



# Infor LN Enterprise Planning User Guide for Exception Messages in Enterprise Planning

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# Table of Contents

## About this document

<b>Chapter 1 Introduction.....</b>	<b>7</b>
Exception Messages in Enterprise Planning.....	7
<b>Chapter 2 Types of Exception Messages.....</b>	<b>9</b>
Types of exception messages.....	9
<b>Chapter 3 Inventory and Demand Exception Messages.....</b>	<b>11</b>
Inventory and demand exception messages.....	11
<b>Chapter 4 Order Exception Messages.....</b>	<b>15</b>
Order and order planning exception messages.....	15
Confirmed Quantity signals.....	16
Order quantity exception messages.....	16
Order planning exception messages.....	17
Additional Lead Time signals.....	20
<b>Chapter 5 Pegging Exception Messages.....</b>	<b>21</b>
Pegging exception messages.....	21
Pegging: Potential Stock Shortage.....	21
Pegging: Potential Material Shortage.....	21
Pegging: No Projected Stock.....	22
Pegging: No Projected Material Stock.....	22
Pegging: No Planned Stock.....	22
Pegging: No Planned Material Stock.....	22
Pegging: Material Supply in the Past.....	22
Pegging: Supply is too late.....	22
Pegging: Material Supply is too late.....	23
Pegging: Supply is too early.....	23
Pegging: Over Supply.....	23
Pegging: Over Supply Customer Forecast.....	23

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Pegging: Item is excluded from Pegging.....	23
<b>Chapter 6 Resource Exception Messages.....</b>	<b>25</b>
Resource exception messages.....	25
<b>Chapter 7 Error Exception Messages.....</b>	<b>27</b>
Error exception messages.....	27
<b>Chapter 8 Exception Messages by Planner.....</b>	<b>31</b>
Planner/Item Exception Messages for specific item.....	31
<b>Appendix A Glossary.....</b>	<b>33</b>
<b>Index</b>	

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## About this document

This document is an overview of exception messages of types: inventory and demand, resources, orders and order planning, pegging, and errors. An overview is provided of the circumstances under which various exception messages are displayed.

### How to read this document

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## Exception Messages in Enterprise Planning

In Enterprise Planning, one way to monitor the performance of your planning involves the use of exception messages. These are used to indicate bottlenecks and other (possible) problems occurring in a specific scenario, and allow you to analyze and solve these problems.

Here are some key characteristics of exception messages:

- Exception messages are created for a specific combination of scenario and plan level.
- Each exception message belongs to an exception message type (for an overview of the available exception message types and their meanings, see the Related topics *Types of exception messages* (p. 9)).
- The exception message is a brief description of the problem or situation involved. The exception message can contain extra information, such as a relevant date, or an error specification.
- Attached to each exception message are a number of fields containing information, such as a reference date, information on the order involved, and a quantity indication. The meaning of these fields can vary per exception message type; for more information, see the help for these fields in the Exception Messages by Planner and Item (cprao1125m000) session and the Exception Messages by Resource (cprao1130m000) session.

You can use the Update Exception Messages (cprao1210m000) to generate or update planning exception messages based on the current planning situation. In the following situations, you can also let LN generate or update the exception messages online:

- When you initialize or update a scenario in the Initialize, Roll, and Update Scenario (cprpd4200m000) session, additional exception messages may be generated due to progression of the planning periods.
- When you generate a master plan.
- When you generate an order plan.

When a exception message is created, it is marked as directed to a specific planner. The following procedure is used to determine this planner:

- When generating orders using the Generate Order Planning (cprp1210m000) session, you can specify in the **Planning Signals to Planner** field to which planner the newly generated exception messages are sent.
- If you leave the **Planner** field empty, or if the exception messages are generated starting from a different session, the planner defined for the plan item in question (in the Items - Planning session) is used.
- If the **Planner** field in the Items - Planning session is empty, the exception message is not marked for a specific planner. In sessions which give an overview or list of exception messages, you can view such non-planner-related exception messages by leaving the planner ID field empty.

The Resource Analysis and Optimization module contains several sessions to quickly analyze and resolve exception messages. Examples of what you can do with these sessions are:

- Get an overview of total exception messages by item and resource.
- Zoom to specific exception messages by item or resource.
- Zoom to the planning and simulation sessions to analyze and resolve the exception messages.

#### Note

Exception messages are only generated if the exception message type involved is included in the exception message settings defined for the planner in question. You can define and view the exception message settings in the Exception Message Types by Planner (cprao1110m000) session. Here you can define customized settings for each exception message type (and separately for each planner), to fine-tune the circumstances in which each exception message is generated.



## Types of exception messages

Each exception message is a token of a certain exception message type.

### Types and categories

The following categories of exception message types can be distinguished:

- *Inventory and demand exception messages (p. 11)*
- *Order exception messages (p. 15)*
- *Pegging exception messages (p. 21)*
- *Resource exception messages (p. 25)*
- *Error exception messages (p. 27)*

Resource exception messages are stored and retrieved per resource. You can view and print resource exception messages in the Exception Messages by Resource (cprao1130m000) session and the Print Exception Messages by Resource (cprao1430m000) session.

All other exception messages fall under the generic label of item exception messages, because they are stored and retrieved per item. You can view and print item exception messages in the Exception Messages by Planner and Item session and the Print Exception Messages by Planner and Item (cprao1425m000) session.

### Note

Although all errors are considered item exception messages, some types of error exception messages do not refer to a specific item. For these exception messages the item field remains empty. This holds true for the following error exception message types:

- **Fatal Error**
- **No Items for Plan Unit**

The following item exception messages can also be generated for channels:

- **Actual Demand Late**
- **Forecast <> Actual Demand**
- **No Demand (Master Plan)**

## When exception messages are generated

Item exception messages as well as resource exception messages are generated when you:

- Run a exception message update using the Update Exception Messages (cpao1210m000) session.
- Initialize or maintain a scenario by running the Initialize, Roll, and Update Scenario (cprpd4200m000) session.
- Run master-based planning
- Run order-based planning

Only resource exception messages are generated when you:

- Rebuild the resource planning by running the Rebuild Resource Planning (cprmp3200m000) session.
- Update the resource planning in the Resource Master Plan (cprmp3501m000) session.
- Update the resource exception messages in the Exception Messages by Resource (cpao1130m000) session.

When you update your item exception messages in the Exception Messages by Planner and Item (cpao1125m000) session, only item exception messages are generated. Some types of item exception messages are also generated when you run the Convert Master Plan to Planned Orders (cprmp2240m000) session.

## Master planning and order planning

To a certain degree, master planning and order planning differ when it comes to the exception messages generated. Some item exception messages are typically generated when LN creates or updates an item master plan, whereas other item exception messages are usually created in the context of order planning.

### Example

Order exception messages are mostly generated in order planning, while demand exception messages are usually generated in master planning. Inventory exception messages, on the other hand, are created in both types of planning.

### Note

When LN generates or updates planned orders, the item master plan for the item involved is checked as well. Running the Generate Order Planning (cprmp1210m000) session, for example, not only yields item exception messages typically belonging to order planning, but can also produce item exception messages which are usually confined to master planning (such as demand exception messages).

## Inventory and demand exception messages

Inventory and demand exception messages refer to a projected inventory level or a demand quantity. They indicate that the level or quantity involved is below or above a certain norm level.

These exception messages are especially helpful when it comes to controlling inventory levels and improving customer service.

You can use the following sessions to analyze these exception messages:

- Item Master Plan (cprmp2101m000)
- Item Order Plan (cprp0520m000)
- Planned Orders (cprp1100m000)
- Planned Inventory Transactions (whinp1500m000)

### Note

All exception messages are only generated for the first occurrence unless stated otherwise.

### Negative Inventory Level

This message appears in:

- **Master Planning**
  - If the channel is empty for the item master plan but not for the channel master plan.
  - If the period in which projected inventory is less than zero (0) exceeds the order time fence.
- **Order Planning**
  - If the projected inventory level is lower than zero (0).

## Inventory < Safety/Plan

This message appears in:

- **Master Planning**
  - If the channel is empty for the item master plan but not for the channel master plan.
  - Inventory plan in the master plan is greater than zero.
  - Projected inventory in the master plan is greater than zero.
  - The projected inventory level in the master plan is lower than the inventory plan in the corresponding period with the difference being greater than the specified in Exception Messages by Planner (cprao1120m000).
- **Order Planning**

If the projected inventory falls below safety stock with the difference greater than the tolerance specified in Exception Messages by Planner (cprao1120m000)

### Note

The safety stock is specified in the Item - Ordering (tcibd2100s000) session; it is adjusted for seasonal influences by means of a seasonal pattern, which is selected in this same session.

## Inventory > Maximum

This message appears in:

- **Master Planning**
  - If the channel is empty for the item master plan but not for the channel master plan.
  - If the project inventory is higher than the maximum inventory specified in the Item - Ordering (tcibd2100s000) session.
  - If the period in which the projected inventory is greater than the maximum inventory falls outside the order horizon.
- **Order Planning**

If the projected inventory goes above the maximum inventory with a difference greater than the tolerance specified in Exception Messages by Planner (cprao1120m000).

## Actual Demand Late

This message appears in:

- **Master Planning**

If the **Cumulative ATP** in the Item Master Plan (cprmp2101m000) session for the master plan is less than zero.
- **Order Planning**

If the **ATP** field in the Item Order Plan (cprrp0520m000) session falls below zero.

Part of the actual demand of the item or channel will be delivered late.

## Forecast <> Actual Demand

This message appears if in a certain plan period, the actual demand in the master plan for an item or channel deviates from the demand forecast, to a degree which exceeds the tolerance percentage specified for this exception message type in the Exception Message Types by Planner (cprao1110m000) session.

The demand forecast of an item is specified in the following fields in the Item Master Plan (cprmp2101m000) session:

- **Demand Forecast**
- **Extra Demand**
- **Special Demand**

The actual demand is specified in the following fields:

- **Customer Orders**
- **Customer Deliveries**
- **Dependent Distribution Demand \***
- **Dependent Material Demand \***
- **Dependent Scheduled Demand \***
- **Internal Deliveries \***
- **Distribution Deliveries \***

\* These fields are only taken into account when the **Dependent Demand Forecast** check box in the Items - Planning (cprpd1100m000) session is selected.

## Inventory > Inventory Plan

The projected inventory in the Item Master Plan (cprmp2101m000) session is higher than the inventory plan specified in this same session.

This type of exception message is only generated outside the order horizon.

### Note

This message does not occur when using order-based planning.

## Shop Floor Inventory < 0

This exception message appears in:

- **Master Planning**  
If the on-hand inventory is negative.
- **Order Planning**
  - At the start of planning the on-hand inventory is negative.
  - The planned inventory on the shop floor drops below zero (0) on a certain date. In other words, the current set of orders on the shop floor or at purchase is sufficient to maintain a positive inventory until the reference date attached to the exception message.

### Note

As a rule, the shop-floor inventory is determined by taking into account all planned requirements and planned receipts except those which originate from Enterprise Planning, such as demand forecasts and planned orders. However, the shop-floor inventory does include the dependent distribution demand originating from planned distribution orders.

You can resolve this exception message by transferring planned orders to the execution level in the Transfer Order Planning (cppat1210m000) session.

### No Demand (Master Plan)

The item master plan or channel master plan does not contain any demand for the item involved.

This type of exception message is generated when master-based planning is executed (compare the next exception message type).

### No Demand (Order Planning)

There is no demand at all for the item involved.

This type of exception message is only generated when order-based planning is executed (compare the previous exception message type).

## Order and order planning exception messages

Order exception messages are item exception messages that refer to the planning and execution of orders (or the supply plan in master planning).

Some order exception messages are only generated for planned orders, while other order exception messages are also created for orders that have already been transferred to the execution level.

There are the types of order exception messages:

- **Group order exception messages**

A number of groups of order exception messages can be distinguished: **Additional Lead Time** exception messages and **Confirmed Quantity** exception messages.

- **Order quantity exception messages**

Order quantity exception messages are related to the lot-size rules specified for an item (see the Item - Ordering (tcibd2100s000) session). This kind of exception message warns you that an order or a production plan does not follow these lot size rules.

You can use the following sessions to analyze and resolve these exception messages:

- Items - Ordering (tcibd2500m000)
- Item Master Plan (cprmp2101m000)
- Item Order Plan (cprp0520m000)
- Planned Orders (cprp1100m000)

- **Order planning exception messages**

Order planning exception messages are related to the planning of production orders, purchase orders, and distribution orders.

You can use the following sessions to analyze and resolve these exception messages:

- Item Master Plan (cprmp2101m000)
- Item Order Plan (cprp0520m000)
- Planned Orders (cprp1100m000)

### Note

All exception messages are only generated for the first occurrence unless stated otherwise.

## Confirmed Quantity signals

The exception messages that are logged when one or more of the following concepts are implemented: vendor managed inventory (VMI), **Use Confirmation (Purchase)**, or **Use Confirmation (Sales)**.

### Confirmed quantity is late

The confirmed date has been changed to a later date.

### Confirmed quantity is early

The confirmed date has been changed to an earlier date.

### Confirmed quantity is higher

The confirmed quantity has been increased.

### Confirmed quantity has been decreased

The confirmed quantity has been decreased.

## Order quantity exception messages

### Order Quantity < Minimum

The order quantity, or the production plan in a certain plan period, is lower than the **Min Order Quantity** specified in the Items - Ordering (tcibd2500m000) session.

### Note

Only applies to planning standard items.

### Order Quantity > Maximum

The order quantity is higher than the **Max Order Quantity** specified in the Items - Ordering (tcibd2500m000) session.

### Note

Only applies to planning standard items.



## Order Quantity <> Increment

The order quantity, or the production plan in a certain plan period, is not a multiple of the order increment specified in the Items - Ordering (tcibd2500m000) session.

This message is given in:

- **Mater Planning**
  - If the channel is empty for the item master plan but not for the channel master plan.
  - If the production plan or purchase plan is not equal to zero.
  - The order quantity increment is not equal to zero.
  - If the production or purchase plan quantity in the master plan is not a multiple of the order quantity increment.
  - If the difference between the production or purchase plan quantity and the quantity rounded to increment is greater than the tolerance percentage defined in the Exception Message Types by Planner (cprao1110m000) session.
- **Order Planning**
  - If the order quantity is not equal to zero.
  - If the order quantity increment is not equal to zero.

### Note

This exception message is only generated for standard items.

This exception message is not generated for the purchase plan during master-based planning if it has been generated for the production plan.

## Order Quantity <> Fixed/Economic

The order quantity differs from either the fixed order quantity if the item's order method is **Fixed Order Quantity** or the economic order quantity if the item's order method is **Economic Order Quantity**.

The parameters involved are defined in the Items - Ordering (tcibd2500m000) session.

## Total Supply > Total Requirements

The total supply (planned orders + actual orders + inventory) quantity exceeds the total requirement (forecast, planned orders, actual orders, safety stock) quantity. This can be caused by the lot sizing rules.

## Order planning exception messages

### Item Supplier Error

An error occurred with respect to purchase planning. The nature of the error is specified in the exception message.

## Transfer Late

If the planned start date is earlier than the current date, and the planned order should already have started, this exception message is always logged. The tolerance days defined for this message are not applied.

If the planned start date falls after the current date, but within the time fence, then this exception message is logged but tolerance days are applied.

You can transfer planned orders in the Transfer Order Planning (cppat1210m000) session. Alternatively, you can transfer a planned order directly from the Planned Order (cprp1600m000) session.

## Planning failed

The planning process could not be completed, because Enterprise Planning did not have sufficient information.

This error occurs, for example, if a calendar is missing.

## Item planned before first allowed order date

The start date of a planned order is before the first allowed order date.

You can specify a general value for the first allowed order date in the **First Allowed Order Date** field in the Items - Ordering (tcibd2500m000) session.

You can also specify a warehouse-specific value in the Warehouse - Item (whwmd2510m000) session that applies if the item is delivered from that warehouse.

### Note

Warehouse specific values can be specified for all the fields in the Items - Ordering (tcibd2500m000) session.

## Cancel Order

Part of the order or part of the supply plan can be canceled, because there is no demand for it (for example, because a sales order has been canceled). The exception message includes an indication of the quantity that is superfluous.

This type of exception signal is generated (starting with the last order or plan period) when:

- On the end date of the last (planned or actual) order, the projected inventory is higher than the inventory plan or the safety stock (in order planning).
- At the end of the last plan period, the projected inventory is higher than the inventory plan (in master planning).

You can let LN automatically process a **Cancel** exception message in the Process Exception Messages (cprao1220m000) session, if you select the **Auto Process** check box in the Exception Message Types by Planner (cprao1110m000) session.

## Reschedule In

Part of the order must be delivered earlier. The quantity attached to the exception message indicates the quantity to be rescheduled; the exception message itself states to which date this quantity must be rescheduled.

If the **Only Reschedule Total Order Quantity** check box in the Planning Parameters (cprpd0100m000) session is selected, the quantity indicated is always equal to the total order quantity.

This type of exception message is only generated as part of an order planning.

If you generate an order planning, LN can automatically process a **Reschedule In** exception message in the Process Exception Messages (cprao1220m000) session when the **Auto Process** check box in the Exception Message Types by Planner (cprao1110m000) session is selected.

## Reschedule Out

Part of the order can be delivered later (for example, because of postponed customer orders). The quantity attached to the exception message indicates the quantity to be rescheduled; the exception message itself states to which date this quantity must be rescheduled.

If the **Only Reschedule Total Order Quantity** check box in the Planning Parameters (cprpd0100m000) session is selected, the quantity indicated is always equal to the total order quantity.

This type of exception message is only generated as part of an order simulation.

If you generate an order planning, LN can automatically process a **Reschedule Out** exception message in the Process Exception Messages (cprao1220m000) session when the **Auto Process** check box in the Exception Message Types by Planner (cprao1110m000) session is selected.

## Order in Order Interval

One of the following situations has occurred:

- A (planned or actual) production-order line falls within the order interval of the previous (planned or actual) production-order line.
- A (planned or actual) purchase-order line falls within the order interval of the previous (planned or actual) purchase-order line.

The actual exception message includes a date indicating the order interval, expressed as the date on which the order interval of the previous order (line) ends.

The order interval (in days) is specified in the Item - Ordering (tcibd2100s000) session.

## Finish Date > Requirement Date

The planned order line's delivery date is later than the requirement date, so that the order will be delivered late.

## Transfer Failed

This exception message is only logged when the transfer of planned production orders is triggered by the SCS Planner in case of automatic transfer. The nature of the error is specified in the exception message.

## Additional Lead Time signals

When the planned finish date of the planned order is in time to meet the requirement date, there can still be a problem because of additional lead times which are not included in the planned order. LN checks these additional lead times in the sequence indicated below. Only the first applicable exception message will be logged. Consequently the next additional lead time elements are not planned.

### Order in Outbound Lead Time

The planned order line's finish date falls within the outbound lead time of the warehouse. There is not enough room between the finish date and the requirement date to plan the outbound lead time of the warehouse.

### Order in Inbound Lead Time

The planned order line's finish date falls within the inbound lead time of the warehouse. There is not enough room between the finish date and requirement date to plan the inbound lead time of the warehouse.

### Order in Extra Lead Time

The planned order line's finish date falls within the extra lead time. There is not enough room between the finish date and requirement date to plan the previous additional lead time elements and the extra lead time specified in the Items - Planning (cprpd1100m000) session.

### Order within Safety Time

The planned order line's finish date falls within the safety time. There is not enough room between the delivery date and the requirement date to plan the previous additional lead time elements and the safety time specified in the Items - Planning session.

### No time to plan Item-Purchase Business Partner's safety time (Item Supplier Error)

The planned order line's finish date falls within the safety time of the business partner. There is not enough room between the order line's finish date and the actual requirement date to plan the previous additional lead time elements and the business partner's safety time.

## Pegging exception messages

Pegging signals show if one order causes a problem for another order, for example:

- A sales order cannot be delivered in time, because the production order to make the item is late.
- A production order cannot be completed in time, because a purchase order is planned too late.

Pegging exception messages are generated as part of an order simulation or separately in the Generate Pegging Relations (cprp0240m000) session.

Pegging exception messages are based upon pegging relations.

### Pegging: Potential Stock Shortage

A required supply, for example, a sales order or a production-order requirement, is not available on stock. The required supply has not yet been delivered by, for example, a particular purchase order. This situation is a potential problem, because you have no guarantee that the required items will be available on time.

### Pegging: Potential Material Shortage

The current order requires a material that is supplied by another order. In this situation, LN also gives a **Pegging: Potential Inventory Shortage** exception message for the item that the current order requires (as material).

## Pegging: No Projected Stock

A required supply, for example, a sales order or a production-order requirement, still has to come from a planned order. You have not yet transferred the planned order to an actual production order or actual purchase order.

## Pegging: No Projected Material Stock

The current order requires a material that is supplied by another planned order. In this situation, LN also gives a **Pegging: No Projected Inventory** exception message for the item that the current order requires.

## Pegging: No Planned Stock

A required supply is not pegged at all.

This situation is serious, because even if you execute all existing planned orders on time, this requirement is not filled. You must create an additional order to meet the supply, or take other actions.

## Pegging: No Planned Material Stock

The current order requires a material that is not in stock and not supplied by another planned order. In this situation, LN also gives a **Pegging: No Planned Inventory** exception message for the item that the current order requires.

This situation is a serious, because you will not be able to fill the current requirement, unless you order additional material, or take other actions.

## Pegging: Material Supply in the Past

The current order requires a material that is supposed to have been delivered in the past. In this situation, LN also gives a **Pegging: Supply in the Past** exception messages for the item that the current order requires.

If you enter a tolerance in the **Tolerance (Days)** field in the Exception Message Types by Planner (cprao1110m000) session, LN only logs exception messages that exceed the tolerance. For example, if the tolerance is three, you only see supply that is more than three days in the past.

## Pegging: Supply is too late

The supply is expected *after* the demand. In other words, the current order has a planned delivery date that is later than the moment that the item is required. If you do not shift the supply order to an earlier date, the required item will not be supplied in time.

If you enter a tolerance in the **Tolerance (Days)** field in the Exception Message Types by Planner (cprao1110m000) session, LN only logs exception messages that exceed the tolerance. For example, if the tolerance is three, you only see supply that is more than three days later than the demand.

## Pegging: Material Supply is too late

The current order requires a material that is planned to be delivered *after* you require the item. In this situation, LN also gives a **Pegging: Supply in the Past** exception message for the item that the current order requires.

### Note

If you want the system to log less of these exception message, you can define a tolerance in days.

## Pegging: Supply is too early

The supply is expected *before* the item is required. In other words, the current order has a planned delivery date that is earlier than the moment that the item is required. The required item must be stored for some time, before the item is actually used.

In general, this situation is not serious, but the situation can lead to undesirably high inventory levels in your warehouse. To resolve this situation, you can shift this order to a later date.

### Note

The exception message does not take into account safety time, extra lead time, inbound lead time, and outbound lead time. Therefore, the supply might not, in fact, be early.

If you enter a tolerance in the **Tolerance (Days)** field in the Exception Message Types by Planner (cprao1110m000) session, LN only logs exception messages that exceed the tolerance. For example, if the tolerance is three, you only see supply that is more than three days earlier than the demand.

### Note

If you want the system to log less of these exception message, you can define a tolerance in days.

## Pegging: Over Supply

The supply quantity in the pegging data exceeds the demand quantity.

## Pegging: Over Supply Customer Forecast

The supply quantity in the pegging data exceeds the customer forecast quantity.

## Pegging: Item is excluded from Pegging

This item is logged to warn the planner that the planned item is excluded from planning, as defined in the Items - Planning (cprpd1100m000) session.





## Resource exception messages

Resource exception messages are related to the planning of resources. They warn you when there is a utilization or workload problem.

You can use the following sessions to analyze and resolve these exception messages:

- Resource (cprpd2100m000)
- Resource Master Plan (cprmp3501m000)

### Overloaded Resource

The resource is overutilized. This type of exception message is generated when the utilization for a plan period exceeds 100 % plus the tolerance percentage specified for this exception message type in the Exception Message Types by Planner (cprao1110m000) session.

### Workload < Norm

The workload that is on the shop floor is lower than the workload norm specified in the Resource (cprpd2100m000) session taking into account the workload tolerance specified in this same session.

In determining the workload, only the following fields in the Resource Master Plan (cprmp3501m000) session are considered:

- **Capacity Used for SFC Orders**
- **Capacity Used for PCS Activities**
- **Capacity Used for Service Orders**

### Workload > Norm

The workload that is on the shop floor is higher than the workload norm specified in the Resource (cprpd2100m000) session (taking into account the workload tolerance specified in this same session).

In determining the workload, only the following fields in the Resource Master Plan (cprmp3501m000) session are considered:

- **Capacity Used for SFC Orders**
- **Capacity Used for PCS Activities**
- **Capacity Used for Service Orders**

### Resource CTP < Zero

The CTP of the resource is lower than zero (0). This means that the load on the resource, including newly accepted customer orders, is too high. This type of exception message is only generated for resources which are defined as critical in CTP in the Resource (cprpd2100m000) session.

## Error exception messages

Error exception messages are item exception messages that indicate errors occurring during a planning run.

Some errors are relatively easy to solve, for example, by supplying a default value or parameter where expects one. In other cases, however, the error can be of a more serious nature, and can lead to failure of the planning as a whole.

### Fatal Error

An error has occurred that LN cannot recover from. The exception message is given to specify the fatal error. Examples of a fatal error:

- The program is running out of memory
- An internal sort failed

In most cases the session that started the exception message generation will be aborted. If any planning was generated, it might not be valid.

This exception message is not related to a specific item.

### RPT Planning Failure

While trying to generate orders for repetitive items, no default order quantity could be found.

The default order quantity for repetitive items is calculated in Manufacturing, on the basis of:

- The basic capacity of the bottleneck work center for the repetitive item in question, as specified in the Item - Routings (tirou1101m000) session.
- The basic capacity by resource unit for this bottleneck work center, as specified in the Work Centers (tirou0101m000) session.

## No Supplying Relationship

While trying to generate a planned distribution order, LN could not find any supplying relationships for the item involved. As a result, no planned distribution order is generated.

You can define supplying relationships for a plan item in the Supplying Relationships (cprpd7130m000) session.

## No Supplying Business Partner

While trying to generate a planned purchase order, LN could not find any suppliers for the item involved. However, the planned purchase order is still generated.

You can define suppliers for a plan item in the Items - Purchase (tdipu0101m000) session.

## Item Error

An item-specific error occurred. The nature of the error is specified in the exception message. In most cases the error is such that the planning for the specified item has failed and cannot be trusted.

## Item planned after last allowed order date

The finish date of a planned order falls after the last allowed order date.

You can define a general value for the last allowed order date in the **Last allowed Order Date** field in the Items - Ordering (tcibd2500m000) session.

You can also specify a warehouse-specific value in the Warehouse - Item (whwmd2510m000) session that applies if the item is delivered from that warehouse.

## No Items for Plan Unit

A particular plan unit is empty, that is, no plan items have been assigned to it.

To assign a plan item to a plan unit in the Items - Planning (cprpd1100m000) session, you can specify the plan unit in the **Master Plan Unit** field.

This type of exception message is not related to a specific item.

## No WLC Parameters Defined

A particular item is assigned to a plan unit for which the **Master Planning Method** is **Workload Control**, but the plan unit's WLC parameters have not been defined.

You can define the WLC parameters in the Work Load Control Parameters (cpwlc2101m000) session.

### Insufficient Capacity

The production plan is decreased due to insufficient free capacity on one of the resources defined in the bill of critical capacities. This type of exception message is generated in the workload control (WLC) planning engine.

### Insufficient Materials

The production plan is decreased due to a lack of one of the components specified in the bill of critical materials for a certain plan item. This type of exception message is generated in the workload control (WLC) planning engine.

### Planning Failed

Planning has failed because the required quantity could not be planned. The nature of the error is specified in the exception message.

### Project

The Generate Order Planning (Item) (cprp1220m000) session can only handle PCS Project with the status **Active** or **Simulated**. When executing Generate Order Planning (Item) for customized items that belong to a PCS project that is not **Active** or **Simulated**, this exception message is logged.

### Specification

During the generation of the order planning the application detects an incorrect setting in **Terms and Conditions**. The nature of the error is specified in the exception message.



## Planner/Item Exception Messages for specific item

LN not only generates exception messages for planned or actual orders of the specified item, but also for all kinds of possible data that relates to the specified plan item throughout LN, such as inventory levels, safety stock, or horizons.

On the **Views** menu of the Exception Messages by Planner and Item (cprao1125m000) session, you can select the sort order in which LN displays the data in this session.

In the appropriate menu you can handle the exception messages as follows:

- **Accepted**  
Once you accepted exception messages, you can select Hide Accepted Exception Messages on the appropriate menu to hide or display the accepted exception messages, so that the user can focus on the remaining exception messages.
- **Line Details**  
You can start the Planned Orders (cprrp1100m000) session. A production order number must be specified in the **Order Number** field to be able to zoom to the corresponding production order. If the field is cleared, the **Line Details** command is disabled.
- **Auto Process**  
You can start the Process Exception Messages (cprao1220m000) session to automatically process the exception messages LN generates during order planning. To start automatic processing you must select the **Auto Process** check box in the Exception Message Types by Planner (cprao1110m000) session. You can select or clear the **Auto Process** check box in the Exception Messages by Planner and Item (cprao1125m000) session for individual orders.
- **Update**  
If handling exception messages has led to adjusting the data of the production orders being planned, you can regenerate the exception messages in the Update Exception Messages (cprao1210m000) session. **Note:** accepted exception messages are retained during update.





# Appendix A

## Glossary

# A

### 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.

### basic capacity

The normal daily number of operation hours of the resource units of a work center (resource). A resource unit can be a machine or an employee.

### BCM

See: *bill of critical materials* (p. 33)

### bill of critical capacities

Bills of critical capacities (BCC) indicate the work centers that are regarded as critical in the Master Planning processes. Critical capacities are usually the bottlenecks in a routing.

Enterprise Planning uses the bill of critical capacities to generate the rough capacity requirements for critical capacities.

### bill of critical materials

A bill of critical materials (BCM) indicates the components which are regarded as critical during the production process of a plan item.

A bill of critical materials is a kind of summary of the BOM, which contains only the more important components.

Typical examples of critical materials are:

- Components with long lead times
- Subassemblies with a high capacity load for the internal or external production system

The Enterprise Planning package uses the bill of critical materials to generate the critical material requirements for critical materials.

Synonym: BCM

### bottleneck work center

A work center that determines or limits the production rate of an RPT item when scheduling orders. The work center calendar determines the maximum number of hours per day for planning orders of repetitive items.

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

### calendar

A register of days that contains information on the availability of, for example, resources or business partners at a specified time range.

### channel

A sales or distribution channel used to assign goods to customer groups.

You can link channels to sold-to business partners and to items. Channels can be used in connection with available-to-promise (ATP).

You can assign a certain ATP volume to a channel. This volume limits the ATP for that channel to a maximum.

### channel master plan

An item-specific logistic plan that contains sales targets and constraints for a specific combination of a sales channel and plan item.

A channel is a grouping of customers and items.

A channel master plan supports sales-related functions such as demand forecasting and due-date quoting, as well as aggregation.

### critical in CTP

A plan item that is critical in CTP must be checked during a component CTP check for a higher level item in the bill of critical materials. A resource that is critical in CTP must be checked during a capacity CTP check for a plan item, if this resource is included in the plan item's bill of critical capacities.

### demand forecast

The item quantity that is forecast to be required in a plan period. A demand forecast can be generated based on seasonal patterns or historical demand data.

The demand forecast is part of the demand plan for a plan item or channel.

### economic order quantity

The amount of an item to be purchased or manufactured at one time. This amount is the quantity for which the combined costs of acquiring and carrying inventory are the lowest. This is also referred to as the minimum cost order quantity.

### exception message

A short standardized message that LN generates to advise the user to change or correct a specific planning parameter, value, or constraint to avoid undesired results or conflicts in planning.

### execution level

Within Enterprise Planning, the designation of the LN packages that control the execution of orders and the actual goods flow, such as:

- Manufacturing
- Order Management
- Warehousing

Enterprise Planning uses planning algorithms to carry out simulations and optimizations. The other packages control the execution of orders, and the goods flow.

### extra lead time

Time reserved for extra activities that are necessary to fully complete a planned order.

Enterprise Planning treats the extra lead time in the same way as the safety time: the order must be delivered earlier based on the extra lead time.

The extra lead time is expressed in days or in hours.

### fixed order quantity

A predetermined, fixed quantity of an item for which planned or actual orders are generated. If the net requirements for the period exceed the fixed order quantity, a multiple of the fixed quantity is ordered.

Generated orders always have a fixed order quantity.

### inbound lead time

The time interval between the arrival of the items and the actual storage in the warehouse.

### inventory on hand

The physical quantity of goods in one or more warehouses (including the inventory on hold).

Synonym: on-hand inventory

### inventory plan

The desired inventory level, specified by period.

The inventory plan is part of the item master plan.

The inventory plan can also be a constant inventory level.

### item

In LN, the raw materials, subassemblies, finished products, and tools that can be purchased, stored, manufactured, sold, and so on.

An item can also represent a set of items handled as one kit, or exist in multiple product variants.

You can also define nonphysical items, which are not held in inventory but can be used to post costs or to invoice services to customers. The following are examples of nonphysical items:

- Cost items (for example, electricity)
- Service items
- Subcontracting services
- List items (menus/options)

### lot size

The number of items in a lot.

### master-based planning

A planning concept in which all planning data is accumulated into time buckets with predefined lengths.

In master planning, all demand, supply, and inventory data is handled in terms of these time buckets, and is stored in master plans.

In master planning, supply is planned in the form of a supply plan. This supply plan is calculated on the basis of demand forecasts, actual orders, and other information. For production planning, this planning method only considers critical requirements, as recorded in an item's bill of critical materials and bill of critical capacities.

#### **Note**

In Enterprise Planning, you can maintain a master plan for an item, even if you plan all supply with order planning.

### on-hand inventory

See: *inventory on hand* (p. 36)

### order-based planning

A planning concept in which planning data is handled in the form of orders.

In order planning, supply is planned in the form of planned orders. LN takes into account the start and finish dates of individual planned orders. For production planning, this method considers all material and capacity requirements, as recorded in an item's BOM and routing.

#### **Note**

In Enterprise Planning, you can maintain a master plan for an item, even if you plan all supply with order planning.

### order horizon

The time period for which Enterprise Planning uses order-based planning to plan supply.

The order horizon is expressed as a number of working days from the date you carry out the simulation.

If the order horizon is zero, Enterprise Planning does not use order-based planning for the item involved.

To calculate the order horizon, LN uses the calendar that you specified for the enterprise unit of the default warehouse to which the plan item belongs.

If you did not specify an enterprise unit for the default warehouse of the plan item, Enterprise Planning uses the company calendar to calculate the order horizon.

#### **Note**

LN moves the order horizon towards the end of the plan period) in which it falls, because Enterprise Planning must know whether a plan period falls within the order horizon.

### order interval

The number of workdays or working hours for which all the requirements of a specific item are bundled in one (planned) order, during an order planning run. LN calculates the order interval from the day when the first requirement occurs. Order intervals are used to prevent an excessive number of planned orders in one time period.

### outbound lead time

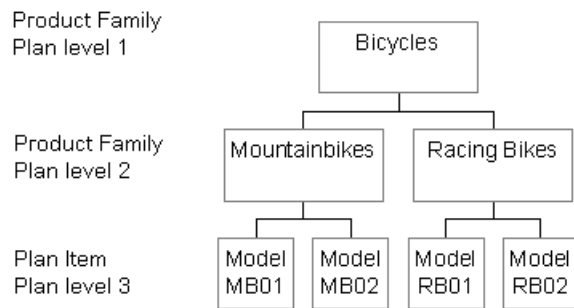
The time interval between taking the items out of the warehouse and the departure of the carrier on which the items are placed.

## plan level

The level within a hierarchical planning structure.

When you plan on a higher plan level, plans are general and less detailed.

### Example



Plan level 1 is the highest plan level; the higher the number, the lower the plan level.

## planned order

A supply order in Enterprise Planning that is created for planning purposes, but which is not an actual order yet.

Enterprise Planning works with planned orders of the following types:

- planned production order
- planned purchase order
- planned distribution order

Planned orders are generated in the context of a particular scenario. The planned orders of the actual scenario can be transferred to the execution level, where they become actual supply orders.

## planned production order

A planned order in Enterprise Planning to produce a certain quantity of an item.

## project

A collection of manufacturing and purchasing actions that are performed especially for a particular customer order. A project is initiated by a customer order for items having a **To Order** order policy. The purpose of a project is to plan and coordinate the production of these items.

For a standard-to-order production, the project is only used to link the item with the customer order. Otherwise, a project can include:

- Customized item data (BOMs and routings)
- Project planning (activity planning)

A budget is a special type of project. A budget is used to plan and estimate, not to carry out production.

## repetitive item

A repetitive item (also called RPT item) is a manufactured item whose production is controlled by schedules. A schedule contains multiple production orders that can be viewed, released, reported as complete, and so on, in one session.

A repetitive item usually has the following characteristics:

- It is produced in large quantities.
- It is subject to repetitive demand.
- The production is based on a rate.
- The lead time is short.

Anonymous items as well as to-order items can be repetitive. However, only to-order items that are **Standard-to-Order** can be used in RPT schedules. You cannot use generic items or **Engineer-to-Order** items in an RPT schedule.

## resource

A group of machines or employees in Enterprise Planning, corresponding to a work center in other LN packages.

Each operation performed to manufacture an item requires a certain capacity amount from a resource (for example, production hours). The capacity of the resource can be a constraint in the planning.

The availability of a resource can be specified by using the resource calendar.

## safety stock

The buffer inventory necessary to meet fluctuations in demand and delivery lead time. In general, safety stock is a quantity of inventory planned to be in inventory to protect against fluctuations in demand or supply. In the context of master production scheduling, safety stock is the additional inventory and capacity planned as protection against forecast errors and short-term changes in the backlog.



### safety time

The time that you can add to the normal lead time to protect delivery of goods against fluctuations in the lead time so that an order can be completed before the order's real need date.

### scenario

The identification of an overall planning solution.

Each scenario represents one overall planning solution, and involves particular settings for the planning of items and resources. You can use scenarios to analyze and compare various planning options and to find the best planning solution. For example, you can vary demand forecasts or sourcing strategies.

One of the scenarios is the actual scenario, which corresponds with the actual planning situation. You can only transfer planned orders and production plans from the actual scenario to the execution level of LN.

### seasonal pattern

Seasonal patterns define the fluctuation of certain values, such as the expected usage or demand of an item in the course of a year. These values serve as parameters in forecast and advice.

### 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.

A standard item can have the following order policies:

- **Anonymous**
- **To Order**

### supplying relationship

A distribution link between a supplying warehouse cluster and a receiving cluster. The clusters involved can be in the same site, or in different sites.

Enterprise Planning uses supplying relationships for distribution planning: the supplying relationships represent valid supply paths for particular items or groups of items. You can specify supplying relationships at the level of individual items, but also at more general levels.

The supplying relationships also determine the costs of supply, lot size rules, and other parameters.

## supply plan

The total supply that is planned in master planning.

The supply plan of an item consists of:

- Production plan
- Purchase plan
- Distribution plan (shown in the item master plan as planned distribution orders)

The item master plan also takes into account the supply planned in order planning (planned orders). However, this type of supply is not part of the item's supply plan. In other words, a supply plan usually exists only outside the item's order horizon.

## time fence

The date until which an item's supply plan and planned orders are frozen.

The time fence is expressed as a number of working days or working hours from the date you carry out the simulation.

As a rule, Enterprise Planning does not regenerate the supply plan or the planned orders within the time fence. However, you can overrule this behavior when you run a master-plan simulation or order simulation.

The time fence is meant to prevent:

- Disturbance of orders that have already started (at the shop-floor level).
- Generation of planned orders with start dates in the past (that is, orders that are late).

Usually, the lead time of an item's production process is a reasonable value for the time fence.

## vendor managed inventory (VMI)

An inventory management method according to which the supplier usually manages the inventory of his customer or subcontractor. Sometimes, the supplier manages the supply planning as well. Alternatively, the customer manages the inventory but the supplier is responsible for supply planning. Inventory management or inventory planning can also be subcontracted to a logistics service provider (LSP).

The supplier or the customer may own the inventory delivered by the supplier. Often, the ownership of the inventory changes from the supplier to the customer when the customer consumes the inventory, but other ownership transfer moments occur, which are laid down by contract.

Vendor-managed inventory reduces internal costs associated with planning and procuring materials and enables the vendor to better manage his inventory through higher visibility to the supply chain.

## WLC

See: *workload control* (p. 43)

### workload control

A constraint-based method for supply planning, aimed at creating a feasible planning solution by leveling the workload on a resource.

Workload control is based on the idea that workload levels and production lead times are related.

This method is used to control both the workload by resource and the lead time per item.

Abbreviation: WLC

### workload norm

The amount of work that must await execution on the shop floor for a resource.

If the workload is much lower than the workload norm, there is a risk that the resource becomes idle. If the workload is much higher, the production lead times can become unacceptably long.

Note that the workload norm is expressed in hours.

### workload tolerance

The percentage by which the resource's workload is allowed to deviate from the workload norm.



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# Index

- appropriate menu, 33**
- basic capacity, 33**
- BCM, 33**
- bill of critical capacities, 33**
- bill of critical materials, 33**
- bottleneck work center, 34**
- business partner, 34**
- calendar, 34**
- channel, 34**
- channel master plan, 34**
- critical in CTP, 35**
- demand forecast, 35**
- economic order quantity, 35**
- Error exception messages, 27**
- exception message, 35**
- Exception Messages**
  - error exception messages, 27
  - inventory and demand exception messages, 11
  - order exception messages, 15
  - overview, 7
  - pegging, 21
  - resource exception messages, 25
  - types, 9
- execution level, 35**
- extra lead time, 35**
- fixed order quantity, 35**
- For Specific Item**
  - planner/item exception messages, 31
- inbound lead time, 36**
- Inventory and demand exception messages, 11**
- inventory on hand, 36**
- inventory plan, 36**
- item, 36**
- lot size, 36**
- master-based planning, 37**
- on-hand inventory, 36**
- order-based planning, 37**
- Order exception messages, 15**
- order horizon, 38**
- order interval, 38**
- outbound lead time, 38**
- Overview**
  - exception messages, 7
- Pegging**
  - exception messages, 21
- plan level, 39**
- planned order, 39**
- planned production order, 39**
- Planner/Item Exception Messages**
  - for specific item, 31
- project, 40**
- repetitive item, 40**
- resource, 40**
- Resource Exception Messages, 25**
- safety stock, 40**
- safety time, 41**
- scenario, 41**
- seasonal pattern, 41**
- standard item, 41**
- supplying relationship, 41**
- supply plan, 42**
- time fence, 42**
- Types**
  - exception messages, 9
- vendor managed inventory (VMI), 42**
- WLC, 43**
- workload control, 43**
- workload norm, 43**
- workload tolerance, 43**

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