SAP Integrated Business Planning
Order-based Integration (IBP for response & supply)

Michael Mack, Spyridon Negas - Product Management
SAP Integrated Business Planning, SAP SE
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Agenda

- IBP Integration
- Smart Data Integration (SDI)
- Integration scenarios using SDI
- How integration works
- IBP Add-On for SAP S/4HANA and SAP ERP
- Demo
- Connectivity to multiple ERP Backends
- Integration Direction for IBP
- Further Information
Overview of Main Integration Scenarios for SAP Integrated Business Planning (IBP)

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SAP Cloud Platform Integration for data services (HCI)
Data Model defined by Algos, master data, time series and KFs, customer project based, periodic loads

SAP Cloud Platform Smart Data Integration (OpenAPI)
Data Model defined by Open API, master data, inventory, orders, customer project-based, periodic loads

S/4 HANA, SAP ERP, SAP APO, SAP DSIM, SAP BPC, SAP CRM and any source

SAP ERP for automatic data exchange, S4 HANA and any source using file adaptors

Other Integration Scenarios

Collaboration
Visibility filters, IBP logging, new product introduction

Direct Connection
Supplier commits, social Networks

Odata Services
Periodic, customer-defined

SAP Ariba, SAP Jam

S/4 HANA, SAP ERP and any source
What Integration Tool(s) To Be Used For SAP Integrated Business Planning?

Find correct tool(s) for IBP integration

- Main master and transactional data (must have)
- Planning Type?
- Order based planning (Response Planning)
- Also time series needed?
- Integration type?
  - Automatic, recommended
  - Manual, low data volume
- Yes
- Integration scenario?

Integration scenario:
  - Collaboration
  - SAP Jam
  - Visibility Filters, Exception Monitoring, External Product References
  - OData services
  - Forecast
  - Commit
  - SAP Ariba cXML message

What to integrate?

- Additional processes, Additional data

Integrate built-in with ERP?

- Yes

Integration type?

- SAP Cloud Platform Integration for data services*
- csv file upload in Data Integration Jobs app
- Open API using SAP Cloud Platform Smart Data Integration
- IBP Add-On for ERP

* Formerly known as: SAP HANA Cloud Platform, integration service for data services (HCI-DS)
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SDI (Smart Data Integration) is a tool to transfer data from a source to a HANA-based system through internet.

- IBP Order-Based Planning uses SDI as technology
- In the on-premise landscape the Data Provisioning Agent (DPAgent) creates the connection between IBP and the source systems
- The DPAgent uses Adapters to enable reading/writing on different kind of sources.
  - IBP supports only ABAP and File adapters
- DPAgent and Data Services OD Agent (for CPI-DS) can not run on the same server
Smart Data Integration - High Level Architecture

- Source (SAP ECC)
- Source (SAP BW)
- Source (Databases)
- Source (Fileshare)

Data Provisioning Agent

HANA

- Data Provisioning Server
- Index Server

Internet

Firewall
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IBP Order-Based Planning – Integration Scenarios

- **Inbound integration** is the process which transfers configuration, master, stock and transactional data from the source into IBP then prepares it for planning.

- **Outbound Integration** is the process which transfers the results of IBP order-based planning from IBP back to the source.
Inbound Integration

Configuration Data

➢ Calendars, Units of Measure, Currencies

Master Data

➢ Location, Material, Resource, Production data structure, Transportation lane

Stock Data

➢ Planning relevant stock (*Unrestricted-use stock, Unrestricted-use Vendor Consignment, Quality Inspection Stock, Vendor Consignment Stock in Quality Inspection, Blocked Stock, Blocked Vendor Consignment Stock*)

➢ Not planning relevant stock

Transactional Data

➢ Planned/Production Orders, Purchase Requisitions/Orders, Stock Transfer Requisitions/Orders, Sales Orders, Inbound/Outbound Delivery, Acknowledgements
Outbound Integration

Transactional Data

- Planned orders, Purchase requisitions, Sales order confirmations, Stock transfer requisitions

Planning result extraction

- Order network pegging information, Planning result orders, Stock information, Forecast quantities information, Forecast characteristics combinations
Agenda

✓ IBP Integration
✓ Smart Data Integration (SDI)
✓ Integration scenarios using SDI

☐ How integration works

☐ IBP Add-On for SAP S/4HANA and SAP ERP

☐ Demo

☐ Connectivity to multiple ERP Backends

☐ Integration Direction for IBP

☐ Further Information
IBP Order-Based Integration using SDI - High Level Architecture

File Server

File Adapter

DP Agent

https

SAP S/4HANA or SAP ERP

ABAP Adapter

Firewall & Internet

IBP on HANA

Staging Tables

EXT Tables

Timeseries World

OBP Tables
IBP – SAP S/4HANA and SAP ERP Integration - High Level Architecture

SAP S/4HANA or SAP ERP

Standard ERP Tables/Function Modules

ECC Add-on

EXT Tables

DP Agent

IBP on HANA

Staging Tables

EXT Tables

Timeseries World

Firewall & Internet

OBP Tables
Built-in integration for IBP order-based planning
Available for SAP ERP and S/4HANA on premise

- For order-based planning a built-in integration for master- and transactional data between SAP S/4HANA on-premise or SAP ERP and SAP IBP

- The installation of the IBP Add-On is the pre-requisite for the built-in integration. The Add-On is delivered with the Product versions:
  - SAP S/4HANA, supply chain integration add-on for SAP Integrated Business Planning 1.0 (SAP IBP S/4HANA INTEGR. 1.0)
  - SAP ERP, supply chain integration add-on for SAP Integrated Business Planning 1.1 (SAP IBP ERP INTEGRATION 1.1)

- 2 main capabilities of the Add-On:
  - Collection and transformation of the planning relevant data for order-based planning. The data is the stored into staging tables and ready to be pulled from IBP
  - Storage of the IBP order-based planning results into staging tables and creation/update/deletion of the relevant orders
OpenAPI

- The OpenAPI is the interface that is used for the order-based planning integration.
- The OpenAPI interface is delivered with versions. Every new version of the OpenAPI enables additional integration capabilities.
- The OpenAPI version provides stability during the IBP upgrades. There is no need to upgrade the OpenAPI version when IBP is upgraded.
- A deprecation process for older OpenAPI versions exists: Lifetime of an OpenAPI version >= 2 Years. Deprecations are announced in the IBP what’s new section 2 releases/quarters before retirement of the version.
Application Jobs for IBP Order-Based Integration - Configuration

- Template: Data Integration using SDI (Calendar, UoM, Currency)
- Integrates Calendars, Units of Measure and Currencies into IBP
- No OpenAPI versions
- Periodic job which replaces integrated data
Application Jobs for IBP Order-Based Integration - Configuration

Prerequisite

- SDI DP Agent installed, configured and connected to the IBP
- Dataset prepared:
  - Have SAP ERP / SAP S/4HANA add-on installed

Process

1. Load data
Application Jobs for IBP Order-Based Integration - Inbound

➢ Template: Data Integration using SAP HANA SDI (Inbound)

➢ Integrates master and transactional data and stock information

➢ OpenAPI versions with postfix: FULL/TRANS

➢ Periodic joc which transfers all data from the source. Delta processing within IBP
Application Jobs for IBP Order-Based Integration - Inbound

Prerequisite

- SDI DP Agent installed, configured and connected to the IBP
- Dataset prepared:
  - Have SAP S/4HANA or SAP ERP add-on installed and data is initially loaded in the staging tables
  OR
  - Have config & data files prepared containing data in the right format

Process

1. Load data
2. Validate input data (full list of validations available in appendix)
3. Transform
4. Cross-check & Business validations (post-process transformed data)
5. Integrate into timeseries
Application Jobs for IBP Order-Based Integration - Outbound

- Template: Data Integration using SAP HANA SDI (Outbound)
- Pushes Planning results back to the source
- OpenAPI versions with postfix: OUTBOUND
- Periodic job with delta transfer possibility
Application Jobs for IBP Order-Based Integration - Outbound

Prerequisite

- SDI DP Agent installed, configured and connected to the IBP
- Target source prepared:
  - Have SAP S/4HANA or SAP ERP add-on installed
  - In case of File Adapter the needed data- & config files existing on the file server

Process

1. Load data
2. Transform
3. Push data to target location
Application Jobs for IBP Order-Based Integration - Planning result extraction

- Template: Data Integration: Extraction of Order-Based Planning Results
- Extracts Planning inputs and results into files
- OpenAPI versions w/o postfix
- Periodic job with full transfer of data
Application Jobs for IBP Order-Based Integration - Planning result extraction

Prerequisite

- SDI DP Agent installed, configured and connected to the IBP
- Target source prepared:
  - The needed data- & config files existing on the file server (only file adapter)

Process

1. Load data
2. Transform
3. Push data to target location
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✓ How integration works

❑ IBP Add-On for SAP S/4HANA and SAP ERP
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❑ Integration Direction for IBP
❑ Further Information
The Integration Modell defines the data which needs to be integrated to IBP

Initial Load of Master and Transactional Data collects, transforms the relevant data and stores into staging tables

New and changed transactional data are collected, transformed and stored in staging tables in real time

IBP Outbound pushes the planning results into staging tables. Order Inbound job must be executed to transform the results into orders
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1. Single Source Integration (available)
2. Multiple Source Integration into Individual Planning Areas (available with IBP1905)
3a. Multiple Source Integration into a common Planning Area (planned for 1911)

Master- & Transactional Data from the same source system

On Premise

Cloud

Outlook

* Data is harmonized before the integration to IBP
3b. Multiple Source Integration into a common Planning Area (planned for 1911)
Master Data from Central Source & Transactional Data from other Source Systems

Outlook

* Data is harmonized before the integration to IBP
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☐ Integration Direction for IBP
☐ Further Information
Today

CPI-DS templates delivered and also adopted for Unified Planning area

Roadmap

Separate integration streams into separate planning areas from independent sources

Product Direction

❖ Separate Integration streams into one planning area
❖ Integration data model extensions to operational supply planning

Target

Rich Integration content for Time series based Planning

Unified Model with one common master data source

Lab Preview

Product Direction

Extend the IBP Add-on to additionally support time-series Integration (CPI-DS)

One integration stream (for master and transactional data) used in separate planning areas. Also supports back-integration and operational data life cycle.
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❑ Further Information
Links for Order-Based Integration

IBP Order-Based Integration - Application Help
https://help.sap.com/viewer/f31706b080044e58b9a9acebfb7808b2/1808/en-US/e10f0b5642880033e10000000a44538d.html

IBP Add-On for SAP S/4HANA (Administrator’s Guide & Application Help)
http://help.sap.com/ibp_s4hana_addon

IBP Add-On for SAP S/4HANA Release Information Note (2558971)
https://launchpad.support.sap.com/#/notes/2558971

IBP Add-On for SAP ERP (Administrator’s Guide & Application Help)
http://help.sap.com/ibp_erp_addon

IBP Add-On for SAP ERP Release Information Note (2268538)
https://launchpad.support.sap.com/#/notes/2268538
Questions?

Find answers and ask your questions about SAP IBP on our Q&A community

https://answers.sap.com/questions/ask.html
2019 Webinar Series on SAP IBP

Planned Sessions focusing on operational supply planning:

9/26/2019  Operational Supply Planning - Order Based Optimizer -

10/24/2019  Operational Supply Planning - Best practices/ Tips and Tricks – Troubleshooting -
2019 Webinar Series on SAP IBP

Available Sessions focusing on operational supply planning:

Meet the Expert : SAP IBP Webinar: Operational Supply Planning - Overview PDF | Recording

Meet the Expert – SAP IBP Operational Supply Planning - Deployment Planning PDF | Recording

Meet the Expert - Operational Supply Planning: Supplier Commit Scenario w/ Ariba PDF | Recording
Recent Webinars & Blogs

Webinar series: How the order based, finite priority heuristic satisfies demands?


Webinar: Learn about Rules for demand prioritization:

Webinar: Learn about Planning Run Types - Process Choreography:

Webinar series: Planning Area SAP7


Webinar: How to best create prototypes with SAP Integrated Business Planning order-based planning

Webinar: Order based Integration using SDI
Recent Webinars & Blogs

How to visualize a Freeze horizon in IBP Excel?

What’s new in IBP Response and Supply 1805 – Order-based Planning

What’s new in IBP Response and Supply 1808 – Order-based Planning

What’s new in IBP Response and Supply 1902 – Order-based Planning

What’s new in IBP Response and Supply 1905 – Order-based Planning

FAQ on Order-based Planning:
https://wiki.scn.sap.com/wiki/x/5AHXHQ
Thank you.

Contact information:

IBP Contact: michael.mack@sap.com, spyridon.negas@sap.com