing procedures*.

Note:

Freeze is not a mandatory activity. If you exclude the **Freeze** activity from the shipment procedure, the shipping documents are printed when the **Confirm** activity is performed.

If **Freeze** is applicable and/or automatic, the **Confirm** activity cannot be set to automatic performance.

Freeze and confirm combined or separate activities

Freezing and confirming shipments and loads is a combined activity performed in the **Freeze/Confirm Shipments/Loads (whinh4275m000)** session for shipment procedures created before LN version 2021.04. If required, you can convert the combined freeze/confirm activity to separate freeze and confirm activities. See *Freeze and confirm combined or separate activities*.

Before freezing or confirming: adjust loads, shipments, and shipment lines

Initially, loads and shipments have the **Open** or **Projected** status.

Before you freeze or confirm the shipments and print the shipment documents, you can, if required, change the item quantities of the shipments and adjust the shipment and load structure.

You can specify quantities that cannot be shipped and create a transfer order to return the not-shipped goods to the storage location or create an automatic adjustment to remove the items from the inventory. For more information, refer to Not-shipped quantities.

While the shipment and loads are still being adjusted, the **Open** status is not changed.

Step 1. Freeze shipments

Perform the Freeze Shipments activity in the **Freeze/Confirm Shipments/Loads (whinh4275m000)** session. You can freeze shipment lines, shipments, and loads.

Freeze shipments, shipment lines or loads

Freezing shipments, shipment lines, and loads means that major changes are not allowed because they are ready for shipping, but you can print the shipping documents, if printing shipping documents is included in the shipment procedure. For more information, refer to Shipment and load status.

Freezing is optional, you can skip this step if freezing is not part of your business practice. To make freezing a mandatory step in your shipment procedure, set the **Freeze** activity to **Applicable** in the **Activities by Procedure (whinh0106m000)** session. For individual order types, select the Freeze Mandatory check box in the **Warehousing Order Types (whinh0110m000)** session.

Freezing shipments or loads is done by batch in the **Freeze/Confirm Shipments/Loads (whinh4275m000)** session. Alternatively, use the options displayed in this table:

To freeze...	Use the Freeze command in...
Shipment lines	The Shipment Lines (whinh4131m000) session
Shipments	The Shipments (whinh4130m000) session
Loads	The Loads (whinh4140m000) session

To freeze a range of shipment lines, shipments, or loads, use the **Freeze/Confirm Shipments/Loads (whinh4275m000)** session.

Reopen

If changes are required for any frozen shipment lines, shipments, or loads, you must reopen these shipment lines, shipments, or loads to be able to make these changes. You can only reopen shipment lines that have the **Frozen** status. To reopen shipment lines, use the **Re-open** command on the *appropriate menu* of the **Shipment Lines (whinh4131m000)** session.

When you reopen a shipment line, the related shipment and load are also reopened. The shipment documents must be printed again, after the final changes to the shipments have been made. The status of the handling units of the shipment and shipment line are changed from **Shipment Frozen** to **Shipment Open**. If you again freeze a shipment line or shipment and a handling unit already exists for the shipment or shipment line, the handling unit is regenerated automatically.

Shipment acceptance

To perform source acceptance, you must submit a shipment for acceptance and specify the accepted or not-shipped quantities when the shipment's status is **Open**. To complete the Source acceptance - procedure, you must freeze the shipment.

If a shipment is submitted for acceptance, the shipment's status is **Open**, but:

- You cannot modify the shipment except for the source acceptance fields.
- No new lines can be added to the shipment.

Step 2. Print shipping documents

If shipping documents are used in the outbound flow of your warehouse, the shipping documents are printed after the shipment lines, shipments, and loads have reached the **Frozen** status or the **Confirmed** status.

The settings of the shipment procedures specified in the Activities by Procedure (whinh0106m000) session determine whether the documents are printed automatically or manually.

Note:

If *BOD* publishing is implemented and LN is integrated with EXM, the shipping documents are printed when the shipments are confirmed.

For individual order types, you can specify that the shipping documents must be printed manually when the shipments are frozen. This facilitates additional checking and adjustment of the shipments prior to confirmation. See Printing shipment documents by external application.

Step 3. Confirm shipments, shipment lines or loads

The **Confirm Shipments/Loads** activity is mandatory in the shipment procedure. This activity entails processing the *shipments*, *shipment lines*, and *loads* generated during the outbound procedure. This activity is performed in the **Freeze/Confirm Shipments/Loads (whinh4275m000)** session. When the goods are loaded and are leaving the warehouse, you must confirm the shipment and loads. As a result, the status of the shipments and loads changes to **Confirmed**.

Step 4. Process pro forma invoices

Print the *pro forma invoices* of the goods listed on the shipments in the Process Pro Forma Invoices (whinh4279m000) session..

Freeze and confirm combined or separate activities

Freezing and confirming shipments and loads is a combined activity performed in the **Freeze/Confirm Shipments/Loads (whinh4275m000)** session for shipment procedures created before LN version 2021.04. For these shipment procedures, you can split the combined activity into separate freeze and confirm activities.

Combined Freeze/Confirm Shipments/Loads activity

If freezing and confirming is a combined activity, shipments are automatically confirmed, without freezing, if you set this activity to automatic.

If not set to automatic performance, the **Freeze/Confirm Shipments/Loads (whinh4275m000)** session is started. In this session, you can confirm, or first freeze and then confirm shipments and loads.

If the shipment documents must be printed automatically, printing is started as soon as the status of the shipment or load changes from **Open** to **Frozen** or **Confirmed**, if the **Freeze/Confirm Shipments/Loads (whinh4275m000)** activity is set to automatic performance.

Split Freeze/Confirm Shipments/Loads into Freeze and Confirm activities

If required, you can convert the combined **Freeze/Confirm Shipments/Loads (whinh4275m000)** activity to these freeze and confirm activities:

- **Freeze**
- **Confirm**

Both activities are performed using the **Freeze/Confirm Shipments/Loads (whinh4275m000)** session.

To convert the freeze/confirm activity, select **Split Freeze/Confirm Shipments/Loads Activity** on the appropriate menu of these sessions:

- **Warehousing Order Types (whinh0110m000)**
- **Shipment Activities by Procedure (whinh0106m400)**
- **Warehousing Order Type (whinh0610m000)**

In this session, the conversion option is available in the header section and in the lines section of the Shipment Activities tab.

Note: The **Split Freeze/Confirm Shipments/Loads Activity** option is initially hidden. To make this option available, in the **Warehousing Order Type (whinh0610m000)** session, select Personalize Toolbar and from the Toolbar Preview, select **Split Freeze/Confirm Shipments/Loads Activity** below the Actions node and in the Properties pane, clear the **Hidden** check box. After restarting the **Warehousing Order Type (whinh0610m000)** session, the **Split Freeze/Confirm Shipments/Loads Activity** option is available.

Shipments and loads

A *load* consists of one or more *shipments*, and a shipment has one or more *shipment lines*.

Loads, shipments, and shipment lines are generated by Warehousing or by Freight. During the outbound procedure, Warehousing generates loads and shipments for outbound order lines with status **Staged**, unless an actual Freight *load plan* is present. For more information, refer to Freight loads and shipments, Warehousing loads and shipments, and The outbound procedure.

You can also manually create loads and shipments, which is usually done to adjust or replace generated loads and shipments.

Optionally, you can manually insert *shipping containers*, which provide a detailed insight into the packing structure of the shipments. If shipping containers are used, a load contains one or more shipping containers,

a shipping container contains one or more *shipments*, and a shipment has one or more *shipment lines*. For further information on shipping containers, see Shipping structures.

Freight loads and shipments

Freight can generate loads and shipments for warehousing order lines and originating order lines. To generate loads and shipments, Freight must generate freight orders for the warehousing orders or originating order lines first. The loads and shipments that Freight generates from the freight orders are contained in a load plan. After the load plan is made **Actual**, Freight passes on these loads and shipments to Warehousing, where they are displayed in the Planned Loads/Shipments (whinh4180m000) session.

If Warehousing has generated loads and shipments for a particular warehousing order before Freight's load plan based on the freight orders of the warehousing order is made **Actual**, the loads and shipments generated by Warehousing prevail. Warehousing's loads and shipments will populate the **Planned Loads/Shipments (whinh4180m000)** session, and will replace the load and shipments of the (not yet Actual) load plan. However, if the **Override Load Plan** check box is selected in the **Outbound Order Lines (whinh2120m000)** session, the load plan is overruled, even if it is actual.

Settings for generating freight orders for warehousing order lines

Freight can generate freight orders for warehousing order lines if:

- In the **Warehousing Order Types (whinh0110m000)** session, the **Generate Freight Order Automatically** check box is selected for the warehousing order type of the order line.
- For outbound order lines, the **Generate Freight Order from Warehousing** check box is selected in the **Outbound Order Lines (whinh2120m000)** session.
- For inbound order lines, the **Generate Freight Order from Warehousing** check box is selected in the **Inbound Order Lines (whinh2110m000)** session.

The values of the **Generate Freight Order from Warehousing** check box in the **Outbound Order Lines (whinh2120m000)** session and the **Generate Freight Order from Warehousing** check box in the **Inbound Order Lines (whinh2110m000)** session are defaulted from the **Generate Freight Order Automatically** check box in the **Warehousing Order Types (whinh0110m000)** session.

Note:

- Freight orders can be generated from various originating orders, such as:
 - Sales orders
 - Purchase orders
 - Enterprise Planning orders
- To ignore the shipment lines of a Freight load plan for an individual outbound order line, you can select the **Override Load Plan** check box in the **Outbound Order Lines (whinh2120m000)** session.

Warehousing loads and shipments

In Warehousing, loads, shipments, and shipment lines are generated for outbound order lines that have the **Staged** status.

To generate loads, shipments, and shipment lines, Warehousing completes these steps:

- 1 Generate shipment line.
- 2 Check if a shipment is present to which the shipment line can be linked.
- 3 If yes, link shipment line to shipment. For more information, refer to Linking a shipment line to a shipment in Warehousing
If no, generate shipment.
- 4 Check if a load is present to which the shipment can be linked.
- 5 If yes, link shipment to load. For more information, refer to Linking a shipment to a load in Warehousing.
If no, generate load and link shipment.

Note:

- If an actual Freight *load plan* is present, Warehousing generates loads and shipments based on the Freight loads and shipments. For more information, refer to Freight loads and shipments.
- For production orders, the setting of the Create Shipment field in the **Default Order Types by Origin (whinh0120m000)** session determines whether shipment lines are generated.
- If the **Consolidate Stock Points in one Shipment Line** check box in the **Inventory Handling Parameters (whinh0100m000)** session is selected, the outbound advices of the same order line with different *stock point* details are consolidated into a single shipment line even if the outbound advices contain multiple:
 - Lots (in inventory)
 - Serials (in inventory)
 - Inventory Dates
 - Effectivity Units
 - E-Item Revision (via the lot)

You can view and maintain loads, shipping containers, shipments, and shipment lines in the following sessions:

- Planned Loads/Shipments (whinh4180m000). In this session, you can create loads and shipments for both inbound and outbound order lines.
- Warehousing Order Loads and Shipments (whinh4545m000)
- Loads (whinh4140m000)
- Shipping Containers (whinh4125m000)
- Shipping Structures Graphical User Interface
This GBF is available from the *appropriate* menu of the sessions mentioned in this list.
- Move Shipment to Shipping Containers (whinh4125m100)
- Shipments (whinh4130m000)
- Shipment Lines (whinh4131m000)
- Compose Load (whinh4134m000)
- Compose Shipment (whinh4231m000)

In these sessions, you can also manually create or modify loads, shipping containers, shipments, and shipment lines. For further information, see:

- Shipping structures

- Shipment and load status
- Manually created shipments

Linking a shipment line to a shipment in Warehousing

Various criteria are used to link a shipment line to a shipment.

A shipment line is linked to a shipment for which the following data matches the warehousing order line data of the shipment line:

- Ship-from type and ship-to type
- Ship-from code and ship-to code
- Ship-from address and ship-to address
- Delivery terms
- Point of title passage
- Delivery code
- Motive of transport
- Sales office
- Shipment procedure activities
- Route
- Carrier
- Planned delivery date. The way the planned delivery date is used is controlled by the option selected in the Generate Shipments group box of the **Warehouses (whwmd2500m000)** session.

Note: If the **Single Order per Shipment** check box or the **Single Order Set per Shipment** check box is selected in the **Warehousing Order Types (whinh0110m000)** session, a shipment can only contain shipment lines that are created from order lines of the same order or order set. For more information, refer to Shipping structures.

Linking a shipment to a load in Warehousing

Various criteria are used to link a shipment to a load.

Normally, a shipment is linked to a load for which the following data matches the warehousing order line data of the shipment:

- Route
- Planned delivery date
- Carrier/LSP

If any of the following conditions apply as well, the shipments are aggregated into more than one load:

- Different ship-from addresses on the originating (sales) order lines.
- The Single Order per Load check box is selected in the **Warehousing Order Types (whinh0110m000)** session. For more information, refer to Shipping structures.

- The Single Ship-to Code per Load check box is selected in the **Warehousing Order Types (whinh0110m000)** session.
- The goods picked for a load exceed the maximum weight specified for the load in the Maximum Weight field of the **Loads (whinh4140m000)** session.

Note: If the *ship-from type* of the warehousing order is a warehouse, narrow shipment time intervals specified for the warehouse will cause fewer shipments to be aggregated into the same load than wide ranges. For more information, refer to Add Orders Based On.

Shipment and load status

Shipments, shipment lines, and loads can have the following statuses:

- **Projected**

Shipments, shipment lines, and loads are created when the outbound order lines are created.

This is the initial status if the use of projected shipments is specified. To use projected shipments and loads, these check boxes must be selected:

- Projected Shipments in use in the **Inventory Handling Parameters (whinh0100m000)** session
- Projected Shipments in use in the **Warehousing Order Types (whinh0110m000)** session

- **Open**

You can:

- Adjust the quantities on shipment lines.
- Add or remove shipment lines from shipments
- Add or remove shipments from *shipping containers* or loads
- Move shipments to other shipping containers or loads
- Add shipping containers to a load

- You cannot print shipment documents and you cannot ship the shipment.

- **Partially Frozen**

The **Partially Frozen** status is assigned if handling units are in use, and you freeze the shipment line at the handling unit level. If multiple handling units are linked to a shipment line, a few of the handling units must be set to **Frozen**. In case of **Partially Frozen** shipment lines, LN assigns the **Frozen** status to confirmed handling units and its children. After all the handling units linked to a shipment line are set to **Frozen**, the shipment line is assigned the **Frozen** status.

You cannot update the shipment line anymore unless triggered by an already linked open handling unit.

- **Frozen**

The picked goods are at the staging area of the warehouse and are ready for shipment. You can print shipment documents and confirm the shipment. You can generate handling units.

You cannot change the loads, shipping containers, shipments, and shipment lines, except for the following fields:

- **Carrier Tracking Number** (shipment)
- **Tracking Number** (shipment)
- **Inventory Adjustment Date** (shipment line)

If other changes are required, you must reopen the shipment lines first.

- **Confirmed**

The goods have been shipped and are actually leaving the warehouse. LN performs financial and inventory transactions for the shipped items. You can print shipment documents for the goods.

Note: Loads present in the Planned Loads/Shipments (whinh4180m000) session have different statuses. For more information, refer to **Planned Loads/Shipments Status** and Shipments and loads.

How the status is determined

The shipment's status is determined as follows:

- If at least one of the shipment lines has the status **Projected**, the shipment's status is **Projected**.
- If at least one of the shipment lines has the status **Open**, **Partially Frozen** or **Confirming** the shipment's status is **Open**.
- If at least one of the shipment lines has the status **Frozen** and the remaining shipment lines has status **Confirmed**, the shipment's status is **Frozen**.
- If all shipment lines have the status **Confirmed**, the shipment's status is **Confirmed**.
- If a shipment line is reopened, the shipment's status also changes to **Open**.

The load's status is by default determined as follows:

- If at least one of the shipments linked to the load has the status **Open** or **Frozen**, the load's status is **Open**. If all shipments are **Frozen**, the **Freeze Load when freezing shipment** check box in the **Inventory Handling Parameters (whinh0100m000)** session or the **Warehousing Settings by Site (whwmd2101m000)** session determines whether the load's status is manually or automatically set to **Frozen**. If this check box is selected, the load is automatically frozen. If this check box is cleared, you must manually freeze the load.
- If all shipments linked to the load have the status **Confirmed**, the load's status is **Confirmed**.
- If a shipment line of a shipment that is linked to the load is reopened, the load's status also changes to **Open**.

Shipping container status

If in the **Inventory Handling Parameters (whinh0100m000)** session the **Shipping Containers in use** check box is selected, you can use *shipping containers*.

The status of a shipping container is:

- **Open**
If the container is empty or at least one shipment in the container has status **Open**.
- **Frozen**
If all shipments of the container have status **Frozen**.
- **Confirmed**
If all shipments of the container have status **Confirmed**.

For more information, refer to Overview of kit handling in Warehouse Management .

Automatically freeze loads

You can freeze a load if all shipments are set to status Frozen. This is done manually or automatically.

To automatically freeze a load when all shipments are frozen, select the **Freeze Load when freezing shipment** check box in the **Inventory Handling Parameters (whinh0100m000)** session or the **Warehousing Settings by Site (whwmd2101m000)** session.

In this way, you avoid having to check if all shipments are frozen before you can freeze the load.

If loads are not to include more than one shipment, you can select the **Single Shipment per Load** check box in the **Loads (whinh4140m000)** session or the **Warehousing Order Types (whinh0110m000)** session.

The loads for which this check box is selected are automatically frozen when the shipment is frozen.


Manually created shipments

In addition to generating shipments for warehousing orders, LN enables you to manually create shipments and shipment lines. Manual shipments are used to ship goods without performing LN *warehousing procedures* and related financial transactions.

You can use manual shipment and shipment lines to register goods transports for items not registered in LN, and/or goods transports for which no warehouse orders exist. For example, transports of rejected goods to the junk yard.

For manually created shipments, you can print *delivery notes*.

To create and maintain manual shipments

To manually create a shipment, click  on the toolbar of the **Shipments (whinh4130m000)** session or the **Shipment (whinh4630m000)** session.

In these sessions, the following fields are mandatory:

- **Address**
- **Ship-from Type** Note that for manual shipments, only Work Center and Warehouse are available.
- **Ship-from Code**
- **Series**
- **Address**
- **Ship-to Type**
- **Ship-to Code**

Because warehouse processing is not performed for manual shipments in LN, you are not required to enter a shipment procedure in the **Warehousing Procedure** field.

Note that you can replace the default series in the **Series** field.

You can link a manual shipment to a load. If you do not link the shipment to a load, LN creates a load for the shipment when the shipment is confirmed. To link the shipment to a load, in the **Load** field, select the required load. As a result, the data from the load is copied to the shipment.

If you do not select a *delivery note* for the shipment in the **Preliminary Delivery Note** field, LN creates a delivery note for the shipment when the shipment is confirmed, provided that the use of delivery notes is enabled for the ship-from/ship-to warehouse defined for the shipment.

For a manual shipment, LN does not create an *advance shipment notice*.

To update manual shipments

You can update the following fields for manual shipments:

- **Hazardous Material**
- **Class of Risk**

The status of manual shipments are updated as a result of the freeze or confirm shipment process. For further information, see Shipment and load status.

The weight of a manual shipment is updated from the weight of the shipment lines added to the shipment.

The loading list sequence for the shipment is updated when the loading list is generated for the load to which the shipment is allocated.

To delete manual shipments


You can delete manual shipments in the **Shipments (whinh4130m000)** session or the **Shipment (whinh4630m000)** session if the shipment status is **open**. In the **Remove Confirmed Shipments/Loads (whinh4250m000)** session, you can delete manual shipments with status **Confirmed**.

To create manual shipment lines

You can create manual shipment lines for both generated shipments and manually created shipments.

On a manual shipment line, you can enter an item present in LN or an item that does not exist in the application.

For example, you can use a manual shipment line to register a delivery in addition to the ordered delivery, such as a free gift, that is not listed on the order but must be listed on the delivery note: for each computer that you deliver you give a mouse pad for free.

To manually create a shipment line, click  on the toolbar of the **Shipment Lines (whinh4131m000)** session or the **Shipment (whinh4630m000)** session.

For manual shipment lines, the same attributes are available as for generated shipment lines, except that you cannot:

- Generate lot and serial numbers
- Generate handling units
- Create packing structures

Conditions for shipment composition

Linking newly generated shipment lines to existing shipments is subject to the following conditions:

- The **Ship-from Type**, **Ship-from Code**, and **Address** must match.
- **Ship-to Type**, **Ship-to Code**, and **Address** must match.
- The statuses of the shipment lines and the parent shipments must be **Open**.
- The routes must match. If the routes do not match, a warning appears, but you can still move the shipment line to the other shipment.
- The delivery terms must match. If the delivery terms do not match, a warning appears, but you can still move the shipment line to the other shipment.
- The planned delivery date of the shipment line must be within the time frame of the shipment.
- The *activities* defined for the *shipment procedures* of the shipment line and the shipment must match.
- The *carriers* must match. If the carriers do not match, a warning appears, but you can still move the shipment line to the other shipment.

Note: These conditions also apply if you maintain handling units linked to shipments and shipment lines.

Linking existing shipment lines to other shipments is subject to the following conditions:

- The **Ship-from Type**, **Ship-from Code**, and **Address** must match.
- **Ship-to Type**, **Ship-to Code**, and **Address** must match.
- The statuses of the shipment lines and the parent shipments must be **Open**.
- The *activities* defined for the *shipment procedures* of the shipment line and the shipment must match.
- The shipment lines do not contain multishipment line bottom-level handling units. Such handling units can only be moved between shipment lines linked to the same shipment.

Chapter 10: Using Workbench Sessions

You can use the **Shipment Workbench (whinh8360m000)** and **Shipment Execution Workbench (whinh8361m000)** workbench sessions to efficiently execute the shipment procedure.

Shipment Workbench

You can use the **Shipment Workbench (whinh8360m000)** workbench session to efficiently execute the shipment process. In this session, you can view the *shipments* that are at the staging area or the loading docks of a warehouse. For each shipment, you can:

- View the details such as the shipment status, the shipping date, or the *ship-to business partner*.
- Execute the shipping processes such as Freeze, Confirm or Re-Open.
- Detect the irregularities such as delays, shortages, and partial deliveries.

Workbench Layout

The workbench consists of these tabs:

- **Total Shipments**
The total shipments based on the selected warehouse, date, and status are displayed on this tab.
- **Exceptions**
Partial and overdue shipments based on the selected warehouse, date, and status are displayed on this tab.

Note: The shipments are displayed based on the Planned Delivery Date in the Shipments (whinh4130m000) session.


You can use these filters to view the shipments:

- **Warehouses:** The shipments linked to the selected warehouse are displayed. You can select more than one warehouse.
- **Date Filter:** You can use the date filter to filter the shipments and the exceptions. You can set this field to:
 - **Today:** The shipments that are scheduled for the current day are displayed. By default, LN displays the shipments that are scheduled for the current date.
 - **This week:** The shipments that are scheduled for the current week are displayed.
 - **Two weeks:** The shipments that are scheduled for the current week and the week before are displayed.
 - **Month:** The shipments that are scheduled for the current month are displayed.

- Custom Range: The shipments that are scheduled for the selected range of dates are displayed.
- Search: You can specify a keyword based on which the search is performed.
- Status: The shipments are displayed based on the selected status. You can select more than one status.

The general options in the workbench are:

- Action Toolbar: Use the action toolbar to process the shipments. The toolbar displays the options such as Freeze, Confirm, Re-Open, or Print.


Click  to view the available options that can be used to execute various shipment related processes:

- Re-open
- Shipment Acceptance
- Submit Shipment for Acceptance
- Unsubmit for Acceptance
- Confirm ASN
- Handling Units
- Generate Handling Unit
- Remove Handling Unit
- View HU Tree
- Compose Load
- Compose Shipment
- Compose Shipment Container
- Calculate Additional Costs
- Select Carrier/ LSP

You must select a shipment to view the toolbar.

Note: When you select the Print option, LN displays the "Print the following documents" prompt, wherein you can select the documents to be printed for the selected shipment. The print report is not generated but the documents are printed. To view the documents printed for the shipment, you can click the "View Documents Printed" option in the Documents Printed column.

- User Settings: Use this option to set the default values based on which the shipments are displayed when you access the workbench next time.
- Save Defaults: Saves the values you set in the User Settings page and the settings are defaulted when you access the workbench next time.
- Clear Defaults: Clears the default values that you set in the User Settings page.
- Get Defaults: Discards the unsaved changes made to the user settings and applies the last saved settings when you access the workbench next time.
- About: Displays the version of the workbench.

Messages section: This is an expandable pane to display the error messages. By default, this pane is expanded when an error is reported in the workbench. Click  to delete the messages. To minimize the pane, click the header.

Column Personalization: Use this option to display the hidden columns for the shipments and the shipment lines.

User Settings

You can use this option to specify the default values, based on which the shipments are displayed in the workbench.


On the User Settings page, in the relevant group boxes, you specify these values:

- General
 - Warehouses: The shipments linked to the selected warehouse are displayed. You can select more than one warehouse.
 - Status: The shipments are displayed based on the selected status. You can select more than one status.
 - Confirm shipping setting dialog: If this check box is selected, LN displays the "Shipment Confirmation" prompt when you click the Confirm option for a shipment.
- Print the following documents
Select the documents that must be printed for a shipment.
- Days overdue
You can assign a color to highlight the number of days, based on a specific period (days), for which the shipments are overdue in the workbench.
For example, if you assign the color Blue to the range of 0 to 100 days, for shipments that are overdue by 0 to 100 days, the number of days in the Days Overdue column are displayed in Blue.

Workbench navigation

Click the shipment number in the workbench, to view the details of the shipment.

Shipment details page

Select a shipment to view the additional details such as the ship-to business partner, the address of the business-partner and the shipment date in the details page. The shipment lines linked to the selected shipment are displayed in a grid. Click  for a shipment line to view the details in the **Shipment Lines (whinh4131m000)** session. You can modify the shipment quantity if the shipment is not yet confirmed.

Use the action toolbar to process the shipment lines. The toolbar displays the options such as Freeze, Confirm, or Re-Open.

Click  to view the available options that can be used to execute various shipment line related processes:

- Re-open
- Handling Units
- Generate Handling Unit
- Remove Handling Unit
- Calculate Additional Costs
- Generate Lot
- Generate Serial

You must select a shipment line to view the toolbar.

Use the toolbar in the header section to perform the actions such as Freeze, Confirm and Print for the entire shipment.

Click the Item code in the grid to view the inventory levels of the item.

Inventory levels page

Select an item on the Shipment details page, to view the inventory levels. The inventory data is displayed in the bar chart and the warehouse details are displayed in a list view on the item details page.

Select a bar on the chart to view available inventory:

- On Hand
- Blocked
- On Order
- Allocated
- In Transit
- Committed
- Economic

Use these options to change the view of the data that is displayed:

- Chart
Displays only the bar chart of the inventory levels.
- List
Displays a list view of the warehouse, location, and the inventory levels of the item.
- Dual View
Displays both the bar chart and the list view. The data of the inventory levels in the list view changes based on the inventory level you select on the bar chart. For example, if you select Allocated the bar chart, the Allocated quantity is displayed in the grid. By default, the On Hand quantity is displayed in the grid.

Shipment Execution Workbench

The **Shipment Execution Workbench (whinh8361m000)** is used to view and process shipments. This workbench also provides a graphical view of the shipment status based on the time period.

Workbench Layout

The workbench consists of these sections:

- Workload
- Today in Detail
- Shipments (Gantt chart)
- Day View
- Week View

- Shipment and Load details
- Messages

Workload and Today in Detail sections

In the Workload and Today in Detail sections of the **Shipment Execution Workbench (whinh8361m000)**, the count of the shipments to be processed is displayed.

Workload section

The count of the shipments to be processed is displayed in a bar chart, based on the specified time period and the shipment status. You can place the pointer on the bar chart to view the count of the shipments with the specific status. Based on the option you select, the information is displayed for the span of either 10 days or five days.

Today in Detail section

The count of the shipments for which the planned delivery date is scheduled for the current date, is displayed in a pie chart. You can place the pointer on the pie chart to view the count of the shipments with the specific status.

Colors

Specific colors are used to represent each shipment status in the Workload section and in the Today in Detail section:

- Projected: Grey
- In Progress: Turquoise
- Confirmed: Green
- Issue: Red

Shipments (Gantt chart) section

In the Shipments (Gantt chart) section of the **Shipment Execution Workbench (whinh8361m000)**, the shipments for which the planned delivery date is scheduled for the current date are displayed.

For a shipment, you can view the Shipment code, the Ship-to code and the Current Status.

You can view the shipments either for a day or for a week

- Day View

In this view, the shipments for which the current date is the planned delivery date, are displayed. You can select a date from the Date filter to view the shipments scheduled to be processed on the selected date.

In the week view, you can use the Weeks View option to switch to the day view.

- **Week View**

In this view, the shipments for which the planned delivery date is in the current week, are displayed. You can select a date from the Date filter to view the shipments to be processed in the week starting from the selected date.

In the day view, you can use the Day View option to switch to the week view.

Note:

- By default, the Day View/Week View is used is used based on Initial View user setting.
- When you switch from the Day View to the Week View, LN displays the week of the selected day. Similarly, when you switch from the Week View to the Day View, the first day of the selected week is displayed.
- If the Default View is set to Load in the User Settings, the shipments linked to the same load are grouped by the load and can be processed at the same time.

Due Day/Due Time calculation

The Due Day/Due Time is calculated based on the current date/time and the planned delivery date/time of the shipment. The background color of the Due Date/Due Time is displayed based on the shipment status.

For example, if the planned delivery date for a shipment is the current date, the Due Day is Today. The Due Time is the difference between the current time and the planned delivery time, represented in days, hours or minutes.


You can use these options to view the shipments:

- **Search:** Use this option to search the shipments/loads based on the data you specify.
- **Date:** Use this option to view the shipments for which the selected date is the planned delivery date.
- **Filter by:** You can use this option to filter the shipments based on the Sold-to BPs and Ship-to BP of the shipments. To hide the published shipments or loads, select the Hide Published Shipments or Hide Published Loads check boxes.
- **Sort:** You can use this option to sort the shipments based on the Due Date or the Shipment number.

Messages section and general options

In the Messages section of the **Shipment Execution Workbench (whinh8361m000)**, the messages about errors that occurred during shipment processing are displayed.

Messages Section

When an error is reported in the workbench, the pane expands to display the error messages. Click  to delete the messages. To minimize the pane, click the header.

General options


The general options available in the workbench are:

- **Ship-From**

The shipments/loads are displayed based on selected Ship-From (Warehouse) from LN. If Ship-From is not selected, then all shipments are displayed.

- **Status**
The shipments are displayed for the selected Status.
- **Find Shipment**
The **Find Shipment** window is displayed wherein you can specify the text to search the shipments based on the shipment ID.
- **Refresh**
Reloads the shipment related data from LN.
- **User Settings**
Sets the default values based on which the shipments are displayed when you access the workbench, the next time. See Shipment Execution Workbench - User Settings.
- **Save Defaults**
Saves the values you set in the User Settings page and the settings are defaulted when you access the workbench, the next time.
- **Clear Defaults**
Clears the default values that you set in the User Settings page.
- **Get Defaults**
Discards the unsaved changes made to the user settings and applies the last saved settings when you access the workbench, the next time.
- **About**
Displays the version of the workbench.

Shipment and Load details

In the Gantt section of the **Shipment Execution Workbench (whinh8361m000)**, click  to view the details of the shipment or a load in the details pane.



Load details pane

The Load details pane displays:

- The details of the Load
- The Freeze and Publish options
- The shipment lines linked to the Load
- The current stage of the Load

In this pane you can:

- Click the Load# number of the shipment to view the load details of the load in the **Load (whinh4640m000)** session.
- Click the Shipment# number of the shipment to view the shipment details in the **Shipment (whinh4630m000)**.



- Click  to add additional information related to the Load. **Note** You can also use this option for a linked shipment line.
- Click  to use these options:
 - Publish Load: The selected load is published.
 - Handling Unit: The handling unit structure is displayed.
 - Print Pick and Load Sheet: The **Print Pick and Load Sheet (whinh4430m200)** session is displayed wherein you can specify the details to print the report.
 - Compose Shipping Structure: The Compose Shipping Structure can be displayed wherein you can move a Shipment Line to another Shipment and a Shipment to another Load.**Note:** You can move a shipment or a shipment line only if the shipment status is not Confirmed.

Shipment details pane

The Shipment details pane displays:

- The shipment details
- The shipment lines linked to the shipment
- The current stage of the shipment

In this pane you can:

- Click the Shipment# number of the shipment to view the shipment details in the **Shipment (whinh4630m000)**.
- Click the Load# number of the shipment to view the load details of the load in the **Load (whinh4640m000)** session.
- You can click Delete to delete the shipment. The information is updated in the bar chart, pie chart and the Gantt chart. You can delete a shipment only when the shipment status is set to Projected.
- Click  to add additional information related to the Shipment. **Note** You can also use this option for a linked shipment line.
- Click  to use these options:
 - Print Pick and Load Sheet: The Print Pick and Load Sheet (whinh4430m200) session is displayed wherein you can specify the details to print the report.
 - Calculate Additional Costs:
 - Compose Shipping Structure: The Compose Shipping Structure can be displayed wherein you can move a Shipment Line to another Shipment and a Shipment to another Load. **Note:** You can move a shipment or a shipment line only if the shipment status is not Confirmed.
 - Move Shipment to Load: The Move to Load (whinh4134m200) session is displayed wherein you can select the Load to which the selected shipment must be moved.
 - Publish Shipment: The selected shipment is published.
 - Handling Unit: The handling unit structure is displayed.
- You can click the Item linked to a shipment line to view the item inventory details. The inventory data is displayed in the bar chart and the warehouse details are displayed in a list view on the item details page.

Item inventory details

In the **Shipment Execution Workbench (whinh8361m000)**, you can click the item linked to a shipment line to view the item inventory details. The inventory data is displayed in the bar chart and the warehouse details are displayed in a list view on the item details page.

Select a bar on the chart to view available inventory:

- On Hand
- Blocked
- On Order
- Allocated
- In Transit
- Committed
- Economic

Use these options to change the view of the data that is displayed:

- Chart
Displays only the bar chart of the inventory levels.
- List
Displays a list view of the warehouse, location, and the inventory levels of the item.
- Dual View
Displays both the bar chart and the list view. The data of the inventory levels in the list view changes based on the inventory level you select on the bar chart. For example, if you select Allocated the bar chart, the Allocated quantity is displayed in the grid. By default, the On Hand quantity is displayed in the grid.
- Warehouses
Allows you to select the warehouse for which the data is displayed.

Shipment Execution Workbench - User Settings

In the User Settings, you can specify the default values based on which the shipments are displayed in the **Shipment Execution Workbench (whinh8361m000)** workbench session.

The User Settings are accessed in the upper right of the toolbar of the **Shipment Execution Workbench (whinh8361m000)** workbench session.

On the User Setting page, you can specify these default values:

- Selection
 - Ship-From
The ship from warehouse specified for the shipment.
 - Status
The shipments with the selected status are displayed.
- Filter by
Specify the information based on which the shipments are filtered:

- Sold-to BP
The sold-to BP specified for the shipment.
- Ship-to
The ship-to BP or the warehouse specified for the shipment.
- General
 - Show Ship-To Description in Gantt
If this check box is selected, the name of the customer along with the customer code is displayed in the Ship-To column, in the Gantt chart.
 - Show warning message before confirming or deleting a shipment
If this check box is selected, LN displays a warning message when you confirm or delete a shipment.
 - Publishing Status
If this check box is selected, Infor LN displays the Publishing Status for Shipment and Load in the corresponding details panel.
 - Show Extended Fields
If this check box is selected, the extended fields are displayed in the workbench. Customer Defined Fields can be added to these BDEs:
 - ShipmentExecutionWBInventory
 - AutomotiveShipmentWBShipmentsFor more information, see the *Infor LN Extensions Development Guide*.
 - Order Origin
The shipments with the selected origin are displayed.
- Available Quantity
 - Show Available Quantity based on Pegging Information
If this check box is selected, Infor LN displays the Available Quantity from Pegging Information in the Available Quantity column, in the Shipment Lines grid.
 - Include On Order Transactions
This option is enabled if the above check box is selected. If this check box is selected, then On Order Transactions are also included in Available Quantity based on Pegging Information determination.
 - Planned Delivery Date
Possible Values:
 - Based on Date & Time: On Order Transactions based on Date & Time.
 - Based on Date: Only date is considered for On Order Transactions.
- Current Stage
If the Show Picking List check box is selected, the **Picking List (whinh4525m100)** session is displayed when you click the Confirm Picking option in the current stage. The picking process must be executed manually.
- View Options
 - Initial View
The initial view for the workbench.
Possible Values:
 - Day View: The shipments are shown for a day.
 - Week View: The shipments are shown for a week.

- **Default View**
The default view for the shipments. Possible values:
 - **Shipment:** The shipments are displayed individually.
 - **Load:** The shipments linked to the same load are grouped by the load and can be processed at the same time.
- **Hide Published Shipments**
If this check box is selected, the shipments with the status Published, are not displayed in the Gantt chart and Week View. **Note:** This check box is enabled only if the Default View is set to Shipment.
- **Hide Published Loads**
If this check box is selected, the loads with the status Published, are not displayed in the Gantt chart and Week View. **Note:** This check box is enabled only if the Default View is set to Load.
- **Week View**
You can select the days that must not be displayed in the in the Week view.

Processing shipments in the Shipment Execution Workbench

In the **Shipment Execution Workbench (whinh8361m000)**, shipments are processed in the shipment details pane. The shipments can be processed individually, or you can process a load. All the shipments linked to the selected load are processed in a single execution.

The shipment details pane is opened by clicking a shipment in the Shipments section.

- 1** Click Generate Advice. LN generates the outbound order and the View Outbound Advice option is displayed. You can use this option to view the details of the outbound advice in the **Outbound Advice (whinh4525m000)** session.
- 2** Click Release Advice. The outbound order is released and the View Outbound Advice option is displayed. You can use this option to view the details of the outbound advice in the **Outbound Advice (whinh4525m000)** session. LN selects the **Released** check box in this session.
- 3** Click Send for Picking. The picking list is generated and the View Picking Details option is displayed. You can use this option to view the picking details in the **Picking List (whinh4525m100)** session.
- 4** Click Confirm Picking. The picking list is confirmed and the View Picking Details option is displayed. You can use this option to view the picking details in the **Picking List (whinh4525m100)** session. LN selects the **Picked** check box in this session. The shipment status is set to Open.
- 5** Click Generate Handling Unit. The handling unit is generated and the View HU Tree option is displayed. You can use this option to view the handling unit tree.
- 6** Select the Freeze option to set the shipment status to Frozen. The icon is displayed to indicate the shipment status. The status is updated in the bar chart, the pie chart and the Gantt chart. Click Unfreeze to modify the shipment details.
- 7** Click Confirm. The shipment status is set to Confirmed.

Note: The current stages for a shipment are displayed based on the outbound advice activities defined for the order type of the order for which the shipment is created.

Shipment Planning Workbench

The **Shipment Planning Workbench (whinh8370m000)** session is used to generate projected shipments. The workbench displays the activities linked to an outbound order line and the quantities of the items that are processed when the activities are carried out.

The workbench consists of these sections:

- Selection
- Week View
- Summary
- Messages

Shipment Planning Workbench - Selection section



You can use the options in the **Selection** section to filter the data that must be displayed in the **Shipment Planning Workbench (whinh8370m000)** workbench session.

These options are available in the Selection section:

Warehouse

The code of the warehouse. The items and shipments are displayed for the selected warehouses.

Date

The items and shipments with the planned delivery date in the selected week are displayed. Click  or  to navigate to the previous or next week.

Search

The items and shipments are displayed based on the search value you specify. The search can be performed based on the carrier code, business partner, item code, shipment number, customer item and so on.

Filter by

When you click this option, the **Filter By** window is displayed wherein you can specify the values based on which the items and shipments are displayed in the workbench. These values can be specified:

- Sales Office
- Sold-to BP
- Ship-to (Warehouse or Business partner)
- Intermediate Consignee
- Carrier
- Job Sequence

You can select the **Only show incomplete planned demand** check box to view only the items or shipments for which the demand is not completely planned. This occurs when the cumulated planned shipment quantity is less than the ordered quantity.

Sort By

You can use this option to sort the items and shipments based on the Due Time, Ship-to, Item or the Carrier.

Hide Shipments

If this check box is selected, only the items are displayed in the workbench.

Shipment Planning Workbench - Week view section

The **Week** view section is used to view the outbound order lines for which you can generate projected shipments. The outbound order lines are retrieved from the **Outbound Order Lines (whinh2120m000)** session and displayed as the item cards in this section.

You can also view the corresponding shipment lines for the outbound order lines, displayed as shipment cards. If a shipment line is created for an outbound order line, the item card is replaced by the corresponding shipment card.



Similarly, if the corresponding shipment line is removed, the shipment card is replaced with the item card. You can drag and drop an item card to a shipment card. The item is added as shipment line to the shipment if the required criteria is met.

By default, the data is displayed for the current week. However, you can select a date in the Selection section to view the data for that week.

In this section, you can view this information:

- For each item: The item name, quantity, weight and the ship-to (warehouse or business partner) and carrier.
- For each shipment: The shipment number, ship-to (warehouse or business partner), carrier, loading units (cumulative) and weight (cumulative).

Note:

- The  icon is displayed for item and shipment to indicate that the quantity is modified manually.
- The  icon is displayed to indicate to which extent the ordered quantity has been planned. Green icon indicates that the order is completely planned, Red icon indicates partially planned. If Manual Shipment Planning is not applicable at all, Gray icon is displayed.

Click the  icon to view the details of the selected item or the shipment in the Details pane.

For the selected item, the pane displays this information:

- The item and the data related to the quantity of the item
- The ship-from warehouse
- The ship-to warehouse
- The intermediate consignee
- The customer item
- The Shipment Planning option to access the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session.

For the selected shipment, the pane displays this information:

- The ship-from warehouse, load, weight, carrier and the planned ship date
- The shipment lines linked to the shipment
- Carrier Description, Carrier SCAC code

- Intermediate Consignee

In the shipment Details pane, you can:

- Click the **Shipment#** number to view the shipment details in the **Shipment (whinh4630m000)** session.
- Click the **Load#** number of the shipment to view the load details in the **Load (whinh4640m000)** session.
- Click **Remove** to delete the selected shipment lines and **Delete** to delete the entire shipment.
- You can click **Planning** to access the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session for the selected Shipment line.
- You can click the Item linked to a shipment line to view the item inventory details. The inventory data is displayed in the bar chart and the warehouse details are displayed in a list view on the item details page. Select a bar on the chart to view available inventory:
 - On Hand
 - Blocked
 - On Order
 - Allocated
 - In Transit
 - Committed
 - Economic

Use these options to change the view of the data that is displayed:

Chart

Displays only the bar chart of the inventory levels.

List

Displays a list view of the warehouse, location, and the inventory levels of the item.

Dual View

Displays both, the bar chart and the list view. The data of the inventory levels in the list view changes based on the inventory level you select on the bar chart. For example, if you select Allocated in the bar chart, the Allocated quantity is displayed in the grid. By default, the On Hand quantity is displayed in the grid.

Warehouses

Allows you to select the warehouse for which the data is displayed.

Shipment Planning Workbench - Summary section

The **Summary** section displays the summarized information about the items selected in the Week view section.

This information is displayed along with the count of the selected items:

Gross Weight

The cumulative weight of the items specified for selected items.

Loading Units

The number of pallets or racks required to ship the selected items. The first **Packaging Item** defined for the item in the **Handling Unit Templates (whwmd4160m000)** session is considered. The number of pallets is calculated based on the **Loading Units** value. If the **Loading Unit** value is within these ranges:

- 0.1 to 1, the number of pallets required is one.
- 1.1 to 2, the number of pallets required is two.
- 2.1 to 3, the number of pallets required is three, and so on.

Carrier

The name of the carrier specified for the selected items.

The value in this field is populated only if all the selected items have the same Carrier specified. You can also specify or modify this value. If this value is not specified, the shipments are created in the **Shipments (whinh4130m000)** session without a value specified in this field.

Mode

The transport category for the shipment(s). This value is retrieved from the **Carriers/LSP (tcmcs0180s000)** session.

Planned Ship Date

The Planned Ship Date of the items. By default, the earliest of the dates specified for the selected items, is displayed. However, you can modify this date. Even if this field is cleared manually, the earliest of the dates specified for the selected items is considered.

Note: If the earliest **Planned Ship Date** specified for the selected items is a date in the past, by default, the current date is considered.


You can click **Create Projected Shipments** to create the shipments with the **Projected** status in the **Shipments (whinh4130m000)** session.

Note: You can select the items to create the shipments with the **Projected** status only if the **Projected Shipments in use** check box is selected in the **Warehousing Order Types (whinh0110m000)** session, for the **Warehousing Order Type** specified for the related **Order**, in the **Warehousing Order (whinh2100m100)** session.

Shipment Planning Workbench - Messages section

The **Messages** section is an expandable pane that displays error messages, warnings, and alerts.

This pane also displays a message with the shipment number, when the shipment is created successfully.

The pane expands to display these messages. Click  to delete the messages. To minimize the pane, click the header.

Shipment Planning Workbench - General options

You can access the General options in the upper right of the **Shipment Planning Workbench (whinh8370m000)** workbench session.

These are the available General options:

Refresh

Reloads the shipment related data from LN.

User Settings

Sets the default values based on which the shipments are displayed when you access the workbench, the next time.

Save Defaults

Saves the values you set in the **User Settings** page. The settings are defaulted when you access the workbench the next time.

Clear Defaults

Clears the default values that you set in the **User Settings** page.

Get Defaults

Discards the unsaved changes made to the user settings and applies the last saved settings when you access the workbench, the next time.

About

Displays the version of the workbench.

Shipment Planning Workbench - User Settings

The User Settings are accessed from the General options of the **Shipment Planning Workbench (whinh8370m000)** workbench session.

You can access the General options in the upper right of the **Shipment Planning Workbench (whinh8370m000)** workbench session.

On the **User Settings** page, you can specify default values in the fields of these group boxes:

General**Warehouses**

The items and shipments are displayed for the selected warehouses.

Hide Shipments

If this check box is selected, only the items are displayed in the Week view section and the shipments are hidden.

Hide Items not using Projected Shipments

If this check box is selected, the item cards related to Warehouse Order Types, for which the **Projected Shipments in use** check box is cleared in the **Warehousing Order Types (whinh0110m000)** session, are not displayed.

Show Intermediate Consignee Information

If this check box is selected, the code of the intermediate consignee is displayed in the item and shipment details pane.

Show unplanned items on

The date and time that are considered to display the item cards when the Planned Delivery Date is not specified for the item. Possible values:

- Original Planned Delivery Date
- Current Date / Time
- Maximum of Original Planned Delivery Date and Current Date / Time

Filter By

Specify the information based on which the items and shipments are filtered:

Sales Office

The sales office specified for the items and shipments.

Sold-to BP

The sold-to BP specified for the items and shipments.

Ship-to

The ship-to BP or the warehouse specified for the items and shipments.

Intermediate Consignee

The code of the *intermediate consignee*.

Carrier

The code of the *carrier*.

Job Sequence

The sequence number of the job for which the goods are required.

Sort by

You can sort the data based on these criteria:

- Due-Time
- Ship-to Item
- The carrier specified for the items.

View Options

You can use the View Options to hide the Fridays, Saturdays, and Sundays from the overviews.

Chapter 11: Shipment and Load Building Options

Load building based on the Single Ship-to Code per Load check box

The existing *load* building criteria are:

- Route
- Planned Delivery Date
- Delivery Carrier
- Pick-up Carrier
- Maximum Load weight
- Single Order by Load

You can use the **Single Ship-to Code per Load** check box in the **Warehousing Order Types (whinh0110m000)** session to create loads that have shipments with identical ship-to codes. If this check box is selected, LN groups the shipments into a load in the following manner:

- Outbound order lines that have the same ship-to code are put on the same load, but only if the other load building criteria allow this.
- Outbound order lines that have different ship-to codes are put on different loads.

Shipment building based on shipment reference

Shipment building is the process that automatically creates shipments based on picked outbound advices.

The shipment building criteria are:

- Ship-from Type, Ship-from Code, Ship-from Address
- Ship-to Type, Ship-to Code, Ship-to Address
- Planned for Load Plan (Y/N)
- Manual Shipment (Y/N)
- Office
- Office Company
- Route
- Terms of Delivery
- Point of Title Passage

- Motive of Transport
- Carrier
- Planned Delivery Date
- Delivery Point
- Shipment Reference

The shipment reference determines, among other criteria, how the goods picked from the supplier warehouse are grouped into shipments. The items on sales schedule lines that have the same shipment reference must be shipped as one shipment to the customer. In the automotive business this is called a Pickup Sheet (PUS) process. The shipment reference is primarily populated for warehouse orders with origin Sales Schedule. The value of the shipment reference is passed from Order Management to Warehousing by the **Shipment Reference** field in the **Sales Schedule Planned Delivery Lines (tdsls3520m000)** session.

Based on the Shipment Reference, these shipment building parameters are available in the **Warehousing Order Types (whinh0110m000)** session:

- **Unique Shipment Reference per Shipment**
- **Single Shipment Reference per Shipment**

Unique Shipment Reference per Shipment

If this check box is selected, LN creates a unique shipment for each shipment reference number. Creation of multiple shipments for the same shipment reference is not allowed in the following cases:

- The Ship-to business partner of the shipments is same.
- The Ship-to business partner is different, but shipments have the same Sold-to business partner. Conversely, this means that when the ship-to BP's differ and their related sold-to BP's differ, LN allows the same shipment reference for creation of multiple shipments.

This parameter has the following consequences:

- The Shipment Reference criterion overrules the shipment building criterion for Planned Delivery Date. When the planned delivery date is not the same for all schedule lines, but the schedule lines have the same shipment reference, LN creates one shipment that contains all the schedule lines for this shipment reference.
- LN does not create outbound advices and shipment lines for pickup sheet lines that have full shortage of items. Other lines of the same pickup sheet can be picked and shipped. The outbound line for which the shortage of items occurred remains open and has the pickup sheet number of the already shipped pickup sheet. Processing of this remaining outbound line can result in a shipment that has the already used pickup sheet number. You can cancel the schedule line or provide the schedule line with a new pickup sheet number.

Single Shipment Reference per Shipment

If this check box is selected, LN allows creation of multiple shipments for the same Shipment Reference. This parameter has the following consequences:

- For two shipment lines that have the same shipment reference and different planned delivery dates, LN creates two shipments that have the same shipment reference.
- Outbound Lines that have different shipment reference numbers are put on different shipments.

- If other shipment building criteria allow, outbound lines that have the same shipment reference number are put on the same shipment. Otherwise, outbound lines are put on separate shipments.

The shipment reference scenarios

Contents Existing Shipment Header	Shipment Reference Outbound Line	Related Order Type is Single Reference	Action
Single Reference=No, Shipment Reference= empty	empty	no	Add to Shipment
	empty	yes	Add to Shipment
	AAA	no	Add to Shipment
	AAA	yes	Create New Single Reference Shipment
Single Reference=No, Shipment Reference= AAA In this scenario, the shipment reference at the shipment header is manually filled by the end-user.	empty	no	Add to Shipment
	empty	yes	Add to Shipment
	AAA	no	Add to Shipment
	AAA	yes	Add to shipment if all shipment lines have reference "AAA" and make it a single reference shipment, otherwise create new single reference shipment
	BBB	No	Add to Shipment
	BBB	Yes	Create New Single Reference Shipment
Single Reference=Yes, Shipment reference= AAA	empty	no	create new shipment
	empty	yes	create new shipment
	AAA	no	Add to Shipment
	AAA	Yes	Add to Shipment
	BBB	No	Create new shipment
	BBB	Yes	Create New Single Reference Shipment
Single Reference=Yes, Shipment Reference=Empty	Not Applicable		

Freight integration

The Shipment Reference field which, among others, is used for the Pickup Sheet process, is transferred from the Outbound Order Lines (whinh2120m000) session to the corresponding freight order if Freight is implemented. In the Freight package, this shipment reference must be taken into account, if filled, as a Shipment Building criterion during the Load Building procedure through the **Generate Plan (fmlbd0280m000)** session.

That is, if the Single Shipment Reference per Shipment check box is selected and the **Generate Plan (fmlbd0280m000)** session is run, multiple shipments must be generated if different shipment references are applicable, even though these shipments are to be delivered at the same destination address at the same time, that is, within the same load.

If the Unique Shipment Reference per Shipment check box is selected and the **Generate Plan (fmlbd0280m000)** session is run, for example, for a particular period/freight order range and the same Reference is linked to multiple freight order lines (outbound lines) with different delivery times/dates, LN must still generate one single shipment per reference. This implies that the delivery time/date range on the order lines is extended so that both lines can be included in one and the same shipment. To create one single shipment, other criteria, if applicable, must also be met.

Shipment building based on delivery points

Shipment building is the process that automatically creates shipments based on (picked) outbound advices. The value of the delivery point is passed from Sales to Warehousing by the **Delivery Point** field in the **Sales Schedule Lines (tdsls3107m000)** session. The delivery point is passed to the warehouse order outbound line when a schedule line is transferred to Warehousing.

These shipment building criteria are available:

- Ship-from Type, Ship-from Code, Ship-from Address
- Ship-to Type, Ship-to Code, Ship-to Address
- Planned for Load Plan (Y/N)
- Manual Shipment (Y/N)
- Office
- Office Company
- Route
- Delivery Terms
- Point of Title Passage
- Motive of Transport
- Carrier
- Planned Delivery Date
- Delivery Point
- Shipment Reference

Originally, in LN, the ship-to business partner and related ship-to address is the most detailed level at which the destination of goods is defined. However, often the premises of customers / Original Equipment Manufacturers (OEM) are huge and goods can be received at multiple delivery points. For efficient goods handling, the supplier / shipping company must know the specific delivery point at which the goods must be unloaded. This objective is achieved by adding delivery points to delivery addresses and including them as shipment building criteria.

LN groups the outbound advices that have the same Delivery Point as shipment lines in one shipment. You can use the **Single Delivery Point per Shipment** check box in the **Warehousing Order Types**

(**whinh0110m000**) session to group the shipment lines by delivery points during shipment building. If this check box is selected, LN groups the outbound lines in the following manner :

- Outbound lines that have the same delivery point are put on the same shipment, as shipment lines, provided other shipment building criteria allow this. Otherwise, outbound lines are put as shipment lines on separate shipments. This effectively means that the creation of multiple shipments for the same delivery point is permitted in specific cases.
- Outbound Lines that have different delivery points are put on different shipments.

The following example explains the scenario in which shipments are created based on delivery points:

Order	Position	Ship-to BP	Delivery Point	Shipment
SSC000123	10	VW	Dock A	SHP000234
SSC000123	20	VW	Dock B	SHP000235
SSC000124	10	Opel	Dock A	SHP000236
SSC000125	10	VW	Dock A	SHP000234
SSC000126	10	Opel		SHP000237

Freight Integration

In case a delivery point is present on an outbound order line and the **Single Delivery Point per Shipment** check box in the **Warehousing Order Types (whinh0110m000)** session is selected, the delivery point is passed to the corresponding freight order (if Freight is implemented). The **Single Delivery Point per Shipment** check box cannot be modified in Freight. In other words, Freight load building always follows the shipment building instructions from Warehousing. This implies that the planning engine in Freight builds separate shipments per delivery point instead of per delivery address, which may result in multiple shipments per unloading address within one load.

Example of the Generate Shipments options

The time interval of a shipment is controlled by the options selected in the Generate Shipments field of the **Warehouses (whwmd2500m000)** session.

Example

Warehousing order 100123	
Outbound order line	Planned delivery date
10	2 February 09:00
20	2 February 14:00
30	3 February 09:00
40	4 February 14:00

If you generate and release outbound advice for warehousing order 100123, based on the option specified, LN generates the following shipments, shipment date ranges, and shipment lines:

Option Per Exact Planned Delivery Date/Time

Shipment	From	To	Shipment line	Originating outbound order line
100050	2 February 09:00	2 February 09:00	10	10
100060	2 February 09:00	2 February 14:00	10	20
100070	3 February 09:00	3 February 09:00	10	30
100080	4 February 09:00	4 February 14:00	10	40

Option For Planned Delivery Day

Shipment	From	To	Shipment line	Originating outbound order line
100050	2 February 00:00	2 February 23:59	10 and 20	10 and 20
100060	3 February 00:00	3 February 23:59	10	30
100070	4 February 00:00	4 February 23:59	10	40

Option Up to and Including Planned Delivery Day

Shipment	From	To	Shipment line
100050	-	4 February 23:59	10, 20, 30, and 40

When the outbound advice is released, outbound order line 10 is processed first. While creating a shipment line for outbound order line 10, LN creates the shipment header and fills the date ranges for the **From** and **To** fields. LN leaves the **From** field empty and fills the **To** with the latest planned delivery date present in the outbound advice, which in this example is 4 February 14:00, and sets the time for this date to 23:59. Because the planned delivery dates of all outbound order lines are before 4 February 14:00, LN adds all of the resulting shipment lines to the shipment.

Option Within Time Interval

When multiple suitable shipments exist with a valid shipment interval, the additional pick will be linked to the shipment with the earliest shipment interval start date.

Example: Generate Shipments within Time Interval [-2 hrs; + 2 hrs]

Order	Planned Delivery Date	Shipment	Shipment Interval
Order1	01-04-2009; 10.00 AM	SH000001	[08:00 AM;12:00 AM]
Order2	01-04-2009; 11.00 AM	SH000001	[08:00 AM;12:00 AM]
Order3	01-04-2009; 13.00 PM	SH000002	[11:00 AM;15:00 PM]
Order4	01-04-2009; 11.30 PM	SH000001	[08:00 AM;12:00 AM]

Order 1 leads to an initial shipment SH000001 with an interval of [08:00 – 12:00].

Order 2 is linked to the same shipment because the planned delivery date falls within the shipment interval of shipment SH000001.

Order 3 leads to the creation of a new shipment SH000002 with an interval of [11:00 – 15:00], because the planned delivery date falls outside the shipment interval of shipment SH000001.

Order 4 has a planned delivery date which falls within the shipment interval of both shipments, but Order 4 will be linked to shipment SH000001 because it has the earliest interval start date.

The use of transport categories

In Warehousing, the transport category specified for a *load* is added to the shipment *BOD*.

For each load, a *carrier* is specified. The transport category defined for a carrier in the Carriers/LSP (tcmcs0580m000) session is defaulted to the load.

Carriers can provide multiple types of transport, therefore various transport categories in addition to the default transport category are available that you can specify for a load.

The transport category is also used as a load building criterion. If a transport category other than the default transport category of the carrier is specified for a load, no new shipment lines can be added to the shipments of this load. Therefore, if another transport category is required, you must change the transport category of the load after the load building process is completed.

If a shipment was created after the transport category of the load is changed, the shipment cannot be added to this load, but the shipment is added to a load for which the default transport category is specified. If this is not required, use the Compose Shipment (whinh4231m000) session to move the shipment to the load with the changed transport category.

Freight

In Freight, these transport categories are unavailable:

- **Transport by Sea (Container)**

- **Transport by Rail (Container)**
- **Transport by Road (Container)**
- **Transport by Air (Charter)**
- **Contract Carrier**
- **Transport by Customer Pickup**
- **Less than Truck Load**
- **Mail**
- **Intermodal**
- **Consolidation**
- **Express Air**
- **Express Truck**
- **Express Rail**
- **Pool Point**
- **Milk Run**

Carriers for which one of these transport categories is specified in the Carriers/LSP (tcmcs0580m000) session cannot be linked to a *shipping office* and *planning group* in the Carriers/LSP by Shipping Office and Planning Group (fmfr0160m000) session. Consequently, such carriers are unavailable for load building in Freight.

Chapter 12: Projected Shipments

Projected shipments

Projected shipments are preliminary shipments that are created before the picking process has started.

The purpose of creating shipments at this early stage in the outbound process is to prepare labeling and to publish the shipments before the goods to be shipped reach the staging area. This enhances the efficiency and cost-effectiveness of the process.

If the use of projected shipments is implemented, the initial status of a shipment is **Projected**.

The projected shipment setup determines whether projected shipments are created manually or automatically. If created automatically, projected shipments, shipment lines, and loads are generated when the outbound order lines are created for a warehousing order.

You can use the **Shipment Planning Workbench (whinh8370m000)** workbench session, the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session, or the **Generate Projected Shipments (whinh4230m200)** session to manually create, or initiate the creation of, projected shipments.

If created manually, you can create projected shipments for outbound order lines with statuses up to **Shipped**, provided that the quantity in the **Planned in Order Unit** field is lower than the quantity in the **Projected** field on the outbound order line.

The projected shipment line quantities are taken from the ordered quantities in the **Outbound Order Lines (whinh2120m000)** session or the planned shipment requirement quantities in the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session.

Setup

- 1 Select the Projected Shipments in use check box in the **Inventory Handling Parameters (whinh0100m000)** session.
- 2 Select the Projected Shipments in use check box in the **Warehousing Order Types (whinh0110m000)** session for the order types for which to use projected shipments.
- 3 Optionally, select the Generate Projected Shipments Automatically check box in the Warehousing Order Types (whinh0110m000) session if projected shipments must be generated automatically. Projected shipments are automatically generated for the entire ordered quantity of the outbound order line.

If automatic generation is not required, you can create projected shipments using the **Generate Projected Shipments (whinh4230m200)** session.

If you frequently create projected shipments for less than the total ordered quantity of outbound order lines, clear the **Generate Projected Shipments Automatically** check box in the **Warehousing Order Types (whinh0110m000)** session to prevent generation of projected shipments for the entire ordered quantity.

Generated projected shipments are not displayed in the **Shipment Planning Workbench (whinh8370m000)** workbench session, because these projected shipments are automatically planned. See Planning requirements and projected shipments.

Handling unit setup for projected shipments

In the Creation of Projected Shipments field in the **Warehouses (whwmd2500m000)** session, select the preferred option to control automatic creation of handling units when projected shipments are created.

These settings override the setting of the Creation of Projected Shipments field for specific sites, warehouses, and items:

- Creation of Projected Shipments in the **Warehousing Settings by Site (whwmd2101m000)** session.
- Generate Handling Unit Automatically during Projected Shipments in the **Item Data by Warehouse (whwmd2510m000)** session.

Modifying projected shipments

These changes are allowed for projected shipments:

- Updates from the linked outbound-order lines. You can generate, regenerate, or delete projected shipments from an outbound-order line.
- Picking the goods for the shipment lines, in which case the status changes to **Open**.

These changes are allowed if the **Allow Changes to Shipment** check box is selected in the **Shipments (whinh4130m000)** session:

- Manually removing shipments and shipment lines.
- Moving shipment lines to another shipment using the **Compose Shipment (whinh4231m000)** session.
- Moving shipments to another load using the **Compose Shipment (whinh4231m000)** session.
- Creating handling units, if handling units are implemented.

Note: If projected shipments are changed or removed, new labels must be created and new shipment *Business Object Document (BODs)* must be published.

To prevent the allowed changes from being made to projected shipments or the originating outbound order lines, clear the **Allow Changes to Shipment** check box.

For example, when creating shipment lines for a new outbound order line, LN cannot add these shipment lines to projected shipments for which the **Allow Changes to Shipment** check box is cleared. To enable shipment composition for these shipments, you must first select the check box.

Clearing the **Allow Changes to Shipment** check box prevents changes from being made to shipments, such as the shipped quantities, while the customer has already been notified of the shipments to be delivered.

Planning requirements and projected shipments

Shipment planning can be affected by unexpected inventory shortages, sudden changes in customer demand, or insufficient transport capacity. To respond to such situations, you can manually create projected shipments for part of the ordered quantity of an *outbound-order line*.

For example, if the ordered quantity is 100 items X, to be delivered tomorrow, but you can only ship 30 tomorrow and the remaining 70 the day after tomorrow, you can create two projected shipments. One for 30 and one for 70 items X, and each with a different planned delivery date.

To manually create a projected shipment, create a planned shipment requirement and generate a projected shipment for the planned shipment requirement.

Manually creating projected shipments

- 1 Open the outbound order line for which to create projected shipments.
- 2 On the **Quantities** tab, click Shipment Planning to start the Outbound Order Line - Planned Shipment Requirements (whinh4183m000) session.
- 3 On the toolbar, click New. A planned shipment requirement is created in the lines section of the session.
- 4 In the Planned Shipment Quantity field, specify the quantity for which to create the projected shipment.
- 5 In the Planned Delivery Date field, specify the planned delivery date for the projected shipment.
- 6 Highlight the newly created planned shipment requirement.
- 7 From the *appropriate menu*, select **Generate Projected Shipments**.
- 8 In the **Generate Projected Shipments (whinh4230m200)** session, click **Generate**.

The **Generate Projected Shipments (whinh4230m200)** session closes and in the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session, these changes are made to the planned shipment requirement:

- The status changes to **Planned**.
- In the Shipment and Shipment Line fields, the projected shipment and shipment line of the planned shipment requirement is displayed.

The shipment or the shipment line is either created for the planned shipment requirement, or the quantity of the planned shipment requirement is added to an existing projected shipment and one or more shipment lines. This depends on the availability of projected shipments whose Shipment Date Interval spans the planned delivery date of the planned shipment requirement.

Note:

If overdeliveries are not allowed, a warning is displayed if the total quantity of the planned shipment requirements exceeds the ordered quantity, but creating the projected shipments is not blocked.

If multiple projected shipments are linked to an outbound order line, and the **Allow Changes to Shipment** check box in the **Shipments (whinh4130m000)** session is cleared for one of the shipments, this shipment blocks the order from item quantity changes, even if changes are allowed for the other shipments.

Canceling planned shipment requirements

You can cancel planned shipment requirements that have a status of **Created** or **Planned**.

If you cancel a planned shipment requirement with status **Planned**, the projected shipment and shipment line created for the planned shipment requirement are deleted. If the quantity of the planned shipment requirement was added to an existing projected shipment line, this quantity is subtracted from the projected shipment line.

You can cancel, but not delete a planned shipment requirement.

Planning requirements for less than the ordered quantity

If you create a planning requirement for less than the ordered, not yet advised, released, or picked quantity of an outbound order line and close the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session, you are asked if a planning requirement must be created for the remaining quantity.

If yes, these planning requests are created:

- A planning request with a planned delivery date and the specified quantity.
- A planning request without a planned delivery date for the unplanned quantity, that is, the ordered quantity minus the specified quantity.

If no, a new planning request with the specified quantity is created.

In the **Shipment Planning Workbench (whinh8370m000)** session, the corresponding cards are marked with a red dot to indicate that the ordered quantity is not fully planned. When planning requirements for the entire ordered quantity are present with status **Created** or status **Planned**, the corresponding cards are marked with a green dot.

When projected shipments are generated, the planning requests without planned delivery dates are skipped.

Option Plan Remaining Quantity

The **Plan Remaining Quantity** option is used to create planning requests for the unplanned quantity of partially planned outbound order lines, provided that the unplanned quantity is not yet advised, released, picked, or shipped.

The **Plan Remaining Quantity** option is present on the appropriate menu of the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session.

Example of planning requirements and projected shipments

The ordered quantity of outbound order line SLS00010/10 is 100 items X. The planned delivery date is 02/17/yyyy. On that day, there is no available stock. On 02/16/yyyy, the available stock is 30. The remaining 70 items X are available by 02/22/yyyy.

Because the available stock changes frequently, you must create projected shipments to ship the items.

1 Create planned shipment requirement

In the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session, create a planned shipment requirement for 30 items X with planned delivery date 02/16/yyyy.

The status of the new planned shipment requirement is **Created**.

In the **Outbound Order Lines (whinh2120m000)** session, the quantity in the **Planned in Order Unit** field changes from 100 to 30.

2 Generate Projected Shipments

In the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session, generate a projected shipment for the planned shipment requirement.

The status of the planned shipment requirement changes to **Planned**.

Because no shipments and shipment lines with matching properties are present, a new projected shipment SHP000123 with shipment line 10 and planned delivery date 02/16/yyyy is generated.

In the Shipment and Shipment Line fields, the projected shipment and shipment line of the planned shipment requirement is displayed.

In the **Shipment Lines (whinh4131m000)** session, the total projected quantity of 30 items X is displayed in the **Projected Quantity** field for shipment SHP000123/10.

In the **Outbound Order Lines (whinh2120m000)** session, the quantity in the **Projected** field is changed to 30.

3 Generate and release outbound advice

Generate and release outbound advice. Because of inventory shortages, only 20 items X are advised and released.

In the **Shipment Lines (whinh4131m000)** session, the status of shipment SHP000123 and shipment line 10 changes from **Projected** to **Open**. The shipped quantity on shipment line SHP000123/10 is increased by 20, and the projected quantity remains 30.

Note: The status of the shipment and the shipment line has changed to **Open**, even though there is still a quantity of 10 items X that is not yet released.

4 Create planned shipment requirement

In the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session, create another planned shipment requirement for order line SLS00010/10. This time, for 20 items X with planned delivery date 02/17/yyyy.

The status of the new planned shipment requirement is **Created**.

In the **Outbound Order Lines (whinh2120m000)** session, the quantity in the **Planned in Order Unit** field is changed from 30 to 50.

5 Generate Projected Shipments

In the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session, generate a projected shipment for the second planned shipment requirement.

The status of the planned shipment requirement changes to **Planned**.

Because no shipments and shipment lines with matching properties are present, a new projected shipment SHP000129 with shipment line 10 and planned delivery date 02/17/yyyy is generated.

In the Shipment and Shipment Line fields, the projected shipment and shipment line of the planned shipment requirement is displayed.

In the **Shipment Lines (whinh4131m000)** session, the total projected quantity of 20 items X is displayed in the **Projected Quantity** field.

In the **Outbound Order Lines (whinh2120m000)** session, the quantity in the **Projected** field changes from 30 to 50.

6 Generate and release outbound advice

Generate and release outbound advice. Because of another inventory shortage, only 8 items X are advised and released.

This time, the released quantity of 8 is added to shipment SHP000123, shipment line 10 instead of shipment SHP000129 for these reasons:

- The planned delivery date of shipment SHP000123, 02/16/yyyy, is earlier than delivery date 02/17/yyyy of shipment SHP000129.
- For shipment line SHP000123/10, the projected quantity is 30 and the shipped quantity is 20. Therefore, SHP000123/10 can accommodate the released quantity of another 8 items X.

The status of SHP000123/10 remains **Open**.

The shipped quantity on shipment line SHP000123/10 is increased by 8 and now totals 28, and the projected quantity remains 30. This means that two items are not yet released, that is, these items are still projected.

7 Confirm shipment

Confirm shipment line SHP000123/10. A warning is displayed that the projected quantity is greater than the shipped quantity, but the shipment line can be confirmed.

Consequently, in the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session, these changes are made:

- The status of the corresponding planned shipment requirement is changed to **Shipped**.
- A new planned shipment requirement with status **Created** is generated for 2 items X.

Planned and projected quantities on the outbound order line

By default, the quantity specified in the **Planned in Order Unit** field in the **Outbound Order Lines (whinh2120m000)** session equals the ordered quantity.

When you specify one or more planned shipment requirements in the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session, the planned shipment requirements have **Created** status. The total quantity of these planned shipment requirements is updated in the **Planned in Order Unit** field in the **Outbound Order Lines (whinh2120m000)** session.

When these planned shipment requirements reach the **Planned** status, the quantity in the **Planned in Order Unit** field is not changed, but the total quantity of the planned shipment requirements with status **Planned** is displayed in the **Projected** field on the outbound order line. The quantity in this field is increased when a planned shipment requirement reaches the **Planned** status, and decreased when the status changes to **Cancelled** or **Shipped**.

The value in the **Planned in Order Unit** field is not affected by changes in the value of the **Projected** field.

If a planned shipment requirement is specified in the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session, the **Manual Shipment Planning** check box is selected in the **Outbound Order Lines (whinh2120m000)** session.

Projected shipment quantities on the shipment line

In the **Shipment Lines (whinh4131m000)** session, the entire quantity of a projected shipment line is displayed in the **Projected Quantity** field.

This quantity is not changed in the course of the outbound flow, when the status of the projected shipment line changes between these statuses:

- **Projected**
- **Open**
- **Frozen**
- **Confirmed**

See Shipment and load status.

The status of a projected shipment line remains **Projected** when outbound advice is generated for the shipment line or for the outbound order line on which the shipment line is based.

When the outbound advice is released, or the picking list is confirmed for the projected shipment line, the status of the shipment line changes to **Open** and the picked or released quantity is displayed in the **Picked Quantity** and **Shipped Quantity** fields. If only part of the projected quantity is picked or released, the status of the shipment line also changes to **Open**. Consequently, the not yet released or picked quantity is still projected.

The status of the shipment line changes to **Confirmed** when you confirm the entire quantity or part of the quantity of the shipment line. Consequently, the status of the related planned shipment requirement in the **Outbound Order Line - Planned Shipment Requirements (whinh4183m000)** session changes to **Shipped**.

If the confirmed shipment line still contains a projected quantity, a new planned shipment requirement with status **Created** is generated for the projected quantity.

Note:

The ordered quantity of the outbound order line from which a shipment line is created, is displayed in the **Ordered Quantity** field of the **Shipment Lines (whinh4131m000)** session.

If the ordered quantity of an outbound order line exceeds the quantity of the projected shipments present for the outbound order line, an open shipment is generated for the difference between the ordered quantity and the total projected quantity when you release the outbound advice for the outbound order line.

Chapter 13: Load and Shipment Maintenance

Allow changes to shipment

If the **Allow Changes to Shipment** check box is selected in the Shipments (whinh4130m000) session, adding or removing shipment lines is allowed until the shipment status is set to **Confirmed**. For shipments with status **Projected**, updates from the linked *outbound-order lines* are allowed.

If this check box is cleared, these actions are not allowed:

- Deleting the shipment, unless the status is **Confirmed**.
Confirmed shipments can be deleted using the Remove Confirmed Shipments/Loads (whinh4250m000) session.
- Adding or removing shipment lines.
- Other updates of the shipment data.
Note: for **Projected** shipments it is allowed to pick the shipment line quantities and change the status to **Open** when picking is confirmed.

Also, if you clear this check box, these options are unavailable:

- In the **Shipments (whinh4130m000)** session:
 - Compose Shipping Structure
 - Generate Handling Unit
 - Remove Handling Units
 - **Delete**
- In the **Shipment Lines (whinh4131m000)** session:
 - Compose Shipping Structure
 - **Delete**

Cancel originating order lines

An order line cannot be canceled if the **Allow Changes to Shipment** box is selected for the linked shipment. To cancel the order line, clear the **Allow Changes to Shipment** check box for the shipment.

To modify shipment data

LN allows you to modify the warehouse shipment data and the load data on the open shipments.

You can modify these fields:

- **Ship-to Address**
- **Delivery Point**
- **Point of Title Passage**
- **Delivery Terms**

LN allows you to modify the data only if the Ship-to Type field is set to **Business Partner** and the shipment Status is **open**. If the shipment line is frozen, you cannot change the data on the shipment line. To modify the data, you must unfreeze the shipment line. In case shipment documents are already printed, LN resets the print status of the shipment documents from 'Printed' to 'To be printed'. The documents must be re-printed.

Modify the Ship-to Address

- LN allows you to change the **Ship-to Address** field on the shipment header.
- If there are multiple shipments for a load with different routes, LN does not allow you to modify the shipment data. However, LN allows you to move the shipment to a new load and modify the **Ship-to Address**. LN modifies the **Ship-to Address** of the shipment line.

The consequences of changing the **Ship-to Address**

- The value in the **Delivery Point** field on the shipment header and the shipment line, if specified, can also be modified. Specifying the **Delivery Point** is not mandatory.
- The value in the **Route** can also be modified on the shipment header. If there is a single shipment within the same load, the **Route** is automatically updated. In case of multiple shipments within the same load with different routes, the update is not allowed.
- When the taxation regime changes, LN does not allow you to modify the **Ship-to Address**.
- The **Delivery Note** linked to a shipment can also be modified. When only one shipment is linked to the load, LN allows you to modify the **Delivery Note** linked to the shipment with the modified **Ship-to Address**. If the **Delivery Note** is linked to multiple shipments with different ship-to addresses, LN removes the modified shipment from the existing delivery note and links it to a new delivery note. You must also reprint the existing delivery note after you remove the shipment, only if the delivery note is already printed.

Modify the Delivery Point

- LN allows you to modify the **Delivery Point** that is part of the **Ship-to Address** on the shipment header. When the **Single Delivery Point per Shipment** check box is selected in the **Shipments (whinh4130m000)** session, the change in the **Delivery Point** on the shipment header is applicable to the shipment lines as well.
- However, when the shipment building criteria **Single Delivery Point per Shipment** is not selected, you can modify the **Delivery Point** but the changes are not applicable to the shipment lines.

Modify the Delivery Terms

LN allows you to modify the **Delivery Terms** on the shipment header. When the **Delivery Terms** is modified, LN changes the value in the **Delivery Note** field.

If the modified shipment is the only shipment linked to the delivery note, the delivery note is modified as well. In case of multiple shipments, if the **Delivery Note** with different delivery terms is linked to multiple shipments, LN removes the modified shipment from the existing delivery note and links it to a new delivery note.

Move a shipment to another load - delivery notes

If a shipment is moved to another load, LN checks if the shipment data matches the delivery note data of a shipment present on the load. If yes, the shipment is allocated to that delivery note. If not, a delivery note is created for the shipment that is moved.

Partial shipments

If the quantity on the outbound order line is partially shipped and all shipment lines are confirmed, the outbound order line receives the **Shipped** status. In that case, you cannot ship the remaining quantity of the outbound order line, except for order lines of the following origins:

- **Sales**
You can ship the remaining quantity by means of a *back order*
- **Sales Schedule**
If you do not ship the total outbound order line quantity, LN generates a new outbound order line for the remaining quantity. The new outbound order line's status is **Open**. If problems occur, or no shipments are required anymore based on the newly generated outbound order line, the original sales schedule can block, delete, or cancel the outbound order line if the status is **Open**.
- **JSC Production**
If you do not ship the total outbound order line quantity, LN generates a new outbound order line for the quantity that is not shipped. The new outbound order line's status is **Open**.
- **Service**
If you do not ship the total outbound order line quantity, LN generates a new outbound order line for the quantity that is not shipped. The new outbound order line's status is **Open**.

Not-shipped quantities

You can set goods to not shipped, for example, because the loading capacity of the truck is insufficient.

Adjusting quantities is allowed if the shipment line status is **Open**.

If a not-shipped quantity exists, you can do either of the following:

- Create an automatic adjustment for the difference by selecting the **Automatic Adjustment of Quantity Not Shipped** check box in the **Shipment Lines (whinh4131m000)** session. If you select this check box, you must also specify a reason in the Reason field.
LN makes the adjustment if you confirm the shipment line.
- Specify a *transfer order* to return the goods that were not shipped to the storage location:
 - 1 On the *appropriate menu*, select **Return not Shipped Goods--> Not Shipped Goods** to open the **Return not Shipped Goods (whinh4231m500)** session.
 - 2 In the Return not Shipped Goods (whinh4231m500) session, specify the details of the transfer order.

If you confirm a shipment line with a not-shipped quantity, LN:

- Decreases the outbound order line's **Expected Not Shipped Quantity** with the shipment line's **Not Shipped Quantity**.
- Increases the outbound order line's not-shipped quantity with the shipment line's **Not Shipped Quantity**.

Chapter 14: Multiwarehouse Shipments

Multiwarehouse shipments

The Shipment through Warehouse field in the **Warehouses (whwmd2500m000)** session is used to:

- Consolidate shipment lines containing goods from specific warehouses into one shipment
- Define the warehouse from which the actual shipping takes place

This option is used in either of these cases:

- The travelling distance and logistic handling time between a group of warehouses is negligible.
- Multiple warehouses exist for administrative reasons, whereas there is only one actual warehouse from which shipping takes place.

In this way, you can skip specifying transfer orders to register inventory movements from the storage warehouses to the ship-from warehouse.

In the Shipment through Warehouse field of the **Warehouses (whwmd2500m000)** session, the *main warehouse* is specified for each warehouse that shares this warehouse as ship-from warehouse.

Example

Warehouses WH001, WH002 and WH003 are located on the same premises. For easy administration, shipping is done from WH003. For WH001 and WH002, specify WH003 as the main warehouse in the Shipment through Warehouse field of the **Warehouses (whwmd2500m000)** session.

As a result, shipment lines that contain goods from warehouses WH001, WH002, and WH003 are combined in one shipment. WH003 is the main warehouse, from which shipping is done. WH001 and WH002 are the *subwarehouses*.

In the **Shipments (whinh4130m000)** session, the ship-from type and ship-from code of the shipment display WH003. On the shipment lines, the **Warehouse** field displays WH001 and WH002.

To prevent unwieldy clusters of main and subwarehouses:

- In the Shipment through Warehouse field of the **Warehouses (whwmd2500m000)** session, subwarehouses are unavailable.
For example, WH003 is a subwarehouse of WH055. Therefore, you cannot select WH003 as the main warehouse for WH001 and WH002.
- For a warehouse that is selected as the main warehouse for one or more subwarehouses, the Shipment through Warehouse field is unavailable.

Multi warehouse shipment - shipment building

When the shipment procedure is launched for picked or released goods from a subwarehouse, the shipments are built according to the properties and settings of the *main warehouse*. *subwarehouses*

These fields from the **Warehouses (whwmd2500m000)** session impact shipment building and transport planning:

- Generate Shipments
- Shipment Interval Lower Boundary
- Shipment Interval Lower Boundary Unit
- Shipment Interval Upper Boundary
- Shipment Interval Upper Boundary Unit
- Add Orders Based On
- Update Shipping Material Account during
- Delivery Note
- Reset Delivery Note Number

For *subwarehouses*, the values of these fields are taken from the main warehouse. Therefore, in the **Warehouses (whwmd2500m000)** session, these fields are unavailable for subwarehouses.

Warehouse locations

If location control applies, the application does not use the staging locations of the subwarehouses when building shipments.

Handling units

Handling units are consolidated if the package definitions and handling unit templates match of the main warehouse match those of the subwarehouses.

A handling unit present for a shipment can be a multiwarehouse handling unit if the items of the shipment lines originate from different warehouses that share the same main warehouse. For more information, refer to the [Multiwarehouse shipment example](#) on page 101. Each bottom-level handling unit can contain items from a different shipment line.

Shipping documents

If used in the shipment procedure, the shipping documents list the ship-from address or ship-from code of the main warehouse.

Delivery date, distance, and lead time calculation

During the entry of, for example, a sales order, the calculation of the planned delivery date is based on the warehouse specified on the sales order. This is the warehouse in which the sold goods are stored. This can be a sub or a main warehouse. The delivery dates are based on the lead times specified for the warehouse and the distance between the warehouse and the business partner.

During shipment building, after the goods are picked, the application calculates the delivery dates of the main warehouse. These delivery dates are based on the lead times of the main warehouse and the distance between the main warehouse and the business partner.

Quantities not shipped

Unshipped quantities can be returned from the staging location of the main warehouse to the bulk location of the subwarehouse from which the quantities were issued through a transfer order.

Transfer orders between two subwarehouses are not handled through the main warehouse.

Move shipment lines to shipment

If the application does not combine some of the shipment lines into the shipment, you can move the shipment line to the shipment as long as the ship-from code and ship-from addresses of the shipment lines match those of the shipment. This applies to both Warehousing and Freight.

Freight

To support consolidation of shipment lines containing goods from different warehouses into one shipment, you must link the main and subwarehouses involved to a *shipping office* and the *planning groups* of the shipping office. Warehouses are linked to shipping offices and planning groups in the **Shipping Office (fmfmd0680m000)** session. Consequently, the main warehouse is used as the source of the ship-from information of the *freight orders* and freight order lines, which in turn are used as input for loads and shipments.

If the multiwarehouse shipments functionality is supported, the application inserts the address and the ID of the main warehouse in the ship-from address and ship-from code fields of the freight order. The freight order lines and the shipment lines display the warehouse from which the items originate. If the multiwarehouse shipments functionality is supported, this is a subwarehouse.

Chapter 15: Delivery and Receipt Dates

Calculate planned receipt and delivery dates

In the **Warehousing Orders (whinh2100m000)** and **Shipment (whinh4630m000)** sessions, you can use the **Calculate** and **Calculate** commands to calculate the delivery and receipt dates for a *warehousing order* or a *shipment*.

Calculate planned delivery dates

If LN determines the planned delivery date and the lead times are expressed in hours, LN takes into account all the time that is available on a day according to the actual calendar. However, if the lead times are expressed in days, LN considers a day as a whole day if the actual calendar indicates that time is available on that day.

Example 1

System date/time (= order creation date/time): Wednesday 7:00:00.

Outbound lead time: two hours.

The actual calendar is available from Monday through Friday each week, and has an 8:00:00 start time and an 18:00:00 end time.

According to the actual calendar, a calendar correction must be added: the actual time to which the outbound lead time will be added is Wednesday 8:00:00. Consequently, the default planned delivery date is Wednesday 10:00:00.

Example 2

System date/time (= order creation date/time): Wednesday 17:45:00.

Outbound lead time: one day.

The actual calendar is available from Monday through Friday each week, and has an 8:00:00 start time and an 18:00:00 end time.

According to the actual calendar, no calendar correction is added. If, according to the actual calendar, some time is available on a day, the day is considered as a whole day. Consequently, Wednesday is considered a whole day because 15 minutes are left. The default planned delivery date is the start time of (in this example) the next day, Thursday 8:00:00.

Note: Select **Calculate** to get a planned delivery date that is based on the planned receipt date. You can, for example, use this option if you only know the planned receipt date.

Calculate planned receipt dates

The default planned receipt date is calculated as follows:

$$\text{planned receipt date} = \text{PDD} + \text{TT} + \text{CC}$$

PDD	Planned delivery date
TT	Transport time
CC	Calendar correction (ship-to)

LN does not take into account the transport time if the warehousing order originates from a production order.

If LN determines the planned receipt date and the lead times are expressed in hours, LN takes into account all the time that is available on a day according to the actual calendar. However, if the lead times are expressed in days, LN considers a day as a whole day if the actual calendar indicates that time is available on that day.

Example 1: lead times in hours

Planned delivery date: Wednesday 10:00:00

Transport time: eight hours

The carrier's actual calendar has a 7:00:00 start time and a 17:00:00 end time. The ship-to's actual calendar has an 8:30:00 start time and an 18:00:00 end time. Both actual calendars are available from Monday through Friday each week.

The carrier will carry the goods for seven hours on Wednesday (from 10:00:00 until 17:00:00) and for 1 hour on Thursday (from 7:00:00 till 8:00:00). Therefore, according to the carrier's calendar, the planned receipt date is Thursday 8:00:00. However, if you also take into account the ship-to's actual calendar, the default planned receipt date is Thursday 8:30:00.

Example 2: lead times in days

Planned delivery date: Wednesday 16:00:00

Transport time: two days

The carrier's actual calendar has a 7:00:00 start time and a 17:00:00 end time. The ship-to's actual calendar has an 8:30:00 start time and an 18:00:00 end time. Both actual calendars are available from Monday through Friday each week.

If the actual calendar indicates that time is available on a day, the day is considered a whole day. Consequently, Wednesday is considered a whole day according to the carrier's actual calendar because one hour remains. The transport will thus take place on Wednesday and Thursday. The default planned receipt date is Friday 7:00:00 according to the carrier's actual calendar. However, also taking into account the ship-to's actual calendar, the default planned receipt date is Friday 8:30:00.

Note:

- Choose **Calculate** to get a planned receipt date that is based on the planned delivery date. You can, for example, use this option if you only know the planned delivery date.
- For *transfer orders*, you can change the planned receipt date until the moment a *receipt* line is created for an inbound order line of the transfer order. The changed planned receipt date is also displayed on

the inbound and outbound order lines of the transfer order, with the exception of shipped outbound order lines.

Freight Management

If Freight is implemented, the Freight *load building* engine uses the *route plans*, *standard routes*, and address lead times defined for the loading and unloading addresses to calculate the loading and unloading dates.

Calculate loading and unloading dates

In the **Planned Loads/Shipments (whinh4180m000)** session, you can use the **Calculate** commands to calculate the loading and unloading dates for a planned load or shipment.

Calculate loading dates

If LN determines the loading date and the lead times are expressed in hours, LN takes into account all the time that is available on a day according to the actual calendar. However, if the lead times are expressed in days, LN considers a day as a whole day if the actual calendar indicates that time is available on that day.

Consider the following example, in which the lead times are expressed in hours:

System date/time (= order creation date and time): Wednesday 7:00:00.

Outbound lead time: two hours.

The actual calendar is available from Monday through Friday each week, and has an 8:00:00 start time and an 18:00:00 end time.

According to the actual calendar, a calendar correction must be added: the actual time to which the outbound lead time will be added is Wednesday 8:00:00. So, the loading date is Wednesday 10:00:00.

In the following example, the lead times are expressed in days:

System date/time (= order creation date and time): Wednesday 17:45:00.

Outbound lead time: one day.

The actual calendar is available from Monday through Friday each week, and has an 8:00:00 start time and an 18:00:00 end time.

According to the actual calendar, no calendar correction is added. If, according to the actual calendar, some time is available on a day, the day is considered as a whole day. Consequently, Wednesday is considered a whole day because 15 minutes are left. The loading date is the start time of (in this example) the next day, Thursday 8:00:00.

Calculate unloading dates

The unloading date is calculated as follows:

```
Unloading date = PDD + TT + CC
```

PDD	Planned delivery date
TT	Transport time
CC	Calendar correction (ship-to)

LN does not take into account the transport time if the warehousing order originates from a production order.

If LN determines the unloading date and the lead times are expressed in hours, LN takes into account all the time that is available on a day according to the actual calendar. However, if the lead times are expressed in days, LN considers a day as a whole day if the actual calendar indicates that time is available on that day.

Consider the following example:

Planned delivery date: Wednesday 10:00:00

Transport time: eight hours

The carrier's actual calendar has a 7:00:00 start time and a 17:00:00 end time. The ship-to's actual calendar has an 8:30:00 start time and an 18:00:00 end time. Both actual calendars are available from Monday through Friday each week.

The carrier will carry the goods for seven hours on Wednesday (from 10:00:00 until 17:00:00) and for 1 hour on Thursday (from 7:00:00 till 8:00:00). So, according to the carrier's calendar, the planned receipt date is Thursday 8:00:00. However, if you also take into account the ship-to's actual calendar, the default planned receipt date is Thursday 8:30:00.

Note: This formula is also used to calculate the planned receipt and delivery dates by means of the **Calculate** and **Calculate** commands in the **Warehousing Orders (whinh2100m000)** session. In the **Warehousing Orders (whinh2100m000)** session, the unloading date is the receipt date and the loading date is the delivery date.

Freight Management

If Freight is implemented, the Freight *load building* engine uses the *route plans*, *standard routes*, and address lead times defined for the loading and unloading addresses to calculate the loading and unloading dates.

Determination of lead time

When LN determines the default planned delivery date in the **Warehousing Orders (whinh2100m000)** session, LN also takes into account the lead time. The lead time is determined as follows:

- If the **Ship-from Code** is a business partner and the item is specified, LN retrieves the business partner's internal lead time from the **Supply Time** field and the lead time unit from the **Unit for Supply Time** field of the **Item - Purchase** session.
- In all other cases, LN retrieves default lead times from the **Item Data by Warehouse (whwmd2510m000)** session, and lead times for items-by-warehouse from the **Warehouses (whwmd2500m000)** session.

Determination of transport time

If you enter a warehousing order in the **Warehousing Orders (whinh2100m000)** session, LN takes into account the transport time required to:

- Determine the default planned receipt date.
- Calculate the planned delivery date based on the planned receipt date.
- Calculate the planned receipt date based on the planned delivery date.

LN determines the transport time between the ship-from's address and the ship-to's address, based on a relevant distance table (if available) in the **Distance Table by City (tccom4137s000)** session or in the **Distance Table by ZIP Code/Postal Code (tccom4138s000)** session. From which of these two sessions the transport time is retrieved depends on the value of the **Usage Distance Tables** field in the **COM Parameters (tccom0000s000)** session.

When LN determines the transport time, LN also takes into account the calendar of the carrier that is specified for the current warehousing order. The calendar of the carrier is the calendar of the buy-from business partner that is linked to the carrier in the **Carriers/LSP (tcmcs0580m000)** session.

LN determines the calendar correction for the transport time based on the start time and end time of the carrier's actual calendar.

Note: If Freight is implemented, Freight calculates the transport time.

Determination of calendar correction

When LN determines the planned delivery date and the planned receipt date in the **Warehousing Orders (whinh2100m000)** session, LN takes into account the calendars of the ship-from data and the ship-to data to determine the required calendar correction. LN determines the calendar correction for ship-from data and ship-to data in the same way. The calendar correction determination only differs in the following way:

- If the calendar correction must be determined for the ship-from data, LN uses the **Ship-from Code**.
- If the calendar correction must be determined for the ship-to data, LN uses the **Ship-to Code**.

To be able to add a calendar correction, LN searches for a calendar as follows:

- 1 If the **Ship-from Code** or the **Ship-to Code** is a warehouse, LN searches for a calendar in the following sequence: the address' calendar, then the warehouse's calendar, and then the company's calendar. In all other cases, LN uses the address' calendar. If LN cannot find any calendar, a calendar correction does not take place.
- 2 If a calendar is found, LN searches for the actual calendar based on:
 - The found calendar.
 - The *availability type*.
 - The calendar's start date and end date.
- 3 LN determines the calendar correction based on the actual calendar's start time and end time.

Note:

- You can view the actual calendar in the **Calendar Working Hours (tcccp0120m000)** session.

- You can define the availability type in the **Warehouse Master Data Parameters (whwmd0100s000)** session.

Chapter 16: Shipping structure

Shipping structures

Single order settings

In addition to the standard requirements described in Conditions for shipment composition and Shipments and loads, the following warehouse order type settings determine how shipment lines, shipments, and, if implemented, shipping containers, are structured to form loads:

- Single Order Set per Shipment
- Single Order per Load
- Single Order per Shipment

Create shipment line

When a shipment line is created for a warehousing order and **Single Order Set per Shipment** or **Single Order per Shipment** is selected for the order type of the warehousing order, the shipment line is linked to an existing shipment if the shipment is linked to the same warehousing order (**Single Order per Shipment** selected) or order set (if **Single Order Set per Shipment** is selected). If no such shipment is present, a new shipment is created. If **Single Order per Load** is selected, a new load is created if no matching load is present.

Shipment lines are generated during the outbound procedure or manually created. For more information, refer to The outbound procedure and Manually created shipments.

Move shipment line

If a shipment line refers to a warehousing order with order type setting **Single Order per Shipment** or **Single Order Set per Shipment**, you can only move the shipment line to a shipment that refers to the same warehousing order or order set, respectively. You can also move a shipment line to a shipping container and load if the shipment of the shipment line and the destination load and shipping container belong to the same warehousing order.

You can move shipment lines in the Compose Shipping Structure graphical user interface or the Compose Shipment (whinh4231m000) session.

Move shipment

To move a shipment to a load created for a warehousing order with order type setting **Single Order per Load**, the shipment must belong to the same warehousing order.

You can move shipments in the Compose Shipping Structure graphical user interface or the Compose Load (whinh4134m000) session.

To compose shipping containers

You can move shipments from one *shipping containers* to the next within the same load if the status of the shipments and the shipping containers is **Open**.

If a shipment for which the shipping manifest is printed is moved to another shipping container, a new shipping manifest must be printed after the shipment is moved. If a shipment is added to a shipping container for which the shipping manifest is printed, the shipping manifest must be printed again.

If a shipment with a handling unit is moved to a shipping container with a handling unit, the handling unit of the shipment is unlinked from the handling unit of the source container and linked to the handling unit of the destination shipping container. In addition, the gross weights and the net weights of the shipping containers is recalculated. You can use the Compose Shipping Structure graphical user interface to compose shipping containers.

Compose Shipping Structure - Container Handling

This topic describes whether containers, if applicable, must be created manually or whether LN generates the first container automatically. The following **Container Handling** options are available:

- **Manual**
- **Automatic**
- **Not Applicable**

The shipping container indicates how the shipments are packed for transportation. Multiple containers can be linked to a load. Multiple shipments, (for different ship-to codes) can be linked to one shipping container.

Manual

The creation of shipping containers and the assignment of shipments to shipping containers is a fully manual process. When LN creates a shipping structure, by default all the shipments are added to the node Without Containers in the Compose Shipping Structure graphical browser framework (GBF). You must manually create shipping containers and move the shipments from Without Containers to these newly created shipping container.

Note:

The **Manual** option is not applicable for the following **Inventory Transaction Type**:

- **Receipt**
- **WIP Transfer**

Automatic

The **Automatic** option indicates that LN generates a first shipping container and assigns the shipments to this shipping container automatically. LN automatically generates a shipping container during load/shipment building and links this container to the load/shipments.

Note:

The **Automatic** option is not applicable for the following **Inventory Transaction Type**:

- **Receipt**
- **WIP Transfer**

Not Applicable

The **Not Applicable** option indicates that the concept of shipping containers is not in use. LN does not generate shipping containers. If the option is **Not Applicable**, you cannot create shipping containers even manually.

Note:

The **Not Applicable** option is not applicable for the following **Inventory Transaction Type**:

- **Issue**
- **Transfer**

(Automatic) Linking of Shipments to Containers**Example**

The following example scenarios describe how shipments are linked to shipping containers and how shipping containers are created in case no container is available:

- Scenario 1: Load status = Open

The number of containers with status Open = one: New shipments must be linked to that container.

Example

- Container 1 with status = Confirmed
- Container 2 with status = Confirmed
- Container 3 with status = Frozen
- Container 4 with status = Open

In this case, new shipments are linked to the container with status Open.

- Scenario 2: Load status = Open

The number of containers with status Open = two : New shipments must be linked to node "Without Containers."

Example :

- Container 1 with status = Confirmed
- Container 2 with status = Confirmed
- Container 3 with status = Open
- Container 4 with status = Open

In this case, new shipments are linked to node "Without Containers" to let the user decide which container must be used.

- **Scenario 3: Load Status = Open**
The number of containers with status Open = Zero.
In this case, a new container is generated and the new shipments are linked to this new container.
- **Scenario 4: Load status = Frozen/Confirmed.**
In this case, a new load and container are generated and the new shipments are linked to this new container.

Shipping constraints

LN records the shipping constraints on the warehouse order header and the outbound order lines. If a shipping constraint is defined at header level of a manual warehouse order, the shipping constraint is defaulted to all the outbound order lines. For warehouse orders of the origin sales order or sales schedule, the shipping constraint is retrieved from Sales. For all other non-manual origins, the shipping constraints are defaulted as **None**, which means that the shipping constraints can be defined manually on the warehousing order.

Warehouse order header

You can specify these shipping constraints for the warehouse order header:

- **None**
No shipping constraint applies. LN handles the orders based on the available inventory. Sufficient inventory results in a complete shipment.
In case of insufficient inventory, and:
 - If the **Use Contracts for Schedules** check box is selected in the **Sales Schedule Parameters (tdsls0100s500)** session, the back orders are not created automatically in case of partial shipment. In this situation, LN communicates the shipped quantity back to the sales schedule and, based on the shipping details, the user decides on how to deal with the short-shipped quantity. LN clears the **Create Backorders** check box in the **Outbound Order Lines (whinh2120m000)** session.
This process applies only for the sales schedules which are created if the **Use Contracts for Schedules** check box is selected.
 - If contracts are not used for sales schedules, LN automatically creates a backorder in case of a partial shipment. LN selects the **Create Backorders** check box in the **Outbound Order Lines (whinh2120m000)** session.
- **Ship Order Complete**
The total order must be shipped completely in one or more shipments.
Confirmation of shipments or shipment lines can only be started when there are shipment lines for all order lines.
- **Ship Set Complete**
A warehouse order set is based on the sales order set, which is recorded on the Warehouse order header. More than one warehousing order set can belong to a sales order set. For the origin sales this constraint

means that the complete sales order set must be shipped at once, which implies that the related warehouse order set(s) must be shipped completely.

- **Ship Kit Complete**

This can be applied only for a kitting order and means that kits have to be shipped completely. It will be possible to ship less items than ordered but only when the related kit structures are complete with all their components. LN assigns a unique set number to the component lines that constitute a main item/kit, which must be shipped in one set.

Note:

The **Ship Kit Complete** option is not applicable to:

- Warehouse orders that are created manually.
- Non-manual warehouse orders that have an origin other than sales order and sales schedules.

Outbound order line

You can specify these shipping constraints for the outbound order lines:

- **None**

No shipping constraint applies.

- **Ship Line Complete**

The total quantity of the outbound order line must be shipped as a single shipment.

- **Ship Line & Cancel**

If sufficient inventory exists, this results in a complete shipment of the outbound order line. A lack of inventory does not result in a back order but in the cancellation of the order for the remaining quantity. LN links a predefined cancel reason to the order line.

Chapter 17: Costs

Carrier selection and cost calculation in Warehousing

For business scenarios where freight costing and invoicing is based on the actual shipment built in Warehousing, LN allows you to calculate freight costs for the shipment and to select the best carrier and transport means group or transport means combination.

In these scenarios, the shipments are not created by in the Generate Plan (fmlbd0280m000) session in Freight, but by Warehousing. These shipments are the actual shipments issued from the warehouse. The warehouse shipments are passed on to the Freight package after the shipment is confirmed in Warehousing. After the warehouse shipments are received in Freight, the freight loads and shipments are created and the freight costs can be invoiced to the customers.

For details, refer to the online Help of these fields:

- The Rate and Carrier/LSP Selection at Warehouse Shipment field in the Freight Rates and Costs Parameters (fmfr0100m000) session.
- These fields in the Loads (whinh4140m000) session:
 - Estimated Freight Costs
 - Select Carrier/LSP
 - Log Select Carrier/LSP

Additional costs in Warehousing

LN allows you to add additional costs to shipments. You can use the following two types of items for adding additional costs to the shipments:

- Cost Items
- Service Items

Additional cost lines can be attached to a shipment in the following two ways:

- Generate additional cost lines
- Manually insert the additional cost lines

Generate Additional Cost Lines

Whether additional cost lines are generated depends on the setup of cost sets in Sales. Use the **Sales Additional Cost Set (tdsls0624m000)** session to define additional cost sets and to link cost items to a cost set. For more information, refer to Additional costs – setup.

LN determines the applicable cost items based on the total weight, value, or quantity of a shipment. The total weight, value, or quantity of a shipment includes all order lines on the shipment, also those from order origins other than sales orders and sales schedules. You can generate a specific cost line for Hazardous Material in case one or more items of the sales order or the shipment is marked as hazardous. To define an item as hazardous, you can select the **Hazardous Material** check box in the **Item - Warehousing (whwmd4500m000)** session. Furthermore, you must define a proper cost set with cost items in the session mentioned above.

The shipment-based and item-dependent additional costs are added to the shipments in Warehousing as separate shipment lines in the **Shipment Lines (whinh4131m000)** session the moment a shipment is confirmed. The additional shipment cost lines are initially generated in Warehousing and sent to Sales, where a cost order is generated for the shipment when the shipment is confirmed. You can add, change, and/or remove additional cost lines in the **Shipment Lines (whinh4131m000)** session before confirmation of the shipment.

If the **Interactive Adding of Additional Costs** check box is selected in the **Sales Additional Cost Set Scenarios (tdsls0527m000)** session, LN displays a question whether additional costs must be calculated or not. Otherwise, costs are added automatically. A third option is to manually retrieve additional costs through the **Calculate Additional Costs** command in the **Shipments (whinh4130m000)** session. This allows the user to modify these costs.

Manual Insertion of additional cost lines

You can also manually add cost or service items on cost lines to a shipment. You can also specify the quantity and amount for manual cost lines. Manually inserted lines are not affected when additional cost lines are regenerated.

Cost Item Amount

The amount of the cost items is retrieved from Pricing, or from the standard sales price. For more information, refer to Additional costs – setup. LN does not allow discounts for cost lines on the shipment. Generated cost lines only have an amount and no quantity. For manual cost lines, both the amount and quantity can be specified. The user is allowed to change or remove cost lines in interactive mode.

Invoicing

In case one or more additional cost lines are present for the shipment, a sales cost order is generated when the shipment is confirmed in Warehousing, but only if the Update Sales Deliveries field is set to **Direct** in the **Inventory Handling Parameters (whinh0100m000)** session. Otherwise, LN adds the cost lines to the **Deliveries (whinh4139m000)** session. In that case, the user processes the deliveries and the additional cost lines create a cost order in Sales. The cost order is released to Invoicing together with the delivered sales order lines. When the invoice is composed for a shipment in Invoicing, LN updates the invoice number and invoice date on the warehouse shipment order.

Printing Shipping Documents

You can print the following shipping documents:

- **Print Cost/Service Item on Shipping Manifest**
- **Print Cost/Service Item on Packing Slip**
- **Print Cost/Service Item on Goods Received Notes**
- **Print Cost/Service Item on Delivery Note**

Shipment and shipment line charges

Shipment charges are extra costs incurred for a shipment or one or more shipment lines. These charges are specified for informational purposes and do not result in an invoice to the customer. You can specify multiple charges for a shipment or a shipment line.

Various options are available to select the required type of charge. A shipment charge consists of a type, an amount, a currency, and, optionally, a description.

For example, you can specify charges such as freight, insurance, or port handling for a shipment or a shipment line.

You can maintain shipment charges for shipments and shipment lines with the **Projected** or the **Open** status.

Adding shipment and shipment line charges

If you only need to specify one shipment charge for a shipment, you can add this charge in the **Shipment (whinh4630m000)** session. To add additional charges, or charges for specific shipment lines, you must use the **Shipment Charges (whinh4122m000)** session.

To add shipment and shipment line charges, complete these steps:

- 1 In the **Kind of Charge** field in the **Shipment (whinh4630m000)** session, select the preferred option.
- 2 Specify an amount in the **Charge Amount** field.
- 3 Optionally, change the default currency in the **Currency** field.
- 4 To specify more charges for the shipment, or to add charges to shipment lines, click **Shipment Charges** next to the **Currency** field.
- 5 In the **Shipment Charges (whinh4122m000)** session, click New.
- 6 Select the preferred charge option, specify an amount, and optionally, add a description and change the currency.
- 7 To add a shipment charge to a shipment line, add a shipment charge as described in the previous steps and in the **Shipment Line** field, specify a shipment line.
- 8 Repeat steps 6 and 7 to add more charges.

Note: Perform steps 4 - 8 to maintain shipment charges when you access the **Shipment (whinh4630m000)** session to add or maintain charges for a shipment for which one or more shipment charges are present, in which case the **Kind of Charge** field is set to **Consolidated**.

Maintaining shipment and shipment line charges

You can add multiple charges, each with a different currency.

You can add multiple charges with identical kinds of charges. For example, a Freight charge from Mumbai, India to Dubai, in AED (UAE Dirhams) and another Freight charge from Dubai to Rotterdam, Netherlands, in EUR.

You can add charges to multiple shipment lines, or add multiple charges to the same shipment line.

To show that one or more records are present in the **Shipment Charges (whinh4122m000)** session for a shipment, the **Kind of Charge** field is set to **Consolidated** in the **Shipment (whinh4630m000)** session.

The **Charge Amount** field in the **Shipment (whinh4630m000)** session shows the total amounts of the shipment and shipment line charges for the shipment that have been specified in the **Shipment Charges (whinh4122m000)** session. If multiple currencies are specified for the shipment or shipment line charges, the amounts in these currencies are converted to the shipment currency and aggregated.

Move or split shipment line

If you move a shipment line to another shipment, the total amount of any charges specified for the shipment line are moved from the originating shipment to the target shipment. The total amounts of the charges of the originating shipment and the destination shipment are updated accordingly.

In all other cases, when moving or splitting a shipment line, you can only manually adjust the total amount of the shipment charges.

When splitting a shipment line or moving a shipment line to another shipment, this message is displayed if shipment charges are present: "Shipment charges present for shipment <ID of shipment from which the shipment line is moved>. Continue?"

Removing warehousing orders and shipments

If you remove shipments related to warehousing orders in the **Remove Warehousing Orders (whinh2250m000)** session, the shipment charges present for the shipments are also deleted.

If you remove shipments in the **Remove Confirmed Shipments/Loads (whinh4250m000)** session, the shipment charges present for the shipments are also deleted.

Chapter 18: Shipping Documents

Shipping documents

The shipping documents are printed along with the shipment that list the consignment related information. The shipping documents are printed as part of the *shipment procedure*. The shipment procedure determines which shipping documents must be printed. The shipping documents are:

- *packing slip*
- *packing list*
- *shipping manifest*
- *bill of lading*
- *delivery note*

Printing shipment documents by external application

If LN is integrated with external application Automotive Exchange Export Manager (EXM), the shipping documents are normally printed when a shipment is confirmed. After confirmation, adjustments cannot be made to the shipment should compliance issues occur.

You can check the shipments before they are confirmed by adding an additional step to the shipment procedure. This step entails printing the shipping documents when the shipment is set to **Frozen**.

Based on the shipping documents, the user can check the shipments, and if required, reopen and adjust them before printing the final version of the documents and confirming the shipments.

Adjusted shipment procedure

If the additional verification step is implemented, the shipment procedure has these steps:

- 1 Create shipment.
- 2 Freeze shipment.
- 3 Manually print shipping documents.
- 4 Manually check shipping documents.
- 5 If required, complete these manual steps:
 - a Reopen shipment.
 - b Adjust shipment.
 - c Re-freeze shipment.
- 6 Manually print shipping documents.

- 7 Confirm shipment.
- 8 Prepare *advance shipping notice (ASN)*.

Steps 3 and 6 Printing the shipping documents

To print the shipping documents, complete these steps:

- 1 Select **Print Shipping Documents by External Application** in the *appropriate menu* of the **Shipments (whinh4130m000)** session to start the **Print Shipping Documents by External Application (whinh4430m300)** session.

- 2 Click **Print** in the **Print Shipping Documents by External Application (whinh4430m300)** session.

These *Business Object Documents (BODs)* are sent to the external application to start the printing process:

- Shipment BOD
- Invoice BOD
- Carrier Route BOD

Step 7 Confirm shipment

When you confirm the shipments, these steps are completed:

- 1 The Shipment, Invoice, and Carrier Route *BODs* are sent to EXM again.
- 2 EXM checks the shipping documents and reprints any that have changed from the previous version.

Note: If the additional verification step is implemented, you cannot confirm the shipment before the shipment documents are printed. For individual users, you can overrule the additional verification step in the user profile. Authorized users can then confirm shipments before the shipping documents have been printed.

Setup

Prerequisites

- LN must be linked to EXM.
- *BOD* publishing must be implemented.

Printing shipping documents for frozen shipments is defined by order type. In the **Warehousing Order Types (whinh0110m000)** details session, select these check boxes for the applicable order types:

- **Freeze Mandatory**
- **Print Shipping Documents by External Application**

Optionally, you can authorize individual users to confirm shipments for which no shipping documents have been printed, thus overriding the selection of the **Print Shipping Documents by External Application** check box. For this purpose, select the **Confirm Unprinted Shipments by External Application** check box in the **Warehousing User Profiles (whwmd1140s000)** session.

When printing shipment documents before confirmation is implemented, the **Print Shipping Documents by External Application** check box is selected in the **Shipments (whinh4130m000)** session for shipments of the applicable order types.

Chapter 19: Packaging and Delivery

This chapter discusses packaging and shipment processes mainly based on handling units. While briefly addressed in this chapter, a detailed discussion of packaging definitions and handling unit templates is outside the scope of this chapter.

For more information about package definitions and handling unit templates, please refer to *LN Warehousing User Guide for Handling Units (U8938)*. For information about shipping material accounts, please refer to *LN Warehousing User Guide for Shipping Material Accounting (Uwhsmaug)*.

Packaging and shipment processes for outbound handling units

Industries require various packaging and shipment processes for efficient delivery of products.

To enhance the packaging and shipment processes, you can use these features:

- Fill up handling units
- Full packaging of material
- Packaging reference distribution
- Shipping sequence
- Consolidate stock point details

Fill up handling units

Handling units can be filled up and shipment lines can be consolidated based on the Consolidate Stock Points in one Shipment Line parameter in the Inventory Handling Parameters (whinh0100m000) session.

The prerequisites to fill up handling units within the same handling unit structure:

- The package definition code of the shipment line must be identical to the package definition of the picked goods.

Templates are also compared when dealing with the multi-item structure:

- The number of nodes must be the same.
- The quantity of packaging items must be the same.
- The auxiliary packaging must be identical.
- The quantity of the auxiliary packaging must be the same.

- The handling units must not be in stock, but they must be generated during the confirm pick process. When the handling units are picked from stock, the **Shipment** on the picking list is filled. In this situation, the picking list is closed and the contents are transferred to the **To Shipment Handling Unit**.
- If used, the single packaging references must match the handling unit template.
- When filling up, the item that is put in the single handling units must match the picked item.
- Goods picked and placed within the same shipment are filled up in the handling unit structure, if possible.

Fill-up conditions

When starting the shipment building process, LN checks for existing shipment lines that can be used to ship the goods. When handling units are generated during picking, and the picked goods have no handling unit yet, the package definition of the outbound order line is used. When the package definition is filled, LN searches for existing shipment lines with the same package definition with related handling unit, based on this package definition. When no package definition is defined for the outbound order line, the shipment building process searches for shipment lines without a package definition. When handling units are generated during picking, shipment lines with a related handling unit are also selected and filled up accordingly.

When a shipment line that can be used for the picked goods is identified, these actions are executed:

- Validate current handling unit structure against the package definition. If the validation fails, a new handling unit structure is created for the picked goods. This happens only when all the shipment line related handling units have the **Status** set to **staged**. In case there are handling units with the **Status** set to **Open**, the fill-up is performed without the validation.
- Add the picked goods to the singles that are not full yet, so contents are added to existing handling units. Related constraints:

- The item of the single handling unit must be the same as the picked item.
- Reference, Packaging Reference A and Packaging Reference B must be identical.

- Add packages on the master handling unit(s) if there is still space available on the master handling unit. Constraints for single item:

- The reference of the master handling unit must match the picked reference when for the master, the **Single Reference** check box is selected in the **Handling Units (whwmd5130m000)** session.
- The Packaging Reference A of the master handling unit must match picked packaging reference A when for the master, the **Single Packaging Reference A** check box is selected in the **Handling Units (whwmd5130m000)** session.
- The Packaging Reference B of the master handling unit must match picked packaging reference A when for the master, the **Single Packaging Reference B** check box is selected in the **Handling Units (whwmd5130m000)** session.

Constraints for multi-item:

- The Allow Multi Item for Shipping check box in the **Handling Unit Templates (whwmd4160m000)** session must be selected for the handling unit template of the outbound order line that is related to the picking list that is just picked.
- The handling unit templates must match (except for the contents within the packaging item) the packaging items.
- The Reference of the master handling unit must match the picked reference when the **Single Reference** indicator is selected on the master.
- The **Packaging Reference A** of the master handling unit must match the picked packaging reference A when the **Single Packaging Reference A** check box is selected on the master.

- The **Packaging Reference B** of the master handling unit must match the picked packaging reference A when the **Single Packaging Reference B** check box is selected on the master.
- Add new master handling unit when the contents cannot be added to the existing masters or the single reference constraints do not match, and there are goods that still require packing.

Validate packaging reference distribution/CINDI

In order to prevent the shipping of incorrect structures, a validation of the structure must be performed before the confirmation of the shipment. For the shipment line that is to be confirmed/frozen, the packaging reference distribution is validated against the handling unit structure. For more information on CINDI, see CINDI process.

Compose handling Unit

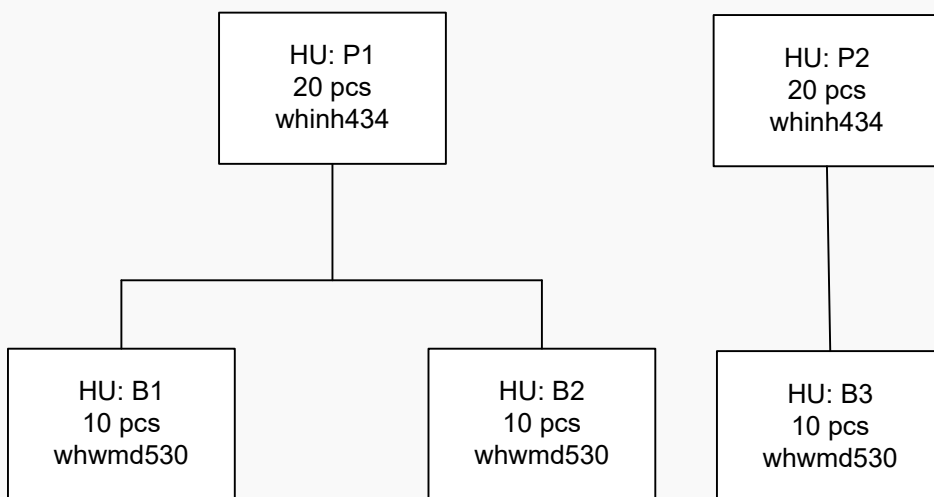
When handling units are composed, additional checks must be executed with respect to the references. When moving handling units from one parent to another, LN considers the handling unit building constraints.

Example

The handling unit is defined:

Note	Packaging Item	Single Packaging Reference	Single Packaging Reference A	Single Packaging Reference B
1	Pallet	V	V	X
2	Box	V	V	V

The handling unit structure is present:



For handling unit P1 these references are filled:

- Reference: REF001
- Reference A: REFA001

- Reference B: REFB001

For handling unit P2 these references are filled:

- Reference: REF001
- Reference A: REFB001
- Reference B: REFB001

When the user want to move the handling unit B2 from P1 to P2 the user will get an error message, because the reference A of the parent handling unit (pallet) are not matching. This table indicates when moving of complete boxes is allowed:

<div>Target (Pallet)</div> <div>Source (Box/ Crate)</div>		Pallet P1 Single Reference: V Single Reference A: V Single Reference B: V			Pallet P2 Single Reference: X Single Reference A: V Single Reference B: V			Pallet P3 Single Reference: V Single Reference A: X Single Reference B: X			Pallet P4 Single Reference: X Single Reference A: X Single Reference B: X		
		Ref 001	Ref A A01	Ref B B01	Ref 001	Ref A A02	Ref B B02	Ref 002	Ref A A01	Ref B B01	Ref 002	Ref A A01	Ref B B01
Reference	001	V			X			X			V		
Reference A	A01												
Reference B	B01												
Reference	001	X			V			V			V		
Reference A	A02												
Reference B	B01												
Reference	002	X			X			V			V		
Reference A	A01												
Reference B	B01												
Reference	001	X			X			X			V		
Reference A	A01												
Reference B	B02												
Reference	002	X			V			V			V		
Reference A	A02												
Reference B	B02												
Reference	003	X			X			X			V		
Reference A	A03												
Reference B	B03												

Compose shipment

When a shipment line is moved from one shipment to another, the shipment line reference distribution is also moved into the new shipment line. The reference distribution is copied or updated. The handling units must be filled-up manually by composing the handling unit structure.

Split shipment line

When shipment lines are split, the packaging reference distribution is also split. When a handling unit is split from the shipment line, the handling unit reference fields are used to determine which part of the shipment line reference distribution must be copied.

However, when there are no handling units and there is a shipment line reference distribution present, the split off quantity inherits a part of the packaging reference distribution assigned. LN prioritizes the highest distribution line till the whole split quantity is assigned.

Shipping documents

Generally, handling units are printed on shipping documents. When a multi-item handling unit structure is present for a shipment, the multi-item level is not printed.

Full packaging of material

The material quantities and packaging method received by the car manufacturers. Car manufacturers frequently accept only full packaging material (crates, boxes, pallets and so on); this is applicable to all levels within a packaging structure or only to specific levels. In LN, this can be managed using **Full Packages Only** functionality at each packaging level in a handling unit structure.

The impact of the **Full Packages Only** functionality:

Order entry

When the **Full Packages Only** functionality is implemented for a node/ level within the handling unit template related to a sales schedule, the planned warehouse order quantity becomes a multiple of the full package quantity. When the package definition is defined for the sales contract line logistic data, a relation can be established between the sales schedule and the handling unit template used. This enables the user to activate the **Full Packages Only** functionality for a sales schedule.

When a planned warehouse order is created for which the **Full Packages Only** check box is selected on the package definition or handling unit template, the order quantity may not necessarily be the sum of the linked sales schedule line or lines as the quantity can be adjusted to meet 'full packages only' criterion. The multiple of a packaging item quantity on an order is determined from the package definition and the item. For example:

Node	Packaging Item	Packaging Item Quantity	Quantity in Storage Unit	Full Package Only
1	Pallet	1	0 pcs	No

Node	Packaging Item	Packaging Item Quantity	Quantity in Storage Unit	Full Package Only
2	Box	10	0 pcs	Yes
3			100	Yes

In the example, order quantities must be a multiple of the packaging item quantity of 10 pcs (100pcs of node 3 packed in 10 boxes of node 2). The storage unit is the same as the inventory unit. In case the storage unit box is used, allows 4 pcs per box, this happens:

Node	Packaging Item	Packaging Item Quantity	Quantity in Storage Unit	Full Package Only
1	Pallet	1	0 pcs	No
2	Crate	10	0 pcs	Yes
3			40 box	Yes

In the example, order quantities must be multiple of 16 pcs (40 box of node 3 packed in 10 crates of node 2) * 4 (conversion of pcs to box is 4).

Outbound Processes

After the generation of the outbound advice for the outbound order line; the outbound advices can be modified manually. When an outbound advice is adjusted or a shortage has been identified, resulting in a quantity that is not a multiple of the full package quantity, a warning message is displayed, stating that the 'full packages only' criterion is not met. However, LN allows the user to continue the process.

The same principle is applicable in case of partial shipments. A deviation from the 'full packages only' criterion is allowed and semi-filled packages can be delivered. When the warning message is displayed during the generation of the outbound advice, the quantities can be changed to match the 'full packages only' criterion.

Note: LN does not perform the 'full packages only' check again during the confirmation of a shipment.

Packaging reference distribution

When goods are picked and linked to a shipment, the packaging reference distribution is created or updated below the shipment line and is used when handling units are generated for a shipment line. This is applicable only for the shipment lines that are created for a sales schedule.

The distribution is created based on the outbound order line reference distribution. The following table describes these references:

Reference	Description
Shipment Reference	Transport ID

Reference	Description
Reference	In the automotive industry, master handling units must be shipped with the same Reference. The user is allowed to model the level of Single Reference in the handling unit template.
Packaging Reference A	In the automotive industry, whole master handling units must be shipped with the same Reference A. The user is allowed to model the level of Single Reference A in the handling unit template.
Packaging Reference B	In the automotive industry, single handling units must be shipped with the same Reference B. The user is allowed to model the level of Single Reference A in the handling unit template.

CINDI process

Automobile manufacturers use various delivery concepts/ procedures while ordering components from suppliers which result in procedural and informative requirements that all automotive suppliers must meet. One of these procedures is called CINDI, an extensive procedure consisting of four aspects:

- Transport ID
- Distribution Zone/ Routing Code
- RAN/ KANBAN number/ Delivery call number.
- Point of consumption/ Point of destination

Transport ID

The Transport ID is sent by the customer organization as a shipping instruction to the supplier to indicate which deliveries (load/ shipments) must arrive at the factory.

LN allows you to reuse the existing shipment reference as the Transport ID. In case only one Transport ID is allowed per shipment, the **Unique Shipment Reference per Shipment** check box in the **Warehousing Order Types (whinh0110m000)** session must be selected. In case the Transport ID is not provided by the customer, LN creates a temporary ID because defining the shipment reference is mandatory. However, the ID can be manually replaced with the final Transport ID during the outbound process, at a later date. The temporary ID can be maintained up to the status **Frozen or Shipped** before being replaced by the final Transport ID.

The user is responsible for the timely replacement of the temporary ID with the final Transport ID (Shipment Reference) at the appropriate time.

Distribution Zone/ Routing Code

The supplier can also be informed about the more specific destinations within the organization for which a delivery is intended. These destinations are defined as the Distribution Zone or Routing Code. These are the intermediate locations to which the goods are moved after the receipt, at the unloading dock.

If the Distribution Zone (or Routing Code) is provided by a customer organization, this must always be used as a package building criterion. For this purpose, an extra reference field is added on the sales schedule line

called **Packaging Reference A** which is picked up by the warehouse order, outbound, and shipping procedure as a criterion while generating handling units during shipment.

The requirements/ items within a Transport ID that are destined for the same Distribution Zone can be combined into the same handling unit; the requirements/ items may not be merged with items/ handling units, destined for other distribution zones.

The Distribution Zone/ Routing Code must be available as extra information and printed on labels and documents to enable the OEM personnel to immediately recognize the (intermediate) destination of a handling unit.

Point of consumption/ Point of destination

The point of consumption (POC) or point of destination (POD) is the final destination of the received items. It is usually the production or assembly line on which the components are used.

If the Point of consumption (POC) is defined by the customer organization, and thus recorded on the sales schedule, the POC is used as handling unit building criterion. A new handling unit is initiated for each POC. Consequently a new reference field **Packaging Reference B** is added. The field is retrieved from the sales schedule and can be viewed using the **Reference Distribution** option from the **References** menu in the **Outbound Order Lines (whinh2120m000)** session and the **Reference Distribution** option from the **References** menu in the **Shipment Lines (whinh4131m000)** session.

When handling units are built, the singles (= lowest packaging level example, a box) created must contain items destined for the same point of consumption/ point of destination. Items can only be packed and shipped in the same box (single), if the point of consumption/ point of destination of the box and the picked goods is the same.

For easy allocation to the precise POC, information of the POC must be printed on the packaging labels.

RAN/ KANBAN number/ Delivery call number

The RAN (Registration Authorization Number) can also be provided by the customer organization. This number can be used as an additional constraint during the building of master handling units (= top level packaging item example pallets), for scenarios where only one KANBAN/ RAN number is allowed per master handling unit. Such master handling units are called Homogeneous, while multi-RAN or MixRAN handling units are called Heterogeneous.

The RAN information can be printed on the labels and the shipping documents.

Chapter 20: Shipment Acceptance

Shipment acceptance DD 250

The Material Inspection and Receiving Report (DD Form 250) can be mandatory for contractors working for the US Government. The report comprises prescribed information relevant to the shipping process and is used for invoicing.

The DD 250 report may require users to check and accept or reject shipments at their source, destination, or both:

- **Source Acceptance**
The goods must be accepted or rejected at the supplier's or contractor's location during shipment, before the shipments are confirmed. The user performing the acceptance is usually an employee of the supplier or contractor acting on the customer's behalf.
- **Destination Acceptance**
The goods must be accepted or rejected at the customer's location during receipt. The accepted or rejected goods are registered for confirmed shipments.
- **Source and Destination Acceptance**
The goods must be accepted or rejected at both the supplier's or contractor's and the customer's location.

Roles

These roles are involved in shipment acceptance:

- Warehousing official
- Official working on the customer's behalf

First, the warehousing official specifies the required type of shipment acceptance on the outbound order lines and completes shipment building. If the outbound order lines originate from a contract created in Project, the default shipment acceptance type is retrieved from the contract lines.

Next, if source acceptance is required, the official acting on the customer's behalf specifies the accepted or rejected quantities for the shipment lines involved and completes the acceptance procedure. The warehousing official then confirms the shipments and the goods are shipped.

If destination acceptance is required, a customer official completes the acceptance procedure after the goods have arrived at the customer location.

For both source and destination acceptance, dedicated sessions are available.

Prerequisites

- The Shipment Acceptance in use check box is selected in the **Inventory Handling Parameters (whinh0100m000)** session.
- Source acceptance
Picking and shipment building is completed, and the status of the shipment lines and shipments is **Open**.
- Destination acceptance
The status of the shipment lines and shipments is **Confirmed**.

Source acceptance - procedure

For the warehousing official

- 1 For the relevant outbound order lines, select the relevant type of shipment acceptance in the Acceptance Point field of the **Outbound Order Lines (whinh2120m000)** session. If the outbound order lines originate from a contract created in Project, you can use the default shipment acceptance type that is retrieved from the contract lines.

From the outbound order line, LN passes on the selected type of shipment acceptance to the related shipment lines and shipments. You cannot modify the type of shipment acceptance on the shipment lines and shipments.
- 2 Complete picking and shipment building.
- 3 In the **Shipments (whinh4130m000)** session, select the shipment for which acceptance is required.
- 4 On the *appropriate menu*, select Submit for Acceptance to set the acceptance mode for the shipment and the shipment lines.
- 5 When the official acting on the customer's or supplier's behalf has completed the last step of the source acceptance procedure, confirm the shipment.

For the official acting on the customer's or supplier's behalf

- 1 Open the **Shipment Acceptance (whinh4130m200)** session.
- 2 Double-click a shipment for which source acceptance is required and the Submitted for Acceptance check box is selected.

The **Shipment Acceptance (whinh4630m100)** session opens.
- 3 Do one of the following:
 - To accept the entire shipment, on the toolbar, click **Accept**.
 - To accept individual shipment lines, see the next step.
- 4 Click the **Shipment Lines** tab and select a shipment line that you want to accept.
- 5 Do one of the following:
 - To accept the total quantity of the shipment line, see step 6.
 - To accept less than the total quantity, see Shipment acceptance - to accept or reject quantities.
- 6 On the *appropriate menu* of the **Shipment Lines** tab, select **Accept** to save the accepted quantity.

- 7 Select **Freeze** to freeze the shipment line.
- 8 Repeat steps 3 - 7 for the other shipment lines.
- 9 To complete the acceptance for the entire shipment:
 - Select the **Inventory Accepted** check box.
 - In the **Accepted by** field, select your user name (or the name of the user on whose behalf you accept the shipments).

Modify source acceptance

If the source acceptance is completed and the shipment is not yet confirmed:

- 1 Clear the **Inventory Accepted** check box in the **Shipment Acceptance (whinh4630m100)** session. The values in the **Date** and **Accepted by** fields are removed.
- 2 Unfreeze the shipment lines that need modification.
- 3 Repeat steps 4 - 9 of the procedure [For the official acting on the customer's or supplier's behalf](#) on page 130.

Destination acceptance - procedure

For the official acting on the customer's or supplier's behalf:

- 1 Open the **Shipment Acceptance (whinh4130m200)** session.
- 2 Open a confirmed shipment for which destination acceptance is required.
- 3 Open a shipment line that you must accept.
- 4 In the **Shipment Lines (whinh4131m000)** session, specify the rejected quantity in the **Destination Rejected Quantity** field if required. This field is located on the **Acceptance** tab.
- 5 Save and close the **Shipment Lines (whinh4131m000)** session.
- 6 You return to the **Shipment Acceptance (whinh4630m100)** session.
Select the **Inventory Accepted** check box.
- 7 In the **Accepted by** field, select your user name (or the name of the user on whose behalf you accept the shipments).

The destination rejected quantities are only used for reference and do not trigger any inventory movements, updates in invoicing, or the creation of financial transactions. The destination rejected quantities are updated in the *contract deliverables*.

Shipment acceptance - to accept or reject quantities

The toolbar on the **Shipment Lines** tab of the **Shipment Acceptance (whinh4630m100)** session shows whether the shipment lines have stock point details or handling units. If you select a shipment line and the **Stock Point Details** or the **Handling Unit Tree** options are available, the shipment line contains stock point details or handling units. The **Shipment Line Packing Structure** option is always available, even if no packing structures are used.

To specify accepted or rejected quantities for shipment lines that contain:

Items without packing materials, stock point details, or handling units

- 1 On the toolbar of the **Shipment Lines** tab, click **Shipment Line Packing Structure**. The **Shipment Line Packing Structure (whinh4136m000)** session opens.
- 2 Specify the shipped quantity in the **Shipped Quantity in Storage Unit** field.
- 3 Click Save and close the **Shipment Line Packing Structure (whinh4136m000)** session.

Packing structure with stock point details

- 1 Accepted and not shipped quantities specified for the stock point details are propagated to the packing structure.
 - On the toolbar of the **Shipment Lines** tab, click **Stock Point Details**. The **Shipment Line Stock Point Details (whinh4133m000)** session opens.
 - If the items are serialized, select the **Not Shipped** check box for each item that you want to reject.
 - Otherwise, specify the accepted quantity in the **Shipped Quantity** field. LN marks the remaining items as rejected.
- 2 Save and close the **Shipment Line Stock Point Details (whinh4133m000)** session.

Handling units

- 1 On the toolbar of the **Shipment Lines** tab, click **Handling Unit Tree**.
- 2 Select the handling unit and on the toolbar, click **Stock Point Details** to reject one or more items of the handling unit.
- 3 In the **Handling Unit Stock Point Details (whwmd5136m000)** session that opens, select the **Not Shipped** check box for each item that you want to reject.
- 4 Save and close the **Handling Unit Stock Point Details (whwmd5136m000)** session.
- 5 Save and close the **Handling Unit Tree**.

Important: After specifying the accepted or not shipped quantities in the relevant sessions, you return to the **Shipment Acceptance (whinh4630m100)** session. Complete steps 6 - 9 in [For the official acting on the customer's or supplier's behalf](#) on page 130 to finish the source acceptance procedure.

Chapter 21: Shipment Validation

Shipment validation

Shipment validation is a process that verifies if specific trading partner requirements are met before your shipments are confirmed and leave the warehouse.

Shipment validation is a step that you can add to the outbound flow. If implemented, shipment validation can be an optional or a mandatory process.

This process performs various checks on shipments, such as these:

- Are the required handling units present?
- Are the tracking numbers present?
- Are the supplier numbers present?

These checks are based on user defined sets of validation rules. Each validation rule consists of one or more validation checks. You can define validation rules for shipments based on specific warehousing order types, or shipments shipped to specific sold-to or ship-to business partners.

If the validation is successful, you can confirm the shipments. For unsuccessful validations, how to proceed depends on the setup: if the validation error is blocking, you must correct the error before you can confirm the shipment. If the error is not blocking, a warning is displayed, but you can proceed and confirm the shipment without correcting the error.

If a shipment must be shipped urgently despite validation errors, authorized users can confirm shipments despite blocking validation errors.

Validating shipments

The shipment validation is performed manually or automatically. You can validate shipments if the status is **Open** or **Frozen**.

The setup of the shipment validation functionality determines which shipments are subject to validation, and whether validation is mandatory or optional.

To manually validate a shipment, on the *appropriate menu*, select **Validate Shipment**. Manual shipment validation is available if optional or mandatory validation is applicable.

A shipment is automatically validated when you freeze or confirm the shipment. Automatic validation is only available if mandatory validation is applicable.

Shipment validation is mandatory for a shipment if the **Shipment Validation** check box is selected for the shipment. This check box is selected if shipment validation is mandatory for the order type of the order from which the shipment is generated.

If the validation is successful, the **Complete** check box is automatically selected for the shipment. You can then confirm the shipment.

If validation errors are found, the **Complete** check box is cleared. The validation error messages are displayed in the **Shipment Validation Log (whinh4521m000)** session. If the **Blocking** check box is selected for an error message, you must correct the error, otherwise the shipment cannot be confirmed.

You can access the **Shipment Validation Log (whinh4521m000)** session from the *appropriate menu* of the **Shipments (whinh4130m000)** session, or by selecting the Validation Log tab in the **Shipment (whinh4630m000)** session.

You can use the **Delete Shipment Validation Log** command in the **Shipment Validation Log (whinh4521m000)** session to delete validation messages for shipments with statuses up to **Open**. When a shipment is deleted, the validation messages of the shipments are also deleted.

Note: If you reopen a frozen shipment, the **Complete** check box is cleared. This means that the shipment must be validated (again).

To overrule shipment validation errors

If a shipment must be shipped urgently despite validation errors, authorized users can confirm shipments that are blocked on account of validation errors. For this purpose, the **Release Shipment** or **Release Load** option is used in the **Shipments (whinh4130m000)** session.

This authorization is provided if the Release Unvalidated Loads/Shipments check box is selected for a user in the **Warehousing User Profiles (whwmd1540m000)** session.

Validation rules

You can define validation rules for shipments based on specific warehousing order types, or shipments shipped to specific sold-to or ship-to business partners. Shipment validation is optional or mandatory.

A shipment is validated against a validation rule. A validation rule consists of one or more validation lines.

A validation line consists of one validation check, for example, "Are the terms of delivery specified on the shipment?" Thus a validation rule is a set of one or more validation checks.

These types of validation rules are available:

- Generic validation rules
- Business-partner validation rules

To determine the shipments that must be validated, a generic validation rule is linked to a warehousing order type and a business-partner validation rule is linked to a ship-to or a sold-to business partner.

If a generic validation rule is linked to an order type, shipments generated from warehousing orders of this order type must be validated against the validation rule of the order type.

If a business-partner validation rule is linked to a ship-to or a sold-to business partner, shipments sent to the ship-to or sold-to business partner are validated against the validation rule linked to the business partner.

Mandatory or optional validation

To define mandatory shipment validation for shipments based on a specific order type, select the Freeze Mandatory check box and the Shipment Validation check box in the **Warehousing Order Types (whinh0110m000)** session for the order type. To specify the validation rule against which the shipments must be validated, link a generic validation rule to the order type or define business-partner validation rules for the ship-to or sold-to business partners of the shipments.

If you link a generic validation rule to the order type in the Rule field in the **Warehousing Order Types (whinh0110m000)** session, shipments are validated against this rule. If no validation rule is linked to the order type, shipments must be validated against the business-partner validation rules that are present for the ship-to or sold-to business partner of the shipment.

To define optional shipment validation for shipments, clear the Shipment Validation check box for the order type on which the shipments are based, and define business-partner validation rules for the ship-to or sold-to business partner of the shipment.

Note:

Validation rules must be available for the warehousing order type or the ship-to or sold-to business partner of a shipment.

If shipment validation is mandatory for the warehousing order type of a shipment, but no validation rule is linked to the order type and no business partner rules are defined for the ship-to or sold-to business partner of the shipment, an error message is displayed.

Validation lines

A generic or a business-partner validation rule consists of one or more validation lines. A validation line is a check that is performed for a field, for example, the **Delivery Terms** field. Available checks are, for example, "Does the field contain a value?" or "Does the field contain value ABC?"

Generic validation lines

Generic validation lines are defined in the **Validation Lines (whwmd1151m000)** session.

Business-partner validation lines

Business-partner validation lines are defined in the **Validation Lines (whwmd1151m000)** session and the **Validation Lines by Business Partner (whwmd1156m000)** session. The **Validation Lines (whwmd1151m000)** session is used as a template for business partner rules.

First define a validation line in the **Validation Lines (whwmd1151m000)** session, then specify a business partner in the **Validation Lines by Business Partner (whwmd1156m000)** session. The validation line is copied to the validation line of the business partner. If you specify more business partners, the validation line is also copied to these business partners.

Fields and validation checks

To define a validation line in the **Validation Lines (whwmd1151m000)** session, you must select the field that must be validated and the type of check that must be performed to validate the field.

The field to be validated is selected from a database table. The availability of the fields from which to select depends on the database table and the type of validation check that you select.

For example, if you select the Shipments (whinh430) table and validation check **Field Present**, most of the fields from the Shipments (whinh430) table are available. For example, if you select the Shipments (whinh430) table, you can select the **Carrier/LSP** (inh430.carr) field.

If you select the Shipments (whinh430) table and validation check **Related Field**, you must select a field from the Shipments table and then select the field to be validated from the reference table of the field that you selected from the Shipments table.

For example, if you select the Delivery terms (whinh430.cdec) field from the Shipments (whinh430) table, you can select a field from the reference table of the Delivery terms (whinh430.cdec) field.

The reference table of the Delivery terms field is the Delivery Terms (tcmcs041) table. From the Delivery Terms (tcmcs041) table, you can select the Text or the Description field.

Note: The related fields Item and Business Partner have multiple reference tables from which you can select the field to be validated.

Defining validation rules

- 1 To implement shipment validation, select the **Shipment Validation** check box in the **Inventory Handling Parameters (whinh0100m000)** session.
- 2 Define a validation rule in the **Validation Rules (whwmd1150m000)** session.
Select the **Generic** check box if the validation rule is to be generic. Generic validation rules are linked to a warehousing order type.
- 3 Click the arrow to open the validation rule in the **Validation Rule (whwmd1650m000)** session. The Lines tab of this session refers to the **Validation Lines (whwmd1151m000)** session and the Business Partners tab refers to the **Validation Lines by Business Partner (whwmd1156m000)** session.
- 4 In the Lines tab, click New to add a validation line. The line number is generated.
- 5 Specify the description of the validation line.
- 6 In the Table field, select the source table. This is the database table from which to select the field to be validated or the field from whose reference table you must select the field to be validated.
- 7 From the Validation Check field, select the validation check that must be performed. Select the **Related Field** validation check if the field to be validated must be selected from a reference table.
- 8 In the **Field** field, select the field to be validated or the field from which to select the reference table. The reference table of the selected field is displayed in the **Table** field.
- 9 If you selected validation check **Related Field** in step 7, in the **Validation Check** field, select the validation check to be performed for the related field.
- 10 In the **Field** field, select the field to be validated from the reference table.
- 11 Please refer to the session help of the Validation Lines (whwmd1151m000) session and the Validation Lines by Business Partner (whwmd1156m000) session for further information about the fields of these sessions.

- 12 If the validation line must be part of a business partner rule, click the Business Partners tab in the **Validation Rule (whwmd1650m000)** session.
- 13 Click New in the Business Partners tab .
- 14 Specify a ship-to or a sold-to business partner and click the arrow to open the line. The validation line from the **Validation Lines (whwmd1151m000)** session is copied to the validation line of the business partner.
- 15 Repeat the previous step to add the validation line to more business partners.

Defining parent-child validation checks

You can also define validation checks that include a condition. For example, if the Delivery Transport Means Group field is present, the Delivery Means of Transport field must also be present. The condition "If Delivery Transport Means Group is present" is the parent check and "Delivery Means of Transport" is the child check.

The parent, that is, the condition check in this example is defined as "Field Present: Delivery Transport Means Group" and the child condition is defined as "Field Present: Delivery Means of Transport." The connection between the parent and the child validation check is shown by the line number and the sequence number of the validation lines. The line number of the validation checks is identical, and for the child condition, the sequence number is set to 1.

- 1 Define a validation line with source table Loads, validation check **Field Present** and target field **Delivery Transport Means Group** as described in the previous procedure.
- 2 In the **Validation Rule (whwmd1650m000)** session click New to define a new validation line.
- 3 In the **Line** field, specify a line number that is identical to the line number of the previous line. The Sequence field obtains number 1 when you continue defining the validation line.
- 4 Specify source table Loads (whinh440), validation check **Field Present** and target field **Delivery Means of Transport** as described in the previous procedure.
- 5 Link the validation line to business partners as needed.

Shipment validation - interaction with shipment acceptance and scan-to-verify

If shipment validation is used in combination with the shipment acceptance and scan-to-verify procedures, the type of shipment acceptance determines the order in which you must use these procedures.

Source acceptance

Source acceptance is performed for shipments with status **Open**. Therefore, you must deploy source acceptance before shipment validation or scan-to-verify, because the latter procedures requires the shipments to be **Frozen**.

Destination acceptance

Destination acceptance is performed for shipments with status **Confirmed**. Therefore, you must deploy destination acceptance after shipment validation or scan-to-verify, because the latter procedure requires the shipments to be **Frozen**.

Chapter 22: Scan-to-Verify

Scan-to-verify

Scan-to-verify is an optional step that you can add to the outbound flow. It is a process that is used to verify if the handling units about to be loaded at the staging location match the handling units linked to the shipment lines in LN. If yes, the handling units can be loaded, the shipments can be confirmed, and the ASNs can be sent.

To start the scan-to-verify process, a shipment must be set to **Frozen** to prevent that changes are made to the shipment while scanning is in progress.

The verification is done by scanning the labels of the handling units at the loading dock.

If a scanned handling unit label matches a handling unit label in LN, the Confirmed for Shipping check box is selected for the handling unit. If all handling units are scanned successfully, the scan-to-verify process is completed and the shipment line to which the handling units are linked can be confirmed.

Note: When the Confirmed for Shipping check box is selected for a handling unit, the status of the handling unit is still **Staged**.

The status of the handling unit is set to **Shipped** when the linked shipment line is confirmed. The setting of the Confirm Shipment Lines when confirming Handling Units check box in the **Warehousing Order Types (whinh0110m000)** session determines whether the shipment lines are confirmed automatically when all of the linked handling units are confirmed.

In the **Shipment Lines (whinh4131m000)** session, the Indicator field shows the actions to be taken to complete the shipment procedure (which can include the scan-to-verify process). In the **Shipments (whinh4130m000)** and **Shipment Lines (whinh4131m000)** sessions, the Handling Unit Based Confirmation check box shows whether handling unit based confirmation is mandatory.

Setup

To use the scan-to-verify functionality, the Freeze Mandatory and the Handling Unit Based Confirmation check boxes must be selected in the **Warehousing Order Types (whinh0110m000)** session.

Automatically or manually confirming shipment lines when confirming handling units

The setting of the Confirm Shipment Lines when confirming Handling Units check box in the **Warehousing Order Types (whinh0110m000)** session determines whether the shipment lines are automatically confirmed when all of the linked handling units are confirmed.

Handling units are confirmed in one of these ways:

- Using the **Confirm** option in the **Handling Unit Tree**.
- Using the Confirm option on the **Execute Outbound** submenu of the **Handling Units (whwmd5130m000)** session.
- After a successful scan if the scan-to-verify process is used.

As a result, the Confirmed for Shipping check box is selected for the handling unit.

The status of the handling unit changes to **Shipped** when the shipment line of the handling unit is confirmed. The shipment line is automatically confirmed if the Confirm Shipment Lines when confirming Handling Units check box is selected and all of the linked handling units are confirmed.

If the shipment lines containing the handling units are automatically confirmed, the status of the shipment lines changes to **Confirmed** and the status of the handling units changes to **Shipped** after the last handling unit is successfully scanned. Consequently, changes to the shipment lines or the handling units are not allowed.

If the shipment lines are not automatically confirmed after confirming the handling units, the shipment line status **Frozen** and the handling unit status **Staged** are retained. Consequently, you can adjust the shipping structure if required.

For example, if the shipment line contains 100 handling units of type Box but the truck can contain only 80 boxes. You can solve this by reopening the shipment line and setting 20 handling units of type Box to **Not Shipped**. Consequently, these handling units are no longer part of the shipment and the Confirmed for Shipping check box is cleared.

Unconfirmed handling units after scan is completed

If after scanning the bar code scanner generates an error message and some of the handling units of the shipments in LN are unconfirmed, the labels of the unconfirmed handling units of the shipment are different from the labels of the scanned handling units at the loading dock. This means that incorrect handling units are picked and must be replaced with the correct handling units. After replacement, the scanning process must be repeated for the newly picked handling units.

Chapter 23: Authorized Excess Transportation Costs (AETC)

Authorized excess transportation costs (AETC)

To control transport costs, various organizations require their suppliers to ask for approval if the transport costs exceed the agreed terms. The supplier is to request a customer authorization number.

When granted by the customer, the supplier specifies the customer authorization number on the load.

The supplier also specifies a reason code in the **Reason** field and a reference to the party responsible for the excess costs in the **Responsibility** field. The responsible party can be, for example, the carrier that performs the actual transport.

Note: This applies to Freight and Warehousing loads. The values specified for the Freight load is copied to the Warehousing load and vice versa.

To specify a customer authorization number, reason, and responsible party on the load

- 1 Specify a tracking number of type **Customer Authorization Number** in one of these tracking number fields of the load:

- **Carrier Tracking Number**
- **Tracking Number**
- **Tracking Number 1**
- **Tracking Number 2**

Adding a tracking number of type **Customer Authorization Number** is allowed in only one of these fields. After adding the customer authorization number, the **Reason** and **Responsibility** fields become available.

- 2 Specify a reason code of type **Customer Authorization Number** in the **Reason** field.
- 3 In the **Responsibility** field, specify the party responsible for the excess transportation costs.

Setup

- 1 For the *ship-to business partner* role of the customer who requires AETC authorization from their suppliers, select the **Authorize Excess Transportation Costs** check box in the **Ship-to Business Partners (tccom4511m000)** session to specify that the business partner requires excess authorization numbers. When this business partner is specified on the load, the **Authorize Excess Transportation Costs** check box on the load is selected.
- 2 For the applicable order types, select the **Single Ship-to Code per Load** check box in the **Warehousing Order Types (whinh0110m000)** session. This is to prevent multiple shipments with different settings for the **Authorize Excess Transportation Costs** check box from being combined in a load.

- 3** In the Reason field of the **Reasons (tcmcs0105m000)** session, define reason codes of type **Customer Authorization Number**.
After specifying a reason code of type **Customer Authorization Number**, the Excess Transportation Reason field is available.
- 4** In the Excess Transportation Reason field, specify a transportation cost excess reason, or use the default value **Not Applicable**.

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