



SAP HANA Course Content

Overview of the SAP HANA Basic Principles

SAP HANA Introduction

- ❖ In-Memory Computing
- ❖ Evolution of In-Memory computing at SAP
- ❖ History HANA
- ❖ HANA Hardware Sizing
- ❖ Product Availability Matrix
- ❖ HANA compare to BWA

SAP HANA Overview

- ❖ Architectural overview
- ❖ Row Store
- ❖ Column Store
- ❖ Persistency Layer

SAP HANA Versions and Studio overview

- ❖ SAP HANA Version
- ❖ History of Service pack details
- ❖ Studio Overview
- ❖ HANA Studio Preferences
- ❖ HANA Studio Prospective

SAP HANA Engines

- ❖ Column Store Engine
- ❖ Row Store Engine
- ❖ Join Engine
- ❖ OLAP Engines
- ❖ Calculation Engine
- ❖ Calculation Engine's Non-Relational Behavior

SAPHANA General Modeling Principles

SAP HANA Modeling

- ❖ **Design Attribute View**
- ❖ How to connect tables using
- ❖ Inner Join
- ❖ Left Outer Join
- ❖ Right Outer Join
- ❖ Full Outer Join
- ❖ Text Join
- ❖ Referential Join
- ❖ Union
- ❖ Filter
- ❖ Calculated Column

Design Analytic View

- ❖ Structural Overview
- ❖ Data Foundation
- ❖ Logical View
- ❖ Define View Semantics
- ❖ Left Outer Join – Attribute View
- ❖ Inner Join – Analytical View
- ❖ Right Outer Join – Analytical View
- ❖ Referential Join – Analytical View
- ❖ Run-time object: column view
- ❖ Calculated Attribute
- ❖ Calculated Measure
- ❖ Restricted Measure
- ❖ Filter
- ❖ Variable
- ❖ Input Parameter

Tables in HANA

- ❖ Column Store Table
- ❖ Row Store Table
- ❖ Table Type

SQL in HANA

- ❖ Basic SQL Knowledge
- ❖ Select Statement
- ❖ From Clause
- ❖ Where Clause
- ❖ Group By clause
- ❖ Having Clause
- ❖ Order by Clause
- ❖ Top N clause

SQL Procedure in HANA

- ❖ How to create Procedure
- ❖ Elements of the Procedure
- ❖ Procedures using Column Store Views
- ❖ IF-ELSE Logic
- ❖ For Loop Logic
- ❖ Cursor in HANA
- ❖ Dynamic Filter



CE based Script in HANA

- ❖ CE_COLUMN_TABLE
- ❖ CE_JOIN_VIEW
- ❖ CE_OLAP_VIEW
- ❖ CE_CALC_VIEW
- ❖ CE_JOIN
- ❖ CE_LEFT_OUTER_JOIN
- ❖ CE_RIGHT_OUTER_JOIN
- ❖ CE_FULL_OUTER_JOIN
- ❖ CE_PROJECTION
- ❖ CE_CALC
- ❖ CE_AGGREGATION
- ❖ CE_UNION_ALL

Design Calculation View

- ❖ Graphical Calculation View
- ❖ Calculation SQL Script method
- ❖ Graphical Calculation View Working with Nodes
- ❖ Graphical Calculation View Define View Result Set
- ❖ Graphical Calculation View Define View Semantics
- ❖ How to call Calculation view using SQL into Calculation Views
- ❖ Script-based CV: output column structure import
- ❖ Spatial support: spatial operations in model data flow
- ❖ Scenario redesign: replace node / replace data sources
- ❖ Extract semantics from data sources
- ❖ Table function as data sources
- ❖ Debugging Views with drill-down analysis
- ❖ Calculation View limitations in Designing and performance issues
- ❖ Select count (*) statement on top of a HANA graphical Calculation View leads to unexpected number of records in the result set.

Miscellaneous

- ❖ Delivery Units
- ❖ Transport Individual HANA Models
- ❖ How to load Excel data into HANA using Studio
- ❖ Export/Import
- ❖ How to create Sequence
- ❖ How to create Synonym
- ❖ How to create Trigger
- ❖ How to create View

Performance Tuning

- ❖ Index creation
- ❖ Partitioning
- ❖ Hash Partition
- ❖ Merge Partition
- ❖ Round Robin Partition
- ❖ Multi-Level Partition
- ❖ Table Redistribution

Security & User Management

- ❖ Creating Users
- ❖ Creating Roles
- ❖ Privileges
- ❖ Authorization challenges
- ❖ User Administration
- ❖ Backup & Recovery
- ❖ Collecting traces

Data Provisioning

- ❖ SAP Data Services extraction
- ❖ SAP SLT Replication
- ❖ Smart Data Access
- ❖ SAP HANA-Direct Extractor Connection (DXC)

SAP Data Services Overview

- ❖ What is SAP Data Services
- ❖ SAP Data Services Architecture
- ❖ SAP Data Services objects (Job, Data Flow, Work Flow, Transformations)



SAP Data Services Extraction

- ❖ Loading Data from SAP ECC to SAP HANA DB
- ❖ Loading Data from SAP BW to SAP HANA DB
- ❖ Loading Data from MSSQL Server DB to SAP HANA DB
- ❖ Loading Data from Excel to SAP HANA DB
- ❖ How to load data from HANA Information Models to MSSQL DB

SAP SLT Data provisioning overview

- ❖ What is SAP SLT
- ❖ SAP SLT License options
- ❖ SAP SLT system sizing
- ❖ SAP SLT system landscape preparation

SAP SLT Schema configuration

- ❖ How to configure SLT Schema for SAP Source system
- ❖ How to configure SLT Schema for Non-SAP Source system
- ❖ No. of Data transfer Jobs configuration
- ❖ How to improve Initial data loading
- ❖ Tables configuration in SLT using Data Provisioning

SAP SLT Performance tuning technics

- ❖ Monitoring Replication in SLT
- ❖ Access Plan
- ❖ Reading Types
- ❖ Adding Entry in the table IUUC_PRECALC_OBJ
- ❖ Adding Entry in the table IUUC_PERF_OPTION
- ❖ MWBMON
- ❖ How to do Partition in SLT
- ❖ How to restrict the tables that are allowed for replication
- ❖ HANA Supported Data Types
- ❖ How to change the standard mapping

Advanced Replication Settings

- ❖ How to Edit target table structure
- ❖ How to Import and Export transformations
- ❖ How to set Reading Types to handle large data tables loads

HANA Advanced Analytics

HANA Reporting BO Tools

- ❖ How to Connect with IDT
- ❖ How to create Universe using HANA Tables
- ❖ How to create Webi Reports
- ❖ Webi Functions
- ❖ How to schedule Webi reports
- ❖ How to assign the Webi reports to the End users

HANA Reporting with Crystal Reports 2013

- ❖ Report Designer
- ❖ Report creation wizard
- ❖ Sections
- ❖ Sorting and Grouping
- ❖ Chart expert
- ❖ Formulas
- ❖ Sub reports

HANA Reporting with Crystal Reports for Enterprise

- ❖ How to Connect HANA with Crystal Reports for Enterprise
- ❖ How to create reports

HANA Reporting with SAP Dashboards

- ❖ How to Connect HANA with Dashboards
- ❖ How to create Dashboard Reports

HANA Reporting with SAP Lumira

- ❖ How to Connect HANA with SAP Lumira
- ❖ How to Explore HANA Data with Lumira
- ❖ Publish Lumira report

HANA Reporting with SAP Design Studio

- ❖ SAP Design Studio Overview
- ❖ How to create reports

HANA Reporting with SAP Predictive Analysis

- ❖ SAP Predictive Analysis Overview
- ❖ How to Explore data with Predictive Analysis



BW 7.3 powered by HANA Overview

- ❖ BW 7.3 powered by HANA Overview
- ❖ Sizing report for SAP BW on HANA
- ❖ BW7.30-HANA Optimized Info Cube
- ❖ BW7.30-HANA Optimized Info DSO
- ❖ Importing SAP BW7.30 Models into HANA Modeling environment
- ❖ Publish Standalone HANA Models into SAP BW 7.30 on HANA
- ❖ BW on HANA Migration activities

BW 7.4 powered by HANA Modeling in Studio tool

- ❖ CompositeProvider
- ❖ Open ODS View
- ❖ Advanced DataStore Object
- ❖ Query in Eclipse

SAP HANA as Secondary Database

- ❖ SAP HANA End to End Mock Implementation Project
- ❖ How configure SAP 150 ECC tables using SLT Replication
- ❖ How to configure Data loads using SAP Data Services from Oracle DB
- ❖ How Create HANA Information models based on Business Requirement
- ❖ Creating HANA Models using Combination of multiple Sources
- ❖ How to generate SAP BO reports and Assign to End User
- ❖ Creating 3 HANA Implementation projects Proof of Concepts
- ❖ Guidance to Create HANA models Architecture for Implementation project

SAP HANA Certification Guidance

- ❖ SAP HANA Exam Code C_HANAIMP141
- ❖ HA100 and HA300 Documents can be provide for certification preparation purpose.
- ❖ SAP HANA Exam Dumps can be provided, to clear certification exam.