

Experience Enhance Service Level with Available to Promise (ATP) and Global Available To Promise (GATP) – Part 1



Applies to:

SAP 4.6 C and later releases. For more information, visit the [Manufacturing homepage](#).

Summary

This is a two part article where in the first part we will discuss about ATP and it's capabilities and in the second part we will touch on Global available to Promise (GATP). Available To Promise (ATP) objective is to provide a confirmation to both internal and external customers as to whether or not the requirement placed on the organization can be supported. It cut across various modules (cross-application component.) in SAP viz. Production planning; Order Execution, Sales and Distribution etc. ATP helps to enhance the service level by indicating in advance whether the stock will be available for the requirements date.

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Available to Promise (ATP)-Overview

The prime goal of the companies is to ensure cent percent customer service and to ensure that right product/component is available in right location for production and delivery. In one line ATP quantity can be defined as the sum of stock in inventory and planned receipts deducted from planned issues. During the material availability check, the system makes sure that requirements are covered by stock or by planned receipts. You can therefore recognize at an early date, for example, when creating the sales order, whether a material will be available for the requirements date or whether you have to make extra planning arrangements to guarantee material availability.

We can implement ATP checks for different business functions like Sales Order, Production Order or Goods movement. When a sales order is created, the system checks, within the framework of the ATP check, whether or not there is enough stock available in the warehouse for the required material.. If there is enough stock then the sales order can be confirmed.

The availability check itself does not trigger any procurement.

Base Line ATP Scenario with Process Order in MTS

Step 1:

Create Process order (Generally, the planned order will be converted to process/production order in real life scenarios)

Create Process Order: Header - General Data

Material Capacity WM material staging Open

Process order %000000000001

Material 11003541 Material Description - XXXX

Status CRTD MSPT BCRQ SETC

General data Assignment Goods recpt Control data Dates/qtys

Quantities

Total qty	1,000	CS	ExpectYieldVar	0
Delivered	0			

Dates

	Basic dates		Scheduled		Confirmed
Finish	15.04.2011	24:00:00	15.04.2011	08:33:00	
Start	15.04.2011	07:00:00	15.04.2011	07:00:00	

Step 2:

Save the process order. While saving the process order material availability is checked.

Create Process Order: Input Help

The screenshot shows the SAP 'Create Process Order: Input Help' screen. The 'Material' field contains '11003541' and the 'Material Description' is 'XXXX'. An information dialog box is open in the foreground, displaying the message: 'Order has missing parts (see log)'. The background tabs include 'General data', 'Assignment', 'Goods recpt', 'Control data', 'Dates/qtys', and 'Mast. dat'. The 'Dates' section shows 'Finish' at 24:00:00 and 'Start' at 00:00:00. The 'Scheduling' section shows 'Type' as 'No scheduling note' and 'Reduction' as 'Float after product'.

Availability checks can be triggered either **automatically** or **manually**. We can configure the business function i.e whether the creation and/or release of the order triggers the ATP check. Also, material availability check can be manually triggered any time in the order change mode.

Step 3:

Missing parts list is generated in the case where ATP check identifies that requirements cannot be covered by stock or by planned receipts.

The screenshot shows the 'Availability Check' dialog box. It displays summary statistics and a table of missing parts.

Material	Plant	SLoc	Reqmts quantity	Requirements	Committed quantity	Committ. date	Material description
34021733	2328	0400	5,000.000 EA	16.04.2011	367.000 EA	20.04.2011	Material Description - XXXX

Availability check shows committed qty that will be available on the requirement date and the date on which entire requirement will be available.

In the example above, out of the required 5000 EA only 367 EA will be available on 16th April and the full quantity will be available on 20th April (based on the planned receipt).

Similar ATP check can be executed for sales order the other business functions which will be discussed in the part 2 of this document.

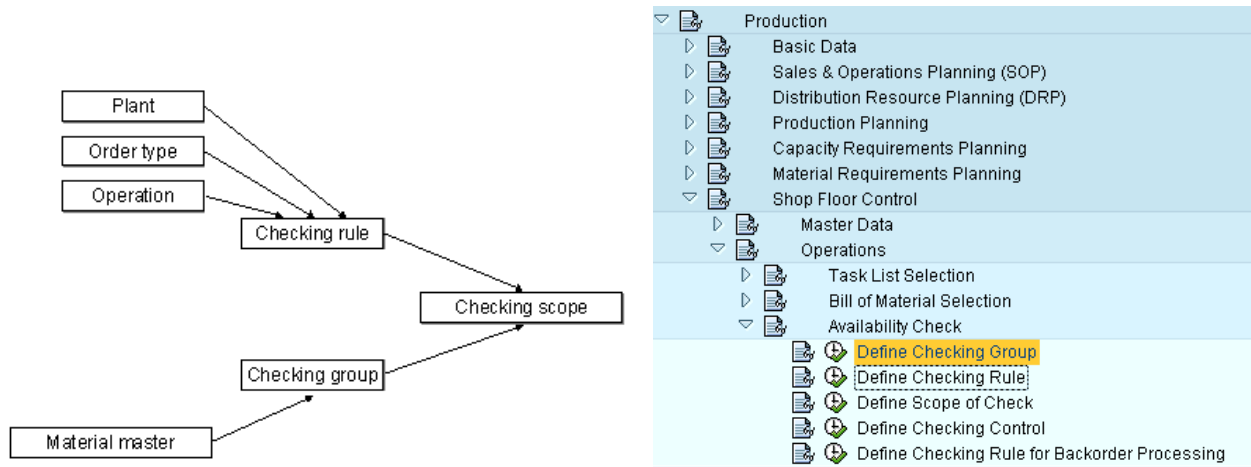
Collective Availability check : Through the mass processing for availability check we can analyze the availability of several orders at the same time.

The orders are checked in the sequence in which they are displayed in the object detail list (i.e. the top order is checked first). You can change the sequence using the grouping and sort functions of the production order information system.

Configuration of ATP

The setup for ATP functionality consists of :

- Checking (ATP) Group
- Check rule
- Check Control
- Scope of Check
- Production Scheduling Profile



Checking Group

Every material for which availability check needs to be carried out must be assigned to a checking group. It is done in material master – MRP 3 view

Using the checking group we can define

- Whether the materials to be checked are locked during the availability check
- If the "Block with TrOfQties" indicator is set, the committed quantities are stored in a table of locks.
- Whether the normal ATP quantity or the cumulated ATP quantity is used

Display View "Availability Check Control": Overview

Av	Description	Total ...	T ...	Block QtRq	No check	Accumul.	Response	RelChkPlan
01	Daily requirements	B	B	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3	1	1

Blocking the confirmed quantities : If this indicator has been set, the quantities confirmed during an availability check are blocked by special entries in the server so that availability checks taking place at the same time do not assign these quantities again.

No Check: Material whose material master has a checking group entered in which this indicator is set is never included in a material availability check.

Checking Rule

The check rule is a key for a specific business process viz. created orders and released orders.

Checking rule for created orders applies to

- Manual checks in a created order
- Automatic checks during order creation
- Automatic checks when a created order is saved

Checking rule for released orders applies to

- Manual checks in released or partially released orders
- Automatic checks during the release of an order
- Automatic checks when a released or partially released order is saved

The checking rule for backorder processing is defined per plant.

It applies exclusively to availability checks carried out in

back order processing.

Display View "Checking Rule": Overview

ChR	Description of checking rule
P1	Std process order creation
P2	Std process order release (plant)
P3	Std process order release (sloc)
PM	Checking rule for plant maintenance
PP	PP checking rule
PS	PS Checking rule (project system)
RP	Replenishment
RS	Checking rule (SAP Retail Store)
SM	Service checking rule
Z1	Process Order availability check
Z2	Process Order Creation rule
Z3	planned order rule
Z4	Process Order Release rule
ZL	Over delivery
ZP	Check rule for PM (no safety stock incl)
ZZ	Delivery Change (Exit)

Scope of Check

The connection between the checking group and the checking rules is made by entering this into the scope of check.




Display View "Availability Check Control": Overview

Av	Description	ChR	Checking rule
01	Daily requirements	01	Checking rule 01
01	Daily requirements	03	Checking rule 03
01	Daily requirements	A	SD order
01	Daily requirements	AE	SD order; make-to-order stock
01	Daily requirements	AQ	SD order; project stock

The scope of check is used to set which stock types as well as which dynamic receipt and issue types are to be taken into account in the availability check

Through the use of the checking group which is assigned to the material master, and the checking rule that can be assigned via configuration.

Display View "Availability Check Control": Details




  			
Availability check	01 Daily requirements		
Checking rule	AQ SD order; project stock		
<table border="1"> <tr> <td> Stocks <input type="checkbox"/> Include safety stock <input type="checkbox"/> StockInTransfer <input type="checkbox"/> Incl.quality insp. stock <input type="checkbox"/> Incl. blocked stock <input type="checkbox"/> Incl. restricted-use stock <input type="checkbox"/> W/o subcontracting </td> <td> Receipts/Issues <input type="checkbox"/> Incl.purchase orders <input type="checkbox"/> Incl. purch.requisitions <input type="checkbox"/> Incl. dependent reqs <input type="checkbox"/> Include reservations <input checked="" type="checkbox"/> Include sales reqmts <input checked="" type="checkbox"/> Include deliveries <input type="checkbox"/> Incl.ship.notificat. <input type="checkbox"/> Incl.depen.reservat. <input type="checkbox"/> Do not check <input type="checkbox"/> Incl.rel.order reqs <input type="checkbox"/> Do not check <input checked="" type="checkbox"/> Incl. planned orders <input checked="" type="checkbox"/> Check all planned o <input checked="" type="checkbox"/> Incl. production orders <input checked="" type="checkbox"/> Take all production </td> </tr> </table>		Stocks <input type="checkbox"/> Include safety stock <input type="checkbox"/> StockInTransfer <input type="checkbox"/> Incl.quality insp. stock <input type="checkbox"/> Incl. blocked stock <input type="checkbox"/> Incl. restricted-use stock <input type="checkbox"/> W/o subcontracting	Receipts/Issues <input type="checkbox"/> Incl.purchase orders <input type="checkbox"/> Incl. purch.requisitions <input type="checkbox"/> Incl. dependent reqs <input type="checkbox"/> Include reservations <input checked="" type="checkbox"/> Include sales reqmts <input checked="" type="checkbox"/> Include deliveries <input type="checkbox"/> Incl.ship.notificat. <input type="checkbox"/> Incl.depen.reservat. <input type="checkbox"/> Do not check <input type="checkbox"/> Incl.rel.order reqs <input type="checkbox"/> Do not check <input checked="" type="checkbox"/> Incl. planned orders <input checked="" type="checkbox"/> Check all planned o <input checked="" type="checkbox"/> Incl. production orders <input checked="" type="checkbox"/> Take all production
Stocks <input type="checkbox"/> Include safety stock <input type="checkbox"/> StockInTransfer <input type="checkbox"/> Incl.quality insp. stock <input type="checkbox"/> Incl. blocked stock <input type="checkbox"/> Incl. restricted-use stock <input type="checkbox"/> W/o subcontracting	Receipts/Issues <input type="checkbox"/> Incl.purchase orders <input type="checkbox"/> Incl. purch.requisitions <input type="checkbox"/> Incl. dependent reqs <input type="checkbox"/> Include reservations <input checked="" type="checkbox"/> Include sales reqmts <input checked="" type="checkbox"/> Include deliveries <input type="checkbox"/> Incl.ship.notificat. <input type="checkbox"/> Incl.depen.reservat. <input type="checkbox"/> Do not check <input type="checkbox"/> Incl.rel.order reqs <input type="checkbox"/> Do not check <input checked="" type="checkbox"/> Incl. planned orders <input checked="" type="checkbox"/> Check all planned o <input checked="" type="checkbox"/> Incl. production orders <input checked="" type="checkbox"/> Take all production		
Replenishment lead time <input type="checkbox"/> Check without RLT			
Storage location check <input type="checkbox"/> No stor.loc. inspectn			
Missing parts processing Checking period: GR <input type="text" value="0"/>	Receipts in the past <input type="checkbox"/> Include receipts from past and future		

No Storage location check: This prevents the availability check at the storage location level (if it exists in this reservation). There are performance advantages to this since otherwise the system carries out the check both at the level of the storage location and at the level of the plant.

Checking Control:

In checking control we define for each order type, plant, checking rule , and business function (order is created or released) combination which type of check is to be used for the material availability check, PRT availability , and capacity availability

Display View "Order control": Details

  		
Plant	3202	Plant Description
Order type	PI02	Process order (external number assignmnt)
Business funct.	2	Check availability during order release
Material availability		
<input type="checkbox"/>	No avail. check	
<input type="checkbox"/>	Status check	
<input type="checkbox"/>	Check material availability when saving order	
Checking rule	PP	PP checking rule
Type comp.check	<input type="checkbox"/>	ATP check
Mat. release	3	No release if parts are missing
PRT availability		
<input checked="" type="checkbox"/>	No check	
Checking rule	<input type="checkbox"/>	
PRT release	<input type="checkbox"/>	
Capacity availability		
<input checked="" type="checkbox"/>	No avail. check	
Overall profile	<input type="checkbox"/>	
Rel. capacities	<input type="checkbox"/>	

We can control whether the orders can be released or not (Material release field) in case ATP check results missing part.

Subsequent part of this document will discuss on Global available to Promise (GATP) capabilities and how it can help business realize enhanced manufacturing responsiveness and service level

Related Content

[Production Orders \(PP-SFC\)](#)

[Basic Availability check concept](#)

For more information, visit the [Manufacturing homepage](#)

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