Infor LN Enterprise Planning User Guide for ATP and CTP

Important Notices

Trademark Acknowledgements

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About this document

This document is an overview of available-to-promise and capable-to-promise possibilities in Enterprise Planning. The options for, and conditions under which these resource checks are available for use are described.

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Chapter 1
Introduction

1

Available to promise and capable to promise

Introduction

LN provides extensive functionality to support order promising. The following concepts are central to order promising:

- An item's ATP is the quantity that is available for customers either immediately, or on a specific time in the future.
- An item's Capable to Promise (CTP) quantity, is the quantity that is available in addition to the ATP, based on the spare production capacity of your production facility.

Available-to-promise and capable-to-promise support is important functionality for a reliable order acceptance procedure. To prevent over-promising of products to customers, LN may need to check on available inventory of finished goods, available sub-assemblies and components, and available production capacity.

You can use ATP checks as follows:

- **Online**
  The sales employee performs an ATP check for one sales order during the sales order entry procedure or the sales quotation entry procedure.
- **Offline**
  The customer does not immediately receive a delivery date from the sales employee. Instead, you prioritize multiple orders and promise dates later.

To support both situations, you can use the ATP Handling (cprrp4800m000) session during sales order entry, and also offline as a separate session.

Parameters

The following parameters, which you can specify in the Planning Parameters (cprpd0100m000) session, determine how LN performs ATP and CTP checks.

- **Online ATP Update in EP**
  If this check box is selected, every time you save a sales order line, LN immediately updates the sales order reservations and CTP reservations in Enterprise Planning and recalculates the ATP quantities. As a result, the next sales order line is checked against updated ATP quantities. This prevents the sales clerk from promising the same product ATP quantities to different customers.
- **CTP Check for Sales**
  If this check box is selected, and you insert the ordered quantity on a sales order line, LN performs an automatic ATP check. If the sales order line quantity exceeds the cumulative ATP quantity, a screen appears that includes an ATP Handling (cprrp4800m000) option. If you save a sales order line, and the ordered quantity exceeds the cumulative ATP, LN blocks the sales order line. You cannot save the sales order line if the ordered quantity is too high

Chapter 2
ATP and CTP checks

2

Types of ATP and CTP checks

LN offers a set of order-promising techniques that ranges from standard item ATP to advanced CTP techniques.

Note

- If multisite functionality is active, the checks are performed per planning cluster.
- If you are using CPQ Configurator for item configuration you must use the Planning - Generic BOM (cprpd3140m000) and Planning - Generic Routing (cprpd3150m000) sessions to generate a generic BOM and routing to be able to perform these checks.

- **Standard ATP check**
  An item master plan contains available-to-promise (ATP) information. ATP represents the balance of planned supply and actual demand. You can use ATP information to determine how much you can still sell to customers.
- **Extended CTP checks**
  Component CTP and capacity CTP are extensions of standard ATP, and are used to determine how many items you can produce in addition to the existing production planning.
- **Family CTP**
  For planning on longer term, working with detailed ATP and CTP information is not always useful. LN offers the option of redirecting ATP checks and extended CTP checks to a higher product-family level. Channel ATP checks are always carried out at the level of the item itself.
- **Channel ATP**
  If you maintain channel master plans, you can constrain the allowed volume that is delivered to each channel. LN uses channel ATP to determine how much can still be sold in a particular channel.

Standard ATP check

The most straightforward way to check ATP for an ordered item is a check on the expected free inventory of the item on the sales order line itself.

LN calculates a cumulative ATP quantity for the finished good that takes all future actual demand and (planned) supply transactions into account. The ATP check on date (t) is performed against the cumulative ATP on (t). The cumulative ATP is the expected free stock.

LN calculates the cumulative ATP as follows:

```
Projected inventory (t) = inventory + actual and planned supply
  until (t) - actual and planned demand (t)
```

Note

If multisite functionality is active, the standard ATP check is performed per planning cluster.

Example

Cumulative ATP (t) = the lowest value of:

- Projected Inventory (t), and
- Cumulative ATP (t + 1)

Note (t + 1) indicates the day after day t

Example

Cumulative ATP constantly increases: if the cumulative ATP on t is 10 pieces, the ATP will be 10 or more on t+1.

Nonconsumed forecast demand is not part of cumulative ATP. Therefore, ATP is built up by (planned) supply for nonconsumed forecast demand.

The cumulative ATP quantity is displayed in these sessions:

- **Item Master Plan (cprmp2101m000)**
  Only for items that have a master plan
- **Item Order Plan (cprrp0520m000)**
  For items without a master plan

Enabling standard ATP checking

To enable standard ATP checking, perform the following in the Items - Planning (cprpd1100m000) session:

- Select the **Online ATP Update in EP** check box to enable online updates after sales order entry.

- Set the **CTP Horizon** field to a value greater than zero. LN assumes that an infinite supply is available after the CTP horizon. As a result, only orders with a delivery date before the CTP horizon will be checked.

Note

The CTP horizon is defined in working days.

Component CTP

In a component CTP check for an item, LN checks whether a sufficient quantity of the components of the item is available to produce that item.

As a rule, a component CTP check is carried out in the following situation:

- The ATP of an item is checked.
- The item's ATP value is insufficient to cover the demand involved.
- Component CTP checks are enabled for the item involved (see the Items - Planning (cprpd1100m000) session).

A component CTP check is performed on the items bill of material (BOM), on its bill of critical materials (BCM), or on its generic BOM if the items customized. In all situation, you must select the **Critical in CTP** check box in the Items - Planning (cprpd1100m000) session of the component items that LN must take into account during a component CTP check, so that LN recognizes them as critical in CTP.

For each CTP-critical component, LN carries out a full CTP check. This check can consist of various types of ATP and CTP checks, based on the settings in the Items - Planning (cprpd1100m000) session. Note that this can result in a multilevel component check, in which LN also checks lower-level components.

Note

The component CTP check ignores the specification, regardless of the value of the **Inherit Demand Peg** field in the Job Shop List of Materials (tibom3610m000) session, or **Inherit Demand Peg** fiend in the Bill of Material (tibom1110m000), if the **Job Shop by Site** parameter in the Implemented Software Components (tccom0100s000) session is **Inactive**.

LN simply presumes that all of the ATP of the components is available.

Example

You produce 4 items: A, B, C, and D.

- D is a critical component of C
- C is a critical component of B
- B is a critical component of A

In the Items - Planning (cprpd1100m000) session, you selected the **Component CTP** check box for all items, and you selected the **Critical in CTP** check box for item B, C, and D. You did not select the **Capacity CTP** check box, the **Channel ATP** check box, or the **Family CTP** check box.

LN starts a CTP check for item A with a standard ATP check. If the ATP of item A is insufficient, LN carries out a full multilevel CTP check for item B. This means that the following data is checked:

- The ATP of item D
- The ATP of item C, plus the volume that can be produced based on the ATP of item D
- The ATP of item B, plus the volume that can be produced based on the ATP of item C

Requirement date of the component

If you perform a component CTP check, LN calculates the requirement date of the component based on the requirement date of the main item. The difference between the requirement date of the main item and the requirement date of the component is the lead-time offset.

LN plans the offset against the applicable calendar and the availability type defined in the Planning Parameters (cprpd0100m000) session. The value of the **Component CTP bucket** field in the Planning Parameters (cprpd0100m000) session also impacts the lead-time offset.

Using the Job Shop List of Materials

- The component CTP check is based on the job shop bill of materials, LN calculated the requirement date of the component by using the data in the Job Shop List of Materials (tibom3610m000) and Item - Production (tiipd0101m000) sessions.
- If the Job Shop List of Materials (tibom3610m000) session has the **Specify Material Offset** check box selected for the specific product and site combination, the value of his field is used as the lead-time offset.
- If the Job Shop List of Materials (tibom3610m000) session has the **Specify Material Offset** check box is cleared, the order lead time of the product is used as the lead-time offset. An item's order lead time is defined in the **Order Lead Time** field in the Item - Production (tiipd0101m000) session.

Using the Bill of Material BOM (Old)

- The component CTP check is based on the bill of material (BOM), LN calculates the requirement date of the component by using the data in the Bill of Material (tibom1110m000) and Item - Production (tiipd0101m000) sessions.
- If in the Bill of Material (tibom1110m000) session, the **Specify Material Offset** check box is selected, LN uses the value of the **Lead Time Offset** field in that session as the lead-time offset.
- If in the Bill of Material (tibom1110m000) session, the **Specify Material Offset** check box is cleared, LN uses the order lead time of the main item as the lead-time offset. An item's order lead time is defined in the **Order Lead Time** field in the Item - Production (tiipd0101m000) session.

Using the Bill of Critical Materials (BCM)

If the component CTP check is based on the bill of critical materials, LN calculates the requirement date of the component by using the data in the Bill of Critical Materials (cprpd3120m000) session.

If in the Generic BOMs (tipcf3110m000) session, the check box is selected, LN uses the value of the **Lead Time Offset** field in the Bill of Critical Materials (cprpd3120m000) session.

Using the Bill of Critical Materials (BCM) (Old)

If the component CTP check is based on the bill of critical materials, LN calculates the requirement date of the component by using the data in the Bill of Critical Materials (cprpd3120m000) session.

If in the Bill of Material (tibom1110m000) session, the check box is selected, LN uses the value of the **Lead-Time Offset** field in the Bill of Critical Materials (cprpd3120m000) session.

How to set up component CTP checks

Set up the main item

- If the **Component CTP** check box in the Items - Planning (cprpd1100m000) session is selected for a particular item, you can carry out component CTP checks for the corresponding item.
- Clear the **Component** check box in the ATP Handling (cprrp4800m000) session to disable component CTP checks for that item.

Note

You can also use component CTP checks in configure-to-order situations.

Set up the components

In the Items - Planning (cprpd1100m000) session, select the **Critical in CTP** check box for all components that must be checked.

- Specify a lead-time offset in one of the following ways:
  - In the Bill of Material (tibom1110m000) session, select the **Specify Material Offset** check box and enter the lead-time offset in the **Lead Time Offset** field. If an item is used as component for multiple main items, you must specify this lead-time offset in every bill of material where the component occurs.
  - In the Job Shop List of Materials (tibom3610m000) session, clear the **Specify Material Offset** check box. In the Item - Production (tiipd0101m000) session, enter the lead-time offset in the **Order Lead Time** field. If the item is used as component for multiple main items, LN uses this value in the CTP calculations for every end item.

Note

If you use the DEM Content Pack with Infor LN, consider using the MPL1110 (Planning of Cumulative ATP and/or CTP) wizard to set up ATP and CTP. You can execute this predefined wizard from the Wizards by Project Model (tgwzr4502m000) session after you specified the business function model for your company.

Capacity CTP

Capacity CTP refers to information on the available resource capacity. This information can be used for order promising.

Capacity CTP can be expressed in two ways:

- The capacity CTP of a resource: the free capacity at a resource that is still available for additional production, up to and including a certain plan period.
- The capacity CTP of a plan item: the item quantity that can be produced based on the capacity CTP of a resource, or the capacity CTP of all resources that are critical in CTP.

A capacity CTP check is based on the capacity CTP at a set of critical resources. When a customer order is received, a CTP check can be carried out on the resources' availability.

As a rule, a capacity CTP check is carried out in the following situation:

- The ATP of an item is checked.
- The item's ATP is insufficient to cover the demand involved.
- Capacity CTP checks are enabled for the item involved: you selected the **Capacity CTP** check box in the Items - Planning (cprpd1100m000) session.

Note

A full multilevel CTP check can also involve capacity CTP checks at lower (component) levels. This depends on whether or not you selected the **Critical in CTP** check box in the Items - Planning (cprpd1100m000) session for the for the (component) item involved.

Note

To do a capacity CTP check for an item, that item does not need an item master plan. However, only resources that have a resource master plan is taken into account.

How to set up capacity CTP checks

Carry out the following steps to set up capacity CTP checks:

- Select the **Capacity CTP** check box in the Items - Planning (cprpd1100m000) session for the involved item.
- Select the **Critical in CTP** check box in the Resources (cprpd2100m000) session for the resources in the bill of critical capacities (BCC) that LN must take into account for capacity CTP checks.

To disable the capacity CTP check during the execution of a particular check, clear the **Capacity** check box in the ATP Handling (cprrp4800m000) session.

Family CTP

You can carry out a CTP check on individual items, but you can also check the CTP on product-family level. In fact, you can transfer the CTP check for an item to any other item.

Family CTP checks are useful in three situations:

- The items in one product family are very similar: most of the material requirements and capacity requirements are the same. In that case the production plans of these items are easily interchangeable and the CTP can be checked on the totals of the production plans, demand forecasts and customer orders.
- The demand forecasts for the longer term are made on product-family level and not on item level. The short-term demand forecasts for plan items are made on the lowest plan level. If a customer order is to be delivered in a later period, the CTP check is performed on product-family level.
- The CTP check must be performed in a central logistical company. This is especially useful in a situation that several logistical companies are interchangeable with respect to the CTP. The product family on which the CTP check is performed can be defined in another (central) logistical company. All the logistical data of the product family is the summation of the logistical data of its child items.

How to use family CTP

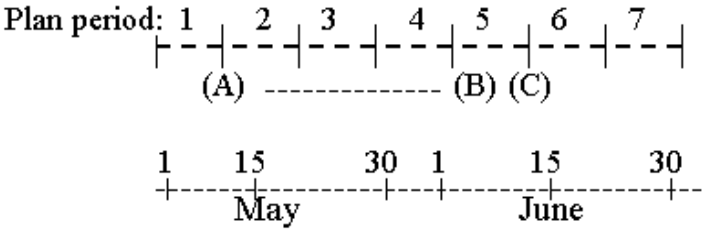
The execution of family CTP checks depends on the following settings in the Items - Planning (cprpd1100m000) session:

- The **Family CTP** check box.
- The **CTP Time Fence** field.
- The **Family Company** field.
- The **Family Item** field.

The **CTP Time Fence** field determines after how many workdays the family CTP horizon starts:

1. A preliminary start date is computed using the value of the **CTP Time Fence** field.
2. This start date is rounded to the end of a plan period. Effectively, this means that the next plan period is the first period of the family CTP horizon.

Example: family CTP horizon



Current Date (A):	May12
Start of family CTP horizon after:	25 days
Current date + 25 days (B):	June 6
Start of family CTP horizon (C):	June 14

In periods 2, 3, 4, and 5 the CTP check is on item level. From period 6 onward the CTP check is on product-family level.

The end of the family CTP horizon coincides with the CTP time fence.

If family CTP checks are enabled for a plan item, any CTP checks for that item within the family CTP horizon are redirected to the item in the **Family Item** field.

Note

You can enter any plan item in the **Family Item** field; the plan-item type does not necessarily have to be **Family**.

The CTP check can again be transferred from the product family to another product family. This depends on the CTP parameters of the product family. In other words: the procedure can take several steps before the item is found on which the actual check takes place.

If family CTP applies, the following checks are redirected to the family level:

- Standard ATP check
- Component CTP check
- Capacity CTP check
- Channel ATP check

Note

Channel ATP checks are not redirected to a higher family level, but are always carried out at the level of the item itself.

Clear the **Family** check box in the ATP Handling (cprrp4800m000) session, to disable the family CTP check for that session.

Channel ATP

You can use channel ATP to constrain an item's sales volume for a particular channel.

This function has two purposes:

- Assure that important customers are at least delivered a certain amount, by restricting the allowed demand of other channels.
- Assure that certain channels are not supplied with more than a certain maximum quantity.

Note

- If multisite functionality is active, the checks are performed per planning cluster.
- If you primarily use channels for channel ATP, you do not necessarily have to group all your customers into channels. Only those customers for which you want to limit the maximum sales volume must be in a channel.
- If you use the DEM Content Pack with Infor LN, consider using the MPL1210 (Forecast by Plan Item/Distribut. Channel) wizard to set up channel ATP. You can execute this predefined wizard from the Wizards by Project Model (tgwzr4502m000) session after you specified the business function model for your company.

- **Required data**
  To use channel ATP, you must provide the following data:
  - The ATP period length in the Plan Item - Channels (cpdsp5100m000) session.
  - The allowed demand in the Channel Master Plan (cpdsp5130m000) session.

  As a rule, a channel ATP period consists of several plan periods. The allowed demand is specified by plan period. The total value of the allowed demand in one channel ATP period is the basis for the channel ATP. For more information, see Channel ATP periods.
- **Channel ATP checks**
  During a CTP check for an item, LN can also carry out a channel ATP check. In this case, the quantity that can be promised to a customer is the smaller of the following quantities:
  - The result of the normal CTP check.
  - The result of the channel ATP check.

  Channel ATP checks are carried out for items for which the **Channel ATP** check box in the Items - Planning (cprpd1100m000) session is selected. In the ATP Handling (cprrp4800m000) session, you can temporarily disable the channel ATP check.
- **Updating channel ATP**
  The channel ATP can be updated in two ways:
  - Offline: the channel ATP is recomputed when LN updates the channel master plan.
  - Online: LN automatically updates the channel ATP as soon as a customer order is accepted. See: Online ATP update.

Important!

If the **Delivery Schedule based on Warehouse Calendar** check box in the Planning Parameters (cprpd0100m000) session is selected, channel ATP checks can give incorrect results.

A quantity of channel ATP is only valid for a specific period. LN cannot transfer unconsumed channel ATP to the next period. If you select the **Delivery Schedule based on Warehouse Calendar** check box, LN may shift the planned delivery date to a future period that has insufficient channel ATP.

Chapter 3
Algorithms

3

Component CTP and capacity CTP bucket calculation

If you use component CTP or capacity CTP for an end item, Enterprise Planning performs a bucket calculation based on the value of the **Component CTP bucket** field in the Planning Parameters (cprpd0100m000) session. Therefore, if the value of this parameter is one day, Enterprise Planning checks every subsequent working day to see whether ATP is present.

If the ATP of the end item in the first bucket is insufficient to cover the complete demand quantity, Enterprise Planning performs a component CTP check and a capacity CTP check (if both are selected) for that bucket.

Two methods are available in which the component CTP and the capacity CTP are calculated: order based and master based.

The calculation method is determined as follows::

- If the order horizon is in the order horizon of the end item, that is, in the near future, the calculation is order based.
- If the order horizon is between the order horizon and the planning horizon of the end item, the calculation is master based.

Note

The end item's horizons determine whether Enterprise Planning uses the order-based CTP check or the master-based CTP check for the entire product structure (end item and components).

Part of the CTP check cannot be order based if another part is master based, even if, for example, one of the components has a shorter order horizon than the end item.

Component CTP and capacity CTP order-based CTP check

Standard items

To calculate the date on which items are required, LN retrieves the lead-time offsets, as follows:

- The bill of material defines the lead-time offset for the components. In addition to this lead-time offset value, the component is also offset with the inbound and outbound lead-time, the safety time, and the extra lead time.
- LN multiplies the routing operation times and the required quantity to calculate the lead-time offset for the capacity.

When the required date is determined, the component CTP is calculated online for every bucket as specified in the **Component CTP bucket** field of the Planning Parameters (cprpd0100m000) session.

However, the capacity CTP is derived from the resource master plan that is based on the plan period buckets as defined in the Scenario - Periods (cprpd4120m000) session. As a result, the lead-time offset for capacity results in a required date that will fall in a resource master plan bucket, after which the available capacity of that bucket is taken.

Note

You can specify the critical materials by selecting the **Critical in CTP** check box in the Items - Planning (cprpd1100m000) session.

In a multilevel bill of material, you can indicate that only the lowest level components are critical in CTP. The subassemblies need not be selected as critical.

If only the **Component CTP** check box is selected for the subassemblies in the Items - Planning (cprpd1100m000) session, the CTP check will not calculate their availability. Instead, the CTP checks only perform a lead-time offset for such items based on the information in the bill of material. Next, the CTP check explodes the critical components and checks the availability of components. This enables you to check only the critical materials in the entire product structure.

For capacities, the same concept can be applied. If the **Critical in CTP** check box is selected in the Resources (cprpd2100m000) session and the **Capacity CTP** check box is selected in the Items - Planning (cprpd1100m000) session, the resource's availability will be checked during CTP. This enables you to check only the critical resources in the entire product structure.

Generic items

In case of generic items, the correct materials and capacities must be checked based on the chosen options in the product variant. First, the user configures the product variant in, for example, the sales order. When the user enters the ordered quantity, the CTP for that specific configuration is checked.

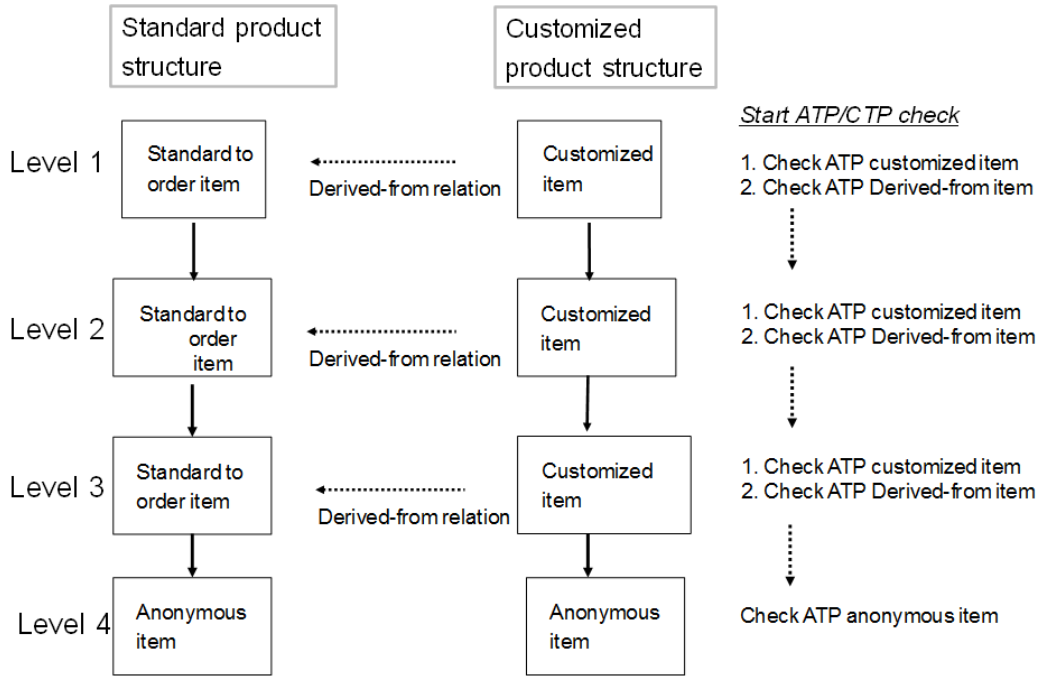
The generic bill of material is therefore matched against the chosen options in order to find the appropriate materials and capacities. This action is performed online.

The generic bill of material is exploded, taking into account all constraints, which is precisely the same action as when the customized product structure is created for the generic item. However, this explosion is merely a simulation to find the correct CTP figures. The result of the explosion is not stored.

The lead-time offset is determined in the same way as for standard items. However, instead of the bill of material lead-time offset (LTO), the generic bill of material LTO is used to determine the required date for the components. In addition to this LTO value, the component is also offset with the inbound and outbound lead-time, the safety time, and the extra lead-time.

Customized items

In case of customized items, the ATP and Component CTP are performed first for the customized items, and then for the derived-from item, as illustrated in the following figure:



The ATP of the standard-to-order items does not include the ATP of the related customized items. As a result, if a standard to order item A has a relation to five different customized items, the ATP of all these customized items is deducted from the ATP of item A.

This outcome is logical, because when the ATP is checked for one of the customized items, the ATP cannot, of course, consume ATP of any of the other customized items. ATP can only consume its own ATP and the ATP of the derived-from item.

The ATP of the derived-from item (A) is based on the item's own transactions and on-hand stock. The item order plan for this type of item enables you to toggle between the item's transactions and the derived-from item's transactions, including all customized items.

Both options provide the ATP for the derived-from item that is checked for customized items.

Note

This concept of checking ATP/CTP for customized items and the derived-from item is also valid for customized items that are derived from a generic item.

Master-based CTP check

For the master-based CTP check, standard items and generic items do not differ from each other. The master-based components CTP check is performed between the order horizon and the planning horizon of the end item. The bill of critical materials is used to find components that are critical in CTP.

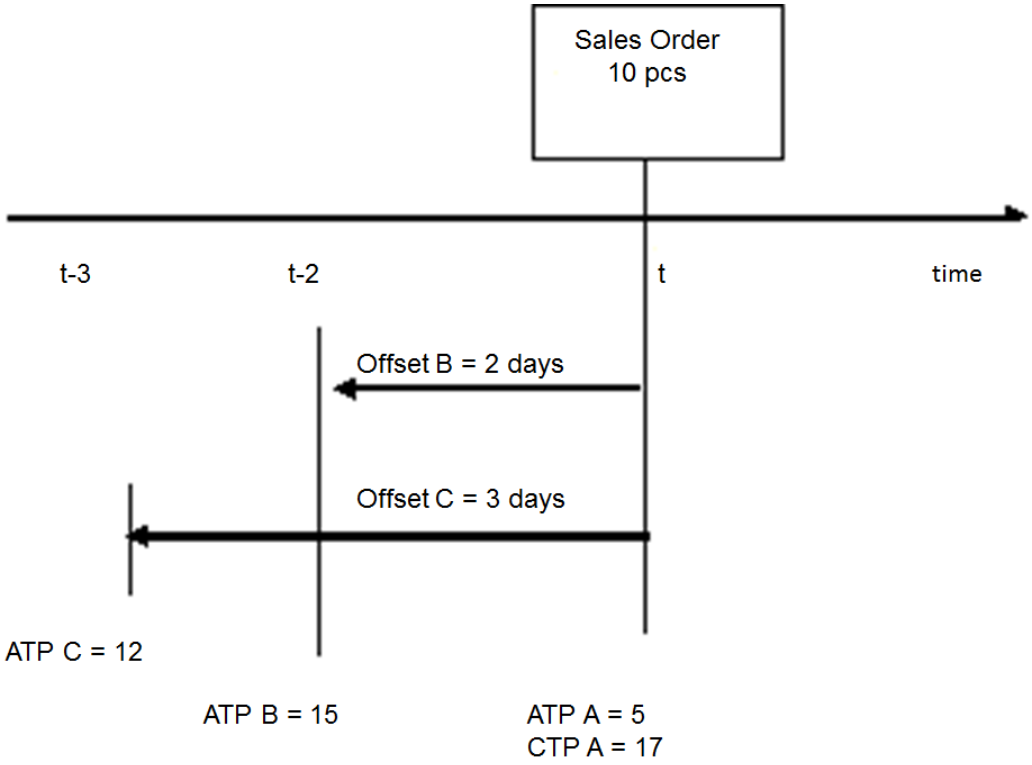
LN takes the quantity required and the lead-time offset defined in the bill of critical materials (BCM) line into account when adding the component ATP to the end item's ATP.

Note

Note that the LTO value already includes inbound, outbound lead-time, safety time and extra lead-time. Therefore, unlike for the order-based offset, these lead-times are not added separately when offsetting the component in the master-based horizon.

The component CTP quantity is derived from the item master plan, so it is checked based on the plan period buckets as defined in the Scenario - Periods (cprpd4120m000) session. As a result, the cumulative component CTP of every subsequent plan period is taken during the check.

Component CTP increases the ATP with the quantity you can produce on date t, based on component ATP:



Example

Consider the acceptance of a sales order for item A on date t.

Item A has a critical material B and C. A production order takes three days and requires C at the start. Material B is required one day later, so the BCM has a two-day offset for material B, and three days for C.

The sales order is for 10 pieces, ATP of item A on date t is five. Because this amount is insufficient, component CTP is checked. ATP for C on t-3 is 12, and ATP for B on t-2 is 15. Therefore, you can produce 12 more. As a result, CTP is 5 + 12 = 17, and the order can be accepted.

The master-based capacity CTP is checking the work center availability between the order horizon and the planning horizon. The bill of critical capacities is used to find capacities that are critical in CTP.

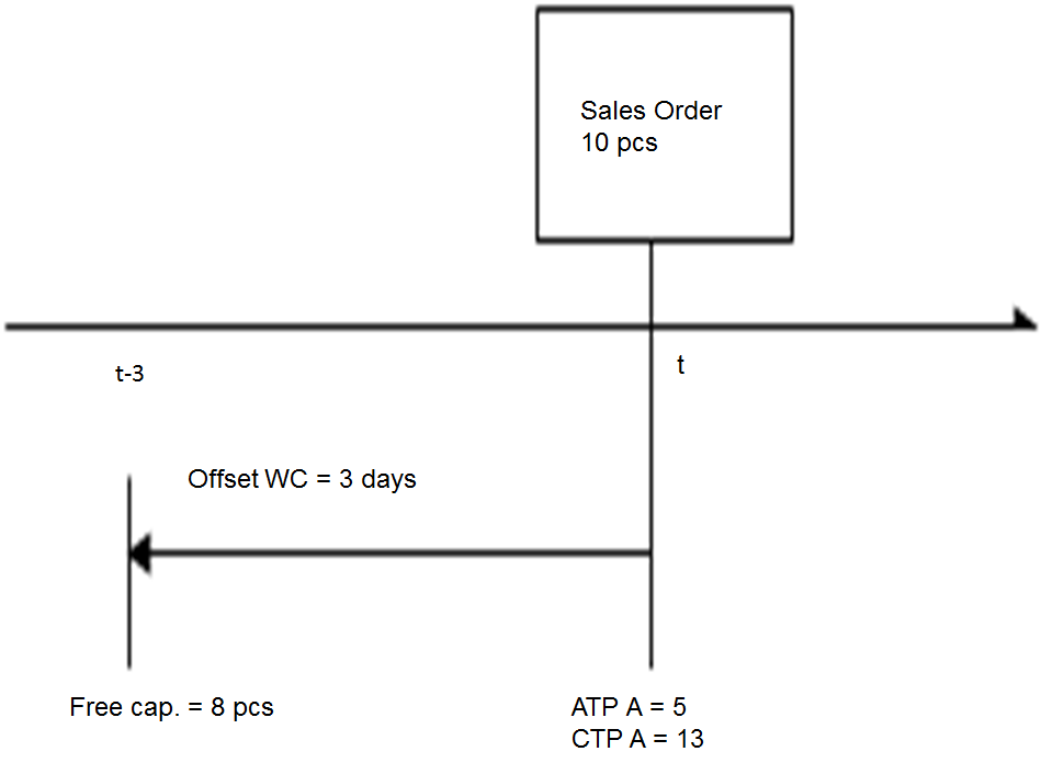
The capacity CTP value is derived from the resource master plan, therefore, the capacity is checked based on the plan period buckets as defined in the Scenario - Periods (cprpd4120m000) session. As a result, LN takes the cumulative capacity CTP of every subsequent plan period during the check.

The cumulative capacity CTP for a resource appears in the Resource Master Plan (cprmp3501m000) session and is expressed in hours. Using the **Lead-Time Offset**, and **Capacity Required** fields in the Bill of Critical Capacities (cprpd3130m000) session, this capacity is translated into an additional cumulative ATP quantity for the finished good that can be promised.

Example

If the **Cumulative Capacity CTP** is four hours and the **Capacity Required** is 0.5 hours, the cumulative ATP quantity of the finished good increases by eight pieces. For the correct timing of these quantities, the lead-time offset is taken into account. This calculation is performed as follows:

Using the same sales order example, with critical work center WC.



The bill of critical capacities (BCC) has three-day offset for WC, and one piece requires 0.5 hour capacity.

Free capacity for WC on *t-3* is four hours, thus eight pieces. Therefore, CTP is 5+8.

Capacity CTP reservations

LN calculates CTP reservations when a plan item's ATP is updated, or when an item master plan is updated.

Capacity CTP reservation

LN generates a capacity CTP reservation in the following situation:

- The cumulative ATP of a plan item in a particular plan period becomes negative.
- You selected the **Capacity CTP** check box in the Items - Planning (cprpd1100m000) session for the plan item involved.

LN generates CTP reservations for the resources that are:

- Listed in the item's bill of critical capacities (BCC).
- Defined as critical in CTP.

Note

When component CTP reservations and/or capacity CTP reservations are made for a plan item, the expected additionally produced quantity of the item itself is stored as CTP Reservation Receipt.

Calculation

The capacity CTP reservation is computed as follows:

```
CCR(t) = -NA(t) x  CR(t)
```

CCR(t)	capacity CTP reservation
NA(t)	negative ATP
CR(t)	required capacity (from the bill of critical capacities)

The requirement date for the capacity CTP reservation is determined as follows:

```
RD = PFD - LTO
```

RD	requirement date for the capacity CTP reservation
PFD	finish date of the originating plan period
LTO	lead-time offset (from the bill of critical capacities)

LN records the capacity CTP reservation in the Resource Master Plan (cprmp3501m000) session in the plan period in which the requirement date falls. LN subtracts the capacity CTP reservations from the resource's capacity CTP.

You can view capacity CTP reservations and their origin in the Capacity CTP Reservations (cprmp5520m000) session. This session is accessible through the appropriate menu of the Item Master Plan (cprmp2101m000) session.

Component CTP reservations

LN calculates CTP reservations when a plan item's ATP is updated, or when an item master plan is updated.

Component CTP reservation

LN generates a component CTP reservation in the following situation:

- The cumulative ATP of a plan item in a particular plan period becomes negative.
- You selected the **Component CTP** check box in the Items - Planning (cprpd1100m000) session for the plan item involved.
- You selected the **Critical in CTP** check box in the Items - Planning (cprpd1100m000) session for (one or more) component items of the plan item.
- You entered a sales order, and the cumulative ATP of the end item and/or the cumulative ATP of one or more components is not enough.

Note

When component CTP reservations and/or capacity CTP reservations are made for a plan item, the expected additionally produced quantity of the item itself is stored as CTP reservation receipts.

Calculation

The component CTP reservation is computed as follows:

```
CCR(t) = -NA(t) x  RQ(t)
```

CCR(t)	component CTP reservation
NA(t)	negative ATP
RQ(t)	required quantity

The requirement date for the component CTP reservation for a critical material is determined as follows:

```
RD = PFD - LTO
```

RD	requirement date for the component CTP reservation
PFD	finish date of the originating plan period
LTO	lead-time offset

LN converts the lead-time offset from workdays to calendar days. See Workdays and calendar days in Enterprise Planning.

LN records the component CTP reservation in the plan period in which the requirement date falls. The component CTP reservations are subtracted from the (component) item's ATP.

You can view component CTP reservations and their origin in the Item CTP Reservations (cprrp0111m000) session. This session is accessible through the appropriate menu of the Item Master Plan (cprmp2101m000) session.

Family ATP

The ATP algorithm makes no distinction between the plan item types.

As a result, the ATP for a plan item of type Family is calculated in the same way as a plan item of type Item. If, for the family item, the **Component CTP**, **Capacity CTP**, and **Channel ATP** are cleared in the Items - Planning (cprpd1100m000) session, the order plan calculation is used.

If one of these check boxes is selected, the bucket calculation is used for the family.

Channel ATP

You can use channel ATP to constrain an item's sales volume for a particular channel.

This function has two purposes:

- Assure that important customers are at least delivered a certain amount, by restricting the allowed demand of other channels.
- Assure that certain channels are not supplied with more than a certain maximum quantity.

Note

- If multisite functionality is active, the checks are performed per planning cluster.
- If you primarily use channels for channel ATP, you do not necessarily have to group all your customers into channels. Only those customers for which you want to limit the maximum sales volume must be in a channel.
- If you use the DEM Content Pack with Infor LN, consider using the MPL1210 (Forecast by Plan Item/Distribut. Channel) wizard to set up channel ATP. You can execute this predefined wizard from the Wizards by Project Model (tgwzr4502m000) session after you specified the business function model for your company.

- **Required data**
  To use channel ATP, you must provide the following data:
  - The ATP period length in the Plan Item - Channels (cpdsp5100m000) session.
  - The allowed demand in the Channel Master Plan (cpdsp5130m000) session.

  As a rule, a channel ATP period consists of several plan periods. The allowed demand is specified by plan period. The total value of the allowed demand in one channel ATP period is the basis for the channel ATP. For more information, see Channel ATP periods.
- **Channel ATP checks**
  During a CTP check for an item, LN can also carry out a channel ATP check. In this case, the quantity that can be promised to a customer is the smaller of the following quantities:
  - The result of the normal CTP check.
  - The result of the channel ATP check.

  Channel ATP checks are carried out for items for which the **Channel ATP** check box in the Items - Planning (cprpd1100m000) session is selected. In the ATP Handling (cprrp4800m000) session, you can temporarily disable the channel ATP check.
- **Updating channel ATP**
  The channel ATP can be updated in two ways:
  - Offline: the channel ATP is recomputed when LN updates the channel master plan.
  - Online: LN automatically updates the channel ATP as soon as a customer order is accepted. See: Online ATP update.

Important!

If the **Delivery Schedule based on Warehouse Calendar** check box in the Planning Parameters (cprpd0100m000) session is selected, channel ATP checks can give incorrect results.

A quantity of channel ATP is only valid for a specific period. LN cannot transfer unconsumed channel ATP to the next period. If you select the **Delivery Schedule based on Warehouse Calendar** check box, LN may shift the planned delivery date to a future period that has insufficient channel ATP.

Chapter 4
ATP Handling

4

Where Available

The **Where Available** button results in an ATP overview report. The ATP check is performed on a specific date across multiple planning clusters. The algorithm looks at the ATP of the plan item, which means that the check is performed on planning cluster level and not on individual warehouse level.

Each plan item has a default warehouse, which will be the warehouse printed on the ATP overview report, but the availability will always be checked for all warehouses together within the planning cluster.

Note

CTP cannot be checked during a **Where Available**. Only an ATP check is permitted.

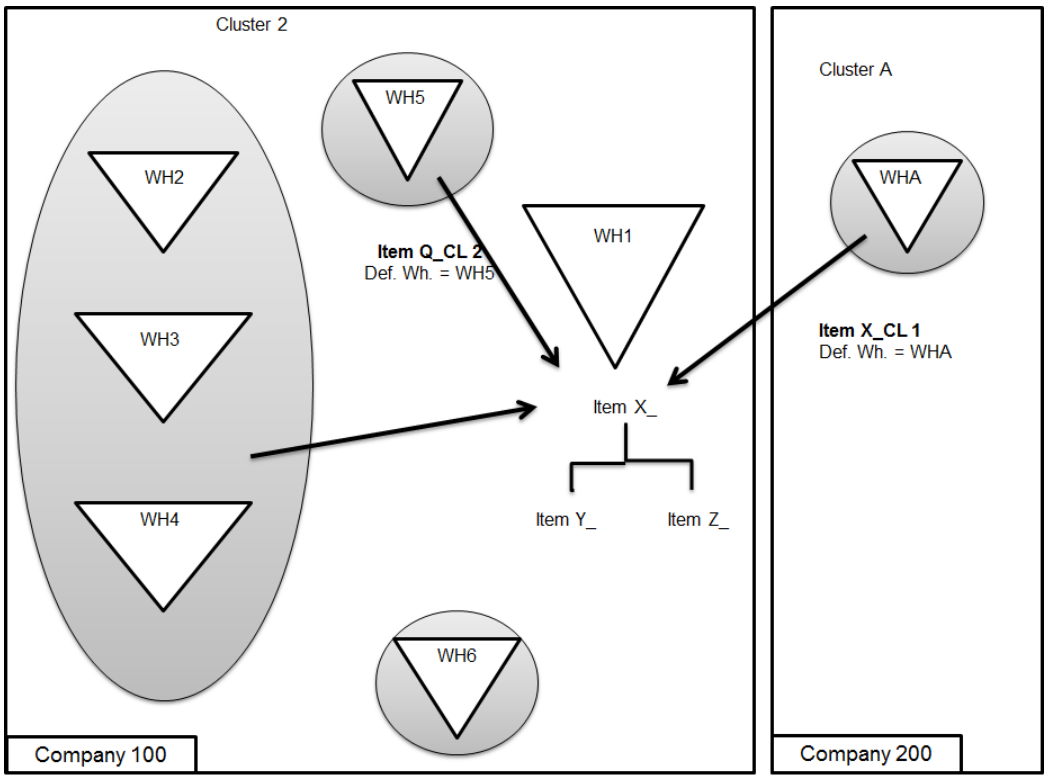
Which items/planning clusters are taken into account?

If the **Ignore Supplying Relations** check box is cleared in the ATP Handling (cprrp4800m000) session, the **Where Available** command checks the ATP of the item defined on the required date and for the ATP of all supplying items.

This ATP check includes all the warehouses of the planning cluster from which the demand originates, plus all warehouses of the planning clusters that are linked to that planning cluster by means of a supplying relation. The supply lead-time offset is also taken into account: planned delivery date versus planned receipt date.

Example

The following supplying relationships are set up for item X_ in the empty planning cluster (default warehouse WH1). The item also exists in a location (planning cluster 3) for which no supplying relationship is defined.

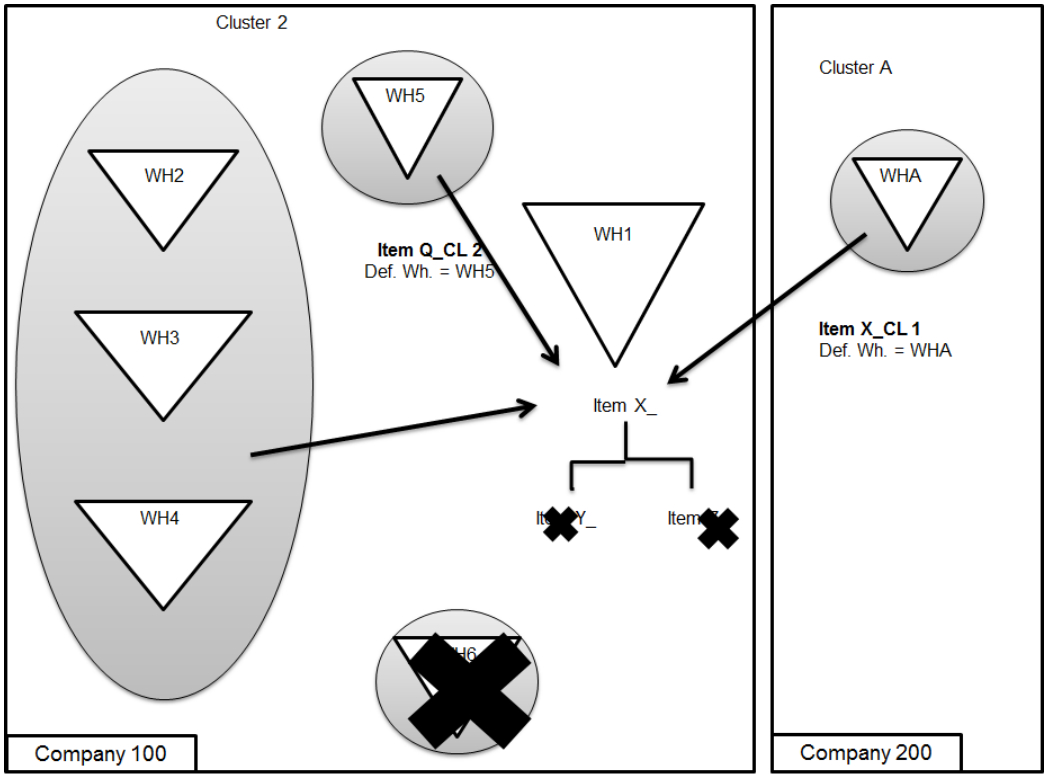


When you perform the where-available check for item X__ on 25/4, the result is as follows:

Availability

Company	Warehouse	Available	Date
100	WH1	20	25/4
100	WH3	15	25/4
100	WH5	10	25/4
200	WHA	40	25/4

The following planning clusters and items are checked:



Note that the ATP of item X_CL3 is not part of the where available because the ATP does not have a supplying relation to X__.

The ATP of item Q_CL2 is included in the where-available check, although the item code differs. If you do not ignore the supplying relationships, all of these items are checked, independent from the item code.

The two components of item X__ are not included because (component) CTP is not permitted.

The problem in each of these situations is that a supplying relationship must be defined to retrieve the goods from another planning cluster. In some cases, however, you might not want that because you only want to check the ATP and then deliver directly to the customer from the goods' location.

Therefore, if the **Ignore Supplying Relations** check box is selected, the **Where Available** command checks on the ATP of the item defined on the defined date and for the ATP of all items with the same (general) item code, but *not* multicompany. This check is carried out based on the item code. Therefore, all X_… items are included.

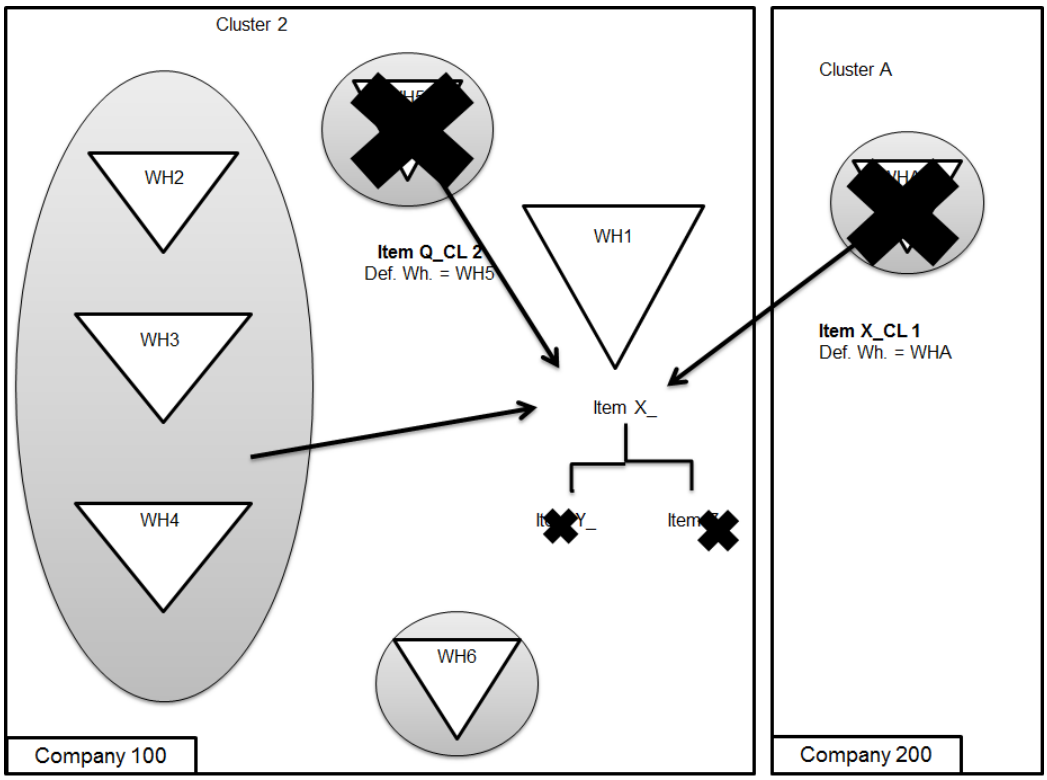
Example

Where available for item X__ on 25/4:

Availability

Company	Warehouse	Available	Date
100	WH1	20	25/4
100	WH3	15	25/4
100	WH6	**25**	25/4

The following planning clusters/items are checked:



Notice that the ATP of item Q_CL2 is not part of the where-available function because the system does not recognize that item Q_CL2 is a supplying item for X_. The check is carried out on the item code X_.

In addition, item X__CL1 is also not included because this item resides in another company, and this check is only performed on a single company.

When Available

The **When Available** command offers the same ATP overview report as the **Where Available** command. The **When Available** command displays the availability on a specific date across multiple warehouses.

The when-available check is specially designed for sales order entry.

Where the where-available view shows the entire availability across multiple companies, the when-available check provides a view of only those default warehouses required to deliver the complete sales order line quantity. The where-available view and the fixed date check differ in no other way. In addition, in this case, you cannot perform component CTP checks or capacity CTP checks.

If a sales order line entry is blocked by the ATP of the item, you can zoom to the ATP Handling (cprrp4800m000) session and request a where-available check. This check can result in a transfer between warehouses or a direct delivery to the customer.

For a direct delivery from the warehouse where ATP is found, specify the **Ordering Warehouse** field.

For warehouse transfers from the warehouse where the ATP is found to the asking warehouse, LN takes the supply time into account.

For the where-available check, three situations can apply in cases in which the required quantity is greater than the ATP for a plan item in a specific cluster:

- The demand is less than the sum of the ATP for all related planned items
- The demand is equal to the sum of the ATP for all related planned items
- The demand is greater than the sum of the ATP for all related planned items

If the demand is less than the sum of the ATP for all related planned items, the ATP does not have to be consumed entirely to meet with the demand.

A decision must be made which warehouse will handle the supply. The item and warehouse that will deliver the supply first is based on the supply priorities as defined in the supplying relationships.

If the demand is equal to the sum of the ATP for all related planned items, the entire ATP will be consumed.

If the demand is greater than the sum of the ATP for all related planned items, the same applies as in the previous situation. The demand which is not met simply disappears. The sales order line quantity, therefore, is smaller than the originally ordered quantity.

Accepting When Available check

After the user performs a **When Available** check, the button to accept this check becomes available. This button is not available after a where-available check. However, this only occurs when you started the ATP Handling (cprrp4800m000) session from a sales order or sales quotation.

The **Accept Check** button automatically generates separate sales order deliveries for one sales order line. The deliveries are based on the lines displayed in the when available check.

If the when available check will not result in sales order deliveries, for example, if the entire quantity is located in a single warehouse, the **Accept Check** command is available, because only the existing sales order line will be changed (a warehouse change). This will not cause problems for the generation of the project structure.

When Available

The **When Available** check is performed in a time-phased way on a specific planning cluster. In this case, the ATP overview report represents a time-phased overview of delivery capability. The check is performed for the item defined in the ATP handling screen. The default warehouse of this plan item, as defined in the Items - Planning (cprpd1100m000) session, is displayed as the supplying warehouse.

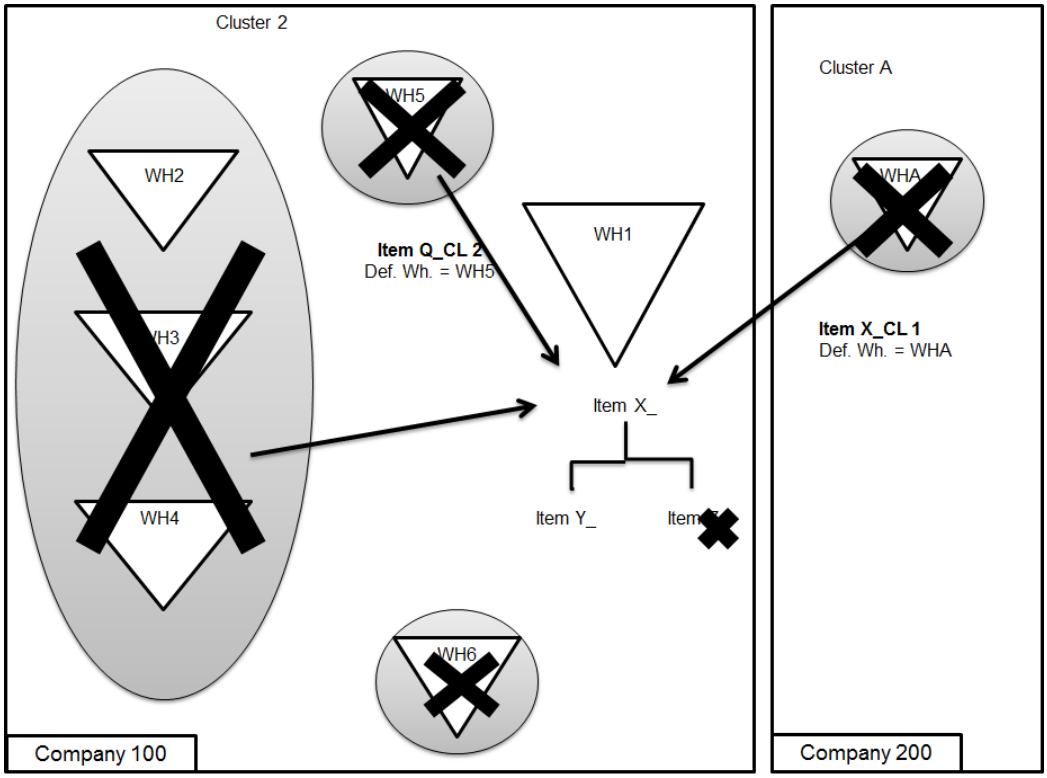
The **When Available** check takes supplying relations into account, as well as the available quantity on other planning clusters with the defined supply chain. The appropriate planning cluster is determined by means of the warehouse that requires the goods. In addition, the availability of capacities (capacity CTP check) and components (component CTP check) can be considered for this type of check.

Example: **When Available** check for X__ with a component CTP check.

Availability

Company	Warehouse	Available	Date
100	WH1	40	25/4
100	WH1	10	31/5

The **When Available** check looks at the following planning clusters/items:



Accepting fixed warehouse check

After the user performs a fixed warehouse check, the **Accept Check** button becomes available. However, this only occurs if you started the ATP Handling (cprrp4800m000) session from a sales order or sales quotation.

The **Accept Check** button automatically generates separate sales order deliveries for one sales order line. The deliveries are based on the lines that appear in the fixed warehouse check. LN creates a delivery in sales for each line on the fixed warehouse check report. The only difference between the deliveries is the delivery date.

The warehouse is always the same.

Note

You cannot create separate sales order deliveries for sales order lines on which the Make Customized check box is selected, because you cannot customize sales delivery lines when generating the project structure. If you try to accept a fixed warehouse check that will result in sales deliveries, LN displays a blocking message.

If the fixed warehouse check will not result in sales deliveries, for example, if the entire quantity is located on one specific date, the **Accept Check** command becomes available, because only the existing sales order line will be changed (a planned delivery date change). This will not cause problems for the generation of the project structure.

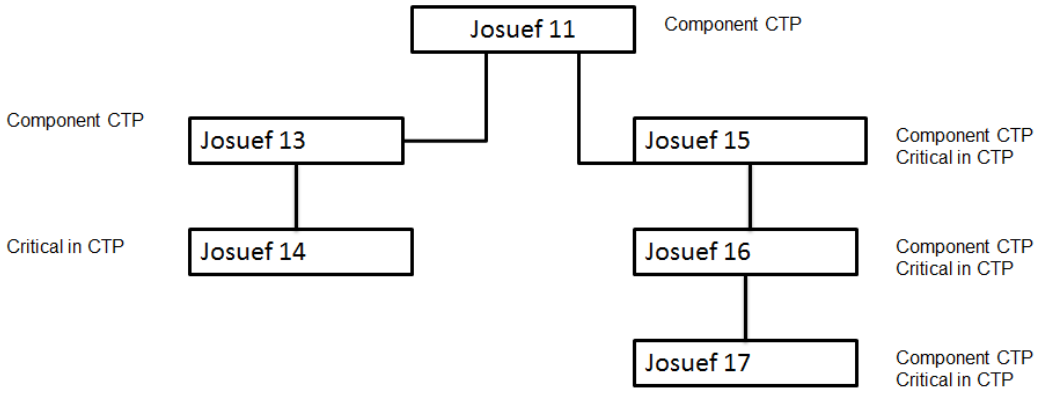
Show CTP details

If you select the **Show CTP Details** check box in the ATP Handling (cprrp4800m000) session, a graphical browser called Capable to Promise Overview is generated, in addition to the ATP Overview report. The overview provides detailed information below each delivery line with information about the component and capacity constraints encountered during the CTP check.

This Capable to Promise overview, therefore, only provides additional information when component or capacity CTP is applied. Otherwise, both reports return the same result.

Example of capable to promise overview:

Suppose a quantity of 247 pieces of end item JOSUEF11 is required. This item has the following multilevel bill of material:



The components JOSUEF14 and JOSUEF17 are the only components in this product structure that are critical in CTP.

The other items in the bill of material all have the **Component CTP** check box selected in the Items - Planning (cprpd1100m000) session.

Capacity is excluded from this example.

Note

The **Component** check box is selected as the type of check. The **Show CTP Details** check box is also selected, which indicates that a separate capable to promise overview will be generated in addition to the ATP overview report.

The following is shown on the report for the fixed warehouse check :

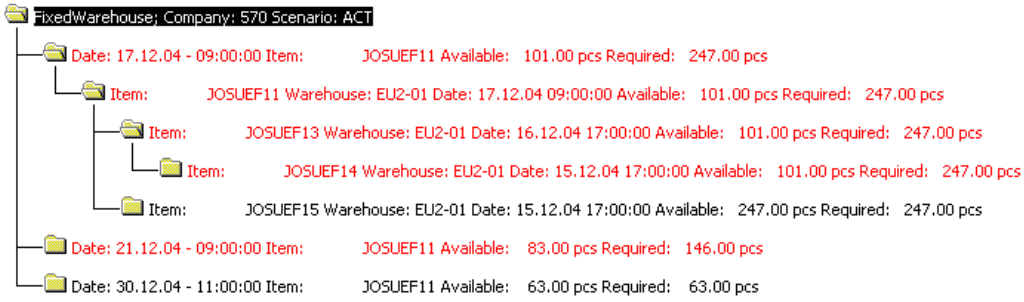
Date : 14.12.04 [13:03,Eur] ATP Overview Page : 1
ERP LN democompany 570 Company : 570

Ordering Data
Site 570
Warehouse EU2-01
Item JOSUEF11
Quantity 247.0000 [pcs]
Date 14.12.2004 08:49

Supplying Data					
Site	Warehouse	Available [pcs]	Trans Time [Days]	Delivery Date	Receipt Date
570	EU2-01	101.0000		17.12.04	17.12.04
570	EU2-01	83.0000		21.12.04	21.12.04
570	EU2-01	63.0000		30.12.04	30.12.04

Total Available	247.0000

The capable to promise overview for this fixed warehouse check is as follows:



Both reports show that the required quantity of 247 pieces can be delivered in these parts:

- 101 pieces on December 17
- 83 pieces on December 21
- 63 remaining pieces on December 30

As you see, the main lines of the report and the graphical browser are identical. However, where the ATP overview report stops at this point, the capable-to-promise overview shows which components or capacities were restrictive for delivering the entire quantity.

This overview reads as follows:

- The material for which sufficient availability was found in a branch of the product structure is marked black. The underlying branch of such a component (if present) is no longer depicted because the information is considered irrelevant for this overview. This overview concentrates on the restrictive components and capacities only.
- An example in the previous picture is item JOSUEF15, where 247 pieces can be built based on the availability of its critical component JOSUEF17. In addition, the last main line for JOSUEF11 is marked black because sufficient ATP for this item is found on December 30 to cover the remaining 63 pieces of the demand. Therefore, you will not encounter problems in terms of availability for the black lines. You can also see this by the fact that the available quantity is equal to the required quantity.
- The branch for which insufficient availability is found is marked red. The first main line is expanded for the entire branch in the example above. Because insufficient availability for JOSUEF14 was found and this is the lowest component in this branch, the entire branch is red. In addition, the second main line is marked red, but is not yet expanded.

You determine the dates as follows:

- The CTP of the end item JOSUEF11 is checked every period based on the EP parameter **Component CTP bucket**. If the value of this parameter is set, for example, to *1* hour, every subsequent hour, the CTP is calculated. When calculating this CTP, the lead-time offset is used to determine the required date for each component. This offset is visible in the previous picture in the branch of the first main line. JOSUEF14 is required earlier than JOSUEF13, and so on.

The available quantity is determined as follows:

- The main lines, which are end items for which the CTP is calculated, always depict the additional available quantity compared to the previous main line.
- However, the component lines always depict cumulative quantities.
- Therefore, each subsequent component line increases the available quantity compared to the previous component line.

Example

Example: If 300 pieces of JOSUEF11 are required:

The main lines for JOSUEF11 show 101 pieces available on December 20, and an additional 83 pieces on December 21.

The component lines for JOSUEF14 show 101 pieces available on December 16 (lead-time offset applied) and 184 pieces on December 17. As a result, the available quantity of 184 is a cumulated quantity of 101 + 83 pieces.

Although this method of showing the available quantity might be less transparent, this method shows extensive additional quantities for the components, rather than the cumulated quantities. From the main line, you can always see the amount of the additional quantity.

ATP handling from a sales order line

If you start the ATP Handling (cprrp4800m000) session from a sales order, several fields cannot be modified.

ATP handling from a sales quotation line

If you start the ATP Handling (cprrp4800m000) from a sales quotation, the **Accept Check** button is unavailable, because you cannot create deliveries or warehouse transfer orders for a sales quotation line.

Appendix A Glossary

A

allowed demand

The maximum volume that you want to sell to customers in a particular channel. When this maximum is reached in a certain channel ATP period, you accept no more customer orders for that channel.

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.

ATP

See: *available-to-promise (p. 44)*

ATP

See: *available-to-promise (p. 44)*

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.

available-to-promise

The item quantity that is still available to be promised to a customer.

In LN, available-to-promise (ATP) is part of a larger extended framework of order promising techniques called capable-to-promise (CTP). If an item's ATP is insufficient, CTP goes beyond ATP in that it also considers the possibility of producing more than was initially planned.

In addition to the standard ATP functionality, LN also uses channel ATP. This term refers to the availability of an item for a certain sales channel, taking into account the sales limits for that channel.

For all other types of order promising functionality used in LN, the term CTP is used.

Acronym: ATP

Abbreviation: ATP

BCM

See: *bill of critical materials (p. 44)*

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

bill of material (BOM)

A list of all parts, raw materials, and subassemblies that go into a manufactured item and show the quantity of each of the parts required to make the item. The BOM shows the single-level product structure of a manufactured item.

business-function model

A part of a business model that is built from a selection of business functions that are initially created in the repository.

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

capacity CTP

The capacity of a resource that is available in a plan period for additional production of a plan item in connection with a customer order.

The capacity CTP is used in capable-to-promise calculations.

capacity CTP check

An availability check on the capacity necessary to produce an extra quantity of an item to deliver a customer order on time.

The capacity CTP check is performed on resources in the item's bill of critical capacities or on the work centers of the item's routing, depending on the order horizon. Only the resources defined as CTP critical are checked.

channel ATP

The item quantity that can still be promised to customers in a particular sales channel.

The channel ATP depends on the allowed demand for a channel. The total allowed demand for one channel ATP period forms the initial value of the channel ATP in that period. Every time a demand is recorded within this channel and within this channel ATP period, this demand is subtracted from the channel ATP.

Channel ATP is used to limit the supply that goes to specific channels, and to secure that enough quantity is left to supply other important customers.

channel ATP check

A check on the quantity that can be promised to a customer based on the allowed demand for the channel to which the customer belongs.

Note that the main purpose of channel ATP is to reserve a certain quantity of the product for other channels, for example, for strategic reasons.

Example

A customer belongs to the direct marketing sales channel. The allowed demand for this channel is 50,000 piece per period. A quantity can be promised to the customer, as long as the total sales volume for that channel in that period does not exceed 50,000.

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.

component CTP check

An availability check on the components necessary to produce an extra quantity of an item to deliver a customer order on time.

The type of check that is performed on a component item itself depends on the CTP parameters for the component in question.

The component CTP check is performed on components in the bill of critical materials or the bill of material, depending on the order horizon. Only components defined as CTP critical are checked.

component CTP reservation

The item quantity reserved to be used as critical components for the (as yet unplanned) production of other items.

This reservation is made when the ATP data in an item master plan is updated and the following is true:

- The cumulative ATP for plan item A drops below zero.
- The plan item settings for item A are set to enable component CTP checks.
- The bill of critical material for item A contains item B.
- Item B is defined as CTP critical in the plan item settings.

In this case, a component CTP reservation is recorded for item B, and the ATP of item B is reduced accordingly. The quantity of item A that will be produced with the reserved quantity of the component is stored as CTP Reservation Receipts.

Note

To guarantee that LN can carry out an ATP check correctly, you must fill the Warehouse field in the Bill of Critical Materials (cprpd3120m000) session. LN explodes the ATP of a main item to plan items that have the same planning cluster as the warehouse you specified on the bill of critical materials of the main item.

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

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.

CTP

See: *capable-to-promise (p. 45)*

CTP time fence

The number of working days from the current moment, during which LN does not perform CTP checks.

The CTP time fence must be smaller than the ATP/CTP horizon.

During the period of the CTP time fence, CTP is considered to be zero.

cumulative ATP

The total item quantity that you can promise to deliver in a particular plan period.

You can use the cumulative ATP to check the availability of an item when you receive a sales order or an inquiry.

Note

If the item's cumulative ATP is insufficient, LN can carry out a capacity and/or component CTP check to see if the demand can be met by increasing the production of the item.

customer orders

The sales orders that have not yet been delivered to the customers involved.

The customer orders are part of the actual demand and are used to consume the demand forecast.

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.

family CTP check

A CTP check that is carried out at a higher product-family level, instead of the level of the item itself.

Like the regular CTP check for an item, a family CTP check can involve several types of ATP and CTP checks.

In this case, you can configure LN so that, when the CTP of the mountain bike must be checked, LN will in fact check the CTP of the bicycle family.

Example

The mountain-bike item is part of the bicycle family.

family CTP horizon

The time period for which LN performs the capable-to-promise (CTP) check for an item on a higher product-family level, instead of the level of the item itself.

The start date of the family CTP horizon is defined in the plan-item settings. The end date coincides with the CTP time fence.

The application of family CTP depends on the plan period in which the delivery date of a customer order falls:

- If the plan period falls before the family CTP horizon, LN checks the CTP of the item itself.
- If the plan period falls within the family CTP horizon, LN checks the CTP on a higher product-family level.

generic BOM

Set of components, per generic item, from which product variants can be composed. The generic bill of material forms the basis for the variant bill of material which arises during the configuration/generation of a product variant. For each BOM line (component) a constraint rule may apply.

item master plan

An item-specific, overall logistic plan that contains planning data and logistic targets for sales, internal and external supply, and inventory. All planning data in the item master plan is specified by plan period. Enterprise Planning uses this data to carry out master-planning simulations.

Within the item master plan, you can distinguish the following subplans:

- demand plan
- supply plan
- inventory plan

In addition, an item's master plan contains information about actual demand, actual supply, planned supply in the form of planned orders, and expected inventory.

If an item has a master plan and channels have been defined for this item, each channel usually has its own channel master plan. A channel master plan contains channel-specific information only, that is, demand data and information about sales restrictions.

Item master plans and channel master plans are defined within the context of a scenario. These scenarios can be used for what-if analyses. One of the scenarios is the actual plan.

lead-time offset

The cumulative lead time of the production process, calculated from the production stage where the relevant critical material or critical capacity is required to the final stage of the production process. The lead-time offset is a factor in determining the start date of the critical material or critical capacity requirement.

The lead-time offset can be expressed in days or hours.

main item

The end result of a production order.

A main item is either be changed to an end item (for delivery to a warehouse), or delivered directly to the customer in bulk.

multisite

Refers to the management of multiple sites within a single (logistic) company.

In a multicompany structure, which includes several companies, multisite applies to each of the logistic companies.

nonconsumed demand forecast

The part of the forecast demand that has not yet been consumed by actual demand.

As a rule, the demand forecast, extra demand, and special demand are gradually filled by actual orders. This process is referred to as consumption of forecast demand by actual demand.

order lead time

The production time of an item expressed in hours or days, based on the lead time elements as defined in the routing operations.

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.

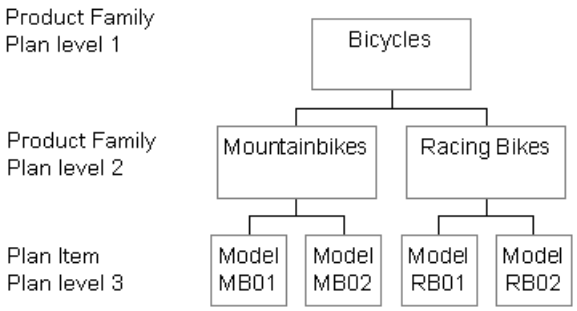
A group of similar plan items or families is called a product family. The items are aggregated to give a more general plan than the one devised for individual items. A code displayed by the item code's cluster segment shows that the plan item is a clustered item that is used for distribution planning.

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.

planning cluster

An object used to group warehouses for which the inbound and outbound flow of goods and materials is planned collectively. For this purpose, the demand and supply of the warehouses of the planning cluster is aggregated. Within a planning cluster one supply source is used, such as production, purchasing or distribution.

If multisite is implemented, a planning cluster must include one or more sites. The site or sites include the warehouses for which the planning processes are performed.

product family

An item that represents a group of similar plan items (or families). The items are aggregated to give a more general plan than the one devised for individual items.

The aggregation relationships specify the percentage of each plan item in the product family.

Use product families with care. A product family does not normally have its own BOM or routing. However, you can create production orders or sales orders for a product family, though this can lead to inconsistencies in the planning.

production plan

The planned receipts of manufactured items, specified by period.

These receipts are the quantity that must be produced internally.

Note that the production plan does not include the quantity of the plan item that is delivered by other companies or warehouse locations.

The production plan is part of the supply plan for a plan item.

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.

resource master plan

A time-phased overview of the capacity use at a certain resource.

In a resource master plan, the following types of capacity use are recorded per plan period:

- Critical capacity requirements from master-based planning.
- Capacity use related to planned orders.
- Capacity use related to JSC (production) orders and service activities.
- Capacity use related to PCS (project) activities.

In addition, the resource master plan contains capacity CTP information.

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.

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

wizard

A special form of user assistance that automates a task by setting the parameter values within a business model and which directs the software to meet the specific requirements of an organization.

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