SAP IBP Integration using CPI-DS Webinar Series
#building the bridge

SAP Product Management
April, 2020
Agenda

Welcome & Introduction :: 5 min (Michael)
Step by step demo :: 40 min (Venu, Venkat)
Troubleshooting :: 5 min (Venu, Venkat)
Q&A :: 10 min (all)
Overview of Webinar Series

SAP IBP Integration using CPI-DS (1/4): SAP ERP - April 2\textsuperscript{nd}

SAP IBP Integration using CPI-DS (2/4): SAP BW Integration - April 8\textsuperscript{th}

SAP IBP Integration using CPI-DS (3/4): Back integration from SAP IBP to SAP ERP using RFC Enabled Function Modules - April 14\textsuperscript{th}

SAP IBP Integration using CPI-DS (4/4): Microsoft Azure Data Lake & Microsoft Azure Cloud Storage Integration - April 29\textsuperscript{th}

Roadmap session: Meet the Expert: SAP IBP External Integration – Capabilities and Roadmap - April 16\textsuperscript{th}
Use Cases

Example 1: Customer does Demand Planning in SAP IBP and likes to send resulting Consensus Forecast Numbers to SAP BW (on-premise) for reporting purposes.

Example 2: For business continuity purposes customer likes to archive IBP Planning results in a SAP BW (on-premise)

Example 3: Integrating IBP with Multiple backend systems with BW as staging system.
# SAP Cloud Platform Integration (DS) – Connectivity

Wide range of supported sources and targets

<table>
<thead>
<tr>
<th>SAP Business Suite Applications (ERP, SCM/APO, …)</th>
<th>Databases</th>
<th>Cloud Databases</th>
<th>HANA Applications in the cloud</th>
<th>Other cloud applications</th>
<th>Files</th>
<th>Cloud Storage</th>
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<tbody>
<tr>
<td><strong>Business Content Extractors</strong>&lt;br&gt;Standard and custom extractors, including delta queues – through ODP</td>
<td>SAP HANA</td>
<td>MSSQL Server on Azure VM and PaaS</td>
<td>SAP IBP (Integrated Business Planning)</td>
<td>SuccessFactors applications</td>
<td>Delimited files:</td>
<td>Azure Storage:</td>
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<td><strong>RFC Enabled Function modules</strong></td>
<td>SAP (Sybase) ASE</td>
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<td>SAP Lumira</td>
<td>oData (v2 &amp; v4)</td>
<td>Local files</td>
<td>Azure Blob Storage</td>
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<td><strong>ABAP tables</strong>&lt;br&gt;Cluster, transparent, pool, Z-tables</td>
<td>SAP (Sybase) IQ</td>
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<td>SAP HANA database-as-a-service on HANA Cloud Platform</td>
<td>Web Services (SOAP and REST)</td>
<td>Remote files through SFTP</td>
<td>Azure Data Lake Storage</td>
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<tr>
<td><strong>Custom ABAP programs</strong>&lt;br&gt;Generated on the fly – no ABAP coding needed.</td>
<td>IBM DB2</td>
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<td>XML Files</td>
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<td><strong>SAP BW</strong>&lt;br&gt;Direct access to ODS tables&lt;br&gt;Write access through staging BAPI</td>
<td>MSSQL Server</td>
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<td>Based on XSD Template file</td>
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<td>MySQL</td>
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<td>Oracle</td>
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<td>Teradata</td>
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Data flow overview

Logical entities

SAP NetWeaver Business Warehouse

- InfoProvider
  - Info cube
  - Info Object
- Datastore
  - Object

Open hub Tables

SAP CPI-DS

- CPI-DS Agent
- BW Source Datastore
- BW Target Datastore

Inbound/Outbound Tasks

Paths:
- Open hub
- Staging/BAPI

SAP Cloud

- SAP CPI-DS
- SAP IBP

- SAP IBP
  - Post Processing
  - Application Tables
  - Staging Tables

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SAP Cloud Platform Integration
Integration with SAP BW

- CPI-DS provides the capability to read data from and to load data to SAP Business Warehouse (BW)
- SAP BW is a business warehouse application that runs on an SAP application server.
- BW contains data in various objects such as infoSources or DataSources from which you can extract and load data.
- Create BW datastores in CPI-DS for source and targets
- CPI-DS supports two datastore types for SAP BW.
  - BW Source
  - BW Target
- For Supported versions of BW, refer to CPI-DS Product Availability Matrix (PAM)
Demo steps

1. Create Data sources in BW
2. Create new data stores for BW Source and BW Target
3. Browse IBP metadata and import tables
4. Create CPI-DS task and dataflows
5. Execute CPI-DS Task
6. View results in BW and IBP
SAP BW Data Source Creation

SAP BW as source

- Define an Info provider in the Data warehousing workbench.
  - Create a data store object.
    - Specify the key fields and the data fields for the data store.
SAP BW Data Source Creation
SAP BW as target

- Define SAPDS as an RFC connection and assign an external system SAPDS to it in Data warehousing workbench.
- Within the SAPDS external system, create a data source.
SAP BW Data Source Creation
SAP BW as target

- Create an application component and a data source in the newly created SAPDS external system.

- Data source definition:
  - Define the field and the field attributes for the list of fields to be written from IBP into BW.
  - Activate the data source. System creates an auto generated info package.
SAP Cloud Platform Integration (DS)
Integration with SAP BW as source

- An SAP BW source datastore – logical link to SAP BW System to import source metadata into CPI-DS
- Supports importing metadata by browsing or by name
SAP Cloud Platform Integration (DS) Integration with SAP BW as Target

- An SAP BW target datastore – logical link to SAP BW System to import target objects into CPI-DS.
- Supports importing metadata by browsing or by name.
- Before loading generated data from CPI-DS into SAP Business Warehouse (BW), ensure that you have the proper loading profile established in SAP BW.
- Ensure that you have the minimum SAP BW authorization profile in BW to create an SAP BW target datastore.
Troubleshooting
Troubleshooting
Ensure that the Program ID is maintained correctly in the CPI-DS data store definition and the RFC destination.
SAP Cloud Platform Integration (DS)

BW as a target: Error in CPI-DS: Infosource `<BW_IBP_TARGET>` for source system `<****>` failed at packet `<****>`.

- Check in BW target under “Manage” menu to check on the Error message.
- In this example, there is a data mismatch between the IBP source and the data source in BW. Ensure that the data types are correctly maintained between the source data store in CPI-DS and in BW data source.
When writing very large datasets to SAP BW and performance is slow:

- This may be due to the CPI-DS loader batch size (defaulted to 1000 rows) being a bottleneck.
- The loader batch size can be adjusted to an optimum value for best performance according to your BW system resources.
- Not supported through UI – Currently in backlog.

```xml
<descriptionContainer/>
<properties name="LDRLiveLoad" value="no"/>
<properties name="Table_Type" value="BW_HIERARCHY_DATA_TRANSFORMATION"/>
<properties name="auto_correct_using_merge" value="yes"/>
<properties name="bulk_col_delimiter" value="/127"/>
<properties name="bulk_ldr_cleanup" value="yes"/>
<properties name="loader_xact_size" value="1000"/>
<properties name="bulk_ldr_max_blind_array" value="100000"/>
<properties name="bulk_ldr_max_discards" value="10"/>
<properties name="bulk_ldr_mode" value="append"/>
<properties name="bulk_ldr_rows_per_commit" value="1000"/>
```
Questions & Answers
Further reading on IBP Extraction

SAP IBP Data Extraction via SAP CPI-DS – Curl ERROR 52

SAP IBP Data Extraction via CPI-DS: How to best filter data by time?

SAP IBP Data Extraction via CPI-DS: How to extract key figures on different planning levels?
https://blogs.sap.com/2019/09/09/sap-ibp-data-extraction-via-cpi-ds-how-to-extract-key-figures-on-different-planning-levels/

SAP IBP Data Extraction via CPI-DS: Are your Filters considered?
Recent Webinars & Blogs

Meet the Expert SAP IBP WEBINAR: CPI-DS Customer Use Cases
https://dam.sap.com/a/3aCtujF

Meet the Expert: SAP IBP Webinar: External Integration Capabilities and Roadmap
https://dam.sap.com/a/2HX9hxq

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Troubleshooting Data Integration Tasks in SAP IBP

Use SAP S/4HANA core data services in CPI-DS
Thank you.

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