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Critical Role of SAP BW Bridge to Transition SAP Data Warehouse to the Cloud

Kumail Saifuddin Saif

kumail.saif@gmail.com
SAP Technical Architect & Projects Delivery Manager,
Accenture LLP, USA

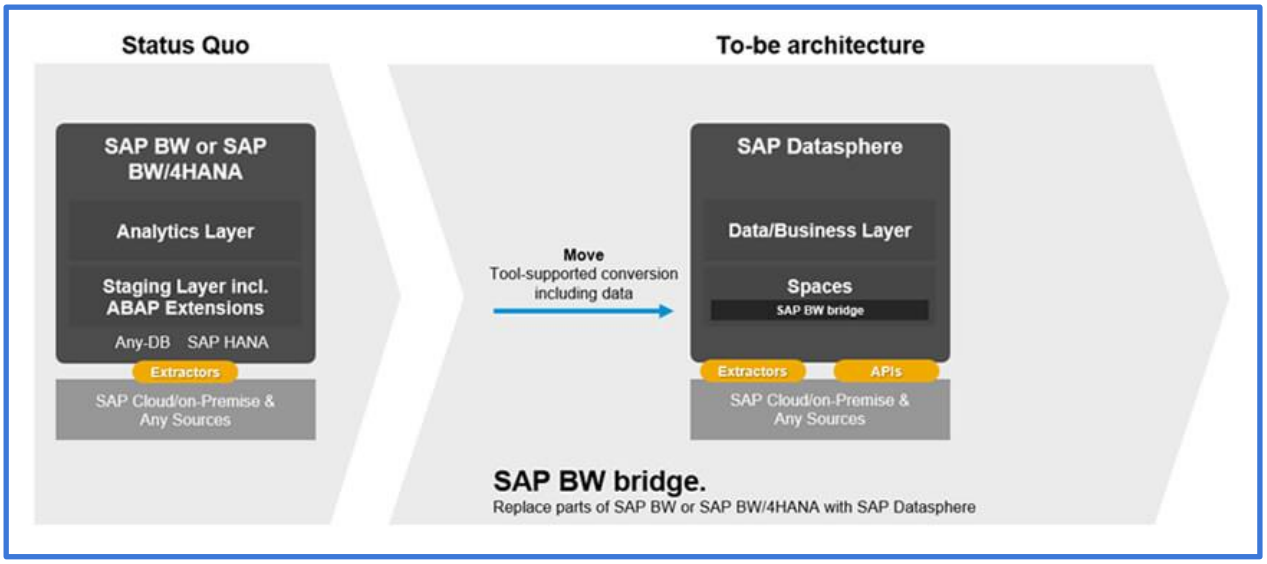
Abstract
SAP is innovating and providing industry leading data warehousing technologies to enable the Intelligent Enterprise. SAP Datasphere is the latest innovation in the data warehousing portfolio of SAP. It is a DWaaS (Data Warehouse as a Service) approach in the public cloud with very fast release cycles. However, SAP's existing customers who have SAP BW or SAP BW/4HANA on premise systems for Data Warehouse solutions have to transition their system to the cloud. SAP BW Bridge is introduced as an extension of SAP Datasphere that offers a functionality to migrate SAP BW data models to SAP BW Bridge environment and integrate with SAP Datasphere.

Keywords: SAP BW Bridge, SAP Datasphere, SAP BW, SAP BW/4 HANA, Cloud Migration

1 Introduction:

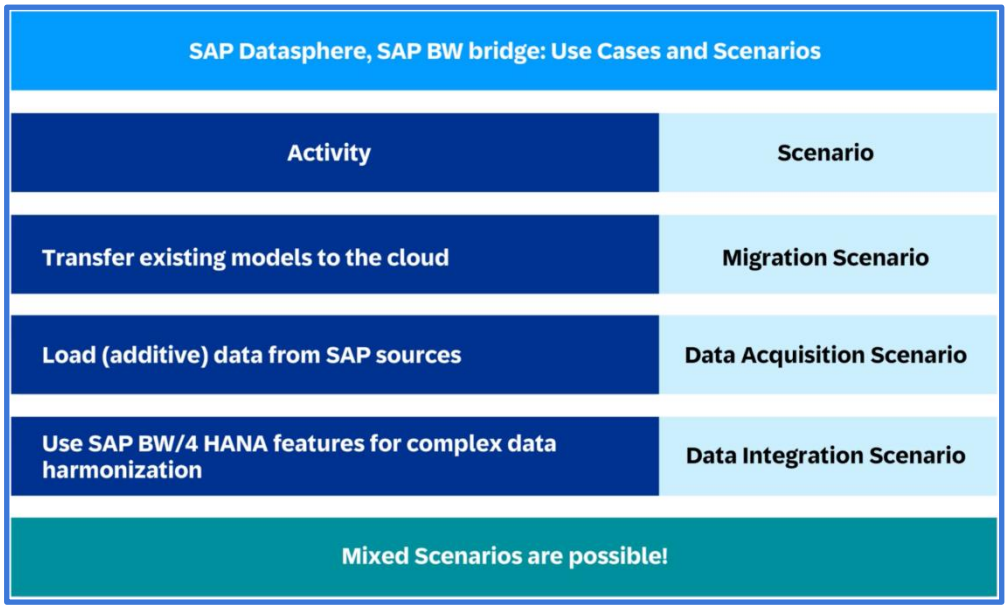
SAP Datasphere goes beyond the scope of the two on-premises and private-cloud offerings. SAP Datasphere and its open data ecosystem is the technology foundation that enables a business data fabric, which is a data management architecture that focuses on delivering an integrated, semantically rich data layer over underlying data landscapes to provide seamless and scalable access to data without duplication. SAP has presented a roadmap for the SAP BW and BW/4HANA customers to leverage their past investments in BW while allowing them a smooth transition from their legacy on-premises systems to the cloud. SAP BW Bridge plays a key role in this transition to the cloud. The SAP BW bridge is an SAP BW/4HANA system in a cloud, hence it offers SAP BW capabilities directly in SAP Datasphere. Therefore, SAP BW bridge enables customers to:

- Leverage SAP BW data structures, transformations, customizations, and skills, quickly extending SAP BW investments to the public cloud.
- Integrate on-premises SAP Business Suite data with familiar connectivity and semantic richness, retaining instant access while expanding your analytics depth
- Empower business to rapidly innovate on BW data with an open and unified data & analytics cloud service, scaling innovation and efficiency in the cloud



2 SAP BW Bridge Use Cases:

Customers that have been working with a SAP BW on-premise such as SAP NetWeaver BW 7.5 or SAP BW /4HANA for years and already integrated the data in different layers creating different BW objects or data flows and now want to leverage what has been done, they can simply migrate all the objects to SAP BW bridge and use it as a migration scenario. However additional data from different sources can also be uploaded as a Data acquisition scenario in the BW Bridge. In addition, complex transformations capabilities can be used and harmonized data can be exposed to the SAP Datasphere core tenant which is called the Data Integration Scenario. In most cases a mixed scenario can be used which is a combination of all of the above mentioned scenarios.

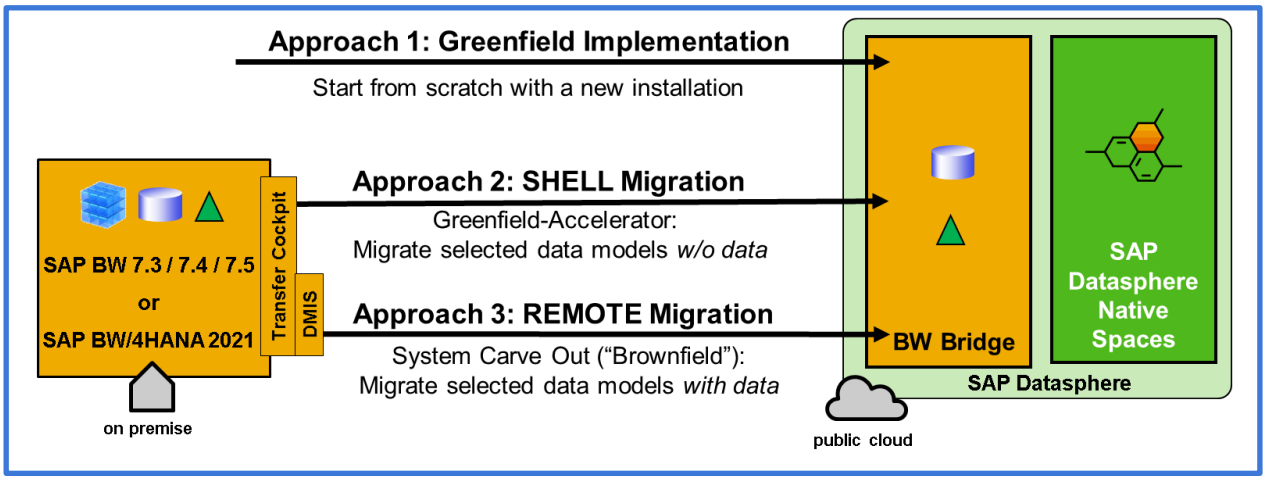


3 Migration Scenarios:

When you create new BW objects and data models in a BW bridge, it is a greenfield implementation and then load data to them from the connected source systems. However, when you already have an operational BW or BW/4HANA system and wish to move to SAP Datasphere, BW bridge. It can be

helpful and convenient to use an automated way to transfer such objects without the need to recreate them from scratch.

There are three possible approaches for the SAP Datasphere use case. Approach 1 is the Greenfield implementation, whereas the other two options are for the migration scenarios.



Approach 2 - SHELL Migration:

For SAP BW systems on releases from 7.30 to 7.50 running on SAP HANA or Any-DB and SAP BW/4HANA 2021, a SHELL migration can be performed. The Transfer Cockpit in the sending on-premise system can be used to select dedicated data flows (BW applications) and migrate them without data into an SAP BW bridge tenant. In SAP BW Bridge, the data models will be converted into successor object types, if required. During this process, new technical names for ADSOs generated from InfoCubes or DSOs can be defined. The same applies for CompositeProviders that are generated from MultiProviders. After the transfer to the BW Bridge, the InfoProviders do not contain any data there.

For loading the data, there are the following options:

- Historical data can be loaded either from the SAP BW sender system of the original SAP source.
- Current data can be loaded from the SAP source system.

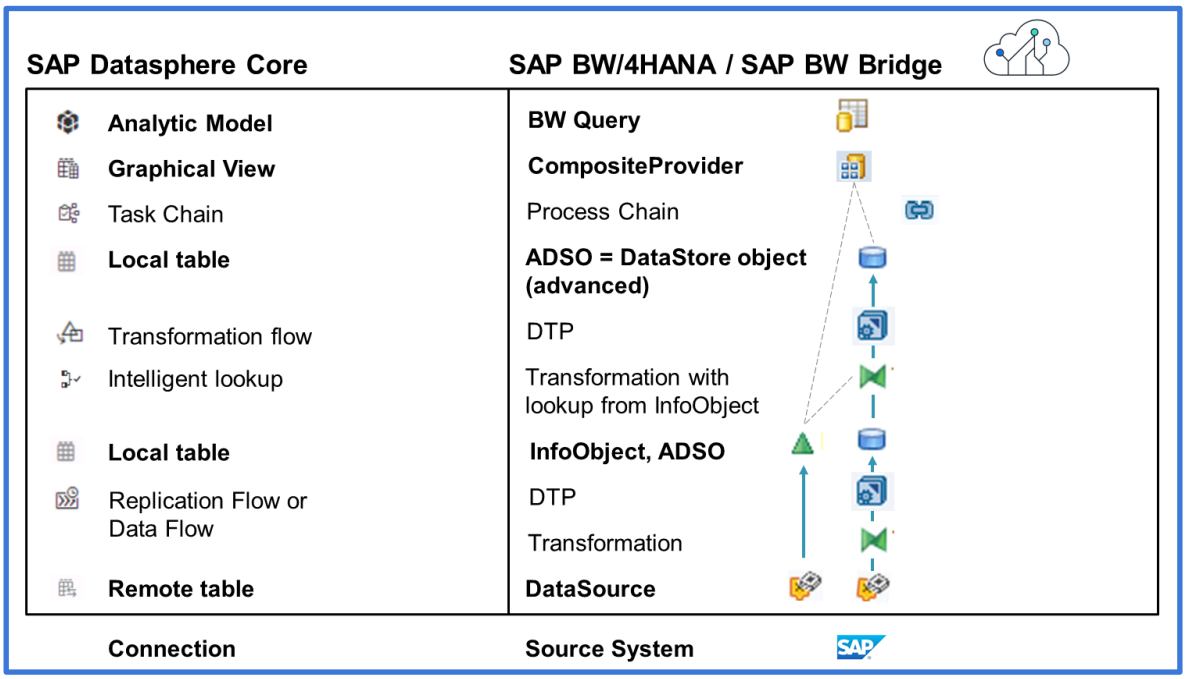
SAP provides a well-defined process for a shell migration to SAP BW Bridge.

Approach 3 - Remote Migration:

The Shell Migration is actually a subset of the Remote Migration. By using the Remote Migration, it is possible to automatically transfer the already existing data of the sender system. This transfer (metadata and business data) is done via RFC. There are some differences between Shell and Remote Migration in terms of the scope collection logic for the metadata transfer, especially because of the relationship and dependencies of the request management. When using the Remote Conversion, data and request Information need to be copied and converted from the sender into the receiver system, therefore all objects on which a data request is touching become relevant for the scope collection in order to ensure consistency.

4. Terminology:

The terminology used in the SAP BW bridge and SAP BW/4HANA is the same. However, you can see below the corresponding SAP Datasphere core tenant objects with similar purpose.



5. Value for SAP Customers:

SAP Datasphere is the latest innovation in SAP Data Warehousing space. In this new age of Cloud first strategy and Artificial Intelligence (AI) capabilities provided on the cloud platforms, it becomes essential for the customers to transition to the cloud using SAP Datasphere. SAP BW bridge provides the following key benefits in this essential transition to make the data warehouse future ready for SAP customers.

- Cloud Migration Path:
  It offers a clear pathway for SAP BW customers to migrate their data warehouse to the cloud without significant development effort.
- Preserving Existing Data:
  Allows users to access and utilize their existing BW data, objects, and business logic within the cloud environment.
- Reduced Development Time:
  Eliminates the need to rebuild data models and transformations from scratch in the cloud, saving time and resources.
- Seamless Integration:
  Enables integration between on-premise BW systems and cloud-based analytics tools in SAP Datasphere.
- Modern Analytics Capabilities:
  Provides access to advanced cloud analytics features while leveraging the familiarity of their existing BW structures.

- Faster return on investment:
  Businesses can transition to the cloud faster, which can lead to a faster return on investment.
- Improved performance:
  Semantic partitioning can help keep runtimes short, even with large data volumes.

Conclusion:

SAP Datasphere is the evolution of data warehouses bringing together so many powerful capabilities to cover the ever-growing technical and business data requirements. SAP BW Bridge helps businesses modernize their data warehousing by moving data from legacy SAP BW or BW/4 HANA systems to SAP Datasphere. This allows businesses to take advantage of cloud-based solutions while retaining their existing investments. Multiple migration paths provide flexibility for Businesses to adopt the cloud migration as per their business needs. SAP Datasphere leverages its embedded Machine Learning and Advanced Analytics capabilities which can drive the innovation faster for the businesses.

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