Modernize your Data Warehouse with SAP BW/4HANA

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Welcome message
welcome to this session

SAP BW/4HANA – is an integrated data warehouse solution optimized to fully leverage the SAP HANA in-memory platform. SAP BW/4HANA dramatically simplifies development, administration and user interface of your data warehouse resulting in enhanced business agility.

This new product is launched by SAP on Sept. 7th 2016

Let`s start!
What is BW/4HANA?
The next generation data warehouse, benefits, etc.

Future Architecture
Recommended reporting architecture

Feature Highlight
HANA optimized modeling objects, modern interface, data provisioning, and DLM

Transition Path
Which path you should go?
Key Takeaways

5 System Demo
Modeling in Eclipse, Open ODS view, etc.
The Next Generation Data Warehouse

SAP BW/4HANA...

• A new data warehouse solution
• Highly optimized for SAP HANA
• Solves analytics problems in seconds that take other systems days
• Leverages SAP HANA differencaitors (e.g. Integration,...)
• Integrates with new data sources and engines
• Accelerates solution development
• Is ready for the internet of things at petabyte scale
• Creates the logical data warehousing foundation

The transition from standard SAP BW to SAP BW/4HANA can be compared with the transition of the SAP Business Suite to SAP S/4HANA. As part of this transition, SAP BW/4HANA will drastically reduce the number of data objects to be stored and maintained, similar to the elimination of aggregates in SAP S/4HANA.
SAP BW/4HANA Design Principles

- Simplicity
  - Simplified data structure
  - Simple data flow
  - Reduced development effort

- Openness
  - Access all models through open SQL interface
  - Integration with big data scenario

- Modern Interface
  - New UI for everyone
  - Eclipse based modeling tool
  - Web based administration and monitoring

- High Performance
  - Push down data processing to HANA
  - Simplified code for HANA only
Future Reporting Architecture

Presentation Layer
- BOBJ Cloud
- Analysis for Office / OLAP
- Lumira Design Studio
- Fiori / UI5
- Webi
- Crystal

Data Sources
- HANA Vora / Hadoop
- Data Services
- Extract, Transform, Load
- Data Federation
- ...

SAP HANA Platform

BW/4HANA
- Composite Provider
- ADSO
- Info Object
- Open ODS View
- HANA Source System

HANA Analytics
- Enhanced View
- HANA View
- HANA View
- HANA Table

ODP

S/4HANA
- CDS
- Extractor

Eclipse
- HANA Studio
- BW Modeling Tools
- ABAP Development Tools

Data Federation

Fiori / UI5

Webi

Lumira Design Studio

Analysis for Office / OLAP

BOBJ Cloud
Feature: Accelerated Open Data warehouse development

**Simplified Data Model**
- CompositeProvider
- MultiProvider
- InfoSec
- VirtualProvider
  - “Operational” Provider

**Open SQL Support**
- Composite Provider (join and union)
- Open ODS View (native HANA views)

**Virtual Layer**
- HybridProvider
- InfoCube
- DataStoreObject
- Staging Area

**Persistent Layer**
- Advanced DataStore Object

- Master Data
- Enhanced HANA View
- Generate
- ADSO
- BW/4HANA Schema
- SAP HANA Schema
Feature: Modern Interface, Better User Experience

Data Modeling

Administration
Feature: New Data Provisioning Options

- DB Connect
- UD Connect
- Web Services
- SAP Data Services
- ODP
- SAPI
- File

SAP HANA Source System

SAP HANA

SAP BW

SAP HANA Source System

SDA

EIM: Smart Data Integration

Real-Time Replication

Direct Access

- Oracle
- DB2
- Twitter
- Hadoop
- OData
- Teradata
- Netezza
- IQ
- HANA
- ASE
- File
Feature: Multi-Temperature Data Lifecycle Management

SAP HANA

Hot Data
- Modern in-memory platform
- Real-time transaction and analysis
- Native predictive, text, and spatial algorithms

SAP HANA Dynamic Tiering

Warm Data
- New in-memory dynamic tiering option
- Disk-based, dynamic tiering option using smart columns
- High performance and efficient compression
- Excels at queries on structured data, from terabyte to petabyte scale
- No data duplication

SAP IQ NLS and ADK

Cold or Frozen Data
- Data persistence optimized in system landscape through relocation of infrequently accessed data to SAP IQ
- Less frequently accessed data archived in time partitions
- NLS data resides in a highly compressed state in cost-efficient storage with fewer backups to reduce operational costs

SAP HANA Vora HADOOP

Candidate Data
- Acceleration with SAP HANA Vora
- SAP HANA smart data access capability for Hive- and Spark-type scenarios

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# Transition to SAP BW/4HANA

<table>
<thead>
<tr>
<th>New Implementation</th>
<th>New customer or ready for a fresh start, migrate data from your legacy system to a new installation of SAP BW/4HANA with our integrated data management and quality tools.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP BW on AnyDB*</td>
<td>Upgrade your BW-on-AnyDB to BW-on-HANA then migrate to SAP BW/4HANA object set and convert to SAP BW/4HANA.</td>
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<tr>
<td>SAP BW on HANA*</td>
<td>Upgrade your system to BW7.5 on HANA, migrate to SAP BW/4HANA object set then convert to SAP BW/4HANA.</td>
</tr>
<tr>
<td>Landscape Simplification</td>
<td>Simplify your landscape to carve out selected processes, moving gradually to SAP BW/4HANA innovations. Improve M&amp;A activities by consolidating rapidly, delivering predictive capabilities.</td>
</tr>
</tbody>
</table>

*Conversion tool is still under development, targeted release time is end of the year, only green field implementation is available now.
New Implementation

**SAP or Non-SAP Data warehouse**
- SAP BW
- Or
- Any Legacy System
- Any Database

**WHAT**
- Install SAP BW/4HANA
- selective transport of BW objects (optional & BW/4HANA compatible objects only)
- Implement HANA-optimized data models and flows
- Followed by data load and quality checks

**HOW**
- Software Provisioning Manager (SWPM)
- system connection (SAP source)
- SAP BW/4HANA ETL
- File upload and/or SAP HANA EIM (legacy sources)
- Re-engineering and process simplification based on modern data warehouse architecture
- Eliminate old data and shrink system size
- Reap full benefits of SAP HANA platform

**PROS**
- More time and money need to be invested
- Need dual data warehouse landscape temporarily, before the new system is live and old system is decommissioned
- Re-extraction from source system is needed

**CONS**

**BW/HANA**
- SAP BW Modeling Tools
- SAP Business Objects Suite
- SAP BW/4HANA 1.0
- SAP HANA 1.0 SPS 12

**Installation & Transport of Objects**

**Data Load & Quality Check**
Conversion from BW on AnyDB

**WHAT**
- Upgrade to SAP BW 7.5, Powered by HANA and implement BW/4HANA add-on
- Transfer classical to HANA-optimized data models and flow, adjust custom code (if necessary)
- Check prerequisites and perform system conversion

**HOW**
- Database Migration Option (DMO)
- Object Transfer Tool
- Custom Code Analysis
- Software Update Manager (SUM)

**CONS**
- Data redundancy in the system, require more space
- Can not fully release the power of BW/4HANA without re-engineering
- Production system downtime

**PROS**
- Migration without reimplementation
- No disruption for existing business processes
- Re-evaluation of customization and existing data models and flows

**Technical Tasks**
- Database Migration, Release Upgrade, System Conversion

**Semantical Tasks**
- Pre-Checks, Object Transfer Custom Code Adjustment

**SAP Business warehouse**
- Any UI
- SAP BW 7.X
- Any Database

**BW/HANA**
- SAP BW Modeling Tools
- SAP Business Objects Suite
- SAP BW/4HANA 1.0
- SAP HANA 1.0 SPS 12
Conversion from BW on HANA

**WHAT**
- Upgrade to SAP BW 7.5, Powered by HANA and implement BW/4HANA add-on
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- Check prerequisites and perform system conversion

**HOW**
- Object Transfer Tool
- Custom Code Analysis, Software Update Manager (SUM)

**PROS**
- Migration without reimplementation
- No disruption for existing business processes
- Re-evaluation of customization and existing data models and flows

**CONS**
- Production system downtime
- May still need reengineering later, depends on how current system is architected and maintained

**Technical Tasks**
- Release Upgrade, System Conversion
- Pre-Checks, Object Transfer, Custom Code Adjustment

**Semantical Tasks**
- SAP BW Modeling Tools
- SAP BW/4HANA 1.0
- SAP HANA 1.0 SPS 12

**SAP Business warehouse**
- Any UI
- SAP BW 7.X, Powered By SAP HANA
- SAP HANA 1.0
Landscape Transformation

**WHAT**
- Install SAP BW/4HANA
- Implement consolidated and HANA-optimized data models and flows
- Followed by data load and quality checks

**HOW**
- Selective Data Migration (SLO)
- SAP Landscape Transformation (SLT)
- SAP Data Services, SAP BW/4HANA ETL or SAP HANA EIM

**PROS**
- Stay with current landscape and move gradually to SAP BW/4HANA innovations
- Harmonized data models through consolidation
- Carve out of single entities of the company to SAP BW/4HANA and leverage process simplification

**CONS**
- More time and money need to be invested
- Need to maintain more landscapes temporarily, before the systems got consolidated and old systems are decommissioned

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**Any UI**

**Any Database**

**Installation & Transport of Objects**

**Data Load & Quality Check**

**SAP BW Modeling Tools**
- SAP Business Objects Suite

**SAP BW/4HANA 1.0**

**SAP HANA 1.0 SPS 12**
Another Look At Conversion Path

Step 1: Classic DB migration and upgrade to latest SAP BW release using SAP DMO

Step 2: Implement add-on, use transfer tools to make system ready for SAP BW/4HANA

Step 3: “Conversion” – like an upgrade

SAP BW on xDB → SAP BW powered by SAP HANA → SAP BW 7.5 powered by SAP HANA + SAP BW/4HANA Starter Add-On → SAP BW/4HANA

Prerequisites for moving to SAP BW/4HANA
- Only use SAP HANA-optimized objects
- Only use ODP, HANA and FILE source systems
- No 3.x data flows
- No BEx front-end tools – BEx/BW Query stays
- No NLS partner solutions

Current limitations of SAP BW/4HANA
- Planning (IP/PAK and BPC) not yet supported
- No add-ons supported

SAP BW/4HANA Starter Add-On provides tools for migration
• Eclipse Environment
  • Data Sources
  • Info Area
    • InfoObject
    • ADSO (Advanced DataStore Object)
    • Open ODS View
    • Composite Provider
    • BW Query
    • BOBJ Advance analysis consume BW query

• GUI - RSA1
  • Source Systems
  • Process Chain
  • Transport Connection
Key Takeaways

- Is BEx query gone? Is RSA1 still in use? Is BPC supported?

<table>
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<th>BW/4HANA</th>
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<tbody>
<tr>
<td>Bex Query</td>
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<tr>
<td>Bex Query Designer</td>
<td>Eclipse Query Designer BOBJ</td>
</tr>
<tr>
<td>Bex Analyzer</td>
<td>Advanced Analysis</td>
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<tr>
<td>RSA1 Modeling</td>
<td>Eclipse Modeling</td>
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</tr>
<tr>
<td>BPC</td>
<td>No BPC</td>
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</tbody>
</table>

Thank You!!

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