



Infor LN Sales User Guide for Sales Orders

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About this document

This document provides an introduction to sales orders and explains the sales order procedure and functions.

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.

References

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

- *User Guide for Sales Master Data U9839 US*
- *User Guide for Sales Quotations U9841 US*
- *User Guide for Sales Contracts U9844 US*
- *User Guide for Purchase and Sales Schedules U9541 US*
- *User Guide for Margin Control U9842 US*
- *User Guide for Retrobilling U9840 US*
- *User Guide for Commissions and Rebates U9843 US*
- *User Guide for Vendor Managed Inventory U9501 US*
- *User Guide for Statistics U9816 US*
- *User Guide for Kit Handling U9540 US*
- *User Guide for CRM U9653 US*
- *User Guide for Subcontracting U9361 US*
- *User Guide for Terms and Conditions U9499 US*
- *User Guide for Project Pegging U9777 US*
- *User Guide for Demand Pegging U9500 US*
- *User Guide for Pricing U9179 US*
- *User Guide for Material Pricing U9865 US*
- *User Guide for Price Stages*
- *User Guide for Global Trade Compliance*
- *User Guide for Letters of Credit*

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Overview of sales order handling

Sales orders are used to sell and deliver items or services to a sold-to business partner under certain terms and conditions. Sales orders can result from a variety of sources, such as **Contracts**, **Quotations**, **EDI**, and **Planning**. In Sales, you can create and modify orders.

After approval, a sales order is a legal obligation to deliver items according to the agreed terms and conditions, including specific prices and discounts.

Sales order master data

Before you can carry out the sales order procedure, you must define the sales order parameters in the Sales Order Parameters (tdsls0100s400) session and specify the sales order master data.

For more information, refer to:

- Sales item data
- Sales organizational data
- General sales data

Sales order procedure

The sales order procedure includes these steps:

1. The creation and communication of the sales order
2. The delivery of the sold goods
3. The invoicing of the sold goods
4. The transfer of the delivered sales order to the history database

For more information, refer to *Sales order procedure* (p. 13).

Sales order additional processes

A number of processes do not always occur in the sales order procedure, but can be applicable in specific situations.

For more information, refer to *Sales orders - additional processes (p. 19)*.

Sales order procedure

The sales order procedure covers the complete administrative procedure for selling standard, customized, and generic items.

The procedure includes these steps:

Step 1: Creating sales orders

Sales orders can be created as follows in the Sales Order - Lines (tdsls4100m900) session:

- Automatically, from a variety of sources, such as **Contracts**, **Quotations**, and **EDI**
- Based on a template or a catalog
- Copied from an existing order in the Copy Sales Order (tdsls4201s000) session
- Manually

Step 2: Approving sales orders

After sales orders are created, sales order approval is a mandatory step in the sales order procedure. The execution of the order procedure activities can start when a user approves the order, either in the Approve Sales Orders (tdsls4211m000) session, or by clicking **Approve** on the appropriate menu of the Sales Orders (tdsls4100m000) or Sales Order (tdsls4100m900) sessions.

If the **Use Confirmation** check box is selected in the Order Terms and Conditions (tctrm1130m000) session or the Sold-to Business Partner (tccom4110s000) session, the goods must be confirmed by the customer before the sales order can be approved.

Step 3: Printing sales order acknowledgements

After the order is registered and approved, you can print the sales order and send it to the sold-to business partner as an order acknowledgment. The Print Sales Order Acknowledgements/RMAs (tdsls4401m000) session is an optional session in the sales order procedure. After the sales order is printed, you can still modify the sales order.

Step 4: Releasing sales orders to Warehousing

After the sold-to business partner is informed about the sales order and the order is approved, you can release the sales order to Warehousing in the Release Sales Orders to Warehousing (tdsls4246m000) session. As a result, the warehousing department is informed about the goods that must be shipped.

When sales 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 sales order type.

To link a warehousing order type to a sales 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 Sales Order Types (tdsls0594m000) session.

It is not mandatory to release sales orders for cost and service items to Warehousing. This depends on the setting of the **Release to Warehousing** check box in the Items - Sales (tdisa0501m000) session. Direct deliveries are never released to warehousing.

Step 5: Delivering the sold goods

You can record the deliveries of sold items in Warehousing or Sales.

- **Warehousing**
If the sales order is released to Warehousing, the delivery procedure is covered by the outbound procedure and the shipment procedure in Inventory Handling (INH).
When shipments are confirmed in Warehousing, the delivery/shipment data is reported back to Sales. You can view this data in these sessions:
 - Sales Order Lines - Monitor (tdsls4510m000)
 - Sales Order Actual Delivery Lines (tdsls4106m000)
- **Sales**
For noninventory items that are not released to Warehousing, you can record the deliveries in the Sales Deliveries (tdsls4101m200) session.

You can indicate whether the goods must be customer approved after the goods are delivered.

When the goods are delivered, the prices and discounts of the goods may be changed. Use the Change Prices and Discounts after Delivery (tdsls4122m000) session to maintain prices and discounts.

Step 6: Invoicing the sold goods

Use the following sessions to invoice the sold items:

1. You can view, enter and maintain sales order invoice lines and release them to Invoicing in the Sales Order Invoice Lines (tdsls4106m100) session.

2. If you want to check the invoice data before it is sent to the invoice-to business partner or released to Invoicing, you can print a draft invoice in the Print Sales Draft Invoices (tdsls4447m000) session. If required, you can change the invoice data.
3. You can release the order data for invoicing in the Release Sales Orders/Schedules to Invoicing (tdsls4247m000) session.
After release to Invoicing:
 - The status of the invoicing data is **Confirmed** in Invoicing.
 - The status of the invoice line is **Released** in Sales.
4. Create an invoicing batch in the Invoicing Batches (cisli2100m000) session. Only the lines of the selected invoicing data that have the **Confirmed** status will be processed.
5. Process invoicing batches in a recurring invoicing batch in the Compose/Print/Post Invoices (cisli2200m000) session.
After invoices are posted:
 - The status of the invoicing data is **Posted** in Invoicing.
 - The status of the invoice line is **Invoiced** in Sales.

You can use the Change Prices and Discounts after Delivery (tdsls4122m000) session to change the prices and discounts for sales order lines that are released to Invoicing and for which the sales invoice status is **Confirmed**, or **On Hold**.

Step 7: Processing sales orders

At the end of the sales order procedure, all sales orders must be processed in the Process Delivered Sales Orders (tdsls4223m000) session. The processed sales orders are transferred from the regular database to the history database.

Sales order workbenches

You can use these sessions to view the sales order lines that require an internal sales representative's attention and to execute the appropriate actions on the lines:

- **Sales Order Intake Workbench (tdsls4601m200)**
To view the order lines for which specific activities are yet to be executed, or unconfirmed backorder quantities exist.
- **Sales Order Fulfillment Workbench (tdsls4601m100)**
To view the order lines that are yet to be delivered and are almost due, or lines whose due date (planned delivery date) has passed.

Sales order history

You can use sales order history to track the creation and modification of sales orders and installment orders. You can keep certain information after the original order is completed.

To register the history of orders that are created, canceled, or processed, select the **Log Order History**, **Log EDI Order History** and **Log Actual Order Delivery History** check boxes in the Sales Order Parameters (tdsls0100s400) session.

Contents of history files

The order history includes these files:

- All created order (line) transactions. These orders and lines are not yet processed.
- All invoiced order (line)s. These are the processed orders and lines. When an order is invoiced, the history also includes the gross profit of the order line.

The history files are of these record types:

- **Intake**
The order line was added, changed, or deleted.
- **Cancellation**
The order line was canceled.
- **Turnover**
The order line was processed in the Process Delivered Sales Orders (tdsls4223m000) session.

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

Sales orders	
Field	Retrieved from session
Log Order History	Sales Orders (tdsls4100m000)
Log EDI Order History	Sales Orders (tdsls4100m000)
Start Logging Order History at	Sales Orders (tdsls4100m000)
Level of Order Intake History Logging	Sales Order Parameters (tdsls0100s400)
Log Actual Order Delivery History	Sales Order Parameters (tdsls0100s400)
Log Component History	Sales Order Parameters (tdsls0100s400)
Sales order installments	
Field	Retrieved from session
Log Order History	Sales Order Parameters (tdsls0100s400)

Log EDI Order History	Sales Order Parameters (tdsls0100s400)
Start Logging Order History at	Sales Order Parameters (tdsls0100s400)
Level of Order Intake History Logging	Sales Order Parameters (tdsls0100s400)

Deleting history files

You can restrict the total amount of history data with the Archive and Delete Sales Order/Schedule History (tdsls5201m000) session.

History files are the basis 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.

Sales orders - additional processes

A number of processes do not always occur in the sales order procedure, but can be used optionally.

Adding additional costs to a sales order

Cost items are used to define surcharges such as freight, handling, and administrative fees. These costs can be put on a sales order so the order accurately reflects charges billed to a customer. Several cost items with additional costs can be assigned to an order by bringing them together in a cost set.

Additional costs can be order based or shipment based.

- **Order based**
Additional costs are calculated for a sales order. After sales order approval, additional costs are placed on an order as extra cost (items) after the last item recorded.
- **Shipment based**
Additional costs are calculated for a sales shipment. After confirmation of a shipment, a sales shipment cost order is generated containing all additional costs for one shipment.

For more information, refer to:

- *Additional costs - order based (p. 27)*
- *Additional costs - shipment based (p. 28)*

Blocking and unblocking sales orders

Several reasons can exist for blocking a sales order or a sales order line. An order can be held for more than one reason at any point in the sales order procedure.

For more information, refer to *Blocking sales orders (p. 31)*.

Changing sales data after release to Invoicing

In some cases, you can update sales invoice data after the sales data is released to Invoicing.

Depending on the invoice status, you can change:

- Sales order data in the Change Prices and Discounts after Delivery (tdsls4122m000) session.
- Installment data in the Sales Order Installments (tdsls4110m000) session.
- Rebate data in the Rebates (tdcms2550m000) session.

For more information, refer to *Changing sales data after release to Invoicing* (p. 34).

Creating direct delivery orders

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 into a purchase order. Because the buy-from business partner delivers the goods directly to the sold-to business partner, Warehousing is not involved.

For detailed information on generating and processing direct delivery orders, refer to the following topics:

- *Direct delivery sales orders* (p. 54)
- Direct delivery service orders

Creating freight orders from sales orders

The Freight package can be used to handle transportation requirements. During sales order entry, you can identify and choose the appropriate means of transportation and generate a freight order from a sales order.

The integration between Freight and Sales includes these topics:

- **Integration between freight order control and sales**
In Freight Order Control, two types of planning exist:
 - Rough planning, which is used for long-term capacity planning.
 - Load building, which is the actual execution time plan of the shipments and loads. To ship the goods, Freight Order Control must know the shipments that must be moved over a period of time. If a freight order is created from Sales, the progress of the shipment and loads can be exchanged and information can be shared between Freight Order Control and Sales.
- **Integration between freight invoicing and sales 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 Order Control and Sales* (p. 62)
- *Integration freight invoicing and sales invoicing* (p. 66)

Creating product variants

If you specify a configurable item item on the sales order line, you can configure or link a product variant.

An item is configurable if the **Configurable** check box is selected in the Items (tcibd0501m000) session.

- **Manufactured** or **Product** items with the **Default Supply Source** set to **Assembly** in the Items (tcibd0501m000) session and **Generic** items, are always configurable.
- **Purchased** or **Product** items with the **Purchase Schedule in use** check box selected in the Items - Purchase (tdipu0101m000) session, can be configurable.

For more information, refer to *Product variants in Sales* (p. 39).

Items with **Default Supply Source** set to **Job Shop**

You must decide whether you want to use a Project Control project when producing product variants, or you want to use Product Configuration (PCF) without PCS. A PCS project is used to plan, produce, and control the manufacturing process. Consequently, the structure of the product variant is generated by project. The advantage of using PCS is that it provides an item with a detailed cost roll-up, and the possibility of pegging. However, in high volume environments, a detailed cost roll-up is often not required. Furthermore, using PCS requires extra time to calculate the project costs and to delete the project structure afterwards.

If you want to use PCS for PCF, the **With PCS** check box in the Items (tcibd0501m000) session must be selected. To use PCF without PCS, the **With PCS** check box must be cleared.

After the product variant is configured in the Product Configurator (tipcf5120m000) session, you must use the Generate (Project PCS) Structure for Sales Orders (tdsls4244m000) session to generate the project structure and/or product structure for the product variant.

For more information, refer to How to use a product model in a sales order.

Creating rush orders

Every company deals with rush requests from customers. These requests usually require special payment and delivery terms. To determine whether a rush request is reasonable or not, and to be able to inform the business partner about the delivery date of an order, standard rush order conditions must be defined for a company.

The two possible rush situations are:

- The customer asks for a rush delivery during the order entry itself.
- The customer asks you to rush an already issued order.

For more information, refer to *Rush orders* (p. 51).

Creating sales order lines from a catalog

You can create a new sales order line based on a catalog.

For more information, refer to Using catalogs in sales orders and quotations.

Creating sales orders from a template

You can use sales order templates for recurring sales orders from the same (group of) business partner(s). You can generate sales orders or sales order lines based on an order template.

For more information, refer to *Using templates in sales orders (p. 45)*.

Demand pegging

If the demand pegging functionality is used in a company, inventory is allocated when sales orders are created. In addition, a specification is linked to these orders.

For more information, refer to Demand pegging overview.

Export compliance for sales orders

If global trade compliance is applicable for export documents, sales orders are validated to ensure that the export compliance information is valid and the required licenses are available.

For more information, refer to *Export compliance for sales orders (p. 36)*.

Handling ATP/CTP

The ATP functionality is part of a more extensive order promising technique, called capable-to-promise (CTP).

You can check the ATP/CTP for plan items during the ATP/CTP horizon as specified in the Items - Planning (cprpd1100m000) session. Before you can specify a plan item in the Items - Planning (cprpd1100m000) session, you must set the **Order System** field to **Planned** in the Items (tcibd0501m000) session.

To check an item's ATP/CTP at sales order entry:

1. Select the **CTP Check for Sales** check box in the Planning Parameters (cprpd0100m000) session. If this check box is selected, a capable-to-promise (CTP) check is performed when a sales order for an item is closed. If this check box is cleared, LN does not carry out any CTP check, regardless of the values of CTP-related parameters in the Items - Planning (cprpd1100m000) session.
2. Indicate the types of ATP and CTP checks that must be applied and specify the settings for the checks in the Items - Planning (cprpd1100m000) session.

If the free available inventory (ATP) and additional critical components and capacities (CTP) are insufficient to fulfill the order, various possibilities are presented to handle the shortage. One way to handle the shortage for a sales order is to propose a delivery schedule, which you can specify in the ATP Handling (cprpd4800m000) session.

You can also use the ATP Handling (cprp4800m000) session to perform offline ATP/CTP checks. For instance, you can collect multiple orders in written form and then use the ATP Handling (cprp4800m000) session to carry out ATP/CTP checks.

For more information, refer to Types of ATP and CTP checks.

Handling backorders

If only a part of the goods or none of the goods listed on a sales order are shipped, backorders can be created.

A backorder can be created in the following modules:

- **Sales Control**
A backorder can be created as follows:
 - You manually enter a hold back quantity.
 - The direct delivery purchase order that is created for the sales order is not completely delivered.
- **Inventory Handling**
The shipping quantity can be decreased at two points in the Warehouse Orders module of Warehousing:
 - Before confirmation of the outbound advice.
 - Before confirmation of the shipment.

For more information, refer to *Backorder handling for sales orders (p. 71)*.

Handling components

If you want to deliver components instead of main items, in the sales order procedure, you can define how components are handled.

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

Handling installment orders

Invoicing business partners is a normal and necessary part of business. Invoicing can be performed in a number of ways. Invoicing by installment enables you to send invoices for partial amounts or percentages of the total net amount before or after the ordered goods are actually delivered. To establish the installments, installment lines are linked to the sales order.

For more information, refer to *Installments (p. 75)*.

Handling promotions

In Pricing under Common, promotions are defined for items and business partners. Promotions are used to offer extra discounts and/or free gifts (premiums) on sales orders or sales order lines.

To check whether a promotion is defined for the item and/or the business partner of a sales order, LN uses promotion matrices.

LN looks for valid promotions in the promotion matrices for which a matrix sequence number is defined. The retrieval of promotion matrices is controlled by the parameter settings in the Pricing Parameters (tdpcg0100m000) session.

To retrieve promotions from a promotion matrix, LN looks for promotion matrices with a matrix definition and matrix attributes that match the properties of the relevant sales order. Note that all of the matrix attributes must match the properties of the order. When found, the promotion linked to the promotion matrix is applied to the sales order.

Note

If you enter a sales order or a sales order line, you can display and select eligible and/or applied promotions in the Sales Order Promotion Data Link (tdsls4536m000) session.

For details on setting up promotions, refer to Setting up a promotion matrix.

Handling return orders

If goods must be returned on a sales order, a return order can be created. A return order can only contain negative amounts. A number of steps are involved in the return order process.

For more information, refer to *Sales return orders* (p. 87).

Letters of credit for sales orders

If payment is to be made through a letter of credit (L/C), an export or domestic sales letter of credit must be linked to a sales order or sales order line.

An order or order line linked to a letter of credit can only be approved if it is linked to an approved letter of credit. To be released, the order or order line must be linked to a letter of credit with status **Accepted**, which expresses that the seller accepts the terms of the letter of credit.

For more information, refer to Letter of credit and Export letter of credit procedure.

Material prices on sales orders

If the **Material Pricing in Sales** check box is selected in the Material Price Parameters (tcmpr0100m000) session, after setting up the material pricing master data, LN can retrieve material price information and calculate material prices for a sales order line.

Linked material price information can be viewed in the Material Price Information (tcmpr1600m000) session.

For more information, refer to Material price information – sales orders.

Project pegging

Project pegging in Sales includes the pegging of project costs for sales order lines and sales quotation lines. If project pegging is mandatory for the item on the sales order line or quotation line, a peg must be specified, which is a combination of project/budget, project element and/or project activity. For example, if demand is pegged for a sales order line, the goods are sold for and the costs are booked to the project, element, and activity on the sales order line.

For more information, refer to Project pegging in Sales.

Retrobilling sales orders

If price changes are made to a sales contract or to an item because of price renegotiations, the retrobilling functionality can be used to re-invoice previously invoiced items for sales orders. Price differences are handled through retrobilled sales orders, which have an item quantity of zero and an order amount that includes the price difference.

For more information, refer to Retrobilling in Sales.

Setting up and using alternative items

Whenever a stock shortage occurs for an item, you can offer the sold-to business partner an alternative item. To avoid the risk that an item becomes obsolete, you can first consume the available stock of the original item and then fill the remaining shortage with an alternative.

For more information, refer to Using alternative and replacement items.

Specifying after-sales services

An item can be sold with the related after-sales services. You can use a sales quotation or sales order to specify the after-sales services that are applicable for the sold item after delivery.

You can specify these after-sales service related settings for an item:

- Create physical breakdown
- Link to installation group
- Add warranty
- Generate service contract

Based on the settings, the after-sales service actions are executed when a delivered after-sales service line (item) is processed to Service.

For more information, refer to *Extended integration between Sales and Service for after-sales services* (p. 46).

Static cross-docking order

If you want to fulfill an existing sales order for which no inventory is available, you can take inbound goods immediately from the receipt location to the staging location for issue. To initiate this process, you must generate a cross-docking order.

For more information, refer to *Static cross-docking* (p. 57).

Using consigned inventory

If you want to use consigned inventory in the sales order procedure, you can define how consigned inventory is handled.

For more information, refer to Consignment in Sales and Procurement.

Using copy templates

In LN you can indicate whether copy templates are used in the copy sales order (line) process. With copy templates, you can specify how order (line) data is copied.

A copy template contains a standard set of copy exceptions with which you can complete the following:

- Copy existing orders to target orders in the Copy Sales Order (tdsls4201s000) session.
- Copy existing sales order lines to target order lines.
- Copy an original document's sales order lines to target order lines in the return order process.

For more information, refer to *Copy templates* (p. 48).

Using customer furnished materials

To enable customers or their suppliers to furnish the materials that are required to produce a specific customer item, you can implement **Customer Furnished Materials**. Furnishing of customer materials is initiated from a sales order line, which includes the item that contains customer furnished materials. The sales order line has a linked demand peg for the customer demand.

For more information, refer to Customer furnished materials in Sales and Procurement.

Using price stages

You can use price stages to categorize the price based on the phase of the price-negotiation process. As long as the price is not final, price stages are used to allow the continuation of the order process, but with a restriction on the activities that you can perform during this process. The blocking definition that is linked to the price stage determines the phase at which the sales order line must be blocked or a signaling message must be displayed.

For more information, refer to Price stages - overview.

Using priority simulations

Order priority simulations help you determine the priority by which sales orders are handled in the warehouse for delivery. You can use a priority simulation to calculate the priority by which inventory is allocated to orders. To set actual priorities for sales orders, you must accept the results of the simulation. You can modify these results before accepting them.

For more information, refer to *Order priority (simulations)* (p. 50).

Additional costs

Additional costs - order based

Order-based additional costs are calculated for sales orders or sales order lines. After sales order approval, additional costs are placed on an order as extra cost (items) after the last item recorded.

The order-based additional costs procedure includes these steps:

Step 1: Generating sales order lines with additional costs

If an additional cost set with valid additional cost lines is found for an order (line), after sales order approval, these cost lines are added to the order as extra cost (items) in the Sales Order Lines (tdsls4101m000) session.

The following apply to these sales order lines:

- The **Additional Cost Line** check box is selected.
- The additional cost amount is displayed in the **Amount** field and the **Price** field is empty.
- If the sold-to business partner's **Method of Additional Cost Calculation** is **Header Based**, the position number is retrieved from the **First Position Number for Additional Costs Sets** field in the Sales Order Parameters (tdsls0100s400) session. Sales order lines with **Line Based** additional costs have regular position numbers.
- For sales order lines with **Line Based** additional costs, you can view the additional cost lines that are linked to the sales order line in the Additional Cost Lines per Sales Order Line (tdsls4527m000) session.

Step 2: Issuing the additional cost line items

Based on the value of the **Release to Warehousing** check box in the Items - Sales (tdisa0501m000) session, issuing the cost item is carried out in Warehousing or in Sales.

Therefore, either the Release Sales Orders to Warehousing (tdsls4246m000) or the Sales Deliveries (tdsls4101m200) activity must be executed for the sales order line.

If Sales Deliveries (tdsls4101m200) is not executed before Release Sales Orders/Schedules to Invoicing (tdsls4247m000), the activity is set to **Executed** during execution of the Release Sales Orders/Schedules

to Invoicing (tdsls4247m000) session. Therefore, it is not mandatory to execute Sales Deliveries (tdsls4101m200).

Step 3: Releasing the additional cost lines to Invoicing

The **Release Additional Cost Lines automatically to Invoicing upon** field in the Sales Order Parameters (tdsls0100s400) session determines how the additional cost lines must be released to Invoicing.

Step 4: Processing the additional cost lines

Process the delivered sales order together with the additional cost lines in the Process Delivered Sales Orders (tdsls4223m000) session.

Note

- Because **Line Based** additional cost lines are linked to a specific sales order line, they can be released or processed only together with the original sales order line. You cannot process the sales order line if not all linked additional cost lines are ready to be processed.
- If you copy a sales order (line), the linked additional cost lines are not copied to the new order (line). If you manually copy an additional cost line, a normal sales order line with a cost item will be generated.
- If a sales order line is deleted or canceled, the linked additional cost lines are also deleted or canceled. You can also manually delete or cancel an additional cost line.
- If a sales order line is split before delivery, additional cost lines are linked to each created sales order delivery line. These additional cost lines obtain a new position number, but the sequence number remains zero. Therefore, additional cost lines are not created at sequence level.
- Sales backorder lines can have linked additional cost lines. However, because the additional costs are calculated based on the ordered quantity and not based on the actual shipped quantity, the costs will be too high. A credit note is required to settle this.
- If the **Release Additional Cost Lines automatically to Invoicing upon** check box is selected in the Sales Order Parameters (tdsls0100s400) session, installments can include additional costs.
- If customer approval is implemented, you cannot use the additional costs functionality.

Additional costs - shipment based

Shipment-based additional costs are calculated for sales shipments or shipment lines. After confirmation of a shipment (line), a sales cost order is generated based on the shipment (line). A sales cost order with the **Shipment** origin includes all additional costs for one shipment (line).

Note

- Multiple sales order lines and sales schedule lines can be linked to one shipment.

- The sales shipment cost order and the order/schedule lines that are linked to a shipment, receive a common shipment ID. Based on this ID, a complete shipment can be invoiced to the customer. The relevant order/schedule lines and the sales shipment cost order can be released to invoicing together.

The shipment-based additional costs procedure includes these steps:

Step 1: Generating a sales shipment cost order

If an additional cost set with valid additional cost lines is found for a shipment (line), the shipment-dependent and item-dependent additional costs are added to the shipments as separate shipment lines in the Shipment Lines (whinh4131m000) session. The additional shipment cost lines are generated in Warehousing. When the shipment is confirmed, a sales order with the **Shipment** origin is generated in the Sales Orders (tdsls4100m000) session.

The following apply to these sales orders:

- The sales order type and order series are retrieved from the **Shipment Cost Order Type** and **Shipment Cost Order Series** fields in the Sales Order Parameters (tdsls0100s400) session.
- The **Shipment** field is automatically filled for these orders in the Sales Orders (tdsls4100m000) session.
- Only cost and service items can appear on this sales order.
- The **Additional Cost Line** check box is selected for the generated sales order lines.
- The additional cost amount is displayed in the **Amount** field and the **Price** field is empty on the sales order line. The **Amount** can be changed until the activity Sales Deliveries (tdsls4101m200) is executed. After this, the delivered amount can be changed in the Change Prices and Discounts after Delivery (tdsls4122m000) or Change Prices and Discounts of Sales Invoice Lines (tdsls4132m000) sessions.

Step 2: Approving the sales shipment cost order

The **Automatic Approve Shipment based Cost Orders** check box in the Sales Order Parameters (tdsls0100s400) session determines how the sales shipment cost order must be approved.

Step 3: Issuing the additional cost line items

Based on the value of the **Release to Warehousing** check box in the Items - Sales (tdisa0501m000) session, issuing the cost item is carried out in Warehousing or in Sales.

Therefore, either the Release Sales Orders to Warehousing (tdsls4246m000) or the Sales Deliveries (tdsls4101m200) activity must be executed for the sales order line.

If Sales Deliveries (tdsls4101m200) is not executed before Release Sales Orders/Schedules to Invoicing (tdsls4247m000), the activity is set to **Executed** during execution of the Release Sales Orders/Schedules to Invoicing (tdsls4247m000) session. Therefore, it is not mandatory to execute Sales Deliveries (tdsls4101m200).

Step 4: Releasing the sales shipment cost order to Invoicing

The sales shipment cost order and the order/schedule lines that are linked to a shipment have a common shipment ID. Based on this ID, you can invoice a complete shipment to the customer. If you select the **Shipment** check box in the Release Sales Orders/Schedules to Invoicing (tdsls4247m000) session, the sales shipment cost order and the order/schedule lines that are linked to the shipment, are released to Invoicing together.

The **Release Additional Cost Lines automatically to Invoicing upon** field in the Sales Order Parameters (tdsls0100s400) session determines how the sales shipment cost order must be released to Invoicing.

You can view the shipment IDs in these sessions:

- **Sales shipment cost order**
Sales Orders (tdsls4100m000)
- **Sales shipment cost order lines**
Linked Order Line Data (tdsls4102s200)
- **Sales order lines**
Sales Order Actual Delivery Lines (tdsls4106m000)
- **Sales schedule lines**
Sales Schedule Actual Delivery Lines (tdsls3140m000)

Step 5: Processing the additional cost lines

Process the sales orders and sales schedules together with the additional cost lines in the Process Delivered Sales Orders (tdsls4223m000) and Process Delivered Sales Schedules (tdsls3223m000) sessions.

Additional cost calculation for shipments/shipment lines

The calculation of additional costs for shipments/shipment lines is based on the value of the **Calculation Method** field in the Sold-to Business Partner (tccom4110s000) session. For the shipments, the **Calculation Method** must be **Header Based**; for the shipment lines, it must be **Line Based**.

The additional costs are calculated for sales orders and sales schedules if the **Calculate Additional Costs for Shipments** check box is selected in the Inventory Handling Parameters (whinh0100m000) session.

- **Sales orders**
The additional costs are calculated with the cost set of the business partner (and/or item).
- If the **Calculation Method** is **Header Based** in the Sold-to Business Partner (tccom4110s000) session, the additional cost lines are based on totals per shipment and the link to the originating shipment line is not saved.
- If the **Calculation Method** is **Line Based**, the additional costs are calculated for every originating order line and the link to the originating shipment line is saved.

- **Sales schedules**

The **Header Based** additional costs are calculated with the cost set of the business partner (and/or item). The additional cost lines are based on the totals per shipment and the link to the originating shipment is not saved.

- The **Line Based** additional costs are calculated for the cost set of the contract. This calculation is always independent of the **Calculation Method**. The generated additional cost lines are linked to the originating order line. The quantities of all the shipment lines can be added before the costs are calculated. This is applicable for serials in inventory that have multiple shipment lines per order line.

In the Print Packing Slips (whinh4475m000) and Print Delivery Notes (whinh4477m000) sessions, the header based additional costs are printed first. The line based additional costs are printed below the linked shipment line.

Note

- For confirmed shipment lines, the additional costs are recalculated if the status of the additional cost line is **Not Calculated**. If the status is **Modified**, LN checks if you want to recalculate additional costs or skip the recalculation. After the additional costs are recalculated, the **Additional Costs** field in the Shipments (whinh4130m000) session is set to **Calculated**.
- When you compose a shipment in the Compose Shipment (whinh4231m000) session, the related additional cost lines must be processed for the selected options.
If, on the appropriate menu, you click:
 - **Split Line**, the status of the originating shipment line is reset to **Modified** and the additional cost lines are removed. While confirming the originating line, the additional costs are recalculated.
 - **Move to Shipment**, the additional costs of the originating shipment line are moved to the new shipment line.

Blocking sales orders

In Sales, you can block sales orders or sales order (component) lines.

Blocking occurs for reasons such as:

- The open order balance exceeds the customer's credit limit.
- The invoice to business partner has overdue invoices.
- The invoice to business partner is a doubtful customer.
- The sales order is created by an inexperienced operator.
- The invoice to business partner's credit review period is overdue.
- The sales order includes an invalid or doubtful zip code.
- The sales margin of one of the order lines is exceeded.
- The gross margin of the order is exceeded.
- The sales order is received through electronic data interchange (EDI).

- The sales order fails the export compliance check.
- The sales order fails the letter of credit (L/C) check.
- The price stage of the order line prevents continuation of the order process.
- A general user-defined reason.

Blocking only gives a rough indication of the situation at that particular moment. A customer's overdue invoices during the order entry procedure may have been paid by the time the deliveries are specified.

Setup and procedure

1. Specify the reasons for blocking a sales order or sales order (component) line and the reason categories in the Hold Reasons (tcmcs2110m000) session.
2. Specify when orders must be blocked and the reasons for blocking in the Sales Order Parameters (tdsls0100s400) session. If an order must be blocked for one of these reasons, the order is automatically blocked when it is created.
3. Specify the step at which the procedure is interrupted in the **Block As of Activity** field in the Sales Order Types (tdsls0594m000) session. When an order (component) line is blocked, the procedure for this order can only be partially carried out. If a blocking step is not specified in this session, the order procedure is not interrupted.

Sales orders and sales order (component) lines can also be manually blocked in these sessions:

- Sales Order (tdsls4100m900)
 - Sales Orders (tdsls4100m000)
 - Sales Order Lines (tdsls4101m000)
 - Sales Order Line Components (tdsls4163m000)
4. Blocked orders and (component) lines must be manually released in the Blocked Sales Order (Lines) (tdsls4520m000) session.

In the Sales User Profiles (tdsls0139m000) session, you can specify whether a user is authorized to unblock orders based on the type of hold placed on the order. You can specify whether a user:

- **Can Release Credit Held Orders**
- **Can Release Margin Held Orders**
- **Can Release Promotion Check Held Orders**
- **Can Release Generally Held Orders**

Note

- You can display all blocked orders or select a range of orders to be displayed in the Blocked Sales Order (Lines) (tdsls4520m000) session. The selection criteria for a range of blocked order (lines) is specified in the Select Blocked Sales Order (Lines) (tdsls4220m000) session.
- Use the Print Blocked Sales Order (Lines) (tdsls4420m000) session to print a range of blocked order (lines). Use the Print Released Sales Order (Lines) (tdsls0492m000) session to print a range of released order (lines).
- In the Blocked Sales Order (Line) History (tdsls0592m000) session, information is displayed about sales orders and (component) lines that were previously blocked and released.

Credit rating

The continuation of a sales order can depend on the credit checking of the business partner. For every customer, you must select a credit rating in the Invoice-to Business Partner (tccom4112s000) session. The credit rating determines the action to be taken when you handle sales orders for the business partner and the resulting open invoice amount exceeds the business partner's credit limit.

If a sales order is blocked due to a credit check, these release types are available in the Blocked Sales Order (Lines) (tdsls4520m000) session:

- **Soft Release**
If the order (component) line is blocked due to a credit check and you select the soft type of releasing, the order is blocked again at the next phase if the criteria for that reason still apply to the sales order or order (component) line. If the order is blocked for another reason, you can only use this option to release the order.
- **Firm Release**
If a sales order (component) line is firm released, the order (component) line is released and is not blocked again for the same reason.

Note

- The difference between the firm and soft type of releasing only applies to credit checking. For the other blocking reasons, these types of releasing give the same results.
- If the **Hold Reason Category** is **Credit Check** and the order (line) is **Firm Released**, the released amount (which is the total net amount of the sales order) is recorded in a blocking history record.

Margin control

If the **Margin Control** check box is selected in the Sales Order Parameters (tdsls0100s400) session, LN checks whether the sales price of an item on an order line or quotation line differs too much from the target price.

You can determine the action to be taken (blocking, signaling, or logging) in the Margin Control Parameters (tdsls0120m000) session. The target price is determined by the **Target Price for Margin Control** field in the Sales Order Parameters (tdsls0100s400) session.

Note

For margin control, the allowed deviation from the target price by upper and lower margins can be specified in the Items - Sales (tdisa0501m000) session.

Compliance check failure

Sales order lines that are blocked because the export compliance check or the letter of credit (L/C) check failed, are displayed in the Blocked Sales Order (Lines) (tdsls4520m000) session with the **Hold Reason** value retrieved from the **Pre-Defined Hold Reason - Export Compliance Check** or the

Pre-Defined Hold Reason - Letter of Credit Check fields in the Sales Order Parameters (tdsls0100s400) session.

The blocked lines cannot be released in the Blocked Sales Order (Lines) (tdsls4520m000) session. To unblock a line, you must update the required compliance data and re-execute the compliance check, or an authorized user can manually override the block by using the Document Compliance Check Results (tcgtc1510m000) or Override Compliance Check Results Workbench (tcgtc1610m100) sessions.

Price stages

Sales order lines that are blocked due to the price stage, are displayed in the Blocked Sales Order (Lines) (tdsls4520m000) session. The value of the **Hold Reason** field is retrieved from the blocking definition that is linked to the price stage.

Based on the blocking phase for the blocking definition, the sales order line can be blocked during these phases:

- Order entry
- Release to Warehousing
- Confirmation of shipment

Note

If the blocking phase is set to **Release** (to Warehousing), the sales order line can still be released to Warehousing if the **Allow Release to Warehouse** check box is selected for the hold reason and business partner type in the Hold Reason by Business Partner Type (tdsls0193s000) session. The blocking is applied to the related outbound order line.

The blocked lines cannot be released in the Blocked Sales Order (Lines) (tdsls4520m000) session. To unblock a line, you must update the price stage. Based on the new price stage, the order process can continue, a new blocking can be created, or only a signal may be displayed.

Changing sales data after release to Invoicing

In some cases, you can update sales invoice data after the sales data is released to Invoicing.

Depending on the invoice status, you can change:

- Sales order data in the Change Prices and Discounts after Delivery (tdsls4122m000) and Change Prices and Discounts of Sales Invoice Lines (tdsls4132m000) sessions
- Installment data in the Sales Order Installments (tdsls4110m000) session
- Rebate data in the Rebates (tdcms2550m000) session

When the sales invoice data is changed, LN automatically updates:

- The invoice data in Invoicing. As a result, the sales invoice status is **Confirmed**.
- The business partner order balance.

Changing sales order data

For sales order lines that are released to Invoicing and for which the sales invoice status is **Confirmed** or **On Hold**, you can use these sessions to change the prices and discounts:

- **Change Prices and Discounts after Delivery (tdsls4122m000)**
For sales orders lines of the **Order Line** type, which are also known as total lines.
- **Change Prices and Discounts of Sales Invoice Lines (tdsls4132m000)**
For sales orders lines of the **Order/Delivery Line** and **Backorder** types.

The sales invoice status is related to the **Price Changes Allowed after Delivery** check box, which is displayed in the Sales Order Lines Monitor (tdsls4510m100) and Sales Order Actual Delivery Lines (tdsls4106m000) sessions. See the following table for details on this check box:

Activity	Price Changes Allowed after Delivery	Sales invoice status
Enter sales order line in Sales	No	Not applicable
Confirm shipment in Warehousing, or maintain deliveries in Sales	Yes	Not applicable
Release to invoicing in Sales	Yes	Confirmed
Change sales (invoice) data in Sales	Yes	Confirmed
Compose invoice in Invoicing	No	Composed
Decompose invoice in Invoicing	Yes	On Hold
Change sales (invoice) data in Sales	Yes	Confirmed
Compose invoice in Invoicing	No	Composed
Print and post invoice in Invoicing	No	Posted

You can change these fields in the Change Prices and Discounts after Delivery (tdsls4122m000) and Change Prices and Discounts of Sales Invoice Lines (tdsls4132m000) sessions:

- **Price**
- **Discount %/ Line Discount**

- **Discount Amount**
- **Discount Code**
- **Amount**

Changing installment data

You can use the Sales Order Installments (tdsls4110m000) session to change data for installments that are released to Invoicing and for which the invoice status is **Confirmed**, or **On Hold**.

You can change these fields in the Sales Order Installments (tdsls4110m000) session:

- **Description**
- **Amount**
- **Percentage**
- **Payment Terms**
- **Late Payment Surcharge**
- **Payment Method**

Note

When the invoice is composed in Invoicing, a sequence number is stored on the settled installment line. When the invoice is printed, the invoice number is stored on the installment line. This number is the invoice number of the goods.

Changing rebate data

You can use the Rebates (tdcms2550m000) session to change data for rebates that are released to Invoicing and for which the invoice status is **Confirmed**, or **On Hold**.

When you change the **Rebate Amount** field, the **Rebate %** and **Growing %** fields are automatically changed to zero in the Rebates (tdcms2550m000) session.

Note

You can also check the invoice data before it is released to Invoicing. In this case, you are not restricted by the invoice status in Invoicing when making updates.

To check the invoice data before it is released to Invoicing, you can print a draft invoice:

- For sales (installment) orders in the Print Sales Draft Invoices (tdsls4447m000) session.
- For rebates in the Print Draft Invoices for Rebates (tdcms2401m000) session.

Export compliance for sales orders

If the **Global Trade Compliance** check box is selected in the Implemented Software Components (tccom0100s000) session and the **Export Compliance** check box is selected in the Global Trade

Compliance Parameters (tcgtc0100m000) session, you can set up information for an item for which export compliance is applicable.

When an item is subject to global trade compliance, internal checks are executed to ensure that the export compliance information is valid and the required licenses are available. This is done during sales order line entry, contract deliverable activation, shipment freezing, or confirmation.

After a sales order line is checked for export compliance, the success and failure data is logged. If the export compliance check fails, the sales order line is blocked.

To allow the exclusion of documents from export compliance checks, you can specify document exceptions. For example, the exceptions can be specified by business partner, country, and document type.

Sales order lines

When a sales order line is specified in the Sales Order - Lines (tdsls4100m900) session, an export compliance check is executed if these conditions apply:

- The **Internal Check** check box is selected on the **Export Compliance** tab of the Global Trade Compliance Parameters (tcgtc0100m000) session
- The order type is not used for returning inventory, retrobilling, or consignment invoicing
- The warehouse is specified
- The ordered quantity or order amount are more than zero
- The **Subject to Trade Compliance** check box is selected for the item in the Items (tcibd0501m000) session
- The country of the ship-to address differs from the country of the ship-from address

If these conditions are met, and no exception is found in the Export Document Exceptions (tcgtc0130m000) session, an internal compliance check is executed for the sales order line. For this internal check, the application verifies whether an export license is available and valid in the Export Licenses (tcgtc0120m000) session and whether export compliance data is available and valid for the combination of item and ship-to country in the Item Export Compliance Data (tcgtc0110m000) session.

If the **Limited Quantity Applies** check box, or the **Limited Value Applies** check box is selected in the Export Licenses (tcgtc0120m000) session for the export license, quantity or value limits are checked. The sales order line's ordered quantity in inventory unit and net order line amount in order currency are used for this purpose. During shipment confirmation, export license consumptions are logged in the Export License Consumptions (tcgtc1520m000) session.

Note

If global trade compliance applies to the item of the sales order line, the **Subject to Trade Compliance** check box is selected for the line.

Components

If the **Component Handling** field is set to **Sales BOM** or **Component Lines** in the Sales Order Lines (tdsls4101m000) session, components are linked to the sales order line. The export compliance check is executed only for the components that are shipped, and not for the main item. Consequently, the compliance check results are logged by component line.

These lines are blocked if a component fails the compliance check:

- **Sales BOM**
The order line is blocked. Several components can fail the check, but only one sales order line blocking record is generated in the Blocked Sales Order (Lines) (tdsls4520m000) session. The order line cannot be unblocked before all failure results are removed for the component lines.
- **Component Lines**
Instead of the order line, the order component line is blocked in the Sales Order Line Components (tdsls4163m000) session.

Export compliance check

The compliance check can result in a success or failure, which you can view in the Document Compliance Check Results (tcgtc1510m000) session.

In case of success, the sales order (component) line is saved and the order procedure can start. The compliance check result is automatically approved.

In case of a failure, the line is saved and set to blocked. Consequently, the **Blocked** check box is selected for the line and the line is displayed in the Blocked Sales Order (Lines) (tdsls4520m000) session with the **Hold Reason** retrieved from the **Pre-Defined Hold Reason - Export Compliance Check** field in the Sales Order Parameters (tdsls0100s400) session.

You cannot use the Blocked Sales Order (Lines) (tdsls4520m000) session to release lines if the hold reason category is set to **Compliance Check**. To unblock the line, you must update the required data and re-execute the export compliance check, or an authorized person can manually override the export block by using the Document Compliance Check Results (tcgtc1510m000) or Override Compliance Check Results Workbench (tcgtc1610m100) sessions.

Note

On the appropriate menu in several sales sessions, you can use these commands:

- **Export Compliance Information**, to view and maintain global trade information for the sales document in the Document Global Trade Compliance Information (tcgtc1100m000) session
- **Check Document Compliance**, to force execution of the export compliance check

Product variants in Sales

In Sales, you can generate product variants for configurable items, which are items that have the **Configurable** check box selected in the Items (tcibd0501m000) session.

In the Items (tcibd0501m000) session, **Manufactured**, **Purchased**, or **Product** items with the **Default Supply Source** set to **Assembly** and **Generic** items, are always configurable.

Note

For items with the default supply source set to **Assembly** in the Items (tcibd0501m000) session, the following are applicable:

- If the **Sell Multiples of Same Configuration** check box is cleared in the Assembly Planning Parameters (tiapl0500m000) session, the order quantity is limited to one on a sales order line. Only if the **Sell Multiples of Same Configuration** check box is selected in the Assembly Planning Parameters (tiapl0500m000) session, you can enter an item with an order quantity greater than one and sell multiples of the same assembly product variant, which results in several assembly orders linked to one sales order line. To identify the product variant, the various assembly orders and the sales order line have the same specification. These items are also called assembly items. For more information, refer to Selling multiples of product variants for assembly and Assembly items.
- The **Configurator** check box in the Assembly Planning Parameters (tiapl0500m000) session determines whether you must configure the item in Product Configuration or whether LN automatically generates a product variant for the item in the Product Variants - Inventory (Assembly) (tiapl3600m000) session.

Linking product variants

If the item is a configurable item, you can choose to immediately configure the item at line entry in the Sales Order Lines (tdsls4101m000) and Sales Quotation Lines (tdsls1501m000) sessions. If you want to configure the product variant after the sales line is saved, on the appropriate menu, click **Configurator** to configure the product variant from the Product Configurator (tipcf5120m000) session.

You can also choose to link an existing product variant in the **Product Variant** field of the Sales Order Lines (tdsls4101m000) and Sales Quotation Lines (tdsls1501m000) sessions.

Product variants can be configured or selected here:

Default Supply Source	Item on sales order/quotation	Configure by PCF parameter	Configure product variant	Select product variant from session:
Job Shop	Generic	Not applicable	Product Configurator (tipcf5120m000)	Product Variants (tipcf5501m000)
Assembly	Generic	Selected	Product Configurator (tipcf5120m000)	Product Variants - Inventory (Assembly) (tiapl3600m000)
Assembly	Generic	Cleared	Not applicable	Product Variants - Inventory (Assembly) (tiapl3600m000)
Assembly	Manufactured/Purchased/Product	Selected	Product Configurator (tipcf5120m000)	Product Variants - Inventory (Assembly) (tiapl3600m000)
Assembly	Manufactured/Purchased/Product	Cleared	Not applicable	Product Variants - Inventory (Assembly) (tiapl3600m000)

Note

If LN is integrated with the Product Configuration Management configurator, the product variant is configured in CPQ Configurator and not in the Product Configurator (tipcf5120m000) session. For more information, refer to CPQ Configurator set up.

Reusing product variants

On different sales order/quotation lines of the same sales order or quotation, a specific product variant can be used multiple times.

This functionality can only be used if the following settings are applicable:

- The **Identifying Item Code** check box is selected in the Product Configuration Parameters (tipcf0100m000) session.

- The **Equate Project (PCS) with Sales Order** check box is selected when generating a project structure for the configured item in the Generate (Project PCS) Structure for Sales Orders (tdsls4244m000) session.
- The **Allow reuse of Configurations** check box is selected in the Product Configuration Parameters (tipcf0100m000) session.

Example

Generic item	Feature	Options
100: Chair X	Color	1: Red
		2: Blue
	Height	1: A
		2: B

Sales order/quotation after the configuration is saved:

Order	Position	Item	Description	Variant	Options chosen
123	5	Text	Classroom 1a	-	-
	10	100	Chair X	10	Color Red, Height A
	15	100	Chair X	11	Color Red, Height B
	20	Text	Classroom 1b	-	-
	25	100	Chair X	10	Color Red, Height A
	30	100	Chair X	11	Color Red, Height B

Sales order/quotation after the project structure is generated in the Generate (Project PCS) Structure for Sales Orders (tdsls4244m000) session:

Order	Position	Item	Description	Variant	Options chosen
	5	Text	Classroom 1a	-	-
123	10	100-1-A	Chair X, Color Red, Height A	10	Color Red, Height A
	15	100-1-B	Chair X, Color Red, Height B	11	Color Red, Height B
	20	Text	Classroom 1b	-	-
	25	100-1-A	Chair X, Color Red, Height A	10	Color Red, Height A
	30	100-1-B	Chair X, Color Red, Height B	11	Color Red, Height B

Checks applied in the example

- After configuration of order line 15, the same item is found on line 10. The new item code of position 10 (123/100-1-A) and the item code of line 15 (123/100-1-B) are different. Therefore, order line 15 is accepted.
- After configuration of order line 25, the same item with the same options is found on line 10. The new item code of position 10 and the item code of line 25 are the same: 123/100-1-A. Order line 25 can only be accepted if the **Allow reuse of Configurations** check box is selected.

The item code of position 10 and 25 are the same. In the Items (tcibd0501m000) session, the **Product Variant** for item 123/100-1-A is 10.

Important

The Generic Item - Settings for Data Generation (tipcf3101m000) session affects the expected result:

- In the example, the settings from this session are used: the selected options are part of the generated item code. If you select another option, a different customized item code is generated.
- If the settings for data generation are not specified in the Generic Item - Settings for Data Generation (tipcf3101m000) session, the customized item code is based on order number – item code, that is 123-100. In this case, position 15 would have resulted in an error message: the customized item code is the same as position 10 but the options are different.

Updating sales order lines and sales quotation lines

When you insert an existing product variant on the sales order/quotation line, these fields are updated on the sales order/quotation line:

Effectivity Unit	For items with the Default Supply Source set to Assembly and an effectivity unit linked to the product variant in Assembly Planning (APL).
Warehouse	For Manufactured , Purchased , or Product items with the Default Supply Source set to Assembly .
Work Center	For Generic items with the Default Supply Source set to Assembly .
Sales Price	-
Serial Number	Is updated when the linked <u>assembly order</u> is sequenced. The sales order cannot be released to Warehousing without this number.
Standard Cost	Is updated after you do one of the following: <ul style="list-style-type: none"> ■ Click Calculate Standard Costs in the Product Variants (Assembly) (tiapl3500m000) session. ■ Freeze the assembly order.

Note

For **Manufactured**, **Purchased**, or **Product** items with the **Default Supply Source** set to **Assembly** and the **Sell Multiples of Same Configuration** check box selected in the Assembly Planning Parameters (tiapl0500m000) session, multiple assembly orders can be linked to one sales order line, which means the sales order line cannot be updated with a serial number. Therefore, Warehousing enters serial numbers in a lot and serial set, which you can view by clicking the **Lot and Serial Set** button in the Sales Order Actual Delivery Lines (tdsls4106m000) session. Using this set, multiple serials are linked to the delivery line.

Updating product variants

When you change the **Planned Delivery Date** or the **Order Date/ Quotation Date** on the sales order/quotation line, the following fields are updated on the linked product variant:

Changed field on sales order/ quotation line	Updated field on product variant	Update restrictions
Planned Delivery Date	Requested Offline Date	None
Planned Delivery Date	Planned Offline Date	<ul style="list-style-type: none"> ■ Product variant status is Open. ■ No assembly orders exist.
Planned Delivery Date	Product Configuration Date	<ul style="list-style-type: none"> ■ Product variant status is Open. ■ No assembly orders exist. ■ The Configuration Date (PCS) is set to Delivery Date in the Sales Parameters (tdsls0100s000) session. ■ The product variant is not configured by Product Configuration.
Order Date/ Quotation Date	Product Configuration Date	<ul style="list-style-type: none"> ■ Product variant status is Open. ■ No assembly orders exist. ■ The Configuration Date (PCS) is set to Order Date in the Sales Parameters (tdsls0100s000) session. ■ The product variant is not configured by Product Configuration.

Note

For **Manufactured**, **Purchased**, or **Product** items with the **Default Supply Source** set to **Assembly** and the **Sell Multiples of Same Configuration** check box selected in the Assembly Planning Parameters (tiapl0500m000) session, multiple assembly orders can be linked to one sales order line, and therefore

multiple planned delivery dates can be applicable for a sales order line. As a result, date changes are not updated to the product variant.

Unlinking product variants

On the sales order/quotation line, you can unlink a product variant.

Unlinking does not remove the product variant, but removes only the reference to the sales order or quotation on the product variant and on the assembly order, if applicable. In the Product Variants (Assembly) (tiapl3500m000) and Product Variants (tipcf5501m000) sessions, the **Reference Type** remains **Sales Order**, **Sales Quotation**, or **Standard Variant**.

The unlinked product variant can be reused by another sales order/quotation.

Note

For items with the **Default Supply Source** set to **Assembly**, the following are applicable:

- In the Assembly Planning Parameters (tiapl0100s000) session, the **Allow Assembly Orders for unsold Product Variants** check box determines when you can unlink product variants.
- If the item is rejected during warehouse inspection, the product variant status changes to **Canceled**. You can then cancel the linked sales order line or remove the product variant from the sales order line. If required, you can link another product variant.

Using templates in sales orders

You can use sales order templates for recurring sales orders from the same (group of) business partner(s).

In the Sales Order (tdsls4100m900) session, you can specify a sales order based on a template. In the Customer 360 (tdsmi1500m000) session, you can generate a sales order based on a template for the selected business partner.

Specifying sales order lines based on a template

To specify sales order lines based on a template:

1. Specify one or more sales order templates. For more information, refer to Sales order templates.
2. In the Sales Order (tdsls4100m900) session, specify sales order header data.
3. From the appropriate menu on the **Lines** tab, click **Sales Order Templates**.
4. LN verifies how many templates are available for the business partner. If only one template is available, the Sales Order Template (tdsls2605m000) session is started. If more templates are available, the Sales Order Templates (tdsls2505m000) session is started.
5. ■ If the Sales Order Template (tdsls2605m000) session is started, you can copy all item lines, or a selection of item lines to the sales order by clicking **Copy All Item Lines** or **Copy Selected Lines**.

- If the Sales Order Templates (tdsls2505m000) session is started, you can select a template and click **Copy All Item Lines** to copy all item lines to the sales order. To select specific item lines, double-click a template. The Sales Order Template (tdsls2605m000) session is started in which you can select the lines.

Generating a sales order based on a template

To generate a sales order based on a template:

1. Specify one or more sales order templates.
2. In the Customer 360 (tdsmi1500m000) session, click **Sales Order Templates**.
3. LN verifies how many templates are available for the business partner. If only one template is available, the Sales Order Template (tdsls2605m000) session is started. If more templates are available, the Sales Order Templates (tdsls2505m000) session is started.
4. From the appropriate menu of these sessions, select **Generate Sales Order**. A sales order is generated based on the template for the selected business partner.

Note

If a sold-to business partner is specified in the Sales Order Template (tdsls2605m000) or Sales Order Templates (tdsls2505m000) sessions, you can generate a sales order from the template also from these sessions.

Extended integration between Sales and Service for after-sales services

An item can be sold with the related after-sales services. You can use a sales quotation or sales order to specify the after-sales services that are applicable for the sold item after delivery.

You can specify these after-sales service related settings for an item:

- Create physical breakdown
- Link to installation group
- Add warranty
- Generate service contract

Based on the settings, the after-sales service actions are executed when a delivered after-sales service line (item) is processed to Service.

Master data

To set up the extended integration:

- In the Sales Quotation Parameters (tdsls0100s100) session, select the **Extended Service Integration** check box.
- In the Sales Order Parameters (tdsls0100s400) session, select the **Extended Service Integration** check box.
- In the Items - Service (tsmdm2100m000) session, select the **Process to Service after Delivery** check box for the item.
- Optionally, in the Sales Order Type (tdsls0694m000) session, add the Process After Sales Service Lines (tstdm2250m000) session as an activity to the order type. If the **Automatic** check box is selected for this activity, after-sales service lines are automatically processed to Service.

Procedure overview

1. After you specify and save a sales quotation in the Sales Quotation (tdsls1600m000) session or a sales order in the Sales Order (tdsls4100m900) session, after-sales service data is generated for the item in the After Sales Service (tstdm5600m000) session.
2. To view and modify the defaulted after-sales service data in the After Sales Service (tstdm5600m000) session, click **After Sales Service** on the appropriate menu in the Sales Quotation (tdsls1600m000) or Sales Order (tdsls4100m900) sessions.
3. If the **Process Status** is set to **Delivered** for an after-sales service line (item), the line can be processed to Service using the Process After Sales Service Lines (tstdm2250m000) session. If this session is linked as an automatic activity to the order type, processing is performed automatically.
4. The after-sales service actions you specified for the sold item are executed in Service. To view the after-sales service data that is generated in Service and linked to the sold item, select a processed after-sales service line and click **Results** on the appropriate menu of the After Sales Service (tstdm5600m000) session.

You can use the After Sales Service Workbench (tstdm5600m100) session for an overview of the after-sales service data for sales quotations and orders and the related status.

Notes

- Items cannot be delivered based on a sales quotation, so after-sales service actions cannot be executed for a sales quotation. However, you can copy a sales quotation's after-sales service data to a sales order when the quotation is processed to an order in the Process Sales Quotations (tdsls1200m000) session.
- If a sales order line includes components, separate after-sales service lines are generated for the components.

- If a sales order line includes a lot and serial set, this set is copied to the after-sales service line. When the after-sales service line is processed to Service, the lot and serial set is exploded into separate items for which the after-sales service actions are executed.
- If partial deliveries are applicable for a sales order line, the linked after-sales service line is set to **Delivered** by the first invoice line that is generated. Subsequent deliveries/invoice lines generate additional after-sales service lines.
- If a final delivery is made, but a quantity is yet to be delivered for the sales order line, the sales backorder is used to generate new after sales service lines.

Copy templates

You can use copy templates when copying sales orders (lines). A copy template is used to specify how order (line) data is copied. The template includes a standard set of copy exceptions.

Copy templates can be used when you copy:

- Existing orders to target orders in the Copy Sales Order (tdsls4201s000) session
- Existing sales order lines to target order lines
- An original document's sales order lines to target order lines in the return order process

Copy exceptions can be sales order header or sales order line fields. If a field is not specified as a copy exception, it is automatically copied from the source order (line) to the target order (line).

Sales order header

For sales order header fields, you can specify these copying actions:

- **Prompt**
The selected field can be manually specified in the Copy Sales Orders - Prompts (tdsls4201s100) session. The default value is retrieved from the source order.
- **Retrieve Default**
A default value is retrieved based on standard defaulting logic.
- **Copy From...**
The date that must be copied to the target sales order. This is only applicable for date fields.

Sales order line

For sales order line fields, you can specify these copying actions:

- **Retrieve Default**
A default value is retrieved.
- **Copy From...**
The quantity that must be copied to the target sales order line. This is only applicable for the **Ordered Quantity** field.

- **Copy From Original**

The components that are linked to the source order line are copied to the target order line. This is only applicable for **Component Lines**.

Using copy templates

1. In the Sales Order Parameters (tdsls0100s400) session, select the **Prompt for Copy Templates** check box.
2. In the Sales Order Copy Template - Exceptions (tdsls4690m000) session:
 - a. Specify a template header. Specify the template code and the effectivity period for the **Copy Template**.
 - b. Click **Save**. By default, several sales order header and sales order line copy exceptions are linked.
 - c. On the **Header Exceptions** tab, specify the copy exceptions of the Header Exceptions (tdsls4191m000) session.
 - d. On the **Line Exceptions** tab, specify the copy exceptions of the Line Exceptions (tdsls4192m000) session.
3. In the **Copy Template for Sales Orders** and **Copy Template for Sales Return Orders** fields of the Sales User Profiles (tdsls0139m000) and Sales Order Parameters (tdsls0100s400) sessions, link a default copy template for sales orders and return orders.
4. In the Copy Sales Order (tdsls4201s000) session, specify a copy template.
5. The Copy Sales Orders - Prompts (tdsls4201s100) session is automatically started when you click **Copy** in the Copy Sales Order (tdsls4201s000) session and if a copy template is used in which the value of the **Copy Action** field is set to **Prompt** for the linked copy exceptions.

Note

- This session is started only if the target sales order is a new sales order. If you copy to an existing target sales order, the prompts are not displayed.
- Recheck the values you specify in the fields, because the session does not run a check prior to the execution of the **Copy** action.

You can print the sales order copy templates with the copy exceptions and copy actions using the Print Sales Order Copy Templates (tdsls4490m000) session.

Important!

You can also copy sales orders and the related lines in the Copy Sales Order (tdsls4201s000) session without using copy templates. A standard set of copy exceptions is used, based on which the order data is copied. These are the default copy exceptions linked to a template header when you specify and save the header data. See step 2.

Order priority (simulations)

You can use order priority simulations to calculate the priority sequence in which inventory is allocated to orders. For example, if insufficient inventory is available, you can use a priority simulation to sort sales orders according to the order delivery priority.

In the **Order Priority Method** field of the Sales Order Parameters (tdsls0100s400) session, you can specify the method that is used to determine the order priority.

- **Simulation**
Simulated order priorities are defined in simulation codes. The simulation code includes a sort sequence and a sort mode. You can select six fields for each code to sort sales orders. Default fields are retrieved from the sales order lines, but you can also use fields from sales orders and business partners.
- **Delivery Date**
The order priority is determined by the planned delivery date and the simulations are not used.

Example

Simulation code AA includes the following sort sequences:

- 1 = Planned receipt date
- 2 = Sold-to business partner

If, for both sort sequences, the **Sort Mode** field is Ascending in the Priority Simulation (tdsls4124s000) session, sales orders with the oldest planned receipt date are delivered first. If orders exist with the same planned receipt date, the sales orders with a sold-to business partner that appears first in the alphabet are next executed, and so on.

Specifying and using order priority (simulations)

Complete these steps:

1. Specify priority simulation codes in the Priority Simulations (tdsls4524m000) session.
2. Generate delivery priorities for sales orders in the Generate Sales Order Priority Simulations (tdsls4229s000) session.
3. In the Sales Order Priority - Simulations (tdsls4126m000) session, you can change priority simulations for sales orders of a simulation code and item combination.
4. Process the simulated order priorities to actual sales orders in the Process / Delete Sales Order Priority Simulations (tdsls4226s000) session. You can also delete the generated simulations.
5. Optionally, change the order priority of actual deliveries in the Sales Order Priorities (tdsls4129m000) session.

Rush orders

Every company deals with rush requests from customers. These requests usually require special terms of payment and delivery. To determine whether a rush request is reasonable and to inform the business partner about the delivery date of an order, standard rush order conditions must be specified for a company.

The following rush situations are available:

- The customer asks for a rush delivery during order entry
- The customer asks you to rush an already issued order

Master data

Before you can specify a rush order:

1. Specify rush delivery terms and rush payment terms in the **Rush Delivery Terms** and **Rush Payment Terms** fields of the Sales Order Parameters (tdsls0100s400) session. These default terms can still be changed on the rush order header or rush order line.
2. Because the availability type affects the lead time, specify the **Availability Type** field in the Sales Order Parameters (tdsls0100s400) session.
3. If the **Mandatory Entry of Change Codes** check box is selected in the Sales Order Parameters (tdsls0100s400) session, specify a change type for rush orders in the Change Types (tdsls0198m000) session, and a change reason for rush orders in the Change Reasons (tdsls0197m000) session to clarify why the sales order changed.

Rush order creation

To create a rush order, or to convert an existing normal order into a rush order, click:

- **Rush Order** in the Sales Orders (tdsls4100m000), or Sales Order (tdsls4100m900) sessions. As a result, LN selects the **Rush Order** check box in these sessions. When an order is rushed, all linked sales order (delivery) lines are rushed as well.

- **Rush Order Line** in the Sales Order Lines (tdsls4101m000) session. As a result, LN selects the **Rush Order Line** check box in this session.
- **Rush Delivery Line** in the Sales Order Planned Delivery Lines (tdsls4101m100) session. As a result, LN selects the **Rush Delivery Line** check box in this session.
- **Rush Component** in the Sales Order Line Components (tdsls4163m000) session. As a result, LN selects the **Rush Component** check box in this session.

If a sales order is defined as a rush order, the **Order Priority** is one (1).

Note

- If you want to automate the processing of a rush order, you must specify automatic activities for the order type. For more information, refer to Flexible sales order processing.
- You can convert an existing sales order into a rush order as long as you can change the linked warehousing order.
- The setting of the **Rush Order** check box on the sales order header is defaulted to the relevant check box of the linked sales order lines and/or delivery lines. However, you can change the setting of this check box on the sales order (delivery) line. As a result, you can define a separate order line, or delivery line as a rush line.

Restrictions

You cannot rush:

- Return orders, collect orders, retrobilled orders, and consignment invoicing orders
- Sales order lines that are not released to Warehousing
- Backorder lines

Rush orders and Warehousing

After the rush order is released to Warehousing:

- The **Rush Order** check box is selected in the Outbound Order Lines (whinh2120m000) session. These outbound order lines have the highest priority when generating and processing the outbound advice.
- If the **Rush Orders only** check box is selected in the Generate Outbound Advice (whinh4201m000) session, a purchase order advice is generated for these lines first. To speed up the outbound process for rush orders, you can then click **Direct Outbound** in the Process Outbound Advice (whinh4200m000) session. As a result, all outbound process steps that usually take place before confirmation of the shipment, are skipped. In other words, LN creates a shipment line after processing the outbound advice.

Direct delivery

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.

For detailed information on generating and processing direct delivery orders, refer to the following topics:

- *Direct delivery sales orders (p. 54)*
- Direct delivery service orders

Modifying direct delivery purchase orders

Fields on the generated purchase order (line) that are filled by Sales or Service are disabled and cannot be manually changed.

As long as no receipts are executed, you can change the following fields on the purchase order line from Sales or Service:

- **Ordered Quantity**
- **Planned Receipt Date**
- **Receipt Address**

Deleting direct delivery purchase orders

You cannot delete a direct delivery purchase order from Sales or Service. You can delete a direct delivery purchase order line only manually in Procurement. However, if the service order receives the **Released** status, you can no longer delete the linked direct delivery purchase order.

Note

- If the direct delivery purchase order is deleted, the deletion is communicated to Service in the Related Orders (tsmdm4500m000) session.

- You cannot delete a service order line to which a direct delivery purchase order line is linked. You must first manually delete the direct delivery purchase order line.

Canceling direct delivery purchase orders

You cannot cancel a direct delivery purchase order line in Procurement. You must cancel the linked sales order line in Sales or the linked service order line in Service to cancel the direct delivery purchase order line.

However, if receipts are executed for the purchase order, you can no longer cancel the linked sales order line or service order line.

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 sales orders and related orders

- **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.

- **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. 64).

- **Backorders**

After deliveries are communicated to Sales and less is received than ordered, a confirmed backorder is generated in Procurement irrespective of the setting of the **Confirm Back Orders automatically** check box in the Purchase Order Parameters (tdpur0100m400) session.

It depends on the setting of the **Confirm Back Orders automatically** check box in the Sales Order Parameters (tdsls0100s400) session if you must first manually confirm the backorder in Sales.

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.

Static cross-docking

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.

These types of cross-docking are available:

- Static
- Dynamic
- Direct material supply

In this topic, only static cross-docking is handled.

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.

The calculation of the **Planned Receipt Date** for the purchase order:

Planned Delivery Date in the Sales Orders (tdsls4100m000) session + **Cross-dock Lead Time** in the Item Data by Warehouse (whwmd2110s000) session.

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.

Note

For a cross-docking order, several purchase order line details can be linked to one sales order line, or several sales order planned 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.

When you change sales or purchase order lines that are linked, a message is displayed 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 Sales and Freight

The Freight package can be used to handle transportation requirements. During sales order entry, you can identify and choose the appropriate means of transportation and generate a freight order from a sales order.

Integration between Freight Order Control and Sales

In Freight Order Control, these types of planning are available:

- Rough planning, which is used for long-term capacity planning.
- Load building, which is the actual execution time plan of the shipments and loads. To ship the goods, Freight Order Control must know the shipments that must be moved over a period of time. If a freight order is created from Sales, the progress of the shipment and loads can be exchanged and information can be shared between Freight Order Control and Sales.

For more information, refer to *Integration Freight Order Control and Sales* (p. 62).

Integration between freight invoicing and sales invoicing

Based on the **Rate and Carrier/LSP Selection at Order Line** parameter in the Freight Rates and Costs Parameters (fmfr0100m000) session, during sales order entry or sales quotation entry, a carrier is automatically or manually selected. Several factors, such as invoicing method, item, freight class, service level, transport type, and transport means group, determine the freight invoice amount, which is calculated in Pricing. The calculated invoice amount is printed on the order acknowledgement.

The freight invoice amount 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 sales invoicing* (p. 66).

Integration Freight Order Control and Sales

To identify and choose the appropriate means of transportation, freight orders can be generated from sales orders that are manually created, generated, or that originate from a converted sales quotation.

If a freight order is created from a sales order, the progress of the shipment and loads can be exchanged and information can be shared between Freight Order Control and Sales.

Sales quotation settings

To enable the generation of freight orders from sales orders that originate from a converted sales quotation, and to provide the necessary freight related information when the quotation is converted to a sales order, specify these fields in the Sales Quotation Lines (tdsls1501m000) session:

- Select the **Gen. FreightOrders** 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 sales order.
- Select the **CarrierBinding** check box if you want the same carrier to be used in the freight order as in the sales order.
- Enter a date in the **Planned Delivery Date** field. This date can be considered as the planned load date.
- Enter a date in the **Planned Receipt Date** field.

Note

After the **Planned Delivery Date** is specified on the sales quotation line, Freight determines if the transportation lead time is sufficient. A message is displayed if the goods cannot be delivered in time. You can either change the **Planned Receipt Date**, or select another carrier.

Freight orders cannot be generated from quotations, but only from sales orders. In the Sales Quotation Lines (tdsls1501m000) session, you specify all freight-related data to provide the necessary information when the confirmed quotation is converted to a sales order in the Process Sales Quotations (tdsls1200m000) session.

Sales order settings

To enable the generation of freight orders from sales orders, these settings must be applied in the Sales Order Lines (tdsls4101m000) or Sales Order Planned Delivery Lines (tdsls4101m100) session:

- Select the **Generate Freight Order from Sales** check box.
- Select the **Carrier Binding** check box if you want the same carrier to be used in the freight order as in the sales order.
- 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 sales order.
- Enter a date in the **Planned Delivery Date** field. This date can be considered as the planned load date.

- Enter a date in the **Planned Receipt Date** field.

Note

Freight orders generated for sales orders are of the single-shipment type if:

- The sales order type of the sales order is associated with a warehousing order type for which the **Single Order per Shipment** check box is selected.
- The **Single Shipment Order** check box is selected for the freight order type associated with the sales order.
- The **Single Order per Shipment** check box is selected for the default warehousing order type of the sales order.

Generating freight orders from sales orders

If the **Generate Freight Order from Sales** check box is selected in the Items - Sales Business Partner (tdisa0510m000) session and a sales order is generated for the item – sales business partner combination, after approval, LN checks whether Generate Freight Orders (tdsls4222m000) is linked as an activity to the order type in the Sales Order Type - Activities (tdsls0560m000) session to determine the freight order generation method. The freight order can be manually or automatically generated for the sales order.

After a freight order is generated from a sales order (delivery) line, the status of the freight order is **Expected**. The information that goes to the freight order includes only shipping related data, such as customer-requested date, addresses, shipping constraints, carrier, route, delivery terms, and planning responsibility. The original sales order number, position, and sequence number can be referenced in the freight order line. The calculated freight costs can be returned to the sales order (delivery) line.

When a load plan is created for the freight order, the status of the freight order is **Planned**. The load plan can be made actual only in Freight and the status of the freight order can be **Actual** after the sales order (delivery) line is released to Warehousing. On the appropriate menu of the Sales Order Lines (tdsls4101m000) or Sales Order Planned Delivery Lines (tdsls4101m100) session, you can click:

- **Freight Details**, to start the Freight Order Line Status Overview (fmfoc2601m000) session. In this session, you can view freight details, such as information about shipments and loads, the used carrier, the dates on which the shipments will be executed, and the quantities to be shipped.
- **Linked Information**, to start the Linked Order Line Data (tdsls4102s200) session, in which you can view linked freight orders.

Note

- You cannot create freight orders for retrobilled orders, or cost orders as these order types require no shipment.
- If you want to modify, block, delete, or cancel a sales order and linked freight order, the status of the corresponding freight order must be **Expected**, **Planned**, or **Actual**.

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 sales order (delivery) line. In the Sales Orders (tdsls4100m000) session,

you can click Printing and then *Orders with Deviation in the Shipment Dates* to start the Print Orders with Deviating Shipment Dates (fmlbd3450m000) session. With this session, you can generate a difference report listing all orders for which the original dates differ from those in the load plan of Freight.

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 Business Partner** 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:

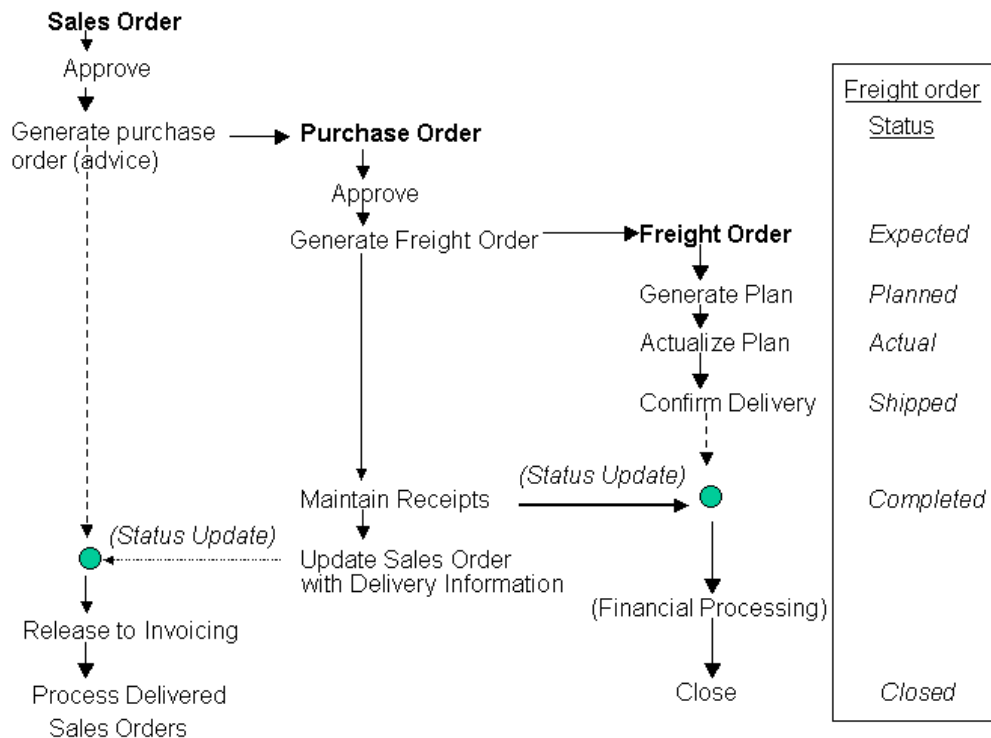
-	Sales	Purchase	Freight	ASN
Moment of shipment of the goods from the supplier.	planned delivery date	load date	load date	shipping date
Moment of receipt of the goods by the sold-to business partner.	planned receipt date	planned receipt date	unload date	planned delivery date

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. 54).
- 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

If the direct delivery purchase order is:

- Updated by Sales, 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 Sales, the linked freight order is deleted.

Integration freight invoicing and sales invoicing

If a sales 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 sales company. The freight rate that a company must pay to the carrier is called freight costs. You can invoice your business partner, for whom you arranged transportation services, for freight.

Master data

If you want to invoice your business partner for freight, specify the following master data:

- **Items - Sales Business Partner (tdisa0510m000)**
Select the **Invoice for Freight** check box. The value of this check box is defaulted to the **Invoice for Freight** check box in the Sales Order Lines (tdsls4101m000) session, Sales Order Planned Delivery Lines (tdsls4101m100) session, and Sales Quotation Lines (tdsls1501m000) session.
- **Sold-to Business Partner (tccom4110s000)**
Select the **Invoice Business Partner for Freight** check box. The value of this check box is defaulted to the **Freight Costs to be Invoiced** check box in the Sales Orders (tdsls4100m000) session, or the **Invoice for Freight** check box in the Sales Quotations Overview (tdsls1500m000) session.
- **Invoice-to Business Partner (tccom4112s000)**
Set the **Invoice for Freight Based On** field to one of the following:
 - **Freight Costs**
If you want the freight costs for an order, 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.

Cost plus invoice

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

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

The freight invoice amount is calculated 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 an order, shipment, or load. When the sales invoice is released to Invoicing, with the calculated amount on the sales order (delivery) line, the freight invoice is also released to Invoicing. In Invoicing, the order invoice is merged with the freight invoice and sent as one invoice.

If the freight invoice is released to Invoicing before the sales invoice is released, one invoice is sent for goods sold and one for goods transported.

Freight Costs (Update Allowed)

The freight amount for the order (delivery) line, or quotation line is prorated based on the entire load in Freight. First, the freight costs (estimated freight costs) are determined, based on the carrier rate books in Pricing. In a later stage, after the carrier invoice is received and matched in Accounts Payable, you can specify the actual costs. After the sales invoice is released to Invoicing, with the prorated amount on the sales order (delivery) line, which are the freight costs, the freight invoice is also released to Invoicing.

If the freight invoice is released to Invoicing before the sales invoice is released, one invoice is sent for goods sold and one for goods transported.

If the sales order (delivery) line is invoiced with the freight costs before the actual costs are received from the carrier, you can invoice the customer with the difference between the estimated freight costs and the actual costs.

Note

If you want to invoice your business partner with the difference, an additional invoice can be generated. 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 freight 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 (invoice) amount calculation

To calculate a freight invoice amount, carriers and corresponding freight rates are selected based on the **Rate and Carrier/LSP Selection at Order Line** parameter in the Freight Rates and Costs Parameters (fmfr0100m000) session, which can be **Interactive**, **Cheapest**, or **Prioritized**.

Note

If the **Show Calculation Log** check box is selected in the Sales Quotation Lines (tdsls1501m000), Sales Order Lines (tdsls4101m000), or Sales Order Planned Delivery Lines (tdsls4101m100) session, you can view how the freight amount is calculated in a freight amount calculation log.

Interactive

During sales order entry or sales quotation entry, you can zoom to Freight to select the most suitable carrier. Based on several factors, such as invoicing method, item, freight class, service level, transport type, and transport means group, the freight invoice amount is retrieved from a rate book in Pricing.

To retrieve a carrier, in the Sales Quotation Lines (tdsls1501m000), Sales Order Lines (tdsls4101m000), or Sales Order Planned Delivery Lines (tdsls4101m100) sessions:

1. Select the **Invoice for Freight** check box.
2. Click the Freight Amount button behind the **Freight Amount** field. The Freight Rates (fmfr0530m000) session starts.
3. Select the most suitable carrier and service level combination, and click OK.

After you made your selection from the Freight Rates (fmfr0530m000) session, the following fields are automatically specified in the Sales Quotation Lines (tdsls1501m000), Sales Order Lines (tdsls4101m000) session, or Sales Order Planned Delivery Lines (tdsls4101m100) sessions:

- **Carrier/LSP**
- **Freight Service Level**
- **Freight Amount**

Cheapest or Prioritized

During sales order/quotation entry or update, the carrier with the lowest rates or with the highest priority is automatically selected. The freight invoice amount is automatically calculated or recalculated.

Note

- If the **Freight Amount Binding** check box is selected in the Sales Quotation Lines (tdsls1501m000), Sales Order Lines (tdsls4101m000), or Sales Order Planned Delivery Lines (tdsls4101m100) session, the **Freight Amount** is recalculated only if the ordered quantity changes. Other changes do not affect the freight amount.
- During confirmation of a final shipment, the freight amount is left unchanged. During confirmation of a nonfinal shipment, the freight amount is divided pro rata across the delivery lines.
- The freight amount is based on the ordered quantity and ordered amount, not the delivered quantity.

Backorder handling for sales orders

If a final delivery is made for a sales order (delivery) line and only a part of the goods or none of the goods are shipped, a backorder is created.

A backorder can be created in Sales or in Warehousing.

Sales

In Sales, a backorder can be created as follows:

- You manually enter a hold back quantity.
- The direct delivery purchase order that is created for the sales order is not completely delivered.

Hold back quantity

In the Sales Order Lines (tdsls4101m000) and Sales Order Planned Delivery Lines (tdsls4101m100) sessions, you can manually hold back a part of the ordered quantity. Holding back a part of the ordered quantity always results into a backorder.

A hold back quantity allows you to identify up front what the expected backorder will be. In this way, you can assign limited stock to several business partners instead of to only one business partner. When you release a sales order line to Warehousing, the **Ordered Quantity** minus the **Hold Back Quantity** is released.

After a sales order line is released to Warehousing for which you specified a hold back quantity in the Sales Order Lines (tdsls4101m000) or Sales Order Planned Delivery Lines (tdsls4101m100) session:

1. A backorder is generated in the Maintain and Confirm Backorders (tdsls4125m000) session when a final delivery is executed for the sales order (delivery) line. The **Hold Back Quantity** is not filled yet in the Maintain and Confirm Backorders (tdsls4125m000) session.
2. The **Back Order Quantity** field is updated with the remaining quantity in the Maintain and Confirm Backorders (tdsls4125m000) and the Sales Order Lines (tdsls4101m000), or Sales Order Planned Delivery Lines (tdsls4101m100) session. The remaining backorder quantity is calculated as follows: **Ordered Quantity- Delivered Quantity**.

3. You must confirm the backorder (sequence) line manually in the Maintain and Confirm Backorders (tdsls4125m000) session, or the backorder is automatically confirmed if the **Confirm Back Orders automatically** check box is selected in the Sales Order Parameters (tdsls0100s400) session.
4. After the backorder is confirmed:
 - A new (delivery) line is generated with a new sequence number and the **Back Order Quantity** check box selected in the Sales Order Lines (tdsls4101m000) or Sales Order Planned Delivery Lines (tdsls4101m100) session. These lines can be processed as regular sales order lines and are also displayed in the Maintain and Confirm Backorders (tdsls4125m000) session.
 - The **Hold Back Quantity** of the parent sales order line is deleted in the Sales Order Lines (tdsls4101m000) or in the Sales Order Planned Delivery Lines (tdsls4101m100) session.
5. If, required, you can specify a **Hold Back Quantity** for the newly created backorder line. Consequently, the previous steps are repeated when you release a sales order (delivery) line to Warehousing.

You cannot specify a **Hold Back Quantity** for:

- Items with a commitment policy
- Order (lines) with shipping constraints
- Cost items
- Service items
- List items
- Subcontracted items
- Equipment items
- Generic items
- Collect orders
- Return order lines
- Total order lines, which have linked delivery lines
- Order lines with an order quantity of zero

Note

- If you select the **Confirm Back Orders automatically** check box in the Sales Order Parameters (tdsls0100s400) session, the backorder is automatically confirmed.
- If you select the **Release Back Orders automatically to Warehousing** check box in the Sales Order Parameters (tdsls0100s400) session, the confirmed backorder is automatically released to Warehousing.

Direct delivery orders

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

If less is received than ordered, the following are applicable:

1. The **Back Order Quantity** field is filled in the Maintain and Confirm Backorders (tdsls4125m000) session and the Sales Order Lines (tdsls4101m000) session or Sales Order Planned Delivery Lines (tdsls4101m100) session. The backorder quantity is calculated as follows: **Ordered Quantity - Delivered Quantity**.
2. You must manually confirm the backorder (sequence) line in the Maintain and Confirm Backorders (tdsls4125m000) session, or the backorder is automatically confirmed if the **Confirm Back Orders automatically** check box is selected in the Sales Order Parameters (tdsls0100s400) session. Consequently, a new line is generated with a new sequence number and the **Back Order Quantity** check box selected in the Sales Order Lines (tdsls4101m000) or Sales Order Planned Delivery Lines (tdsls4101m100) session. This line is also displayed in the Maintain and Confirm Backorders (tdsls4125m000) session with the same position number and another sequence number.
3. A confirmed backorder is automatically generated in Procurement, which is linked to the backorder in Sales. You can view the backorder in the Purchase Order Line Details (tdpur4101m200) and the Confirmed Purchase Backorders (tdpur4101m800) sessions.

Warehousing

A backorder can be created by Warehousing, if, for example, the goods are damaged in the warehouse or the truck that must pick up the goods has insufficient loading capacity.

In such cases, the quantity of the shipment created from the sales order must be decreased. The quantity can be decreased before confirmation of the outbound advice and before confirmation of the shipment.

When the modified shipment receives the **Confirmed** status:

1. A backorder is generated and displayed in the Maintain and Confirm Back Orders (tdsls4125m000) session with the **Back Order Quantity** field filled.
2. You must manually confirm the backorder (sequence) line in the Maintain and Confirm Backorders (tdsls4125m000) session, or the backorder is automatically confirmed if the **Confirm Back Orders automatically** check box is selected in the Sales Order Parameters (tdsls0100s400) session.
3. After confirmation, a new (delivery) line is generated with a new sequence number and the **Back Order Quantity** check box selected in the Sales Order Lines (tdsls4101m000) or Sales Order Planned Delivery Lines (tdsls4101m100) session. The line can be processed as a regular sales order line and is also displayed in the Maintain and Confirm Backorders (tdsls4125m000) session.

Deliveries are displayed in the Sales Order Lines - Monitor (tdsls4510m000) and Sales Order Actual Delivery Lines / Sales Order Invoice Line (tdsls4106m000) sessions.

Warehousing cannot create backorders for:

- Order (lines) with shipping constraints
- Collect orders
- Return order lines

- Order lines with linked delivery lines
- Order lines with an order quantity of zero

Example

Order	Position	Sequence	Ordered	Delivered	Backorder
102	10	0	25	15	10
102	10	1	10	7	3
102	10	2	3	3	0

The backorder quantity of the parent line always determines the ordered quantity of the next line.

Note

For a processed sales order line, you cannot maintain or delete linked backorder lines if these lines are unconfirmed. Therefore, before processing a sales order line, make sure no unconfirmed backorder lines are available.

After confirmation, the backorder can be deleted as follows:

1. Cancel the line on the **Back Orders** tab of the Sales Order (tdsls4100m900) session or in the Maintain and Confirm Backorders (tdsls4125m000) session.
2. Delete the canceled backorder line in the Sales Order Line (tdsls4101m900) or from the Sales Order (tdsls4100m900) session.

If a sales order contains component lines, backorders are created for component lines instead of for order lines. For more information, refer to Component handling - component lines.

Installments

Installment invoicing is used to generate invoices for partial amounts or percentages of the total net amount before or after the ordered goods are delivered for a sales order. To create the installments, installment lines are linked to the sales order.

Installment types

The installment type determines when an installment line is added to an invoice.

- **Advance invoice installment**
An **Advance Invoice** must be paid for by the sold-to business partner before goods can be delivered. The invoice is a legal document.
- **Advance payment request installment**
An **Advance Payment Request** is a request to a sold-to business partner to pay a certain amount or percentage in advance before goods can be delivered. No tax is calculated and the invoice is not a legal document. This type of installment can be used only for order header-based installments.
- **Normal installments**
Normal installments are invoiced before or at the delivery of goods.
- **Guarantee installments**
Guarantee installments can only be invoiced after all goods are delivered and the nonguarantee installments are invoiced.

Installment procedures

In LN, these installment procedures are supported:

- **Order header-based installments**
Installments that are created and invoiced without a link to the sales order lines. When order lines are invoiced, the settlement process is used to link the order line invoices to the already invoiced installment on a first invoiced, first settled basis. If you use this procedure, all lines of a sales order must have the same tax code.

- **Prorate-based installments**

Installments that are generated based on an [installment plan](#). When an installment is transferred to Invoicing, the installment is prorated across the order lines by creating multiple billable lines. These billable lines are handled together and result in one invoice for the customer. If you use this procedure, the lines of a sales order can include different tax codes.

For more information, refer to:

- *Order header-based installments (p. 76)*
- *Prorate-based installments (p. 81)*

Order header-based installments

Order header-based [installments](#) are created and invoiced without a link to the sales order lines. When order lines are invoiced, the settlement process is used to link the order line invoices to the already invoiced installment invoice on a first invoiced, first settled basis. Using this procedure, all lines of a sales order must have the same tax code.

Installment master data and procedure

To specify, maintain, and view installments:

1. Select the **Installments Implemented** check box and specify the installment parameters on the **Installments** tab of the Sales Order Parameters (tdsls0100s400) session.
2. Enter a sales order and specify **Direct Settlement** or **Indirect Settlement** in the **Installments** field of the Sales Order (tdsls4100m900) session.
3. Add the sales order lines and click **Installments** on the [appropriate menu](#) of the Sales Order (tdsls4100m900) session.
4. In the Sales Order - Installments (tdsls4600m100) session, specify an installment schedule for the sales order.
5. After the goods are delivered and all nonguarantee installments are invoiced, close installments in the Sales Order - Installments (tdsls4600m100) session. Next, invoices can be created for guarantee installments.
6. Process installments in the Process Delivered Sales Orders (tdsls4223m000) session.

Note

- You can create default installment schedules in the Installment Schedule (tcmcs2640m000) session. You can copy these schedules to [sales order installments](#).
- In the Update Paid Amounts on Advance Installments (tdsls4200m000) session, the paid amounts for advance installments are updated. After all advance installments for a sales order are fully paid, the sales order procedure can continue.

Installment settlements

Invoiced installments are settled (subtracted from the goods amount) if the *goods* are delivered and the goods invoice is printed. Settled amounts indicate the amount of the goods invoice that is covered by the installment.

Settlement types

The following types of settlement exist:

- **Direct Settlement**
Delivered goods can be invoiced although not all installments are invoiced yet. When the goods are invoiced, the invoiced amounts on the installment lines are subtracted from the goods amount on the invoice.
With direct settlement, the following are immediately visible:
 - Revenue from the sale of goods in Invoicing
 - Turnover of the goods in the Sales Order Actual Delivery Line History (tdsls4556m000) session.
- **Indirect Settlement**
Delivered goods cannot be invoiced before the sales order installment is closed. When the order is closed, the invoiced amounts on the installment lines are subtracted from the goods amount on the invoice.
The following are applicable for indirect settlement:
 - The revenue from the sale of goods is visible in Invoicing after the sales order installment is closed.
 - Turnover of the goods is logged in the Sales Order Actual Delivery Line History (tdsls4556m000) session after the sales order installment is closed. If the sales order installment is not closed yet, in the Sales Order Line History (tdsls4551m000) session, turnover is temporarily booked on the **Item for Advance Payment Installments**, **Item for Normal Installments**, or **Item for Guarantee Installments**, as specified in the Sales Order Parameters (tdsls0100s400) session.

You can view the settlements for an installment in the Installment - Settlements (tdsls4513s000) session. After the goods invoice is printed in Invoicing, the settlements for the invoiced installments are displayed in this session.

Note

- Guarantee installments are settled before they are invoiced, because they are always invoiced after the goods invoice is sent.
- When invoicing a (+) sales order line, the (-) installments are first settled up to the total installment amount.
- When invoicing a (-) sales order line, the (+) installments are first settled up to the total installment amount.

Installment corrections

Settled amounts, which indicate the amount of the goods invoice that is covered by the installment, are the basis for calculating the installment corrections. The correction amount, which is calculated when a sales order installment is closed, is the difference between the total invoiced installment amount and the settled goods invoice amount. It is calculated as follows:

Goods amount to be invoiced - installment amount to be settled.

A correction installment is created only if the goods amount to be invoiced is less than the installment amount to be settled. In this case, the amount for which the customer is invoiced is too high and a reverse **Correction - Advance Invoice**, **Correction - Advance Payment Request**, **Correction - Normal**, or **Correction - Guarantee** is created.

Correction advance installments or **Correction - Normal** installments can be specified only after the original installments are composed or invoiced. In this way, Invoicing can always retrieve the correct currency information. **Correction - Guarantee** installments can be *specified* before the original installment is released to Invoicing, because guarantee installments are handled after the goods are shipped and the sales order installment is closed. The **Correction - Guarantee** installment line cannot be *released* to Invoicing before the original **Guarantee** installment is released to Invoicing. In this way, when composing the invoice for the correction guarantee, the correct invoice information can be retrieved from the original guarantee.

Manually specified correction installments are settled against the goods invoice.

Example

Line	Installment type	Installment amounts
1	Normal	200
2	Normal	400
3	Normal	-50
4	Guarantee	300
Total sales order installment		850

Line	Sales order amounts
1	150
2	500
3	80
4	-10
Total sales order	720

Direct settlement is applicable.

The correction process:

1. Installment line one is invoiced. Invoice amount = 200.
2. Installment line two is invoiced. Invoice amount = 400.
3. Sales order line one is invoiced. The goods amount of 150 is settled against the invoiced installment line one.
 - Remaining goods amount to be settled = $150 - (150) = 0$.
 - Invoice amount = 0.

4. Installment line three is invoiced. Invoice amount = -50.
5. The sales order installment is closed.
 - Goods amount to be invoiced = $500 + 80 - 10 = 570$.
 - Installment amount to be settled = $50 + 400 - 50 + 300 = 700$.
 - Correction amount = $570 - 700 = -130$.
6. The correction installment is invoiced. Invoice amount = -130.
7. Correction installment line five is manually created for the guarantee installment. Correction amount = -300.
8. Correction installment line six is manually created and is of the normal installment type. Correction amount = 170.
9. Installment line four is invoiced. Invoice amount = 300.
10. Sales order line two is invoiced. The goods amount of 500 is settled against the invoiced installments as follows:
 - a. Against installment line three for an amount of -50. Remaining goods amount to be settled = $500 - (-50) = 550$.
 - b. Against installment line five for an amount of -300. Remaining goods amount to be settled = $550 - (-300) = 850$.
 - c. Against installment line one for an amount of 50. Remaining goods amount to be settled = $850 - (50) = 800$.
 - d. Against installment line two for an amount of 400. Remaining goods amount to be settled = $800 - (400) = 400$.
 - e. Against installment line four for an amount of 300. Remaining goods amount to be settled = $400 - (300) = 100$.
 - f. Against installment line six for an amount of 100. Remaining goods amount to be settled = $100 - (100) = 0$.
Invoice amount = 0.
11. Sales order line three is invoiced. The goods amount of 80 is settled against the manually inserted installment line six.
 - Remaining goods amount to be settled = $80 - (70) = 10$.
 - Invoice amount = 10.
12. Sales order line four is invoiced. All installments are settled. Invoice amount = $-10 + 10 = 0$.

Tax for order header-based installments

Several [installment lines](#) can be linked to a [sales installment order](#).

The following tax data must always match between the installment lines and the sales order lines:

- **Tax Country**
- **Tax Code**

■ BP Tax Country

An exception to this are the installment lines of the type **Advance Invoice**. The tax code for these installment lines can differ from the tax code of the sales order lines, provided the tax percentage, tax country, BP tax country, and ledger account match.

Tax for **Advance Invoice** installments

To automatically retrieve a specific tax code for **Advance Invoice** installment lines in the Sales Order Installments (tdsls4110m000) session, you can specify tax code exceptions in the Tax Exceptions by Country (tctax1100m000) and Tax Exceptions by Country Set (tctax1101m000) sessions. The **Order Origin** of these tax exceptions must be set to **Sales Advance**.

When an **Advance Invoice** installment line is created, LN first searches for a matching tax exception. If the tax exception's tax percentage, tax country, BP tax country, and ledger account match for the installment line and the sales order lines, the tax exception's tax code is used on the installment line. Else, the tax code of the sales order lines is used.

Note

You can always manually change the **Tax Code** for **Advance Invoice** installment lines in the Sales Order Installments (tdsls4110m000) session.

Prorate-based installments

Prorate-based installments are generated based on an installment plan. When an installment is transferred to Invoicing, the installment is prorated across the order lines by creating multiple billable lines. These billable lines are handled together and result into one invoice for the customer. Using this procedure, the lines of a sales order can include different tax codes.

Installment master data and procedure

1. Select the **Installments Implemented** check box and specify these parameters on the **Installments** tab in the Sales Order Parameters (tdsls0100s400) session:
 - **Goods Acceptance Date Mandatory for Guarantee Installments**
 - **Include Additional Costs in Installments**
2. Specify installment plans in the Installment Plan (tcmcs2645m000) session.
3. Link an installment plan in the **Installment Plan** field of the Invoice-to Business Partners (tccom4512m000) session.
4. Specify a sales order and lines in the Sales Order (tdsls4100m900) session and specify these fields:
 - Select **Installment Plan** in the **Installments** field.
 - Specify an installment plan in the **Plan** field.

5. Save the sales order, which initiates the generation of installments based on the installment plan in the Installments (cisli8620m000) session. To start this session click **Installments** on the appropriate menu in the Sales Order (tdsls4100m900) session.
6. Approve the sales order. Consequently, the linked installment lines are also approved.
7. Transfer the installment lines to Invoicing in the Installments (cisli8620m000) session. Consequently, billable installment lines are created and the installments are prorated across the sales order lines.
8. Invoice the installments in Invoicing.
9. Release the sales order lines to Warehousing in the Release Sales Orders to Warehousing (tdsls4246m000) session. The advance installments must be paid to release a sales order line to Warehousing.
10. Release the sales order lines to Invoicing in the Release Sales Orders/Schedules to Invoicing (tdsls4247m000) session. Except for **Guarantee** installments, the prorate installments must be invoiced to release a sales order line to Invoicing.
11. Process the sales order in the Process Delivered Sales Orders (tdsls4223m000) session. The installments must be closed to process a sales order.

Note

- Installments are invoiced, settled, and corrected in Invoicing.
- Guarantee installments can be transferred to Invoicing in the Installments (cisli8620m000) session, only after the sales order lines are delivered and invoiced.
- If a sales order line is modified, the linked billable installment lines must also be updated. However, the lines cannot be updated if they are too far in the process. Settlement and correction installments are used to handle the differences.
- The settlement of the advance installment invoice with the goods invoice is also prorated to each order line.
- If the installment invoice cannot be completely settled with the goods invoice, correction installments are generated when the installments are closed.

Settlement example

	Line	Item	Quantity	Price	Amount	Tax
SO line	1	I1	600	1	600	10%
SO line	2	I2	200	2	400	10%

An **Advance Invoice** installment is created for 20% of the order amount ($1000 \times 20\% = \text{EUR } 200$):

Line	Item	Quantity	Price	Amount	Tax	Total	Settle- ments	Amount Due
Advance 1 1 (20%)				200	20			220

Sales order lines 1 and 2 are both shipped and invoiced.

Settlements:

	Line	Item	Quantity	Price	Amount	Tax	Total	Settle- ments	Amount Due
Settle- ment In- voice 1 (SO line 1)	1	I1	600	1	600	60	660	132	528
Settle- ment In- voice 2 (SO line 2)	1	I2	200	2	400	40	440	88	352

Correction example

Invoiced Installment		Sales order line changes			Corrections in billable installment		
Seq.	Amount	Seq.	Amount	User Action	Seq.	Amount	Action
1	100	1	100	Canceled	1	-100	Credit
2	200	2	250	Changed	2	50	Debit
		3	200	Added	3	-	No action
		3	200	Canceled	3	-	No action
		4	50	Added	4	50	Debit

Tax for prorate based installments

Several [installment lines](#) can be linked to a [sales installment order](#).

The following tax data are retrieved from the sales order lines and cannot be changed by the user:

- **Tax Country**
- **Tax Code**
- **BP Tax Country**

An exception to this are the installment lines of the type **Advance Invoice**. The tax code for these billable installment lines can differ from the tax code of the sales order lines, provided the tax percentage, tax country, BP tax country are same.

Tax for **Advance Invoice** installments

To automatically retrieve a specific tax code for **Advance Invoice** installment lines in the Billable Installment Lines (cisl8130m000) session, you can specify tax code exceptions in the Tax Exceptions by Country (tctax1100m000) and Tax Exceptions by Country Set (tctax1101m000) sessions. The **Order Origin** of these tax exceptions must be set to **Sales Advance**.

When an **Advance Invoice** billable installment line is created (when transferring an advance invoice installment to Invoicing), LN first searches for a matching tax exception. If the tax exception's tax percentage, tax country, BP tax country match for the installment line and the sales order lines, the tax exception's tax code is used on the installment line. Else, the tax code of the sales order lines is used.

Sales return orders

If goods must be returned on a sales order, a return order can be created. A return order can include only negative amounts.

To use return orders:

Step 1: Specify a sales order type for return orders

Specify a sales order type for return orders in the Sales Order Types (tdsls0594m000) session.

In the **Return Order** field, specify one of the following:

- **Return Inventory**
An order type that is used for returning inventory.
- **Return Rejects**
An order type that is used for returning rejects, which applies if you reject goods that are delivered on a sales order. You can select this value only if the **Customer Approval** check box is selected in the Implemented Software Components (tccom0100s000) session. Sales orders of the **Return Rejects** order type are always generated.

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

Link a warehousing order type to the return order type in the **Warehousing Order Type** field of the Sales Order Types (tdsls0594m000) session. You must select a warehousing order type for which the **Inventory Transaction Type** is **Receipt** in the Warehousing Order Types (whinh0110m000) session.

Step 3: Link activities to the return order type

Link activities to the order type in the Sales Order Type - Activities (tdsls0560m000) session.

The following mandatory activities are automatically linked to the return order type:

- Release Sales Orders to Warehousing (tdsls4246m000)
- Sales Deliveries (tdsls4101m200)

- Release Sales Orders/Schedules to Invoicing (tdsls4247m000), if the order type is a return order of the type **Return Inventory**.
- Process Delivered Sales Orders (tdsls4223m000)

Step 4: Specify a sales return order

In the Sales Orders (tdsls4100m000) session:

1. Create a sales order header with a sales order type for return orders.
2. Specify the **Original Document Type** field.
3. Specify the **Original Document No** field.
4. Specify the return reason for the return order in the **Return Reason** field.
5. After you created a link between a return order and an original document number, you can 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 sales order have a negative quantity and a negative amount. If desired, you can change these lines.

Step 5: Release the sales return order to warehousing

After the sales return order is approved, release the order to warehousing in the Release Sales Orders to Warehousing (tdsls4246m000) session. As a result, the sales order status is **In Process** and the activity status is *Awaiting Receipt*.

Step 6: Release the sales return order to invoicing

After the receipt procedure is executed by Warehousing, the sales order status is **In Process**, but the activity status is *Release Sales Orders/Schedules to Invoicing* in the Sales Order Line Status (tdsls4534s000) session. You must release the sales return order to invoicing in the Release Sales Orders/Schedules to Invoicing (tdsls4247m000) session.

Step 7: Process the sales return order

After the sales return order is invoiced, you must process the return order in the Process Delivered Sales Orders (tdsls4223m000) session.

Note

- If the return order includes a serialized item, an installation group is automatically linked to the return order when the delivery information is updated on the order through the Warehouse Receipt (whinh3512m000) or Update Sales / Service Order with Delivery Information (tdpur4222m000) sessions.
However, an installation group is not automatically linked if:
 - The serialized items on the sales return order line are linked to different installation groups in Service.
 - The item is an anonymous item, or the items are serialized in Service only.

If required, you can link an item to an installation group and/or link an installation group to the sales return order line in the Sales Order Lines (tdsls4101m000) session.

- If goods are returned on a direct delivery order, the steps related to the direct delivery procedure apply. For more information, refer to *Direct delivery* (p. 53).
- If a specification is linked to the sales order line and the **Return Order** is of the **Return Rejects** type, this specification is not copied to the return order line.

Sequence numbers on sales orders

Sequence numbers are used if more than one delivery takes place on an order line. More than one delivery can occur, for example, with backorders.

Consequently:

- If an order line is generated in the Sales Order (tdsls4100m900) session, the sales order line's sequence number is zero. You can specify all fields.
- If an order line is split or a backorder is generated for the order line, the original order line's sequence number remains zero. The sequence number for the delivery lines of the split sales order line, or the sequence number of the backorder line are greater than zero.

Note

- In the Sales Order Line (tdsls4101m900) session, you can specify the sequence number before the order is released.
- Deliveries can be displayed in the Sales Order Lines - Monitor (tdsls4510m000) and Sales Order Actual Delivery Lines / Sales Order Invoice Line (tdsls4106m000) sessions.

Example

Adding an order line:

Sequence number	Order quantity	Planned delivery date
0	100	14/12

Splitting of the order line:

Sequence number	Order quantity	Planned delivery date
0	100	14/12
1	80	14/12
2	20	21/12

After final delivery:

Sequence number	Order quantity	Planned delivery date	Delivered quantity	Backorder quantity
1	80	14/12	70	10
2	20	21/12	20	0
3	10	28/12	10	0

Sequence number 3 is a backorder line.

Synchronizing sales order line and delivery lines

A sales order line can have linked delivery lines or backorder lines. A delivery line can also have linked backorder lines. The sales order line holds the aggregated information of the delivery lines/ backorder lines. Another product's external order line can connect to the sales order line and update the sales order line. Changed fields on the sales order line are synchronized with the delivery lines and vice versa.

Fields that trigger the synchronization process

Changes to the following fields on the sales order line and/or delivery line can trigger synchronization:

Date fields		Quantity fields		Price and discount fields		Amount fields	
ddta	Planned Delivery Date	qrrq	Ordered Quantity	pric	Price	oamt	Amount
prdt	Planned Receipt Date	qidl	Delivered Quantity	disc	Discount Percentage	amlid	Total Discount Amount
rdta	Release Date	qbbo	Back Order Quantity	ldam	Discount Amount	amod	Order Discount
-	-	qicm	Committed Quantity	dmse	Discount Matrix Sequence	damt	Delivered Amount
-	-	-	-	dmde	Discount Matrix Definition	fram	Freight Amount
-	-	-	-	dmth	Discount Method	-	-
-	-	-	-	dmtt	Discount Matrix Type	-	-
-	-	-	-	cdis	Discount	-	-
-	-	-	-	dtrm	Determining	-	-
-	-	-	-	elgb	Eligible	-	-

Note

A change to a field on the sales order line is not always visible on the delivery line, because commercial data, such as prices, discounts, and amounts are available only on the sales order line. Logistic data, such as time of delivery, and place of delivery are visible only on the delivery line. Consequently, the sales order line includes the aggregated commercial information of the linked delivery lines, which is divided across the delivery lines, but is not visible on the delivery lines. However, if you release a delivery

line to Invoicing, LN uses the invisible commercial data of the delivery line, because a sales order line with linked delivery lines cannot be invoiced directly.

Date fields

Updating the planned delivery date

You can update the **Planned Delivery Date** in the Sales Order Lines (tdsls4101m000) session if no delivery lines are linked to it. Otherwise, the **Planned Delivery Date** is disabled.

You can, however:

- Change the **Planned Delivery Date** for the linked delivery lines in the Sales Order Planned Delivery Lines (tdsls4101m100) session. A delivery line's latest planned delivery date is synchronized with the planned delivery date of the sales order line.
- Change the **Planned Delivery Date** for the sales order header in the Sales Order (tdsls4100m900) session. As a result, LN updates the planned delivery date of all linked sales order lines. However, when LN wants to update a sales order line that has delivery lines linked to it, you are informed that the delivery lines will be removed. If you want to keep the delivery lines, you can reverse the update of the planned delivery date and change the planned delivery date on the delivery line, if required.

You can always update the planned delivery date on the sales order line by means of an external order line. However, if delivery lines are linked to the sales order line, they are removed when an external order line updates the planned delivery date. LN does not inform the external order line on the removal of the delivery lines.

To check if the planned delivery date on the sales order line can be changed, LN verifies whether the **CTP Check for Sales** check box is selected in the Planning Parameters (cprpd0100m000) session. If this check box is selected, LN checks whether the item is available on the new planned delivery date. If the item is not available for the requested quantity, the planned delivery date cannot be changed. If the item is available, LN then determines if delivery lines exist.

Note

- You can never change an order line's planned delivery date if a linked delivery line is already delivered. As a result, for all delivery lines, the **Delivery Date** must be empty in the Sales Order Planned Delivery Lines (tdsls4101m100) session.
- If the new planned delivery date is after the planned receipt date, LN equals the planned receipt date with the planned delivery date. LN does not recalculate the planned receipt date based on the defined lead times. You can recalculate the planned receipt date in the Sales Order Lines (tdsls4101m000) or Sales Order Planned Delivery Lines (tdsls4101m100) session.
- If an external order line changes the planned delivery date but not the price, price fields can be recalculated.

Updating the planned receipt date

You can update the **Planned Receipt Date** in the Sales Order Lines (tdsls4101m000) session if no delivery lines are linked to it. Otherwise, the **Planned Receipt Date** is disabled.

You can always update the planned receipt date on the sales order line by means of an external order line. If delivery lines are linked to the sales order line, the planned receipt date on the delivery lines is also updated.

Note

- You can never change an order line's planned receipt date if a linked delivery line is already delivered. As a result, for all delivery lines, the **Delivery Date** must be empty in the Sales Order Planned Delivery Lines (tdsls4101m100) session.
- If the new planned receipt date is after the planned delivery date, LN equals the planned delivery date with the planned receipt date. LN does not recalculate the planned delivery date based on the defined lead times. You can recalculate the planned delivery date in the Sales Order Lines (tdsls4101m000) or Sales Order Planned Delivery Lines (tdsls4101m100) session. However, if changing the planned receipt date leads to changing the planned delivery date, LN removes the delivery lines that are linked to an order line.
- If an external order line changes the planned receipt date but not the price, price fields can be recalculated when the planned delivery date is changed.
- A delivery line's latest planned receipt date is synchronized with the planned receipt date of the sales order line.

Quantity fields

Updating the ordered quantity

If you change the **Ordered Quantity** in the Sales Order Lines (tdsls4101m000) session, LN removes all linked delivery lines. This applies to delivery lines that are automatically created by the ATP process and to delivery lines that are the result of a manually created delivery schedule. You cannot change the ordered quantity if one of the linked delivery lines is already delivered or is too far in the warehouse process. In this case, you must modify the delivery line's **Ordered Quantity** to carry out the order quantity change. If you change the **Ordered Quantity** on a delivery line, LN preserves the delivery schedule and changes the **Ordered Quantity** on the order line.

If you change the ordered quantity on an external order line, LN does not inform the external order line on the removal of the linked delivery lines.

Note

- You can create a new delivery schedule in the Sales Order Line (tdsls4101m900) session.
- For backorders, the ordered quantity and amount are not synchronized with the order line. The reason for this is that the (parent) order line or delivery line already accounts for the ordered quantity of the backorder line.

Updating the sales unit

You can update the sales unit of an order line if Warehousing did not yet process a linked delivery line. However, if you update the sales unit of an order line, LN removes the not yet processed delivery lines. You must create new delivery lines for the changed sales unit, if required.

If you change the sales unit on an external order line, LN does not inform the external order line on the removal of the linked delivery lines.

Price and discount fields

Synchronizing price fields

The most important fields for price synchronization are:

- **Price**
- **Discount Amount**
- **Discount %**

When these fields are synchronized, also the following price and discount related fields are synchronized:

- **Discount Matrix Definition**
- **Discount Matrix Sequence**
- **Discount Method**
- **Discount**
- **Discount Matrix Type**
- **Determining**
- **Eligible**

Updating the price

When an order line is created, the price is determined based on the following:

- The **Sales Price Date Type** parameter in the Pricing Parameters (tdpcg0100m000) session. This field determines whether the order date, system date, or delivery date must be used to calculate the price.
- The ordered quantity
- The sales unit

When the order line is split into delivery lines, the price that is determined on the order line is the default price for all delivery lines. When you change the planned delivery date (if the **Sales Price Date Type** parameter is set to **Delivery Date**), or you change the ordered quantity on a delivery line, LN synchronizes the new values with the order line. When you close the Sales Order Planned Delivery Lines (tdsls4101m100) session, you are asked to recalculate the prices. The prices are recalculated based on the synchronized fields on the sales order line.

Updating the price based on a fixed amount

If the external order line did not set the price or you did not specify a price in the **Price** field of the Sales Order Lines (tdsls4101m000) session, you must enter an amount in the **Amount** field of the Sales Order Lines (tdsls4101m000) session. This amount is fixed for the order line. As a result, a price is calculated as a price per sales unit.

When the external order line communicates the amount, also the sales price unit is communicated. As a result, the amount is converted into a price by sales price unit.

LN synchronizes the price that is calculated from the fixed amount, with the delivery lines.

Updating the sales price unit

You can change the sales price unit only by using an external order line. You cannot manually change it. In addition, you cannot change the sales price unit if a final delivery is made for the order line. In other words, the order line and linked delivery lines must not be completely delivered.

Updating the price after delivery

After an order line or delivery line is delivered, you can no longer update the price directly on the line. You can update the price of delivered, not yet invoiced lines in the Change Prices and Discounts after Delivery (tdsls4122m000) or Change Prices and Discounts of Sales Invoice Lines (tdsls4132m000) sessions.

In these sessions, the **Apply to other Sequences** check box appears. The following applies to this check box:

- If this check box is selected, the modified price or discount that you enter in this session is also updated to the other line sequences of the same order and position. Line sequences that are already released to invoicing are skipped.
- If you update the prices/discounts of an **Order Line** in the Change Prices and Discounts after Delivery (tdsls4122m000) session, this check box is disabled and selected.
- If you update the prices/discounts of an **Order/Delivery Line** in the Change Prices and Discounts of Sales Invoice Lines (tdsls4132m000) session and this check box is selected, the price and discount fields of the **Backorder** lines that are linked to the **Order/Delivery Line** are also updated. However, if this check box is selected and you update the price/discounts of a **Backorder** line, LN updates the **Backorder** lines that are linked to this **Backorder**, but does not update the (parent) order line or delivery line.

An external order line cannot update the price after delivery.

Promotions

Promotions can offer the customer a premium item or an additional discount.

Premium promotion

If a premium item can be offered, LN creates a new sales order line for the premium item.

Promotional discount

If a promotional discount can be offered on a sales order line with linked delivery lines, LN increases the **Total Promotion Discount** and decreases the **Amount** in the Sales Order Lines (tdsls4101m000) session. However, the sales order line cannot be invoiced. The reason for this is that the sales order line is split into several sequences and only the totaled quantities and amounts are visible on the sales order line. No financial or logistic transactions are done for this line. Therefore, the promotional discount is also registered on the linked delivery lines. The promotional discount that is assigned to a delivery line depends on the **Ordered Quantity** of the delivery line.

LN carries out the following calculation steps to calculate the **Amount** in the Sales Order Planned Delivery Lines (tdsls4101m100) session:

1. Determine the delivery line's promotional discount:

$$\left(\frac{\text{Total Promotion Discount}}{\text{Amount in the Sales Order Lines (tdsls4101m000) session}} \right) * \text{Ordered Quantity in the Sales Order Planned Delivery Lines (tdsls4101m100) session.}$$

2. Determine the amount of the delivery line:

Amount of the sales order delivery line - the outcome of step one.

If you create a sales order line through EDI or an external order line, promotions are not automatically applied. In LN, a user must open the sales order line that is created by EDI or by an external application and manually assign the promotion.

Appendix B

Glossary

B

account

See: *ledger account* (p. 108)

activity

A step that you must carry out for the purchase/sales order type. An activity represents the sessions or the manual action that you must carry out for the purchase/sales order type.

additional cost line

Includes a cost item that can be linked as additional costs to an order or shipment. Examples of additional cost lines are administrative costs added to the order costs if the order amount is lower than a certain value, or freight costs added to the order if the total weight of the sold/purchased goods exceeds a certain value.

additional costs

Charges for extra services, such as extra packaging, insurance, and so on. Additional costs are added to the freight costs of a shipment, load, or a freight order cluster. They are levied for shipment lines or freight order cluster lines, which can be invoiced to the customer. This depends on the agreements made with the business partner.

additional cost set

The code under which a number of additional cost lines and scenarios can be stored. Cost sets can be linked to items, business partners or price lists and, via these, to orders and shipments.

advance shipping notice

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

Acronym: ASN

alternative items

Items that can serve as a substitute for the standard item if the standard item cannot be delivered or is being replaced.

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.

ASN

See: *advance shipping notice* (p. 99)

assembly item

An item with default supply source **Assembly**. The production of assembly items is controlled by an assembly order. Assembly orders are executed on an assembly line.

Note

An assembly item can have item type **Generic**, **Manufactured**, **Engineering Module**, or **Product**.

assembly order

An order to assemble a product on one or more assembly lines.

ATP/CTP horizon

The date until which LN performs ATP and CTP checks.

The ATP horizon is expressed as a number of working days during which LN can carry out ATP and CTP checks. Beyond the ATP/CTP horizon, LN does not check ATP or CTP: all customer orders are accepted.

availability type

An indication of the type of activity for which a resource is available. With availability types, you can define multiple sets of working times for a single calendar.

For example, if a work center is available for production on Monday through Friday and available for service activities on Saturdays, you can define two availability types, one for production and one for service activities and link these availability types to the calendar for that work center.

backorder

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

blocking definition

Indicates the stage at which the order process must be blocked or a signaling message must be displayed, with the associated reason.

business partner

A party with whom you carry out business transactions, for example, a customer or a supplier. You can also define departments within your organization that act as customers or suppliers to your own department as business partners.

The business partner definition includes:

- The organization's name and main address.
- The language and currency used.
- Taxation and legal identification data.

You address the business partner in the person of the business partner's contact. The business partner's status determines if you can carry out transactions. The transactions type (sales orders, invoices, payments, shipments) is defined by the business partner's role.

capable-to-promise

The combination of techniques used to determine the quantity of an item that you can promise to a customer on a specific date.

Capable-to-promise (CTP) involves an extension of the standard available-to-promise (ATP) functionality. CTP goes beyond ATP in that it also considers the possibility of producing more than was initially planned, when an item's ATP is insufficient.

In addition to the standard ATP functionality, CTP comprises the following techniques:

- Channel ATP: restricted availability for a certain sales channel.
- Product family CTP: order promising on the basis of availability on product family level rather than on item level.
- Component CTP: check if there are enough components available to produce an extra quantity of an item.
- Capacity CTP: check if there is enough capacity available to produce an extra quantity of an item.

Abbreviation: CTP

carrier

An organization that provides transport services. To use a carrier for load building, freight order clustering, transport cost calculation, and invoicing, you must define the carrier both as a carrier and a buy-from business partner in Common. A carrier is also referred to as a forwarding agent.

Synonym: Logistics Service Provider (LSP)

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.

catalog

The highest level of a category structure. A catalog contains one or more categories, which contain items or subcategories. A catalog cannot be a member of another category.

change reason

The reason that can be assigned to a changed purchase document (line) or sales document (line).

change type

The indicator of the type of change of a changed purchase document (line) or sales document (line).

client rate book

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

component

An item that is sold, and invoiced in combination with other items as part of a kit.

configurable item

An item that has features and options and must be configured before any activities can be performed on it. If the configurable item is generic, a new item is created after configuration. If the item is manufactured or purchased, the configuration is identified by item code and option list ID.

- **Manufactured or Product** items with the default supply source set to **Assembly** and **Generic** items are always configurable.
- **Purchased or Product** items with a purchase schedule in use can be configurable.
- Configurable **Purchased or Product** items can be used within Assembly Control only.

consigned

A type of ownership behavior pertaining to goods in inventory or on order.

If you are a customer, consigned goods are goods delivered by the supplier that you do not own and for which you have not paid. You become the owner, and payment is due, when you use or sell the goods, or after a given number of days after you receive the goods.

If you are a supplier, consigned goods are goods that you delivered to your customer, but the customer will not take ownership or pay until he uses or sells the goods, or until a given period of time after receipt of the goods has passed.

The period of time between the receipt of the goods and the date on which the customer becomes the owner, and payment is due, is laid down in the contract drawn up between the supplier and the customer.

See also: ownership

Synonym: Pay on Use

copy exception

A field that is not automatically copied from the source order to the target order and for which you must define a copy action.

CPQ Configurator

An application, integrated with LN to configure an item. The integration can be used only as part of the web user interface.

See: Configure Price Quote

credit limit

The maximum financial risk that you accept or are insured against concerning an invoice-to business partner, or that an invoice-from business partner accepts concerning you.

When you create orders, LN continually checks that the total amount of created and invoiced orders does not exceed the credit limit. When you exceed the limit, LN gives a warning message.

credit rating

A system of classifying customers and possible future customers according to their financial strength and the degree of trust that a supplier can place in them.

The credit rating is linked to an invoice-to business partner and defines a number of details such as, the action to be taken when a sales order is processed, and when the credit check must be repeated.

credit review period

Within this period the invoice-to business partner must pay his invoices. This can be seen as a so-called overdue invoice period.

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

CTP

See: *capable-to-promise* (p. 101)

customer approval

A business regulation according to which the goods that are delivered on a sales order must be approved by the customer before you can invoice the goods. The ownership of the goods changes from supplier to sold-to business partner when the delivered goods are approved.

customized item

An item produced on a customer specification for a specific project. A customized item can have a customized BOM and/or a customized routing and is normally not available as a standard item. A customized item can, however, be derived from a standard item or a generic item.

default supply source

The source that supplies an item by default. You can use purchase orders or schedules, production orders or schedules, assembly orders, or warehousing orders to supply an item.

The default supply source determines what type of order is used to supply the item, but in general, you can override the default and specify an alternate source.

delivery terms

The agreements with the business partner, concerning the way the goods are delivered. Relevant information is printed on various order documents.

demand peg

A relationship between a planned order, or an actual supply order, and an item requirement that represents a definite commitment.

You can only use the demand pegged supply for the pegged requirement, unless either of these conditions applies:

- The peg is deleted.
- Parameters allow issuing unallocated inventory or inventory of a different specification for a demand-pegged outbound order.
- **Pegged supply**
The pegged supply can be a purchase order, a planned purchase order, a production order, a planned production order, a warehousing order with transaction type transfer, or a planned distribution order.
- **Pegged requirement**
The pegged requirement can be, among other things, a sales order line or a required component for a production order.

Related term: soft peg

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 (EDI)

The computer-to-computer transmission of a standard business document in a standard format. Internal EDI refers to the transmission of data between companies on the same internal company network (also referred to as multicompany). External EDI refers to the transmission of data between your company and external business partners.

forwarding agent

See: *carrier* (p. 102)

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.

generic item

An item that exists in multiple product variants. Before any manufacturing activities are performed on a generic item, the item must be configured to determine the desired product variant.

Example

Generic item: electric drill

Options:

- 3 power sources (batteries, 12 V or 220 V)
- 2 colors (blue, gray).

A total of 6 product variants can be produced with these options.

global trade compliance

Functionality used to lay down, audit, and automate global trade compliance data, such as the international rules, regulations, and licenses required for conducting global trade. This data is used to validate items, business partners, and import and export documents, resulting in a success or failure for the compliance check. For example, if the compliance check results in a failure for a document such as an order or shipment, the document may be blocked and a user must take action.

Global trade compliance reduces the risk of trade delays, additional costs, or penalties for violating import or export regulations.

gross margin

The sales revenue minus all manufacturing costs, both fixed and variable.

installation group

A set of serialized items that have the same location and are owned by the same business partner. Grouping serialized items into an installation group enables you to maintain them collectively.

installment

An incremental payment method used to spread invoice payments over a period of time. Installments enable you to send invoices for a sales order before or after the ordered goods are actually delivered.

installment plan

A plan based on which installments are generated for an order. The plan includes configuration data for installments, such as when installments must be invoiced, the type(s) of installment that must be generated and the installment percentages. The installments are generated based on a **Prorate** method, which means the installment percentages are prorated across all order lines of an order.

Because the plan is considered an invoicing plan for an order, the installments are generated, maintained, settled, and corrected in Invoicing.

invoicing batch

Selects the order types and orders to be invoiced. If you process an invoicing batch, LN selects the invoicing data and generates the invoices for the order types and orders selected through the invoicing batch.

L/C

See: *letter of credit (L/C)* (p. 108)

ledger account

A register used to record financial transactions and to accumulate the values of the transactions for reporting and analysis. The ledger accounts classify the transactions into categories such as revenues, expenses, assets, and liabilities.

Synonym: account

letter of credit (L/C)

A financing agreement most commonly used for trade arrangements across international borders. An L/C is issued by a bank at the request of the customer, also referred to as importer or buyer. In the letter of credit the bank promises to pay the seller, also called exporter or beneficiary, for goods or services provided, if the exporter presents the required documents and meets the terms and conditions stipulated in the L/C.

Abbreviation: L/C

Logistics Service Provider (LSP)

See: *carrier* (p. 101)

Logistics Service Provider (LSP)

See: *carrier* (p. 102)

lot and serial set

A list of the lot codes and/or serial numbers of an item on a sales order line. The lot and serial set can be used in invoicing or after-sales service.

material price

The price of a material, which can be the following:

- The material base price, if material actual prices are not applicable (yet)
- The sum of these components: material base price + material price surcharge+ material price surcharge costs, if material actual prices are applicable

matrix attributes

A list of elements used to define a price, discount, promotion, or freight rate. The group of matrix attributes is identified by a matrix definition and type.

Imagine you are a furniture vendor and you decide to maintain your sales prices based on two elements:

- The specific item you sell.
- The way to handle payments.

In this case, the matrix type is **Sales Price**, the matrix definition is Furni (this name is user-definable), and the matrix attributes are **Item** and **Payment Method**.

In the Pricing matrix, you specify the values for the matrix attributes.

matrix definition

Defines the group of elements (matrix attributes) that a Pricing matrix uses to determine a price, discount, promotion, or freight rate.

Imagine you are a furniture vendor and you decide to maintain your sales prices based on two elements:

- The specific item you sell.
- The way to handle payments.

In this case, the matrix type is **Sales Price**, the matrix definition is Furni (this name is user-definable), and the matrix attributes are **Item** and **Payment Method**.

matrix priority

For a matrix type, the order in which matrix definitions are searched for.

order acknowledgment

The document that confirms the sale of goods to a sold-to business partner according to the listed delivery terms.

order balance

The balance of outstanding orders.

order priority simulations

A simulated activity that enables you to calculate the priority sequence in which inventory is allocated to orders.

overdue invoice

The invoice that has been left unpaid too long.

payment terms

Agreements about the way in which invoices are paid.

The payment terms include:

- The period within which invoices must be paid.
- The discount granted if an invoice is paid within a given period

The payment terms allow you to calculate:

- The date on which the payment is due
- The date on which the discount periods expire
- The discount amount

Pay on Use

See: *consigned* (p. 103)

peg

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

physical breakdown

A serialized item's composition and structure, defined by the parent-child relationships of its constituent items. The physical breakdown can be displayed in a multilevel structure or a single-level structure.

plan item

An item with the order system **Planned**.

The production, distribution, or purchase of these items is planned in Enterprise Planning based on the forecast or the actual demand.

You can plan these items by means of the following:

- Master-based planning, which is similar to master production scheduling techniques.
- Order-based planning, which is similar to material-requirements planning techniques.
- A combination of master-based planning and order-based planning.

Plan items can be one of the following:

- An actual manufactured or purchased item.
- A product family.
- A basic model, that is, a defined product variant of a generic item.

A group of similar plan items or families is called a product family. The items are aggregated to give a more general plan than the one devised for individual items. A code displayed by the item code's cluster segment shows that the plan item is a clustered item that is used for distribution planning.

Planned load date

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

premium

A free item that is offered to the customer as part of a promotion.

price stage

A categorization of the price based on the phase of the price negotiation process. Using price stages, companies can negotiate the price while continuing the order process with restrictions. The order processing restrictions that apply to the price stage are specified in the linked blocking definition.

Example

Price Stage		Type	Blocking Definition	
PS1	Price stage estimated	Purchase	004	Block on release
PS2	Price stage provisional	Purchase	005	Block on receipt
PS3	Price stage final	Purchase	-	-
PS5	Price stage estimated	Sales	010	Signal on order entry

product structure

The sequence of steps by which components are put together to form subassemblies, until the finished product is produced.

The product structure is defined by a multilevel bill of materials, sometimes in combination with routing data.

product variant

A unique configuration of a configurable item. The variant results from the configuration process and includes information such as feature options, components, and operations.

Example

Configurable item: electric drill

Options:

- 3 power sources (batteries, 12 V or 220 V)
- 2 colors (blue, gray).

A total of 6 product variants can be produced with these options.

project structure

The project structure indicates the subprojects that belong to the main project. Project structures are especially important where there are extensive projects in an engineer-to-order situation.

Project structures can be important for network planning. This is because the start dates and finish dates of subprojects can depend on the computed start dates and finish dates of the main project's activities.

The costs of subprojects are aggregated to the relevant main project in the project calculation.

The project structure only applies to a project with a type other than **Budget**.

You can only delete a project structure if the main project has the **Free** or **Archived** status.

promotion

The application of an additional discount, value off, or premium to a sales order based on predefined order levels of selected items. Two basic types of promotions exist: order level and line level.

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 type

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

quotation lines

The lines used to record the items offered, as well as the associated price agreements and quantities. A sales quotation includes one or more quotation lines.

rebate

The amount of money to be paid to a sold-to business partner as a kind of discount for closing a sales order.

recurring invoicing batch

A set of one or more invoicing batches set up for recurring processing. If you process a recurring invoicing batch, LN selects the invoicing data according to the invoicing batches.

retroactive billing

See: *retrobilling* (p. 113)

retrobilling

The process of issuing credit or debit invoices, based on price renegotiations, for previously invoiced items. Retrobilling can be performed on orders or schedules that are linked to a contract or on individual orders or schedules.

Synonym: retroactive billing

return order

A purchase or sales order on which returned shipments are reported. A return order can only contain negative amounts.

rush order

An order that must be executed as soon as possible and that usually requires special payment and delivery terms.

sales order

An agreement that is used to sell items or services to a business partner according to certain terms and conditions. A sales order consists of a header and one or more order lines.

The general order data such as business partner data, payment terms, and delivery terms are stored in the header. The data about the actual items to be supplied, such as price agreements and delivery dates, is entered on the order lines.

sales order installment

An order that is not paid for immediately but in partial amounts or percentages of the total net amount.

You can send invoices for a percentage of the total net amount on the sales order, before or after the ordered goods are actually delivered. In this case, a number of installment lines is added to the sales order. An installment line consists of an amount and a number of additional details.

Billed installments are settled (subtracted from the goods amount) when the goods are delivered and invoiced.

sales order lines

A sales order contains items that are delivered to a customer, according to certain terms and conditions. The lines of a sale order are used to record the items ordered, as well as the associated price agreements and delivery dates.

sales order type

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

sales price

The price for which an item is sold.

sales quotations

A statement of price, the terms of sale, and a description of goods or services offered by a supplier to a prospective purchaser; a bid. The customer data, payment terms, and delivery terms are contained in the header; the data about the actual items is entered on the quotation lines. When given in response to a request for quotation, a bid is usually considered an offer to sell.

sales schedule

A timetable of planned supply of materials. Sales schedules support long-term sales with frequent deliveries. All requirements for the same item, sold-to business partner, ship-to business partner, and delivery parameter are stored in the same sales schedule.

sequence number

The number used to identify in detail the position number of a sales order (delivery) line or a purchase order line (detail).

serialized item

A physical occurrence of a standard item that is given a unique lifetime serial number. This enables tracking of the individual item throughout its lifetime, for example, through the design, production, testing, installation, and maintenance phases. A serialized item can consist of other serialized components.

Examples of serialized items are cars (Vehicle Identification Number), airplanes (tail numbers), PCs, and other electronic equipment (serial numbers).

service contract

A sales agreement between a service organization and a customer for a specific period, that states the configurations (installation groups or serialized items) to be maintained, the coverage terms, and the agreed price.

specification

A collection of item-related data, for example, the business partner to which the item is allocated or ownership details.

LN uses the specification to match supply and demand.

A specification can belong to one or more of the following:

- an anticipated supply of a quantity of an item, such as a purchase order or production order
- a particular quantity of an item stored in a warehouse
- a requirement for a particular quantity of an item, for example a sales order

specification

A collection of item-related data, for example, the business partner to whom the item is allocated or ownership details.

LN uses the specification to match supply and demand.

A specification can belong to one or more of the following:

- An anticipated supply of a quantity of an item, such as a sales order or production order
- A particular quantity of an item stored in a handling unit
- A requirement for a particular quantity of an item, for example a sales order

standard item

A purchased item, material, subassembly, or finished product that is normally available.

All items that are not built according to customer specification for a specific project are defined as standard items. Opposite term is customized item.

target price

The price that forms the basis for margin control calculations.

A target price can be one of the following prices:

- The sales price
- The recommended retail price
- The standard cost of the item
- The selling price found after a search in Pricing

The target price and the sales price are evaluated in relation to the margin limits registered in the item file.

tax code exception

A set of transaction details for which you define a tax code and/or tax country and business partner tax country other than the values that result from the standard tax code derivation.

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.

warranty

A guarantee that a component is repaired free of charge or at reduced costs if it does not work according to the agreed specifications within a warranty period.

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