What's New in SAP S/4HANA for advanced ATP
Sujeet Acharya, Director, Digital Supply Chain, SAP
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About the Speaker

Sujeet Acharya

- Director, Digital Supply Chain, SAP
- SCM professional with more than 17 years of experience in IT industry. Currently responsible as the Global Solution Owner for SAP’s Order Promising portfolio (ATP) along with the regional responsibility of evangelizing SAP’s Digital Supply Chain solutions in APJ and Greater China.
- Loves Netflix and Goodreads
Key Outcomes/Objectives

1. Get an overview of S/4HANA aATP
2. Learn what is new in S/4HANA aATP
3. Get acquainted with the Roadmap of S/4HANA aATP
Agenda

• Functional Overview
  – What’s aATP?
  – ATP Evolution
  – Functionalities available
• What’s new in aATP?
• Roadmap
• Q&A
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• Functional Overview
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As an important and integral part of the order fulfillment process, S/4HANA advanced Available-to-promise provides accurate and reliable order promise dates considering the relevant stock in real-time, while protecting companies business priorities and profitability goals.
S/4HANA advanced ATP Functionalities and Value Proposition

- **Product Availability Check (PAC)**
- **Back Order Processing (BOP)**
- **Product Allocations (PAL)**
- **Alternative Based Confirmations* (ABC)**
- **Release for Delivery (RefDy)**

**Execute with Excellence**
- Real-time, Accurate

**Omni Channel**
- Order Fulfillment Process

**Improve Customer Service Level**
- through Allocation Management

**Manage shortages**
- Segmentation and Priority based Back Order Processing

**Rich User Experience**
- and Intuitive

**Intelligent**
- Decision support

- Release Restrictions
S/4HANA advanced ATP – Product Availability Check

Business Benefits

- Promise what you can deliver / Avoid over-confirmation
- Fast response time during online check and BOP

Future Outlook

- Fiori based simulation and explanation tool
- Considerations of characteristics and shelf-life

- Time phased mass enabled check (parallelization)
- Supply consideration: All
- Demand consideration: Sales Orders (SO) & Stock Transport Orders (STO)
- Support special stocks
- Support batches
**S/4HANA advanced ATP – Back Order Processing**

**Business Benefits**
- Manage business priorities and protect customer interest
- Manage multi-channel order fulfillment process
- Ensure right supply assignment to right orders
- Significantly faster than traditional rescheduling

**Future Outlook**
- Interactive Back Order Processing
- BOP to support ABC

- Requirement segmentation and classification: Win, Gain, Redistribute, Fill, and Lose
- Filter and Sorter for each segment
- FIORI based set up and result monitor
- Supply Assignment (ARun)
- Exception handling with fall back variants
- Supports Product Allocations
- Global filters to restrict product and location selection
S/4HANA advanced ATP – Back Order Processing

**Confirmation Strategy**

- **Win**
  - Confirm as Requested
  - Selection Criteria: e.g. All orders from PRIO 1 customers for today, All back orders, All rush orders

- **Gain**
  - Improve if Possible
  - Selection Criteria: e.g. All orders from PRIO 1 & 2 customers for this week

- **Redistribute**
  - Might Gain, Might Lose
  - Selection Criteria: e.g. All standard Sales Orders and Stock Transport orders of the week

- **Fill**
  - Delete if Required
  - Selection Criteria: e.g. All internal Stock Transport Orders and quality inspection orders

- **Lose**
  - Delete Confirmations
  - Selection Criteria: e.g. All orders from customers under credit block

**Sorting Criteria**

- **Win**
  - No sorting

- **Gain**
  - Sorted by requested delivery date

- **Redistribute**
  - Sorted by delivery priority and order creation date

- **Fill**
  - Sorted by order creation date

- **Lose**
  - No Sorting
S/4HANA advanced ATP – Product Allocations

**Business Benefits**
- Improve customer service levels
- Manage shortage situations
- Protect key customers and products, avoid penalties

**Future Outlook**
- Further analytics
- Allocation Management for Stock Protection
- Capacity based allocations

- Simple and flexible set up
- Time dependent assignment to product/plant
- Hierarchical / Sequential allocations
- Excel download and upload for mass maintenance
- Importing / exporting allocation quantities from external systems
- Display and analyze product allocation availability situation
- Supports PAC, PAL and ABC
S/4HANA advanced ATP – Alternative Based Confirmations

Business Benefits
• Improve order fill rate by intelligently selecting alternative locations

Future Outlook
• Integration to BOP
• Manual alternative selection
• Product Substitution

- Determination of the delivering plant with best availability during sales order creation
- Simple configuration of Alternative Control that allows to activate ABC based on a combination of characteristics
- Configuration of substitution strategy that allows to specify how to rank alternatives based on SAP-delivered attributes

* Under Release Restrictions
S/4HANA advanced ATP – Release for Delivery

Business Benefits
- Intuitive and fast reassignment of stocks
- Impact analysis while confirmation changes

Future Outlook
- Forward navigation to the explanation components for
  - Product Allocation (PAL)
  - Product Availability Check (PAC)

- FIORI based interactive changes to sales order confirmations before releasing the orders to delivery
- Impact simulation of current ATP situation
- Direct navigation to Sales Order
- Display of Batch and Allocation restrictions
- Visual representation of the stock situation of a material/plant
S/4HANA advanced ATP – Screenshots

- Back Order Processing
- Product Allocations
- Release for Delivery App
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What’s new in 1809 Release in S/4HANA advanced ATP?

**Product Allocations (PAL):**
- Display and analyze product allocation availability situation
- PAL Alignment Services: Automatically reorganize product allocation planning data (allocation quantities and assignments) after deletion, deactivation or reactivation of CVCs
- Field extensibility for Product Allocation Object and Sequence (including corresponding APIs):
  - Characteristic catalog extension for STOs
  - Enable download and upload of product location to product-allocation-assignment data in file format
- Enable mass deletion of product/location assignments in "Assign Product to Product Allocation" app

**Back Order Processing (BOP) and Release for Delivery (RefDy):**
- Automated exception handling with BOP fallback variants
- Display Dates/Times of plants in their respective timezone
- Visualize the constraints imposed by Delivery Groups in RefDy

**Alternative Based Confirmations (ABC):**
- Configure Alternative Control: Allows to activate ABC based on a combination of characteristics
- Configure Substitution Strategy: Allows to specify how to rank calculated alternatives based on SAP-delivered attributes
- Initial determination of the delivering plant with best availability during sales order creation
Product Allocation Overview: PAL Monitor

- Drill down and analyze the product allocation situation for product allocation objects, characteristic value combinations and periods on different levels
- See order items with different ATP statuses which performed a product allocation check
- Drill down into order items and identify all consumed product allocation quantities and the order in which the quantities have been consumed
In the app **Manage Product Allocation Planning Data** the system can now move the planned allocation quantities and corresponding assigned quantities automatically to a collective characteristic value combination (CVC) when a CVC is to be deleted or deactivated/reactivated.
The Manage Product Allocation Planning Data app now also supports the use of MS Excel (open office file format XLSX) for downloading/uploading product allocation characteristic value combinations.
Backorder Processing: Process overview for fallback variants

1. **Start**
   - Execute BOP variant (main, un-/restricted)

2. **NO Exceptions**
   - Complete STOP?
     - **✓**
     - **✗**

3. **Mark requirements for all exception-free material-plant combinations for update**

4. **Update requirements**

5. **End**

- **Unrestricted fallback**
  - Unrestricted fallback

- **Does a fallback exist?**
  - **✓**
  - **✗**

- **Apply global filter**
  - Does a fallback exist?
    - **✓**
    - **✗**

- **Build global filter for all material-plant comb. with exceptions**

- **Any requirements marked for update**
  - **✓**
  - **✗**

- **Save?**
  - **✓**
  - **✗**

- **Manual processing**

- **Exceptional requirements**
  - **✗

**Backorder Processing: Process overview for fallback variants**
Backorder Processing: Fallback variant setup in Configure BOP Variant app
What’s coming in 2019 in S/4HANA advanced ATP?

Product Allocations (PAL):
✓ Further vertical consumption strategies within product allocation sequences
✓ Calculate a feasible confirmation by simultaneously considering multiple product-allocation objects as alternative sources of supply
✓ Integration of product allocation checks based on capacity and production in the advanced available-to-promise (aATP) check (product allocations after product availability checks)
✓ Define and maintain new characteristics based on value groups of existing characteristics

Back Order Processing (BOP) and Release for Delivery (RefDy):
✓ Backorder Processing: Use custom and standard fields for sorting and filtering
✓ Simplify BOP Segment App
✓ Worklist Refresh for Release for Delivery App

Alternative Based Confirmations (ABC):
✓ Tie-breaking criteria for suitable plants
✓ Context specific settings in substitution strategy
✓ Support reevaluation of alternatives in back-order processing
✓ Additional determinations to choose best plant
Alternative Based Confirmation
Location Substitution

- Features of new ABC:
  - Easy to configure Alternative Control
  - Decision to trigger during Sales Order Creation and/or Back Order Processing (BOP)
  - Dynamic selection of alternative: Best fit vs First fit
  - Supports Product Allocations
  - Alternative Determination rules: Max-Earlier Confirmation, Full Confirmation, On-Time Confirmation
  - Tie-Breaker logic for equally placed alternatives.
You can use the **Configure Substitution Strategy** app to define an alternative plant to be used in case the originally requested plant cannot provide sufficient quantity for a confirmation.
ABC (Alternative based confirmation)

Activation: Alternative Control

Maintain characteristic combinations for which a certain substitution strategy should be determined
You can use have multiple different **Alternative Determinations** to rank the possible alternatives (plants) and identify/choose the best of them.

In case you have **multiple determinations**, the subsequent ones are applied only in case the previous ones did not lead to **any** confirmation.

Currently the following three determinations are implemented:
- Max-Earlier Confirmation
- Full Confirmation
- OnTime Confirmation
If there are multiple plants which can confirm equally (e.g. several plants can confirm the full requested quantity on the requested date), which one is chosen?

Currently the following tie-breakers are hard coded:

- Prefer the alternative plant which is in the same country than the ship-to-party (if still not unique, then…)
- Prefer the alternative plant which is in the same region than the ship-to-party (if still not unique, then…)
- Prefer the alternative plant with shorter transit time (if still not unique, then…)
- Prefer the alternative plant with shorter overall delivery time, incl. pick&plan (if still not unique, then…)
- Prefer the originally requested plant (if original plant is no valid alternative, due to its confirmation situation, then…)
- Choose the plant according to alphabetical sorting (4-digit plant no. – numbers are preferred over characters)
Product Allocation – Logical “AND”

**Scope**

- Ability to calculate a feasible confirmation by simultaneously considering multiple product-allocation objects as alternative sources of supply
- Checking of each product-allocation object within the alternative source of supply and final confirmation of the minimum object of all confirmations (logical "AND" connection of product allocation constraints)

**Key Benefits**

- Enhance the product allocation sequence to allow multiple overlapping sequence constraints within a sequence group (alternative source of supply)
- Allow to combine sequence constraints with different check date time types and periodicities
- Confirmation result that is the minimum of all product-allocation constraints within a sequence group (logical "AND" connection of constraints)
Product Allocations: Capacity Allocations

Scope
• Integration of product allocation checks (PALs) based on capacity and production in the standard ATP check
• Enhance Fiori app "Manage Product Allocation Sequences" to offer maintenance of capacity/production based allocation plans
• Execution of an additional product allocation check based on capacity and production after the product availability check

Key Benefits
• Ability to execute a PAL after a PAC – in addition to the sales product allocation check that is performed before a product availability check
• Modeling of restrictions based on production capacities or supply constraints in the additional product allocation check
• Allocation type wherein the first the product availability is checked and then, based on the results of the product availability check, the product allocation check is performed
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S/4HANA advanced ATP Timelines

2015
- ATP Controller (backend)
- Product Availability Check (mass-enabled)

2016
- Backorder Processing (BOP) – Set Up and Results Monitor
- Product Allocation (PAL) – set up and check
- Release for Delivery app
- BOP: Supply Assignment Run
- BOP: Usability enhancements
- PAL: Product Allocation Sequence
- STO support in BOP, PAL and Release for Delivery
- RefDy: Usability enhancements
- API’s for PAC & PAL

2017
- BOP: Automated exception handling with BOP fallback variants
- ABC: Initial determination of the delivering plant with best availability during sales order creation
- PAL: Display and analyze product allocation availability situation

2018
- Planned

Product Vision
- Interactive BOP
- ATP Analytics
- Fair Share logic in BOP
- Stock Protection
- Service Parts ATP
- aATP integration with Production
- aATP integration with Transportation Scheduling
- Machine Learning capabilities

- ABC: Location Substitution supported in BOP
- ABC: Manual alternative selection
- ABC: Product Substitution
- PAL: Capacity based Allocations
- PAL: Logical AND relationship between PAL Objects
- PAC Explanation tool
Further information ...

Discover SAP S/4HANA Help Portal

Discover S/4HANA

Discover SAP HANA Cloud Platform

SAP S/4HANA Roadmap

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Q&A

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