



Infor LN Procurement User Guide for Purchase Orders

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Table of Contents

About this document

Chapter 1 Introduction.....	11
Overview of purchase order handling.....	11
Purchase master data.....	11
Purchase order additional processes.....	11
Chapter 2 Procedure.....	13
Purchase order procedure.....	13
Chapter 3 Commingling.....	21
Overview of purchase order commingling.....	21
Commingling conditions.....	21
Purchase orders waiting for commingling.....	22
Commingling purchase orders.....	22
Commingling process.....	22
Chapter 4 Direct deliveries.....	25
Direct delivery sales orders.....	25
Direct delivery and return orders.....	27
Direct delivery and freight orders.....	27
Direct delivery and backorders.....	27
Direct delivery service orders.....	28
Direct delivery and return orders.....	29
Direct delivery and freight orders.....	30
Direct delivery and backorders.....	30
Chapter 5 Cross-docking and splitting deliveries.....	31
Cross-docking types.....	31
Cross-docking orders.....	31
Splitting deliveries.....	33
Splitting deliveries for cross-docking orders.....	33

Chapter 6 Purchase orders and freight orders.....	35
Integration Procurement and Freight.....	35
Integration between Freight Order Control and Procurement.....	35
Integration between freight Invoicing and purchase invoicing.....	35
Integration between landed costs and Freight.....	35
Integration Freight Order Control and Procurement.....	36
Integration freight invoicing and purchase invoicing.....	37
Master data.....	38
Invoicing methods.....	38
Freight orders for direct delivery orders.....	39
Generating freight orders for direct delivery sales orders.....	39
Generating freight orders for direct delivery service orders.....	42
Chapter 7 Purchase orders and work/service orders.....	45
Integration Procurement and Service.....	45
Purchasing additional parts.....	46
Service subcontracting in Procurement.....	47
Master data.....	48
Generating purchase documents from Service.....	48
Purchase requisitions.....	48
Requests for quotation (RFQs).....	49
Purchase orders.....	50
Receipts and consumptions.....	50
Service subcontracting prices.....	50
Chapter 8 Backorders.....	53
Purchase backorders.....	53
Backorders - automatic confirmation.....	54
Backorders - manual confirmation.....	55
Chapter 9 Return orders.....	59
Purchase return orders.....	59

Return order master data.....	59
Return Inventory procedure.....	60
Return Rejects procedure.....	61
Chapter 10 Additional processes.....	63
Copying purchase orders.....	63
Printing reminders.....	63
Printing claims.....	63
Printing purchase invoices.....	63
Deleting purchase orders.....	64
Changing prices or discounts after receipt or consumption.....	64
Change prices or discounts after receipt.....	64
Change prices or discounts after consumption.....	66
Appendix A Glossary.....	67
Index	

About this document

This document provides an introduction to purchase orders and explains the steps and functions in the purchase order procedure.

Objectives

This document describes the purchase order procedure in Procurement.

Assumed knowledge

Although you need no detailed knowledge of the LN software to read this guide, general knowledge of the Infor LN functionality will help you understand this guide.

Document summary

This table shows the chapters of this guide:

Chapter number	Chapter title	Content
Chapter 1	Introduction	Introduction to purchase orders
Chapter 2	Procedure	Steps in the purchase order procedure
Chapter 3	Commingling	Commingling of purchase orders and order lines
Chapter 4	Direct deliveries	Handling of direct delivery orders
Chapter 5	Cross-docking and splitting deliveries	Handling of cross-docking purchase orders and split deliveries
Chapter 6	Purchase orders and freight orders	Freight order generation from purchase orders
Chapter 7	Purchase orders and work/service orders	Purchase order generation from work/service orders
Chapter 8	Backorders	Handling of purchase backorders
Chapter 9	Return orders	Handling of purchase return orders
Chapter 10	Additional processes	Selection of additional functionality in the purchase order procedure

References

Use this guide as the primary reference for purchase orders. Use the current editions of these related references to research information that is not covered in this guide:

- **User Guide for Purchase Master Data U9817 US**
Use this guide to understand the setup of purchase master data.
- **User Guide for Purchase Requisitions U9820 US**
Use this guide to understand the purchase requisition procedure, including the setup of purchase requisition master data.
- **User Guide for Requests for Quotation (RFQs) U9821 US**
Use this guide to understand the purchase order procedure.
- **User Guide for Purchase Contracts U9822 US**
Use this guide to understand the purchase contract procedure.

- ***User Guide for Purchase and Sales Schedules U9541 US***
Use this guide to understand the purchase schedule procedure, including the setup of purchase schedule master data.
- ***User Guide for Purchase Vendor Rating U9823 US***
Use this guide to understand the purchase vendor rating procedure.
- ***User Guide for Statistics U9816 US***
Use this guide to understand the statistics procedure.
- ***User Guide for Landed Costs U9675 US***
Use this guide to understand the setup and use of landed costs.
- ***User Guide for Supplier Stage Payments U9819 US***
Use this guide to understand the setup and use of supplier stage payments.
- ***User Guide for Subcontracting U9361 US***
Use this guide to understand the subcontracting functionality.
- ***User Guide for Vendor Managed Inventory U9501 US***
Use this guide to understand the vendor managed inventory functionality, including the use of consigned inventory.
- ***User Guide for Project Pegging U9777 US***
Use this guide to understand the project pegging functionality.
- ***User Guide for Budget Control U9655 US***
Use this guide to understand the budget control functionality.
- ***User Guide for Pricing U9179 US***
Use this guide to understand the pricing functionality.
- ***User Guide for Material Pricing U9865 US***
Use this guide to understand the material pricing functionality.

How to read this document

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

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

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 the document.

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Overview of purchase order handling

You can create and modify purchase orders for purchasing goods. For example, if you run out of inventory, you can perform the purchase order procedure to replenish stocks. You can also use the purchase order procedure to purchase, for example, services. After confirmation, a purchase order is a legal obligation to supply items according to certain terms and conditions, including specific prices and discounts.

After an order is processed, the information is used by different departments in the company, such as planning, production, distribution, finance, purchasing, and marketing.

Purchase master data

Before you can complete the purchase order procedure, you must specify the purchase order parameters in the Purchase Order Parameters (tdpur0100m400) session and specify the purchase master data.

For more information, refer to *User Guide for Purchase Master Data U9817 US*.

Purchase order additional processes

A number of processes do not always occur in the purchase order procedure, but can be applicable in specific situations, such as direct deliveries, backorders, and return orders.

For more information, refer to the *Additional processes* chapter.

Purchase order procedure

The purchase order procedure covers the complete administrative procedure for purchasing goods or services.

The procedure includes these steps:

Step 1: Creating purchase orders

In the Purchase Order - Lines (tdpur4100m900) session, purchase orders can be created:

- Automatically, from a variety of sources, such as **EP**, **Sales**, and **Service**.
- Copied from an existing order in the Copy Purchase Order (tdpur4201s000) session.
- Manually.

Step 2: Approving purchase orders

After purchase orders are created, purchase order approval is a mandatory step in the purchase order procedure. The execution of the order procedure activities can start when you approve the order.

Step 3: Printing purchase orders

After the order is registered and approved, you can print the purchase order and send it to the buy-from business partner as confirmation. The Print Purchase Orders (tdpur4401m000) session is mandatory only if you communicate the purchase order to the buy-from business partner by mail or electronic data interchange (EDI). If you use the phone to communicate purchase orders, this step is optional.

After the purchase order is printed, you can still modify the purchase order.

Step 4: Releasing purchase orders to Warehousing

After the buy-from business partner is informed about the purchase order and the purchase order is approved, you can release the purchase order to Warehousing in the Release Purchase Orders to Warehousing (tdpur4246m000) session. The warehousing department is now informed about the goods to be expected.

When purchase orders are released to the warehouse, several activities are triggered in Warehouse Orders, starting with warehouse order creation in the Warehousing Orders (whinh2100m000) session. The activities in Warehouse Orders depend on the warehouse order type that is linked to the purchase order type.

To link a warehousing order type to a purchase order type:

1. Link activities to a warehousing procedure in the Activities by Procedure (whinh0106m000) session.
2. Link a warehousing procedure to a warehousing order type in the Warehousing Order Types (whinh0110m000) session.
3. Link the warehousing order type in the Purchase Order Types (tdpur0194m000) session.

It is not mandatory to release purchase orders for cost items and service items to Warehousing. This depends on the setting of the **Release to Warehouse** check box in the Items - Purchase (tdipu0101m000) session. Direct deliveries are never released to warehousing.

Step 5: Receiving the purchased goods

You can record the receipts of purchased goods in Warehousing or Procurement.

- **Warehousing**
If the purchase order is released to Warehousing, the receipt procedure is covered by the inbound and inspection procedures in Inventory Handling (INH).
When receipts are recorded in Warehousing, the receipt data is reported back to Procurement. You can view this data in these sessions:
 - Purchase Orders - Receipt Overview (tdpur4531m000)
 - Purchase Receipts (tdpur4106m000)
- **Procurement**
For noninventory items that are not released to Warehousing, you can record the deliveries in the Purchase Receipts (tdpur4106m000) session.

After a receipt is confirmed in the Purchase Receipts (tdpur4106m000) session, you can no longer change the receipt data in this session. However, you can still change specific receipt data in the Correct Purchase Receipt (tdpur4106s100) session.

When the goods are received, the prices and discounts of the goods may be changed. Use the Change Price and Discounts after Receipt (tdpur4122m000) session to maintain prices and discounts.

Step 6: Paying the purchased goods

To manage the payment of the purchased goods, use Accounts Payable (ACP). You can carry out this process only if the Financials package is implemented.

In the purchase order procedure, the business partner does not need to send an invoice. Instead, you can use self-billing to automatically generate invoices for the purchased goods.

Self-billing is typically used if you have:

- A contract with the business partner for the price of the goods you are buying.

- An agreement with the business partner that you will pay for the goods without receiving an invoice for them.

Self-billing is controlled by these fields in the Purchase Orders (tdpur4100m000) and Purchase Order Lines (tdpur4101m000) sessions:

- **Self-Billing**
If you select this check box, an invoice can be generated for each order line receipt. In the financial company to which the purchase office is linked, you can select the order lines and generate the invoices in the Generate Self-Billing Purchase Invoices (tfacp2290m000) session.
- **Invoice after**
This field can be:
 - **Inspection**
Self-billed invoices can be created only for the total approved received quantity, after all inspections are finished for a particular receipt.
 - **Receipt**
A self-billed invoice can be immediately created for the total received quantity. If, after inspection, some quantity is rejected, in the Generate Self-Billing Purchase Invoices (tfacp2290m000) session, an invoice is created for the rejected quantity. This invoice contains a negative quantity.

Step 7: Processing purchase orders

At the end of the purchase order procedure, all purchase orders must be processed in the Process Delivered Purchase Orders (tdpur4223m000) session. The processed purchase orders are transferred from the regular database to the history database.

Purchase order approval

After purchase orders are created, purchase order approval is a mandatory step in the purchase order procedure.

You can approve purchase orders:

- Based on approval rules for a range of purchase orders in the Approve Purchase Orders (tdpur4210m100) session.
- Manually, for a range of purchase orders in the Approve Purchase Orders (tdpur4210m100) session.
- Manually, for a specific purchase order. To approve a specific purchase order, click **Approve** on the appropriate menu of the Purchase Orders (tdpur4100m000) session, or the Purchase Order (tdpur4100m900) session. If the **Approval Rules Mandatory** check box is selected in the Purchase Order Parameters (tdpur0100m400) session, this command is disabled.

Notes

- You cannot approve purchase orders that are waiting for commingling before they are actually commingled.

- If the **Use Confirmation** check box is selected in the Order Terms and Conditions (tctrm1130m000) session, or the Buy-from Business Partner (tccom4120s000) session, you cannot approve purchase orders before the **Confirmed Quantity** and **Order Confirmation Date** fields are filled on the purchase order line(s).
- When a purchase order is approved, flexible purchase order processing can start.

Processing purchase orders and schedules

You can process:

- Purchase orders and order lines in the Process Delivered Purchase Orders (tdpur4223m000) session.
- Purchase schedule lines in the Process Delivered Purchase Schedules (tdpur3223m000) session.

Note

If Financials is implemented, purchase schedule lines with the **Invoiced** status can be processed. If Financials is not implemented, purchase schedule lines with the **Final Receipt** status can be processed.

Processing actions

During processing, LN:

- Inserts turnover history.
- Updates the contract data and history (if a contract is used). The called quantity amount is lowered, and the invoiced quantity and amount are raised. The turnover is written to the contract history. This action is performed only if the **Log Turnover on Contract** check box is selected in the Purchase Contract Parameters (tdpur0100m300) session. In this way, you can view which order or schedule called off a quantity for a contract.
- Updates the invoice-from business partner's balance.
- Updates the average/latest purchase price. If Financials is implemented, this action is performed during the invoice matching procedure, which you can carry out after approving the invoice in the Confirm Received Purchase Invoices (tfacp1104m000) session.
- Writes and updates turnover history using the actual purchase price. A posting is made with a positive and a negative quantity.
This action only happens if:
 - The **Log Order History** check box is selected and the **Level of Intake Logging** is **All** in the Purchase Order Parameters (tdpur0100m400) session.
 - The **Log Schedule History** check box is selected and the **Level of Intake Logging** is **All** in the Purchase Contract Parameters (tdpur0100m300) session.
- Sets the status of the purchase schedule line to **Processed**.
- Changes the status of the schedule header from **Termination in Process** to **Terminated** when all lines are processed or canceled.

Processing consignment replenishment orders

In case of consignment, two purchase orders can exist: one for the replenishment and one for the payment of the goods. The consignment replenishment order can be linked to a contract. When the consignment replenishment order is processed, the contract data is not updated, because no invoice is made for that order.

When the consignment payment is done and the order is processed, LN:

1. Searches for the consignment replenishment order.
2. Retrieves the contract from the consignment replenishment order.
3. Updates called quantities and amounts and invoiced quantities and amounts on the purchase contract

Processing purchase orders versus matching and approving purchase invoices

Processing purchase orders and matching and approving purchase orders in Financials can be executed independently from each other. If you approve the purchase invoice after you processed the purchase order, the invoice amount is not written to a turnover history record. Therefore, you must repair the situation by rerunning the Process Delivered Purchase Orders (tdpur4223m000) session. Because the invoice amount was not written yet to a turnover history record, additional turnover history records (- and +) are added with the invoice amount.

Purchase order and schedule history

You can use purchase order and schedule history to track creations and modifications to purchase orders and schedules. You can keep certain information after the original purchase order or schedule is removed.

To register the history of orders and schedules that are created, canceled, or processed, select these check boxes:

- **Purchase orders**
Log Order History and **Log Actual Order Receipt History** in the Purchase Order Parameters (tdpur0100m400) session.
- **Purchase schedules**
Log Schedule History and **Log Actual Schedule Receipt History** in the Purchase Contract Parameters (tdpur0100m300) session.

Contents of history files

The purchase order/schedule history files include:

- All created purchase order/schedule (line)s. These order/schedule (line)s are the not yet processed order/schedule (line)s.
- All invoiced purchase order/schedule (line)s. These order/schedule (line)s are the processed order/schedule (line)s.

The history files are of these record types:

- **Intake**
The order/schedule line was added, changed, or deleted.
- **Cancellation**
The order/schedule line was canceled.
- **Turnover**
The order line was processed in the Process Delivered Purchase Orders (tdpur4223m000) session, or the schedule line was processed in the Process Delivered Purchase Schedules (tdpur3223m000) session.

The fields in this table determine if, when, and how the purchase order/schedule history files are updated:

Purchase orders

Field	Retrieved from session
Log Order History	Purchase Orders (tdpur4100m000)
Start Logging History at	Purchase Orders (tdpur4100m000)
Level of Intake Logging	Purchase Order Parameters (tdpur0100m400)
Log Actual Order Receipt History	Purchase Order Parameters (tdpur0100m400)

Purchase schedules

Field	Retrieved from session
Log Schedule History	Purchase Schedules (tdpur3110m000)
Level of Intake Logging	Purchase Contract Parameters (tdpur0100m300)
Log Actual Schedule Receipt History	Purchase Contract Parameters (tdpur0100m300)

For purchase schedules, history logging always starts during approval.

Deleting history files

You can restrict the total amount of history data with the Archive/Delete Purchase Order/Schedule History (tdpur5201m000) session.

Be aware that the history files are the base for statistics. Before you delete the history files, verify that the statistics are fully updated. If the history files are deleted before the update, you cannot fully update the statistics

Note

You cannot modify the history data. It is only used for information purposes.

Overview of purchase order commingling

To reduce the number of purchase orders and obtain the best available prices and discounts, you can commingle purchase orders. Commingling enables you to group various purchase orders that originate from different sources, into a single purchase order.

You can commingle purchase orders that have these origins:

- Maintenance
- Project
- Warehousing
- Service
- Contract
- Sales
- RFQ
- Requisition
- EP
- SFC
- Manual
- Service Customer Claim

If you create a purchase order in one of the preceding origins, LN can commingle various purchase orders from different origins in Procurement.

Commingling conditions

Before you can commingle purchase orders, the following must be applicable:

- In the Purchase Order Parameters (tdpur0100m400) session, the Commingling For check box is selected for the purchase order's origin.
- In the Items - Purchase Business Partner (tdipu0110m000) session, the **For Commingling** check box is selected for the item and business partner specified on the order line.

Purchase orders waiting for commingling

If the commingling conditions are met, for the purchase orders that are waiting for commingling, the **For Commingling** check box is selected in these sessions:

- Purchase Orders (tdpur4100m000)
- Purchase Order (tdpur4100m900)
- Purchase Order Lines (tdpur4101m000)
- Purchase Order Line Details (tdpur4101m200)

To view the purchase orders that are waiting for commingling, filter on the **For Commingling** check box in these sessions.

You must commingle the purchase orders in the Commingle Purchase Orders (tdpur4210m000) session and approve the commingled purchase orders.

Note

- If the commingling conditions are not met, LN generates normal purchase orders.
- You cannot approve purchase orders that are waiting for commingling before they are actually commingled.

Commingling purchase orders

You can commingle purchase orders that have the **Created** status.

To commingle purchase orders, on the appropriate menu of the Purchase Orders (tdpur4100m000) or Purchase Order (tdpur4100m900) sessions, click **Commingle Purchase Orders**. Consequently, the Commingle Purchase Orders (tdpur4210m000) session starts in which you can enter your selection range.

Commingling process

Step 1: Header level commingling

When you click **Commingle** in the Commingle Purchase Orders (tdpur4210m000) session, the purchase order header fields of each purchase order are compared. If the header fields match, LN writes the corresponding lines into one new header. This process is repeated for the next header. If the header fields match, LN copies this header to the previously created header. If the fields do not match, LN creates a new header. This process is repeated for each successive header.

Step 2: Line level commingling

After comparing the order headers, lines are sorted according to purchase order line fields. Lines with, for example, the same **Item**, **Payment**, and **Payment Terms**, are commingled into one line and the original lines are stored as line details. Lines that differ only by their details fields are commingled into

the same position, but with a different sequence number, because the linked line data differs for the various lines.

If purchase order lines are project pegged, commingling of purchase order lines is subject to project combination checks. Commingling rules regarding project pegging, which you can specify in Project Pegging under Common, determine if lines with different pegs can be commingled into one purchase order line.

Prices that you specify on the purchase order are overwritten during the commingling process. If a valid price/discount structure is linked to the order line, for the total quantity of the order line's line details, LN derives the price from Pricing. If you have not defined a valid price/discount structure for the order line, LN derives the price from Item Purchase Data.

If you commingle purchase order lines that are linked to a purchase contract, the lines that are linked to the same contract are commingled. LN derives the price for the commingled order line from the contract's active purchase contract price revision. If you have not defined a valid contract price revision, LN derives the price from Item Purchase Data.

Step 3: Approval

After both line and header level commingling is carried out, you must approve the commingled order. Next, LN deletes the original order and the related LN modules are updated with the new order number. Therefore, the status in the linked order line data of those modules is changed to **Approved**.

On a sales order or service order, you can indicate whether you want the sold goods to be directly delivered. In case of a direct delivery, a sales order or service order results in a purchase order. Because the buy-from business partner delivers the goods directly to the sold-to business partner, Warehousing is not involved.

Direct delivery sales orders

To generate and process directly delivery sales orders:

Step 1: Delivery Type

To create a direct delivery sales order:

- The **Allow Purchase Orders** check box must be selected for the sales order type in the Sales Order Types (tdsls0594m000) session.
- The **Delivery Type** field must be **Direct Delivery** in the Sales Order Lines (tdsls4101m000) session or the Sales Order Planned Delivery Lines (tdsls4101m100) session.
The **Direct Delivery** delivery type can be selected as follows in these sessions:
 - Automatically, if the ordered quantity is equal to or greater than the quantity defined in the **Direct Delivery from Quantity** field of the Items - Sales (tdisa0501m000) session
 - Manually, by selecting **Direct Delivery**
 - By selecting **Generate Direct Delivery Order** from the Inventory Shortage Menu (tdsls4830s000) session that appears if an inventory shortage exists for the item

Step 2: Create a purchase order advice

After the sales order line is approved and the Generate Purchase Order Advice for Sales Order (tdsls4240m000) session is linked as an activity to the order type in the Sales Order Type (tdsls0694m000) session, a purchase order advice is or must be generated for the sales order line in the Generate Purchase Order Advice for Sales Order (tdsls4240m000) session.

This step is not applicable if the Generate Purchase Orders (tdsls4241m000) session is linked as an activity to the order type instead of the Generate Purchase Order Advice for Sales Order (tdsls4240m000) session.

Step 3: Create a direct delivery purchase order

A purchase order must be generated for the direct delivery sales order. How the purchase order is generated, depends on whether a purchase order advice already exists for the sales order line.

- **No purchase order advice**
You can generate purchase orders for direct delivery sales orders in the Generate Purchase Orders (tdsls4241m000) session. Select the **Direct Delivery** check box and specify the fields in the **Direct Delivery** group box.
- **Existing purchase order advice**
If you want LN to convert the generated purchase order advice automatically to a purchase order, you must select the **Convert Purchase Advice automatically to Purchase Order** check box in the Sales Order Parameters (tdsls0100s400) session. If this check box is cleared, you must manually confirm and transfer the purchase order advice to a purchase order in the Confirm Purchase Order Advice (whina3211m000) session and the Transfer Purchase Order Advice (whina3212m000) session.

LN uses these fields from the Purchase Order Parameters (tdpur0100m400) session to generate direct delivery purchase orders:

Order Series for Direct Delivery	Order Series for Direct Delivery
Order Type for Direct Delivery	Order Type for Direct Delivery

After a purchase order is generated, the status of the originating sales order line is Awaiting direct delivery in the Sales Order Lines Monitor (tdsls4510m100) session.

Step 4: Receive a direct delivery order

If you use advance shipping notices and you click **Receive Direct Delivery Lines** in the Shipment Notices (whinh3100m000) session, receipts for items that are purchased for a direct delivery sales order, are inserted in the Purchase Receipts (tdpur4106m000) session. If you do not use advance shipment notices, you must manually specify the receipts for direct delivery sales orders in the Purchase Receipts (tdpur4106m000) session.

You cannot *confirm* receipts in the Purchase Receipts (tdpur4106m000) session before the lot and serial set, if lots and serials must be registered, is complete.

Step 5: Communicate the deliveries to Sales

Run the Update Sales / Service Order with Delivery Information (tdpur4222m000) session to communicate the item, quantity, lot and serial information back to Sales for final receipts.

For each purchase order receipt line that is registered in the Purchase Receipts (tdpur4106m000) session, a sales order delivery line is created in the Sales Order Line (tdsls4101m900) and the Sales Order Actual Delivery Lines (tdsls4106m000) sessions.

Step 6: Send the sales invoice to the sold-to business partner

After receipts are booked in Procurement and communicated to Sales through the Update Sales / Service Order with Delivery Information (tdpur4222m000) session, you can release the sales order data for invoicing in the Release Sales Orders/Schedules to Invoicing (tdsls4247m000) session.

Step 7: Process a direct delivery order

Process the purchase order in the Process Delivered Purchase Orders (tdpur4223m000) session and the sales order in the Process Delivered Sales Orders (tdsls4223m000) session.

Direct delivery and return orders

If you want to return items that are received for the direct delivery sales order, you must manually enter a direct delivery sales return order in the Sales Order (tdsls4100m900) session.

A direct delivery purchase return order can be generated based on the **Return Order Type for Direct Deliveries** field in the Purchase Order Parameters (tdpur0100m400) session.

Next, the normal procedure for the purchase order type applies.

Direct delivery and freight orders

If you want to use Freight to manage and plan your direct deliveries, you can generate freight orders for direct deliveries.

For more information, refer to *Generating freight orders for direct delivery sales orders* (p. 39).

Direct delivery and backorders

After deliveries are communicated to Sales and less is received than ordered, a confirmed backorder is generated automatically in Procurement, irrespective of the setting of the **Confirm Back Orders automatically** check box in the Purchase Order Parameters (tdpur0100m400) session. Whether or not you must first manually confirm the backorder in Sales, depends on the setting of the **Confirm Back Orders automatically** check box in the Sales Order Parameters (tdsls0100s400) session.

Note

- You can change the backorder quantity in Sales until receipts are executed.
- You can also generate a freight order for a direct delivery backorder.
- You cannot cancel a direct delivery backorder in Procurement.

- You can only delete a direct delivery backorder in Procurement. However, the deletion is not communicated to Sales.

Direct delivery service orders

To generate and process directly delivery service orders:

Step 1: Delivery Type

1. Specify a service order and link activities to the service order in the Service Order (tssoc2100m100) session.
2. Specify a direct delivery line in the Service Order Estimated Material Costs (tssoc2120m000) session and set the **Delivery Type** field to **Supplier Direct Delivery**.

At this stage, the status of the service order is **Free**.

Step 2: Plan the service order

Use the Service Order Resource Planning (tssoc2260m000) session to plan the service order.

These fields from the Purchase Order Parameters (tdpur0100m400) session are copied to the **Purchase Order Direct Delivery** group box in the Service Order Resource Planning (tssoc2260m000) session:

- **Order Series for Direct Delivery**
- **Order Type for Direct Delivery**

Step 3: Generate and approve a direct delivery purchase order

When the status of the service order becomes **Planned**, a direct delivery purchase order is generated in the Purchase Order (tdpur4100m900) session based on the order type and series from the Purchase Order Parameters (tdpur0100m400) session. You must approve the purchase order.

Step 4: Release the service order

Release the service order in the Release Service Orders (tssoc2200m000) session. You cannot receive the direct delivery purchase order before the status of the service order is **Released**.

Step 5: Receive the direct delivery order

If you use advance shipping notices, receipts for items that are purchased for a direct delivery service order are inserted in the Purchase Receipts (tdpur4106m000) session when you click **Receive Direct Delivery Lines** in the Shipment Notices (whinh3100m000) session. If you do not use advance shipment notices, you must manually specify the receipts for direct delivery service orders in the Purchase Receipts (tdpur4106m000) session.

You cannot *confirm* receipts in the Purchase Receipts (tdpur4106m000) session before:

- The status of the linked service order is **Released**.
- The lot and serial set, if lots and serials must be registered, is complete.

Step 6: Communicate the deliveries to Service

Run the Update Sales / Service Order with Delivery Information (tdpur4222m000) session to communicate the item, quantity, lot and serial information back to Service for final receipts.

Step 7: Complete the service order

After all goods are received and all activities are completed on the service order, you can change the service order status to **Completed**.

Step 8: Send the invoice to the sold-to business partner

After receipts are booked in Procurement and communicated to Service through the Update Sales / Service Order with Delivery Information (tdpur4222m000) session, you can invoice the service order if its status is **Costed**. You can set the service order status to **Costed** in the Cost Service Orders (tssoc2290m000) session.

Step 9: Process a direct delivery order

Process the purchase order in the Process Delivered Purchase Orders (tdpur4223m000) session and the service order in the Close Service Orders and Copy to History (tssoc2201m000) session.

Direct delivery and return orders

Service engineers who carry out repairs at your sold-to business partner's site, might not use all the parts that are received for the direct delivery service order. In this case, you can directly return the unused materials to the buy-from business partner or to your own warehouse via a direct delivery return order.

After a service order is set to **Completed**, and the **CumulativeQuantity** is reduced in the Service Order Actual Material Costs (tssoc2121m000) session, use the **Return unconsumed Items Direct to Supplier** check box to indicate whether you want to return the excess quantity either to your company's warehouse or directly to the buy-from business partner.

If parts must be returned to the supplier on completing the order, which you can indicate by selecting the **Return unconsumed Items Direct to Supplier** check box and specifying a **Return Reason** in the Service Order Actual Material Costs (tssoc2121m000) session, another material line is automatically generated with the **Delivery Type** field set to **Supplier Direct Return**. Next, a direct delivery return purchase order is generated automatically in the Purchase Order (tdpur4100m900) session, based on the **Return Order Type for Direct Deliveries** field in the Purchase Order Parameters (tdpur0100m400) session.

Direct delivery and freight orders

If you want to use Freight to manage and plan your direct deliveries, you can generate freight orders for direct deliveries.

For more information, refer to *Generating freight orders for direct delivery service orders* (p. 42).

Direct delivery and backorders

After the status of a service order is **Completed**, and less is received than ordered, a confirmed backorder is generated automatically. The setting of the **Confirm Back Orders automatically** check box in the Purchase Order Parameters (tdpur0100m400) session is ignored.

Note

- You can change the backorder quantity, delivery date, and delivery address in Service until receipts are executed.
- You can also generate a freight order for a direct delivery backorder.
- You cannot cancel a direct delivery backorder in Procurement. You must change the **To be Delivered Quantity** quantity to zero in the Service Order Actual Material Costs (tssoc2121m000) session.
- You can delete a direct delivery backorder only in Procurement. The deletion is not communicated to Service.

Chapter 5

Cross-docking and splitting deliveries

5

To fulfill an existing sales order for which no inventory is available, inbound goods can be immediately taken from the receipt location to the staging location for issue. This process is called cross-docking.

Cross-docking types

- **Static cross-docking**
Static cross-docking means that you cannot maintain the cross-docking order or order lines in Warehousing.
- For static cross-docking, the **Planned Receipt Date** of the purchase order is calculated as follows: **Planned Delivery Date** in the Sales Orders (tdsls4100m000) session + **Cross-dock Lead Time** in the Warehouse - Item (whwmd2110s000) session.
- **Dynamic cross-docking**
With dynamic cross-docking, you can:
 - Create cross-docking orders and order lines in Warehousing.
 - Change or cancel the cross-docking order and order lines at several moments during the cross-docking process in Warehousing.
 - Let LN automatically create cross-docking orders and/or cross-docking order lines in Warehousing.

Dynamic cross-docking is not further discussed in this topic.

Cross-docking orders

To generate cross-docking orders:

Step 1: Create a cross-docking sales order

- Set the **Delivery Type** field to **Cross-docking** in the Sales Order Lines (tdsls4101m000), Sales Order Planned Delivery Lines (tdsls4101m100), or Sales Order Line Components (tdsls4163m000) session.

The **Cross-docking** delivery type can be specified as follows in these sessions:

- Manually, by selecting **Cross-docking**
- By selecting **Generate Cross-dock Order** from the Inventory Shortage Menu (tdsls4830s000) session that appears when an inventory shortage exists for the item
- After you run the Generate Purchase Order Advice for Sales Order (tdsls4240m000) session with the **Warehouse** check box selected for sales order lines that have the **Delivery Type** field set to **Warehouse**

The **Allow Purchase Orders** check box must be selected for the sales order type in the Sales Order Types (tdsls0594m000) session.

Step 2: Create a purchase order advice

After the sales order line is approved and if the Generate Purchase Order Advice for Sales Order (tdsls4240m000) session is linked as an activity to the order type in the Sales Order Type (tdsls0694m000) session, a purchase order advice must be generated for the sales order line in the Generate Purchase Order Advice for Sales Order (tdsls4240m000) session.

This step is not applicable if the Generate Purchase Orders (tdsls4241m000) session is linked as an activity to the order type instead of the Generate Purchase Order Advice for Sales Order (tdsls4240m000) session.

Step 3: Create a cross-docking purchase order

A purchase order must be generated from the sales order. How the purchase order is generated, depends on whether a purchase order advice already exists for the sales order line.

- **No purchase order advice**
You can generate cross-docking orders in the Generate Purchase Orders (tdsls4241m000) session. Select the **Cross-docking** check box and specify the fields in the **Purchase Order** group box.
- **Existing purchase order advice**
To automatically convert the generated purchase order advice to a purchase order, select the **Convert Purchase Advice automatically to Purchase Order** check box in the Sales Order Parameters (tdsls0100s400) session. If this check box is cleared, you must manually confirm and transfer the purchase order advice to a purchase order in the Confirm Purchase Order Advice (whina3211m000) and Transfer Purchase Order Advice (whina3212m000) sessions.

Step 4: Release the cross-docking order to Warehousing

Release the purchase order to Warehousing in the Release Purchase Orders to Warehousing (tdpur4246m000) session.

Release the sales order to Warehousing in the Release Sales Orders to Warehousing (tdsls4246m000) session.

Splitting deliveries

Splitting deliveries is in fact splitting order lines. When purchase order lines or sales order lines are generated, you can split the order lines into several delivery lines. Consequently, multiple deliveries take place on one order line.

To split deliveries, click:

- **Planned Deliveries** on the appropriate menu of the Sales Order Lines (tdsls4101m000) session. The Sales Order Line (tdsls4101m900) session starts in which you can enter your data.
- **Order Line Details** on the appropriate menu of the Purchase Order Lines (tdpur4101m000) session. The Purchase Order Line Details (tdpur4101m200) session starts in which you can enter your data.

Splitting deliveries for cross-docking orders

If a cross-docking order exists and a split delivery is required, you can further split a delivery line into several deliveries by clicking:

- **Split Delivery Line** in the Sales Order Planned Delivery Lines (tdsls4101m100) session
- **Split** in the Purchase Order Line Details (tdpur4101m200) session

As a result, the Split Line (tdpur4000s000) session starts in which you can split the delivery line into several deliveries. Consequently, the link between Procurement and Sales is kept.

Important!

You must make a distinction between splitting and adding a delivery line. When you add a delivery line to increase the order quantity in the Sales Order Line (tdsls4101m900), or the Purchase Order Line Details (tdpur4101m200) session, the link between the sales order and the purchase order is not kept. When you split a delivery line into several deliveries in the Split Line (tdpur4000s000) session, the link between the sales order and the purchase order is kept.

For a cross-docking order, several purchase order line details can be linked to one sales order line, or several sales order delivery lines can be linked to one purchase order line. Therefore, if you make changes to the sales order (delivery) line, the link with the purchase order line (detail)(s) can be broken. LN breaks the link with the purchase order line (detail)(s) if you change these fields in the Sales Order Lines (tdsls4101m000) or Sales Order Planned Delivery Lines (tdsls4101m100) session:

- **Item**
- **Engineering Item Revision**
- **Lot**

- **Lot Selection**
- **Warehouse**
- **Effectivity Unit**, provided the old and the new effectivity unit are not interchangeable.

Example

If two sales order delivery lines are linked to a purchase order line and, on the first sales order delivery line, you change one of the above mentioned fields, the link between the first sales order delivery line and the purchase order line is broken. The link between the second sales order delivery line and the purchase order line still exists. When the second sales order delivery line is also disconnected from the purchase order line, the link between the sales order and the purchase order is removed, which you can view in the Linked Order Line Data (tdsls4102s200) session.

Note

- When you change sales or purchase order lines that are linked, LN notifies you about the link between the sales order and the purchase order.
- When you cancel or delete sales or purchase order lines that are linked, the link is broken.
- When you cancel or delete a sales order line for which a purchase order advice exists, the purchase order advice is deleted.

Integration Procurement and Freight

The Freight package can be used to handle transportation requirements. If the transportation of goods must be arranged in Procurement, and consequently goods must be collected from a supplier, you can generate a freight order from the purchase order. The supplier must know the date on which the goods must be ready. As a result, you must consider the planned load date in the purchase order as the shipment date; when to pick up the goods from the supplier.

Integration between Freight Order Control and Procurement

During the planning and execution of a freight order, its status often changes. If a freight order is created from Procurement, the progress of the shipment and loads can be exchanged and information can be shared between Freight Order Control and Procurement.

For more information, refer to *Integration Freight Order Control and Procurement* (p. 36).

Integration between freight Invoicing and purchase invoicing

The freight rate that you must pay to the carrier, is called freight costs. You can invoice your business partner for the freight costs, based on:

- **Freight Costs**
- **Freight Costs (Update Allowed)**
- **Client Rates**

For more information, refer to *Integration freight invoicing and purchase invoicing* (p. 37).

Integration between landed costs and Freight

You can link estimated or actual freight costs as landed costs to a purchase order for which a freight order is or will be generated.

For more information, refer to Landed costs – freight orders.

Integration Freight Order Control and Procurement

For companies that want to do their own freight planning, an integration is available between Freight Order Control and Procurement to generate freight orders from purchase orders.

Freight orders can be generated from purchase orders that are manually created, generated by LN, or that originate from a converted [response line](#).

RFQ response settings

To enable the generation of freight orders from purchase orders that originate from a converted response line, and to provide the necessary freight-related information when the response line is converted to a purchase order, specify these fields in the RFQ Responses (tdpur1506m000) session:

- Select the **Generate Freight Orders from Purchase** check box
- Enter a service level in the **Freight Service Level** field if you want the same service level to be used in the freight order as in the purchase order
- Select the **Carrier Binding** check box if you want the same carrier to be used in the freight order as in the purchase order
- Enter a date in the **Planned Receipt Date** field, which must be considered as the unload date

Note

Freight orders can only be generated from purchase orders.

Purchase order settings

To enable the generation of freight orders from purchase orders, these settings must be applied in the Purchase Order Lines (tdpur4101m000) or Purchase Order Line Details (tdpur4101m200) session:

- The **Generate Freight Orders from Purchase** check box must be selected
- The **Carrier Binding** check box must be selected if you want the same [carrier](#) to be used in the freight order as in the purchase order.
- A service level must be entered in the **Freight Service Level** field if you want the same service level to be used in the freight order as in the purchase order.
- A date must be entered in the **Planned Receipt Date** field. If the purchasing company is responsible for transportation, you must consider this as the [unload date](#); the date when the goods must be available in the warehouse.
- A [planned load date](#) must be entered in the **Planned Load Date** field. If the purchasing company is responsible for transportation, this is the date on which the suppliers must be ready with the goods on their site. This date can be considered as the shipment date.

Generating freight orders from purchase orders

If the **Generate Freight Orders from Purchase** check box is selected in the Items - Purchase Business Partner (tdipu0110m000) session and a purchase order is generated for the item – purchase business

partner combination, after approval, LN checks whether Generate Freight Orders (tdpur4220m000) is linked as an activity to the order type in the Purchase Order Type - Activities (tdpur0560m000) session to determine the freight order generation method. The freight order can be manually or automatically generated for the purchase order.

After a freight order is generated from a purchase order (detail) line, the status of the freight order is **Expected**. The information that goes to the freight order includes only shipping related data, such as planned dates, addresses, shipping constraints, carrier, route, delivery terms, and planning responsibility. When a load plan is created for the freight order, the status of the freight order is **Planned**. The load plan can only be made actual in Freight, and the status of the freight order can be **Actual** after the purchase order (detail) line is released to Warehousing.

If the freight order status is **Planned**, on the appropriate menu of the Purchase Order Lines (tdpur4101m000) or Purchase Order Line Details (tdpur4101m200) session, you can click:

- **Freight Details** to view freight details, such as information about shipments and loads, the used carrier, the dates that the shipments will be executed and the quantities to be shipped in the Freight Details (fmlbd3552m000) or Freight Details (fmfoc3501m000) sessions.
- **Purchase Order Line - Linked Information** to view linked freight orders in the Purchase Order Line - Linked Information (tdpur4502s000) session.

Note

If you want to modify, block, delete, or cancel a purchase order and linked freight order, the status of the freight order must be **Expected**, **Planned**, or **Actual**.

After the **Planned Receipt Date** is specified on the purchase order (detail) line, Freight determines whether the transportation lead time is sufficient to deliver the goods in time. If not, you must either change the **Planned Receipt Date** or select another carrier. Due to the type of transport or the availability of the carrier, the **Planned Receipt Date** can differ from the date as specified on the purchase order (detail) line. In the Purchase Orders (tdpur4100m000) session, you can click Printing and then **Print with Deviation in the Shipment Dates(Dummy for FM)** to start the Print Orders with Deviating Shipment Dates (fmlbd3450m000) session. With this session, you can generate a difference report that lists all orders for which the original dates differ from those in the load plan of Freight

Integration freight invoicing and purchase invoicing

If a purchasing company is responsible for the transportation of goods and hires a carrier to transport the goods, after transportation, the carrier sends an invoice to the purchasing company. The freight rate that a company must pay to the carrier is called freight costs.

Master data

To invoice your external business partner for freight, specify the following master data:

- In the Buy-from Business Partner (tccom4120s000) session, select the **Invoice Business Partner for Freight** check box to indicate that you want the business partner to pay for the freight costs you make.
- In the Invoice-to Business Partner (tccom4112s000) session, define the **Invoice for Freight Based On** field as:
 - **Freight Costs**
If you want the freight costs for a shipment or load to be based on the best information currently available. The freight invoice amount is based on a carrier rate book in Pricing. These costs are also known as estimated freight costs.
 - **Freight Costs (Update Allowed)**
If you want the freight costs to be invoiced after matching the carrier invoice to a certain load or shipment. Initially, the freight invoice amount is based on a carrier rate book in Pricing. These costs are also known as actual freight costs.
 - **Client Rates**
If you want the freight invoice amount to be based on a client rate book in Pricing. This rate book stores freight service rates for a specific business partner.
- If the **Invoice for Freight Based On** field is **Freight Costs** or **Freight Costs (Update Allowed)**, and if you want to add a cost plus amount or a cost plus percentage to the invoice, specify these fields in the Invoice-to Business Partner (tccom4112s000) session:
 - **Additional Percentage**
The percentage with which the freight invoice amount must be increased
 - **Additional Amount**
The amount with which the freight invoice amount must be increased

Note

These master data fields are used as a default for the same fields in the Purchase Orders (tdpur4100m000) and RFQ Bidders (tdpur1505m000) sessions, but can be overwritten in these sessions.

Invoicing methods

A company can invoice freight rates to the external business partner, based on:

- **Freight Costs**
- **Freight Costs (Update Allowed)**
- **Client Rates**

Freight Costs

Freight calculates the freight invoice amount based on the best information currently available (estimated freight costs). These freight costs are retrieved from a carrier rate book in Pricing and are updated each time a change is made to the shipment/load. Freight releases the freight invoice to Invoicing.

Freight Costs (update allowed)

Freight prorates the freight amount for the purchase order (estimated freight costs) based on the entire load in Freight. It occurs that, when Freight releases the freight invoice with the estimated freight costs to Invoicing, the invoice is sent before the actual costs are received from the carrier. In this case, first the estimated freight costs are determined, based on the carrier rate books as stored in Pricing. In a later stage, after the carrier invoice is received and matched in Accounts Payable, the actual costs can be specified. Consequently, you can invoice your business partner the difference between the estimated costs and the actual costs.

Note

If you want to invoice your business partner with the difference, LN can generate an additional invoice. The invoice is based on the data you specify in the **If amount greater than** or **If greater than** fields of the Freight Invoicing Parameters (fmfri0100m000) session.

Client Rates

If the invoicing method is **Client Rates**, the invoice amount is based on fixed agreements with customers about the freight rates that can be charged to them in order to be compensated for the freight costs that a company must pay to the carrier.

Freight orders for direct delivery orders

Generating freight orders for direct delivery sales orders

On a sales order or sales quotation, you can indicate whether you want the sold goods to be directly delivered. By means of a purchase order that is linked to a sales order, the buy-from business partner delivers the goods directly to the sold-to business partner. A direct delivery by-passes your warehouse.

You can use Freight to manage and plan your direct deliveries.

Direct delivery orders

If you want to generate freight orders for direct deliveries, the following applies:

- The freight order must be generated from the purchase order and not from the sales order. Therefore, if the **Delivery Type** field is **Direct Delivery** in the Sales Order Lines (tdsls4101m000) session:
 - The activity Generate Freight Orders (tdsls4222m000) is no longer linked to the sales order.
 - The **Generate Freight Order from Sales** check box is renamed into the **Generate Freight Order from Purchase** check box. Whether this check box must be selected, is defaulted from the **Generate Freight Orders from Purchase** check box in the Items - Purchase Business Partner (tdipu0110m000) session.

- If, in the Sales Order Lines (tdsls4101m000) session, the **Delivery Type** field is set to **Direct Delivery** after a freight order was generated, the freight order is deleted.
- Either the **Invoice for Freight** check box can be selected in the Sales Order Lines (tdsls4101m000) session, or the **Invoice External BP** check box can be selected in the Purchase Orders (tdpur4100m000) session. You cannot select both check boxes.
- Sales order fields, such as **Carrier/LSP**, **Route**, and **Freight Service Level**, are leading. Therefore, these fields must be specified on the sales order and not on the purchase order. The purchase order data is unavailable.
- To calculate the freight invoice amount for the direct delivery, click **Freight Amount** in the Sales Order Lines (tdsls4101m000) session. The purchase office that is linked to the buy-from business is used for this calculation. LN displays the calculated freight invoice amount in the **Freight Amount** field of the Sales Order Lines (tdsls4101m000) session.

Note

After the **Planned Delivery Date** is entered on the sales order line, LN determines whether the transportation lead time is sufficient to deliver the goods in time. To calculate the transportation time, the ship-from business partner's ship-from address and the ship-to business partner's ship-to address are used. If the goods cannot be delivered in time, you must change the **Planned Receipt Date** or select another carrier on the order line.

If a freight order is linked to a direct delivery order, the date fields have different names in the various modules. See this table:

-	Sales	Purchase	Freight	ASN
Moment of shipment of the goods from the supplier.	planned delivery date	load date	load date	shipping date
Moment of receipt of the goods by the sold-to business partner.	planned receipt date	planned receipt date	unload date	planned delivery date

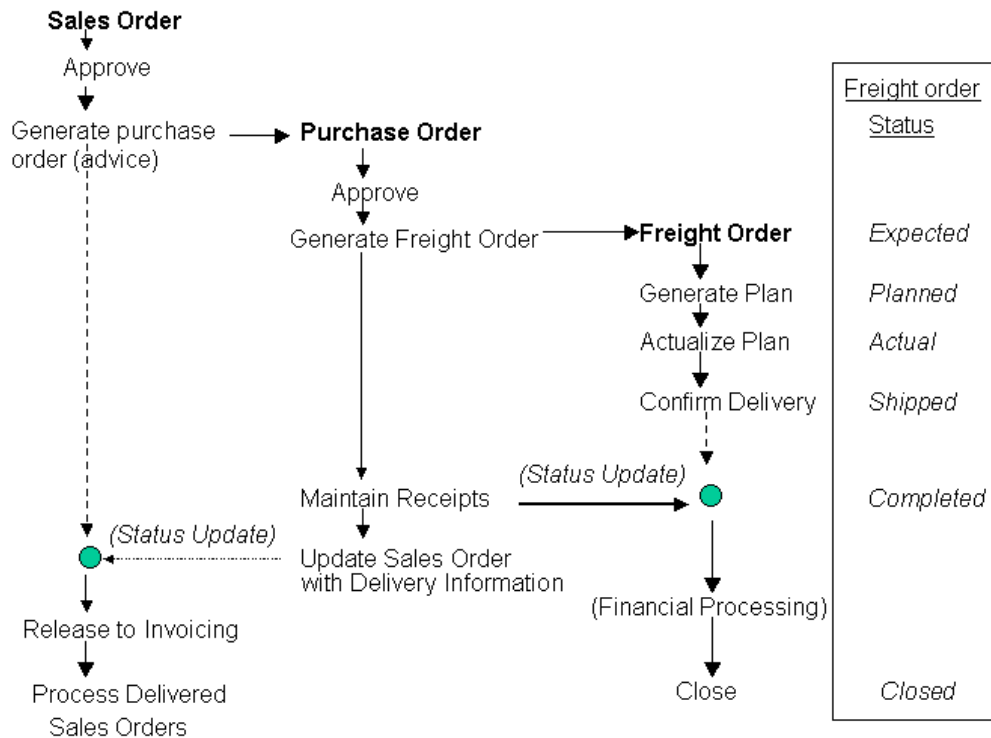
Freight orders

- After a direct delivery purchase order is generated for the sales order, a freight order can be generated for the direct delivery order in the Generate Freight Orders (tdpur4220m000) session. For details on creating a direct delivery sales order, refer to *Direct delivery sales orders* (p. 25).
- The purchase order number as well as the sales order number are displayed on the freight order.
- When the freight order is generated, it is linked to the sales order line in the Linked Order Line Data (tdsls4102s200) session and to the purchase order line in the Purchase Order Line - Linked Information (tdpur4502s000) session.

- When the purchase order is received in the Purchase Receipts (tdpur4106m000) session, freight-related fields must be specified in this session, such as the carrier that is used for freight cost calculation. After final receipt, you must communicate the direct delivery information to the sales order by means of the Update Sales / Service Order with Delivery Information (tdpur4222m000) session.

Procedure

The procedure for direct delivery orders with linked freight orders is explained in this diagram:



Note

The freight order that is linked to a direct delivery purchase order is deleted if any of these actions are performed for the direct delivery purchase order:

- Updated by Sales. You must generate a new freight order, if required.
- Deleted in Procurement.
- Canceled by Sales.

Generating freight orders for direct delivery service orders

On a service order, you can indicate whether you want the sold goods to be directly delivered. By means of a purchase order that is linked to a service order, the buy-from business partner delivers the goods directly to the sold-to business partner. A direct delivery by-passes your warehouse.

You can use Freight to manage and plan your direct deliveries.

Direct delivery orders

If you want to generate freight orders for direct deliveries, the following applies:

- The freight order must be generated from the purchase order, but the service order fields are leading. Therefore, on the **Freight** tab of the Service Order Estimated Material Costs (tssoc2120m000) session, freight information must be specified on the service order. The purchase order data is disabled.
- You must use shipping office matrices to determine which shipping office is responsible for handling the freight orders. For more information, refer to Shipping office matrices.
- The **Invoice for Freight** field in the Service Order Estimated Material Costs (tssoc2120m000) session determines the value of the **Invoice External BP** check box in the Purchase Orders (tdpur4100m000) session.
If this field is:
 - **Not Applicable**
The **Invoice External BP** is selected
 - **By Service or By Freight Management**
The **Invoice External BP** is cleared.
- To calculate the freight invoice amount for the direct delivery, click **Freight Amount** in the Service Order Estimated Material Costs (tssoc2120m000) session. The purchase office that is linked to the buy-from business is used for this calculation. The calculated freight invoice amount is shown in the **Freight Amount** field of the Service Order Estimated Material Costs (tssoc2120m000) session.

Note

After the **Planned Delivery Time** is entered on the estimated material cost line, LN determines whether the transportation lead time is sufficient to deliver the goods in time. To calculate the transportation time, the ship-from business partner's ship-from address and the ship-to business partner's ship-to address are used. If the goods cannot be delivered in time, you must change the **Planned Receipt Time** or select another carrier on the estimated material cost line.

If a freight order is linked to a direct delivery order, the date fields have different names in the various modules. See this table:

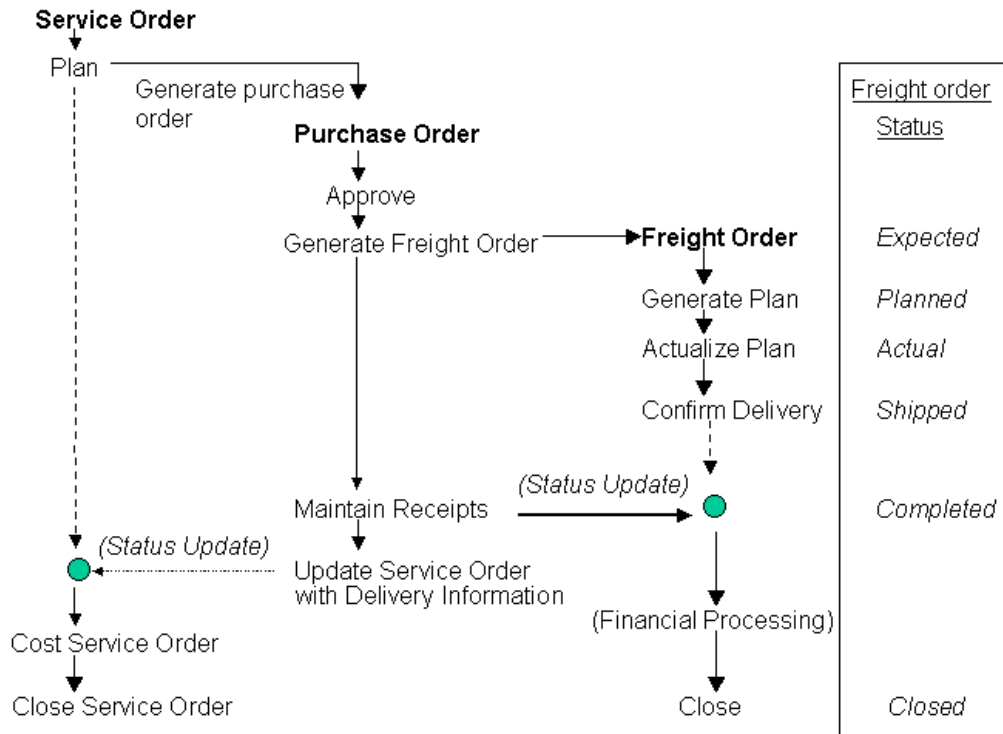
-	Service	Purchase	Freight	ASN
Moment of shipment of the goods from the supplier	planned delivery time	load date	load date	shipping date
Moment of receipt of the goods by the sold-to business partner	planned receipt time	planned receipt date	unload date	planned delivery date

Freight orders

- After a direct delivery purchase order is generated for the service order, a freight order can be generated for the direct delivery order in the Generate Freight Orders (tdpur4220m000) session. For details on creating a direct delivery service order, refer to *Direct delivery service orders* (p. 28).
- The purchase order number as well as the service order number are displayed on the freight order.
- When the freight order is generated, it is linked to the service order line in the Related Orders (tsmdm4500m000) session and to the purchase order line in the Purchase Order Line - Linked Information (tdpur4502s000) session.
- When the purchase order is received in the Purchase Receipts (tdpur4106m000) session, freight related fields must be entered in this session. For instance, you must enter a carrier that is used for freight cost calculation, if no carrier is known yet. After final receipt, you must communicate the direct delivery information to the service order by means of the Update Sales / Service Order with Delivery Information (tdpur4222m000) session.

Procedure

The procedure for direct delivery service orders with linked freight orders is explained in this diagram:



Note

If the direct delivery purchase order is:

- Updated by Service, the linked freight order is deleted. You must generate a new freight order, if required.
- Deleted in Procurement, the linked freight order is also deleted.
- Canceled by Service, the linked freight order is deleted.

Chapter 7

Purchase orders and work/service orders

7

Integration Procurement and Service

With Depot Repair and Field Service you can maintain, repair, or upgrade parts. An integration is available between Service and Procurement to buy parts or to subcontract the maintenance, repair or upgrade.

The following depot repair and field service processes are supported:

- Purchasing additional parts
- Purchasing subcontracting activities

Purchasing additional parts

If an organization that carries out the repairs or upgrades is not equipped with all the necessary parts, additional parts may be required from a third party. A purchase order can be generated from a work order (depot repair) or service order (field service) to buy these parts.

If the **Inventory Commitments Required** check box is selected in the Maintenance Sales Control Parameters (tsmsc0100m000) and/or Work Order Parameters (tswcs0100m000) session, or in the Service Order Parameters (tssoc0100m000) session, the additional parts that are received on a purchase order can be committed. This is to assure that the goods are used only by the work/service order that created the purchase order and not by any other order. This is called an inventory commitment of the goods for the work/service order. A purchase order that includes additional items must be released to Warehousing. Consequently, Procurement passes the order origin, work/service order, work/service order line and required quantity to Warehousing. In Warehousing, the receipts are committed. Warehousing will commit the received quantity until the total required quantity is committed for the order.

For more information, refer to *Purchasing additional parts* (p. 46).

Purchasing subcontracting activities

If an organization that is responsible for the repairs or upgrades hires another company (the subcontractor) to carry out the maintenance, repair, or upgrade, you can specify work order- or service order- activities in Service from which a purchase requisition or purchase order can be generated in Procurement. Both for depot repair and field service, materials can be sent to the subcontractor. For depot repair, also the item to be maintained can be sent.

For more information, refer to *Service subcontracting in Procurement* (p. 47).

Purchasing additional parts

If a department that carries out indoor repairs or upgrades is not equipped with all the necessary parts and needs additional parts from a third party, a purchase order can be generated from a work order (depot repair) or service order (field service) to buy these parts.

Step 1: Create a work order or service order

1. In the Work Order (tswcs2100m100) or Service Order (tssoc2100m100) session, specify an item for which you need additional parts.
2. Perform one of these steps:
 - a. **Work order**
On the appropriate menu of the Work Order (tswcs2100m100) session, click **Material Resources** to add the required additional parts to the work order in the Work Order Material Resources (tswcs4110m000) session.
 - b. **Service order**
On the Materials tab in the Service Order (tssoc2100m100) session, which refers to the Service Order Material Costs (tssoc2122m000) session, add the required additional parts to the service order.
3. Specify an item and select **Via Purchase** (work order), or **By Purchase Order** or **By Field Purchase** (service order) in the **Delivery Type** field to determine that it is Procurement that delivers the materials to the work order or service order.

You can also specify activities for a work order or service order.

After you created the work order or service order header:

1. On the Activities tab of the Work Order (tswcs2100m100) or Service Order (tssoc2100m100) session, specify an activity.
2. In the Work Order Activity (tswcs2610m000) or Service Order Activity (tssoc2110m100) session, on the relevant tab, add material resources to the work order activity, or materials to the service order activity.
3. In the Work Order Material Resources (tswcs4110m000) or Service Order Material Costs (tssoc2122m000) session, specify an item and select **Via Purchase** (work order) or **By Purchase Order/ By Field Purchase** (service order) in the **Delivery Type** field.

The date you specify in the **Earliest Start Time** field or the **Planned Start** field of the work order or service order is displayed as the planned delivery date in the purchase order.

Step 2: Plan a work order or service order

- **Work order**
Plan the work order in the Work Order Planning/Releasing (tswcs3200m000) session to generate a purchase order. After the work order is planned successfully, the status of the work order is **Planned** and a purchase order is generated with order type **Maintenance**. This can be viewed in the **Origin** field of the Purchase Orders (tdpur4100m000) session.
- **Service order**
Plan the service order in the Service Order Resource Planning (tssoc2260m000) session to generate a purchase order. After the service order is planned successfully, the status of the work order is **Planned** and a purchase order is generated with order type **Service**. This can be viewed in the **Origin** field of the Purchase Orders (tdpur4100m000) session.

On the [appropriate](#) menu of the Purchase Order Lines (tdpur4101m000) session, click **Purchase Order Line - Linked Information** to view the original maintenance work order or service order in the Purchase Order Line - Linked Information (tdpur4502s000) session.

Step 3: Commit inventory for a work order or service order

The receipts for additional parts are carried out in Warehousing.

If the **Inventory Commitments Required** check box is selected in the Maintenance Sales Control Parameters (tsmsc0100m000), Work Order Parameters (tswcs0100m000), or Service Order Parameters (tssoc0100m000) session, the additional parts that are received on a purchase order can be committed. If this is required, a purchase receipt automatically results into an [inventory commitment](#) for the work order or service order in Warehousing. Warehousing commits the received quantity until the total required quantity is committed for the order.

In the Purchase Order Lines (tdpur4101m000) session, these fields provide information about the commitment of goods:

- **Inventory Allocated**
- **Committed Inventory**

Service subcontracting in Procurement

The [service subcontracting](#) functionality enables purchase requisitions, requests for quotation (RFQs), and purchase orders to include subcontracted items.

Service subcontracting is supported with and without material flow. When purchasing subcontracting service activities from Depot Repair or Field Service, materials can be supplied to the subcontractor. In case of Depot Repair, also the complete item to be maintained (subassembly) can be supplied to the subcontractor.

Master data

Before you can generate subcontracting purchase documents from Service, you must specify the master data.

For more information, refer to Data setup for service subcontracting with material flow (Depot Repair).

Generating purchase documents from Service

Purchase requisitions and purchase orders with subcontracted items are generated from Service; either from a work order activity in case of depot repair, or from a service order activity in case of field service.

- **Depot repair**

A purchase requisition or purchase order is generated of origin **Maintenance** when the **Activity Status** of a work order activity changes to **Released** in the Work Order (tswcs2100m100) session.

The purchase requisition or purchase order can include a cost or service item, or a purchased or manufactured item.

If the **Supply Item to Subcontractor** check box is selected in the Reference Activities (tsacm1101m000) session, the (purchased or manufactured) item must be supplied to the subcontractor.

If the **Supply Material to Subcontractor** check box is selected for the item in the Reference Activities (tsacm1101m000) session, materials must be supplied to the subcontractor for the item.

You can view the supplied items and materials in the Purchase Order Material Supply Lines (tdpur4116m000) session.

- **Field service**

A purchase requisition or purchase order is generated of origin **Service** when the **Activity Status** of a service order activity changes to **Planned** in the Service Order (tssoc2100m100) session.

The purchase requisition or purchase order always includes a cost or service item.

If the **Supply Material to Subcontractor** check box is selected for the item in the Reference Activities (tsacm1101m000) session, materials for the item can also be supplied to the subcontractor. You can view these materials in the Purchase Order Material Supply Lines (tdpur4116m000) session.

Purchase requisitions

Step 1: Generating subcontracting requisitions

A purchase requisition can be generated from a work order activity, or service order activity.

For a subcontracted requisition line:

- The **Subcontracted** check box is selected in the Purchase Requisition Lines (tdpur2502m000) session
- The work order, the service order, the reference activity, and the material supply information are displayed in, or the details can be accessed using the Linked Requisition Line Data (tdpur2502s000) session

Step 2: Approving subcontracting requisitions

If the **Submit Generated Requisitions Automatically** check box is selected in the Purchase Requisition Parameters (tdpur0100m200) session, LN submits the generated purchase requisitions for approval.

Note: if this check box is selected, the purchase requisition cannot be updated before approval. Updates can be made only if the requisition is rejected by the approver.

For more information, refer to Purchase requisition approval process.

Step 3: Converting subcontracting requisitions

An approved subcontracting requisition can be converted to a purchase order or an RFQ in the Convert Purchase Requisitions (tdpur2201m000) session.

The following is applicable:

- If a suitable buy-from business partner and price are retrieved for the subcontracted item, the requisition can be converted to a purchase order.
- If no suitable buy-from business partner or price can be retrieved or the price requires negotiation, the requisition can be converted to an RFQ.

If an RFQ is generated for a subcontracting requisition, you cannot delete the requisition before the RFQ is converted to a purchase order.

For more information, refer to Purchase requisition conversion process.

Requests for quotation (RFQs)

After a requisition with a subcontracted item is converted to an RFQ, the generated RFQ's origin is set to **Requisition**.

For a subcontracted RFQ line:

- The **Subcontracted** check box is selected in the Request for Quotation Lines (tdpur1502m000) and RFQ Responses (tdpur1506m000) sessions
- The work order, the service order, the reference activity, and the material supply information are displayed in, or the details can be viewed using the Linked RFQ Data (tdpur1502s000) session

The generated RFQ must be converted to a purchase order in the Convert RFQs (tdpur1202m000).

An RFQ line with the origin **Requisition** cannot be deleted before conversion. If more than one alternative is available for a line, alternatives can be deleted. However, the first alternative (alternative 0) must remain.

Purchase orders

Purchase orders lines with subcontracted items can be generated from Service or from a converted requisition or RFQ.

For a subcontracted purchase order line:

- The **Subcontracted** check box is selected in the Purchase Order Lines (tdpur4101m000) session.
- The work order, the service order, and the reference activity are displayed in the Purchase Order Line - Linked Information (tdpur4502s000) session.
- The material supply information is displayed in the Purchase Order Material Supply Lines (tdpur4116m000) session, from which supply orders can also be generated. A warehouse transfer order, or sales transfer order must be generated to transfer the material from the component warehouse (supply-from warehouse) to the administrative warehouse (supply-to warehouse), which represents the subcontractor's warehouse.
- If the item to be repaired (subassembly) is serialized, the item with the proper serial number can be sent to the subcontractor and received. As a result, the purchase order line and material supply line include the lot and serial information.
- A subassembly can be owned by a customer. As a result, a purchase order line and material supply line support sending and receiving customer owned items.

After the purchase order is generated, the linked service order or work order is updated with the purchase order number and the buy-from business partner.

Receipts and consumptions

For a subcontracted item of the type **Cost** or **Service**, the receipts can be processed in Procurement or Warehousing. This is determined by the **Release to Warehouse** check box in the Items - Purchase (tdipu0101m000) session.

LN generates a trigger from Procurement or Warehousing, to Service on the receipt of the item.

Based on the receipt information, Service issues the materials from inventory and updates the consumed quantities on the material supply lines.

Service subcontracting prices

If a requisition is generated from Service and the **Source of Price** field is set to **Reference Activity** in the Items - Purchase (tdipu0101m000) session, LN defaults the purchase price from Service on the requisition line. After the requisition is converted to a purchase order, this purchase price is also defaulted on the order line and no discounts are retrieved.

If the **Source of Price** field is set to **Price Book / Contract**, price data is not defaulted on the requisition line. When the requisition is converted to a purchase order, the purchase price and discounts are retrieved for the purchase order line, based on the general search logic utilized for retrieving pricing information.

For RFQs, the requisition line price is defaulted as the **Target Price** in the Request for Quotation Lines (tdpur1502m000) session. After the requisition (with or without the price) is converted to an RFQ, LN overwrites the requisition line with the price and discounts, specified by the bidders on the RFQ response.

Purchase backorders

If a final receipt is made for a purchase order (detail) line and only a part of the goods or none of the goods are received, a backorder is created.

Note

Before purchase backorders can be generated, the **Back Orders Allowed** check box must be selected in the Purchase Order Parameters (tdpur0100m400) session.

Backorders can be automatically or manually confirmed, which you can specify in the **Confirm Back Orders automatically** check box of the Purchase Order Parameters (tdpur0100m400) session.

If the receipt is a final receipt, the following results in a backorder:

- The received quantity of the purchase order line is less than the ordered quantity at the time of delivery date.
- The received quantity of the goods is (partially) rejected during inspection and the **Payable to Supplier** check box is cleared in the Inventory Handling Parameters (whinh0100m000) session.
- The received quantity is equal to the ordered quantity, but the user changes the backorder quantity from zero into a higher value.

Sessions with backorder information

You can view:

- The ordered quantity, received quantity, rejected quantity (destroyed and returned), quantity on the reject location, backorder quantity, and the most recent receipt number in the Potential Purchase Back Orders (tdpur4101m700), Purchase Orders - Receipt Overview (tdpur4531m000), and Purchase Order Lines (tdpur4101m000) sessions.
- The confirmed backorders for the purchase orders in the Confirmed Purchase Back Orders (tdpur4101m800) session.

Backorders - automatic confirmation

If the **Confirm Back Orders automatically** check box is selected in the Purchase Order Parameters (tdpur0100m400) session, LN automatically confirms backorders.

Received quantity is less than ordered

A distinction is made for items that are received for:

- Regular purchase orders
- Direct delivery purchase orders

Note

For regular purchase orders, the **Combine Open Backorders** check box in the Purchase Order Types (tdpur0194m000) session determines whether several backorder lines are consolidated into one open backorder line for a purchase order line detail.

Regular purchase orders

When you enter a purchase order and release it to Warehousing, its status is **In Process**. After the purchase order is released to Warehousing, receipts are carried out in the Warehouse Receipt (whinh3512m000) session. On the Lines tab of this session, you must enter the quantity of goods received in the **Received Quantity in Receipt Unit** field. If the expected quantity is more than the received quantity and the receipt is final and confirmed, LN generates a backorder and automatically confirms the backorder.

When the backorder is confirmed, LN generates a new purchase order line (with the same position number as the original line, but with another sequence number) for which the **Order Line Type** is **Back Order**. When this backorder is confirmed, the purchase backorder line is automatically released to Warehousing. The original purchase order status still is **In Process**. After the receipt is carried out, the normal procedure for the purchase order type applies.

Direct delivery purchase orders

If a direct delivery purchase order is generated for a sales order or service order, in the Update Sales / Service Order with Delivery Information (tdpur4222m000) session, you can report deliveries back from Procurement to Sales or Service.

If less is received than ordered:

1. A backorder is generated automatically in Sales or from Service. If a backorder is generated in Sales, you must first confirm the backorder (sequence) line manually in the Maintain and Confirm Back Orders (tdsls4125m000) session, or LN automatically confirms the backorder if the **Confirm Back Orders automatically** check box is selected in the Sales Order Parameters (tdsls0100s400) session.
2. A confirmed backorder is generated automatically in Procurement, irrespective of the setting of the **Confirm Back Orders automatically** check box in the Purchase Order Parameters

(tdpur0100m400) session. If the direct delivery applies to a sales order, the backorder is linked to the backorder in Sales.

3. After a (direct delivery) backorder is generated in Procurement, the normal procedure for the purchase order type applies.

Received quantity is (partially) rejected

If inspection is required on the goods, first receipts are carried out in the Warehouse Receipt (whinh3512m000) session and then the goods must be inspected in the Warehouse Inspections (whinh3122m000) session. If the goods are rejected during inspection and the **Payable to Supplier** check box is cleared in the Inventory Handling Parameters (whinh0100m000) session, a backorder is created for the rejected items.

Note

If the **Payable to Supplier** check box is selected in the Inventory Handling Parameters (whinh0100m000) session, you must pay for the items after receipt, even if they must still be inspected. If, in Warehousing, these items are rejected during inspection and returned to the supplier by means of a **Return Rejects** purchase order, the supplier must be invoiced for the returned rejected goods. Because Warehousing does not communicate rejections for disposition items to the purchase order line, no backorder is created.

Backorder lines that are the result of rejection during inspection, cannot be automatically confirmed and always result into a potential backorder. The reason for this is that a user must have the time to decide how to handle the rejected inventory that is stored in the reject location of the warehouse, which can also be accepted again. For more information, refer to *Backorders - manual confirmation (p. 55)*.

Planned inventory transactions for backorders

When a backorder is generated, LN creates a planned inventory transaction in the Planned Inventory Transactions (whinp1500m000) and Order - Planned Inventory Transactions (whinp1501m000) sessions. The value of the **Planned Quantity** field in these sessions is equal to the quantity that is expected to be received on the backorder.

Backorders - manual confirmation

If the **Confirm Back Orders automatically** check box is cleared in the Purchase Order Parameters (tdpur0100m400) session, you must manually confirm potential backorders.

Potential backorders

Potential backorders are displayed in the Potential Purchase Back Orders (tdpur4101m700) session. In this session, you can retrieve all required information for internal investigation and external negotiation. LN displays all purchase orders whose backorder quantity is greater than zero and whose backorder is

not confirmed yet. You can modify the potential backorder details, such as the backorder quantity and the backorder's delivery date, and must confirm the potential backorder in this session.

Note

After confirmation, the backorder is moved to the Confirmed Purchase Back Orders (tdpur4101m800) session.

Received quantity is less than ordered quantity

When enter a purchase order and release it to Warehousing, its status is **In Process**. After the purchase order is released to Warehousing, receipts are carried out in the Warehouse Receipt (whinh3512m000) session. On the Lines tab of this session, you must enter the quantity of goods received in the **Received Quantity in Receipt Unit** field. If the expected quantity is less than the received quantity and the receipt is final and confirmed, LN generates a potential backorder in the Potential Purchase Back Orders (tdpur4101m700) session.

After you confirm the potential backorder, LN generates a new purchase order line (with the same position number as the original line, but with another sequence number) for which the **Order Line Type** is **Back Order**. When the backorder is approved, the purchase (back)order line is automatically released to Warehousing. The original purchase order's status still is **In Process**. After the receipt is performed, the normal procedure for the purchase order type applies.

Received quantity is (partially) rejected

If inspection is required on the goods, first receipts are carried out in the Warehouse Receipt (whinh3512m000) session and then the goods must be inspected in the Warehouse Inspections (whinh3122m000) session. If the goods are rejected during inspection and the **Payable to Supplier** check box is cleared in the Inventory Handling Parameters (whinh0100m000) session, a backorder is created for the rejected items.

Note

If the **Payable to Supplier** check box is selected in the Inventory Handling Parameters (whinh0100m000) session, you must pay for the items after receipt, even if they must still be inspected. If, in Warehousing, these items are rejected during inspection and returned to the supplier by means of a **Return Rejects** purchase order, the supplier must be invoiced for the returned rejected goods. Because Warehousing does not communicate rejections for disposition items to the purchase order line, no backorder is created.

Backorder lines that are the result of rejection during inspection cannot be automatically confirmed and always result into a potential backorder. The reason for this is that a user must have the time to decide how to handle the rejected inventory that is stored in the reject location of the warehouse, which can also be accepted again.

Rejected quantity that is present at the reject location, can be:

- Returned
- Destroyed
- Accepted again

Potential backorders can be manually confirmed in the Potential Purchase Back Orders (tdpur4101m700) session. Confirmation can occur before or after you decided how to handle the rejected inventory at the reject location. However, if (part of) the rejected goods are accepted again, you can first adapt the **To be Confirmed Backorder Quantity** and then confirm the potential backorder.

The following applies to the original purchase order line (detail):

- The original purchase order line (detail) can only be processed in the Process Delivered Purchase Orders (tdpur4223m000) session if the total received quantity is inspected and rejected goods are no longer present at the reject location.
- The invoicing status, which is displayed in the **Invoicing Status** field of the Purchase Order Lines Monitor (tdpur4501m500) session, can only be set to **All Approved** if rejected goods are no longer present at the reject location. If rejected goods are still present, the goods can be accepted again, after which they must be invoiced.

Planned inventory transactions for backorders

When a backorder is generated, LN creates a planned inventory transaction in the Planned Inventory Transactions (whinp1500m000) and Order - Planned Inventory Transactions (whinp1501m000) sessions. The **Planned Quantity** field in these sessions is equal to the quantity that is expected to be received on the backorder, even if the backorder is not confirmed yet. If you change the backorder quantity in the Potential Purchase Back Orders (tdpur4101m700) session and confirm the potential backorder, the changed quantity is recorded as the planned quantity.

Example

Order quantity = 10

Received quantity	Rejected quantity	Backorder confirmed	Backorder quantity	Planned inventory transaction
7	0	No	-	3
7	0	Yes	3	3
7	2	No	-	5
7	2	Yes	5	5
7	2	Yes	3	3

For the example's last line, the backorder quantity is changed manually in the Potential Purchase Back Orders (tdpur4101m700) session.

Purchase return orders

A return order is a purchase order for which returned shipments are reported. A return order can include only negative amounts. With a purchase return order, you can return inventory units or rejected goods to the supplier. Usually, these goods are rejected during inspection.

Return order master data

To use return orders, you must:

Step 1: Specify purchase order types for return orders

Specify purchase order types for return orders in the Purchase Order Type (tdpur0694m000) session.

For the **Return Order** field in the Purchase Order Type (tdpur0694m000) session, you can specify these return order types:

- **Return Inventory**, used to return inventory.
- **Return Rejects**, used to return rejects from quarantine inventory.

If the **Direct Delivery** check box is selected for the order type, you can only specify **Return Inventory** in the **Return Order** field.

Step 2: Link a warehousing order type to the purchase order type

Link a warehousing order type to the return order type in the **Warehousing Order Type** field of the Purchase Order Type (tdpur0694m000) session. The warehousing order type's **Inventory Transaction Type** must be set to **Issue** in the Warehousing Order Types (whinh0110m000) session.

If the received goods must be inspected, you must select a warehousing order type with a linked inspection procedure.

If the **Direct Delivery** check box is selected for the purchase order type, you cannot specify a warehousing order type.

Step 3: Link activities to the return order type

Link activities to the order type in the Purchase Order Type (tdpur0694m000) session.

LN links the following mandatory activities to the return order type:

- Release Purchase Orders to Warehousing (tdpur4246m000)
- Purchase Receipts (tdpur4106m000)
- Process Delivered Purchase Orders (tdpur4223m000)

Step 4: Link order type and series for Return Rejects to the purchase order parameters

To generate **Return Rejects** purchase orders, in the **Order Type for Return Rejection** and **Order Series for Return Rejection** fields in the Purchase Order Parameters (tdpur0100m400) session, select the order type and series that you specified in the Purchase Order Type (tdpur0694m000) session.

Return Inventory procedure

1. Purchase Orders (tdpur4100m000)

Using the Purchase Orders (tdpur4100m000) session:

- a. Create a purchase order header with the purchase order type **Return Inventory**.
- b. Specify the **Original Document Type**.
- c. Specify the **Original Document Number**.
- d. Specify the return reason for the return order in the **Return Reason** field. The reason type must be set to **Return of Goods**.
- e. After you create a link between a return order and an original document number, click **Copy from Original Document** on the appropriate menu. A session is started from which you can copy lines to the return order. The lines that are added to the purchase order have a negative quantity and a negative amount. Optionally, you modify the data of these lines. You can also manually add purchase order lines to the return order.

2. Release Purchase Orders to Warehousing (tdpur4246m000)

After the purchase return order is approved, release the order to Warehousing. The status of the purchase order is set to **In Process** and the activity status is set to *Awaiting Shipment* in the Purchase Order Line Status (tdpur4534m000) session.

3. Generate Outbound Advice (whinh4201m000)

If the **Include Return Orders** check box is selected in this session, LN generates an outbound and shipment advice for the quantity that must be returned.

4. Process Delivered Purchase Orders (tdpur4223m000)

After the shipping process is executed by Warehousing, the purchase order status continues to be **In Process**, but the activity status is set to *Process Purchase Orders* in the Purchase Order Line Status (tdpur4534m000) session. Consequently, you must process the return order in the Process Delivered Purchase Orders (tdpur4223m000) session.

Pegging

Specific conditions are applicable for returning pegged inventory.

If a return order line is linked to an original document, the linked peg distribution is defaulted. If a return order line is not linked to an original document, you can manually specify a peg distribution for the return order line.

You can manually update the defaulted peg distribution. The return order line's pegs can differ from the pegs on the original document.

If two purchase return order lines are linked to a specific original schedule line/schedule receipt line, for both order lines, the same return order quantity and peg distribution are defaulted. As a result, you must manually decrease the return order quantity and update the peg distribution.

Return Rejects procedure

To return production material to buy-from and ship-from business partners, you can generate purchase return orders from quarantine inventory in the Quarantine Inventory Disposition (whwmd2172m000) session. These orders can be linked to an original purchase document, but this is not mandatory.

To return the quarantine inventory, set the **Disposition** field to **Return to Vendor** in the Quarantine Inventory Disposition (whwmd2172m000) session. Select the disposition lines, and click **Process** on the appropriate menu of the Quarantine Inventory Disposition (whwmd2172m000) session, to generate a purchase return order of the type **Return Rejects** in the Purchase Order (tdpur4100m900) session.

If the return order cannot be linked to an original document, LN verifies whether the combination of item, and buy-from/ship-from business partner of the disposition line(s) is available in the purchase order actual or history data. If not, a warning message is displayed.

After a return order is generated, the generated return order number is displayed on the **Disposition Order** tab in the Quarantine Inventory Disposition (whwmd2172m000) session.

You must approve the purchase return order to start the (regular) outbound procedure.

For more information, refer to Process quarantine inventory - return to vendor.

Copying purchase orders

You can use the Copy Purchase Order (tdpur4201s000) session to copy existing purchase orders to new purchase orders. You can copy from the actual orders or from the order history.

Printing reminders

You can use the Print Purchase Order Reminders (tdpur4403m000) session to print a reminder to advise a business partner of undelivered purchase orders.

Printing claims

Occasionally, during the receipt process, the quantity received does not match with the packing slip quantity. If suppliers ship less than what is on their packing slip, a claim note can be printed in the Print Claims (tdpur4420m000) session.

Printing purchase invoices

An optional step in the purchase order procedure is to print purchase invoices in the Print Purchase Invoices (tdpur4404m000) session. These invoices are used to compare the data in your system with the data (invoices) you get from the buy-from business partner.

Deleting purchase orders

You can use the Delete Purchase Orders (tdpur4224m000) session to delete:

- Canceled purchase order lines
- Processed purchase order lines

Note

How the order data is deleted, depends on the value of the **Delete Order Data if Received Completely** field in the Purchase Order Parameters (tdpur0100m400) session.

Changing prices or discounts after receipt or consumption

You can change prices or discounts for purchase orders after receipt or consumption.

Price changes are applied to purchase order lines, purchase order detail lines, or purchase order backorder lines. You can also update the item file with the price changes, which will update the **Purchase Price** field in the Items - Purchase (tdipu0101m000) session. For each subsequent order for the item, the new price is used.

Before you can change prices or discounts, these conditions must be met:

- If the purchase order originates from a sales or service direct delivery order, the sales or service order is not yet updated
- If a production order is linked to a purchase order, the production order status is not **Closed**
- No supplier stage payments are linked to the purchase order line
- The purchase order line is not processed
- If payment for the purchase order line is:
 - **Pay on Use**, the invoicing status is not **All Approved**
 - **Pay on Receipt**, the invoicing status is **Free**

Change prices or discounts after receipt

In the Change Price and Discounts after Receipt (tdpur4122m000) session, you can change prices or discounts for received purchase order lines.

Pay on Use

When you change the price or discount of a purchase order line for which the payment type is **Pay on Use** and the invoicing status is **Free**, LN processes this change as follows:

- Updates the order amount, receipt amount, order line discount amount, and order discount amount in the Purchase Order Lines (tdpur4101m000), Purchase Order Line History (tdpur4551m000), and Invoice Information on Purchase Orders (tfacp2540m000) sessions.
- Updates the receipts in the Purchase Receipts (tdpur4106m000) session.
- Updates the receipt history data in the Purchase Actual Receipt History (tdpur4556m000) session.
- Updates the invoice information in the Orders by Packing Slip (tfacp2543m000) session.
- Updates the purchase contract data. The **Always Use Contract Price and Discount** check box in the Purchase Contract Parameters (tdpur0100m300) session determines how the link with the contract is handled.
- Updates the buy-from business partner's balance of unpaid orders in the Invoice-from Business Partner Balances (tccom4523m000) session.

Pay on Receipt

If the payment type is **Pay on Receipt**, LN performs the following updates in addition to those previously listed:

- Updates the payable receipt in the Purchase Payable Receipts (tdpur4130m000) session.
- Creates payment receipt history records in the Purchase Payable Receipt History (tdpur4560m000) session.
- Updates the receipt information in the Orders by Consumption (tfacp2543m100) session. LN creates a purchase payable receipt record and a consumption record when the receipt for the purchase order line is confirmed.
- Records the price variance per order line in the Integration Transactions (tfld4582m000) session.

Note

If the payment type is **Pay on Receipt**, LN creates a purchase payable receipt when the purchase order line is received. Therefore, if a price or discount change is inserted after receipt, the purchase payable receipt is also updated. If the payment type is **Pay on Use**, the purchase payable receipt is not created until consumption takes place.

If the payment type is **Pay on Use**, LN inserts financial integration transactions in the Integration Transactions (tfld4582m000) session when consumption takes place, because consumption is the moment that payment is due and price or discount changes affect financial transactions.

If the receipt of a purchase order with owned inventory is (partially) consumed and the valuation method is moving-average unit cost (mauc), the created inventory variance will be consumed by inventory for the nonconsumed part. Therefore, the consumed part will still affect the MAUC value.

Change prices or discounts after consumption

In the Change Price and Discounts of Purchase Payable Receipts (tdpur4132m000) and Change Price and Discounts after Receipt (tdpur4122m000) sessions, you can change prices or discounts for consumed purchase order lines for which the payment type is **Pay on Use**.

If you change the price or discount for a purchase payable receipt with payment type **Pay on Use** and status **Free**, LN processes this change as follows:

- **Payable receipt**
Updates the payable receipt in the Purchase Payable Receipts (tdpur4130m000) session.
- Creates payment receipt history records in the Purchase Payable Receipt History (tdpur4560m000) session.
- Updates the consumption information in the Orders by Consumption (tfacp2543m100) session.
- **Integration transactions**
Records the price variance for the payable receipt in the Integration Transactions (tfgld4582m000) session.
- **Contract and business partner balance**
Updates the purchase contract data. The **Always Use Contract Price and Discount** check box in the Purchase Contract Parameters (tdpur0100m300) session determines how the link with the contract is handled.
- Updates the buy-from business partner's balance of unpaid orders in the Invoice-from Business Partner Balances (tccom4523m000) session.

Appendix A

Glossary

A

advance shipping notice

A form of preinvoicing. The customer receives an advance notification of details of a shipment that is on its way to the customer.

Acronym: ASN

appropriate menu

Commands are distributed across the **Views**, **References**, and **Actions** menus, or displayed as buttons. In previous LN and Web UI releases, these commands are located in the *Specific* menu.

approval rule

A combination of data elements, such as buy-from business partner, buyer, planner, effective date, expiry date, and amount, based on which LN approves purchase orders. The approval rules, on their turn, are based on acceptance rules or exception rules.

ASN

See: *advance shipping notice* (p. 67)

backorder

An unfilled customer order, or partial delivery at a later date. A demand for an item whose inventory is insufficient to satisfy demand.

carrier

An organization that provides transport services. You can link a default carrier to both ship-to and ship-from business partners. In addition, you can print sales and purchase orders on a packing list, sorted by carrier.

For ordering and invoicing, you must define a carrier as a business partner.

Synonym: forwarding agent, Logistics Service Provider (LSP)

carrier

The company responsible for the transportation of goods to the ship-to business partner.

carrier rate book

A freight rate book where you can maintain freight agreements with carriers.

claim note

The notes printed to notify the buy-from business partner if the actual delivered quantity is less than the quantity on the packing slip

client rate book

A freight rate book where you can maintain freight agreements with business partners.

commingle

To group a number of purchase orders that originate from different sources, into a single purchase order. Commingling reduces the number of purchase orders and enables you to obtain the best available prices and discounts.

consumption

The issue from the warehouse of consigned items by or on behalf of the customer. The customer's purpose is to use these items for sale, production, and so on. After the items are issued, the customer becomes the owner of the items and the customer must pay the supplier.

contract price revision

A date-controlled agreement for price and discount elements on the contract line. Price revisions enable you to have several prices over time. An active revision is valid from its effective date up to the effective date of the next revision, or the expiry date of the contract line.

cross-docking

The process by which inbound goods are immediately taken from the receipt location to the staging location for issue. For example, this process is used to fulfill an existing sales order for which no inventory is available.

LN distinguishes the following three types of cross-docking:

- **Static**
To initiate this type of cross-docking, you must generate a purchase order from a sales order in Sales.
- **Dynamic**
This type of cross-docking, available in Warehousing, can be:
 - Based on inventory shortages.
 - Defined explicitly during receipt of goods.
 - Created on an ad hoc basis.
- **Direct Material Supply**
You can use this type of cross-docking, available in Warehousing, to meet demand in a cluster of warehouses, and is based on:
 - Receipts
 - Inventory on hand

Note

You can maintain cross-dock orders that originate from Sales in the same way as cross-dock orders created in Warehousing, with the exception of the sales order/purchase order link, which you cannot change.

See: direct material supply

direct delivery

The process in which a seller orders goods from a buy-from business partner, who must also deliver the goods directly to the sold-to business partner. By means of a purchase order that is linked to a sales order or a service order, the buy-from business partner delivers the goods directly to the sold-to business partner. The goods are not delivered from your own warehouse, so Warehousing is not involved.

In a Vendor Managed Inventory (VMI) setup, a direct delivery is achieved by creating a purchase order for the customer warehouse.

A seller can decide for a direct delivery because:

- There is a shortage of available stock.
- The ordered quantity cannot be delivered in time.
- The ordered quantity cannot be transported by your company.
- Costs and time are saved.

electronic data interchange

Way to exchange information with your business partners by using electronic mail. Information include catalogs, sales and purchase orders, and all other types of information necessary to carry out business transactions.

forwarding agent

See: *carrier* (p. 67)

freight order

A commission to transport a particular number of goods. A freight order includes an order header and one or more order lines.

A freight order header includes some general information, such as the delivery date and the name and address of the customer who is to receive the goods listed on the freight order.

A freight order line includes an item to be transported and some details about the item, such as the quantity and the dimensions.

inventory commitment

The reservation of inventory for an order without taking into account the physical storage of the goods within the warehouse. Previously referred to as *hard allocation*.

landed costs

The total of all costs that are associated with the procurement of an item until delivery and receipt in a warehouse. Landed costs typically include freight costs, insurance costs, customs duties, and handling costs.

In LN, landed costs can be part of multiple landed costs sets.

Logistics Service Provider (LSP)

See: *carrier* (p. 67)

moving-average unit cost (MAUC)

An inventory valuation method for accounting purposes.

The MAUC is the average value for each unit of the current inventory. For each new receipt the MAUC is updated.

packing slip

An order document that shows in detail the contents of a particular package for shipment. The details include a description of the items, the shippers or customers item number, the quantity shipped, and the inventory unit of the shipped items.

peg

A combination of project/budget, element and/or activity, which is used to identify costs, demand, and supply for a project.

planned delivery date

The planned date on which the items on the order/schedule line must be delivered. The planned delivery date cannot occur before the order date/schedule generation date.

planned inventory transactions

The expected changes in the inventory levels due to planned orders for items.

Planned load date

The date and time loading is planned at the ship-from location.

position number of an order line

The number used to identify the position of the order line on the sales or purchase order.

potential backorder

A backorder that must be manually confirmed and that can be modified by the user.

The following can result in a potential backorder:

- The received quantity of the purchase order line is less than the ordered quantity at the time of delivery date.
- The received quantity is partially rejected during inspection.
- The received quantity is equal to the ordered quantity, but the user changes the backorder quantity from zero into a higher value.

purchase invoice

Purchased goods that are received, inspected (if required), and posted to inventory are placed on a purchase invoice. You must pay the buy-from business partner for the quantity on the invoice.

The buy-from business partner, order, item data, prices, and discounts are printed on the invoice. You can compare the data on the invoice to the invoice you receive from the buy-from business partner.

purchase order

An agreement that indicates which items are delivered by a buy-from business partner according to certain terms and conditions.

A purchase order contains:

- A header with general order data, buy-from business partner data, payment terms, and delivery terms
- One or more order lines with more detailed information about the actual items to be delivered

purchase order advice

A recommendation based on the economic stock and the reorder point of an item. Purchase order advices must be confirmed and transferred to convert them into actual purchase orders.

purchase order header

The general information of a purchase order.

A purchase order header contains, among other things:

- General order data
- General buy-from business partner data
- Payment terms
- Delivery terms

purchase order type

The order type determines which sessions are part of the order procedure and how and in which sequence this procedure is executed.

purchase payable receipt

Indicates when billing is applicable for purchased goods and contains the payable and invoicing details for an order or schedule. By means of purchase payable receipts, updates to and from the Accounts Payable module are handled.

If the payment for the purchased goods is set to **Pay on Use**, the payable receipt is generated when inventory related to a purchase order or a purchase schedule is consumed, that is, issued from the warehouse. If the payment is set to **Pay on Receipt**, the payable receipt is generated the moment the purchased goods are received.

purchase requisition

A request by a user to obtain authorization for the procurement of goods and services.

A purchase requisition includes both standard and nonstandard material, cost, or service requirements. Information on a purchase requisition includes name, department, location, purchase office, and approver in the header section. The requisition line detail includes item, supplier, quantity, price, and amount.

A purchase requisition can be converted to one of the following:

- Purchase order
- Request for quotation (RFQ)

quarantine inventory

Inventory sent to a quarantine warehouse or quarantine location after initial rejection during inbound or outbound inspection, or upon completion of an operation during production.

At the quarantine warehouse or location, the final disposition of the inventory is determined:

- **Use As Is**
- **No Fault Found**
- **Scrap**
- **Return to Vendor**
- **Rework (to Existing Specification)**
- **Rework (to New Specification)**
- **Reclassify**

Synonym: Rejected inventory

quarantine location

A type of warehouse location in which goods initially rejected during warehousing inspection or production are stored for further examination to determine their disposition.

receipt

The physical acceptance of an item into a warehouse. A receipt registers: received quantity, receipt date, packing-slip data, inspection data, and so on.

receipt number

The sequence number assigned to every individual receipt of goods.

Rejected inventory

See: *quarantine inventory* (p. 73)

reminder

A purchase order document that urges the supplier to deliver the ordered goods under the conditions agreed upon.

response line

A response to a request for quotation line, which includes a bidder's bid for the RFQ line. A bid offers goods or services for a certain price and terms of sale and can be considered as an offer to sell.

RFQ response

A response to a request for quotation, which includes one or more response lines with bids. A bid offers goods or services for a certain price and terms of sale and can be considered as an offer to sell.

self-billing

The periodic creation, matching, and approval of invoices based on receipts or consumption of goods by an agreement between business partners. The sold-to business partner pays for the goods without having to wait for an invoice from the buy-from business partner.

sequence number

The number that identifies a data record or a step in a sequence of activities. Sequence numbers are used in many contexts. Usually LN generates the sequence number for the next item or step. Depending on the context, you can overwrite this number. You can sometimes influence the numbering by setting the corresponding parameters.

service order

Orders that are used to plan, carry out, and control all repair and maintenance on configurations as present on customer sites or as present with the company.

service subcontracting

Allot the service related work of an item to another company. The entire maintenance or repair process, or only a part of the same, can be allotted. Service subcontracting can be used with or without material flow support.

SSP

See: *supplier stage payments (p. 75)*

subcontracting

Hiring certain services from another party, for example the execution of a part of a project or an operation of a production order.

supplier stage payments

Spread payments that are made by customers to suppliers over a period of time. With stage payments, customers can make payments for an item before or after the item is actually received. An item's invoice flow is separated from its goods flow.

Abbreviation: SSP

Unload date

The date and time unloading takes place at the ship-to location.

warehousing order type

A code that identifies the type of a warehousing order. The default warehousing procedure that you link to a warehousing order type determines how the warehousing orders to which the order type is allocated are processed in the warehouse, although you can modify the default procedure for individual warehousing orders or order lines.

warehousing procedure

A procedure to handle warehousing orders and handling units. A warehousing procedure comprises various steps, also called activities, that a warehousing order or a handling unit must take to be received, stored, inspected, or issued. A warehousing procedure is linked to a warehousing order type, which in turn is allocated to warehousing orders.

work order

Orders that are used to plan, carry out, and control all maintenance on items in a maintenance shop or in a repair shop. A work order consists of at least one work order header, and can have a number of activities that must be carried out on a repairable service item.

Index

Additional part

- purchasing, 46

advance shipping notice, 67

appropriate menu, 67

approval rule, 67

ASN, 67

backorder, 67

Backorder

- automatic confirmation, 54

- manual confirmation, 55

carrier, 67, 68

carrier rate book, 68

claim note, 68

Claim note, 63

client rate book, 68

commingle, 68

Commingling, 21, 22

consumption, 68

contract price revision, 68

cross-docking, 69

Depot Repair, 46

direct delivery, 69

Direct delivery, 39, 42

- sales order, 25

- service order, 28

Direct delivery sales order, 39

Direct delivery service order, 42

Discount

- change after consumption, 64

- change after receipt, 64

electronic data interchange, 70

forwarding agent, 67

Freight, 35, 36

Freight invoicing

- integration with purchase invoicing, 37

Freight Management, 39, 42

freight order, 70

History, 17

Integration freight management, 39

Integration Freight Management, 42

inventory commitment, 70

landed costs, 70

Logistics Service Provider (LSP), 67

moving-average unit cost (MAUC), 70

packing slip, 70

peg, 71

planned delivery date, 71

planned inventory transactions, 71

Planned load date, 71

position number of an order line, 71

potential backorder, 71

Price

- change after consumption, 64

- change after receipt, 64

Procurement

- integration with Depot Repair, 45

- integration with Field Service, 45

- integration with Freight, 35

- integration with Freight Order Control, 36

- integration with Service, 45

Purchase backorders, 53

purchase invoice, 71

Purchase invoice

- printing, 63

Purchase invoicing

- integration with freight invoicing, 37

purchase order, 72

purchase order advice, 72

purchase order header, 72

Purchase order

- commingling, 21, 22

- deleting, 64

- history, 17

- printing claim notes, 63

- printing reminders, 63

- procedure, 13

- processing, 16
- purchase order type, 72**
- purchase payable receipt, 72**
- purchase requisition, 73**
- Purchase schedule**
 - history, 17
 - processing, 16
- quarantine inventory, 73**
- quarantine location, 73**
- receipt, 73**
- receipt number, 73**
- Rejected inventory, 73**
- reminder, 74**
- Reminder, 63**
- response line, 74**
- Return order, 59**
- RFQ response, 74**
- self-billing, 74**
- sequence number, 74**
- service order, 74**
- service subcontracting, 74**
- Service subcontracting**
 - Procurement, 47
- SSP, 75**
- subcontracting, 74**
- supplier stage payments, 75**
- Unload date, 75**
- warehousing order type, 75**
- warehousing procedure, 75**
- work order, 75**
