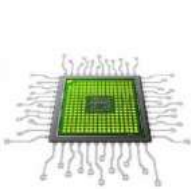# ABAP on HANA cum S/4 HANA Training

> **Target Audience**: Application Developers, Architects, Delivery Managers, Any SAP Enthusiast wants to learn S/4HANA programming with CDS
>
> **Prerequisites-Basic** knowledge of Application Program programming, Basic programming skills, Knowledge of Open SQL, A general understanding of HANA would be beneficial.

Duration: 40+ Hours – A promise of no copy paste

We also provide server access on-demand which has all latest stuff you need. After completing this training, you

- *Will learn how existing code work, when we migrate ABAP Application Program on HANA DB?*

- *Will you be able to optimize the code for performance and build HANA Optimized Fiori Apps?*

- *Able to position yourself as S/4HANA Developer*

- *Can build new style applications with optimized stack S/4HANA using BOPF and Fiori?*

- *Be able to code with new NW 7.5 Application Program syntax and S/4HANA CDS entities and AMDP?*

Highlights:
7+ Case Studies | Latest Server
Newest Concepts | Top notch tooling like BAS- Business Application Studio
Certification Guidance | Interview Questions

Certification Code – C_HANAAW_17

Session: 1

Introduction of HANA

- Introduction to IMCE(In-Memory Computing Engine)
- Hardware and Software Innovation
- Row v/s Column Store
- Evolution of HANA with SAP solutions
- Architecture of SAP HANA Platform
- Describing Index Server
- Describe How System Design Works

Session: 2

- Describing Job Roles
- Tool's
  - o Installation and Setup of ABAP Development Tool (ADT) on Eclipse.
  - o Connection to your HANA Database System via HANA Studio.
  - o Installation of Web IDE
  - o How we use BAS (Business Application Studio)
- Describing Sever Option's and Details
- How ABAP Meets HANA Database
- Understanding Concept of Schema

Session: 3

- New ABAP Syntax
  - o Inline data declaration
  - o Dynamic memory references
  - o SQL Statement with escaping of host variables
- SQL Enhancement
- Introduction to DML, DDL, DCL, DQL.
- Describe EPM Data Model
- ABAP connects to HANA
- Understanding HANA Folder Structure

- Elaborating Design Time Object
- Describing HANA Basics

Session: 4

- Showing Migration to SAP HANA as well as S/4 HANA
- Describing Any Database Migration to HANA Database
- ATC (ABAP Test Cockpit) v/s SCI (SAP Code Inspector)
- S/4HANA Code Conversion

Session: 5

- Performance Guideline for ABAP CODE
- Describing SQLM (SQL Monitor)
- Understanding Code inspector variants
- Describing Data Migration Point
- Static check with SQL performance (SWLT)
- SQL performance work list monitor

Session: 6

- OIA Scenario (Open Item Analysis)
- Articulate Requirement for OIA
- Execute OIA on ABAP
- SQL Console
- Introduction to HANA Database User
- Data Modeling
  - o Attribute View
  - o Analytics View
  - o Calculation View
    - Graphical Calculation Views
    - Scripted Calculation Views
- Classification of Join

Session: 7

- Creation and execution of Data Models
- Showing Concept of currency conversion
- Concept of Dimensions and Measures
- Implementing OIA Using Calculation View
- Concept of Delivery Unit

Session: 8

- Consume HANA Objects
  - ADBC (ABAP Database Connectivity)
  - View Proxy
  - CDS (Core Data & Service)
- Transporting of Dependent Objects
  - Lifecycle Management
  - HANA Transport Container
- SQL Script
  - Declarative Logic
  - Imperative Logic
- Making Data Flow Graph
- Containers
  - Anonymous Block
  - Stored Procedure
  - User-defined function
    - Scalar UDF
    - Table UDF

Session: 9

- Describing Data Objects in SQL Script (Variables)
  - Scalar
  - Array
  - Tables
- Concept of Procedure
  - Create Procedure
  - Update Procedure

- o Delete Procedure
- Concept of Cursor
  - o Implicit
  - o Explicit
- Making Procedure with parameters
- Making Anonymous Block in HANA Database
- Describing User Defined Function with HANADB
- Reuse Function for SQL queries

Session: 10

- What is AMDP
  - o Introduction of AMDP
  - o Implementation of AMDP
- Why we use AMDP
- Describing Rules for AMDP
- Describing New way to Create Structure
- Create AMDP for Consume SQL Script in ADT
- How to Debug AMDP

Session: 11

- Introduction of CDS(Core Data & Service)
- Concept of CDS View
- Understand CDS View Entities (Newer Concepts)
- How Entities are different from CDS Views
- Describing Standard CDS View
- Understanding Concept of Code to Data Paradigm

Session: 12

- CDS Associations
- Describing CDS View on View
- Making Virtual Data Model's (VDM)
  - o Basic/Interface View
  - o Composite View

     o Consumption View
- Describing CDS Angle
- Create your own OData Service on top of CDS Views

Session: 13

- Create Fiori App by CDS
- Elaborating Uses of CDS for Analytics
- Describing CDS Annotations
    - Object Model Annotations
    - OData Annotations
    - Analytical Annotations
    - End User Annotations
    - UI Annotations

Session: 14

- S/4HANA Embedded Analytics
    - Query Browser
    - ALP (Analytic List Page)
    - OVP (Overview Page)
- Describing (SAP Analytics Cloud) SAC Consumption
- Making CDS DCL (Authorization and Secure Programming)
- Understanding SAP ABAP Security
- Secure Data from CDS View using DCL

Session: 15

- CDS Table Functions
- CDS-BOPF Integration
- Describing Validation in (Business Object) BO
- Implementation of Smart filter Fiori Application
- Transactional Fiori App with CDS and BOPF

Session: 16

- Hierarchy CDS Programming with Tree Table
  - New Hierarchy
  - Classical Hierarchy
- Implementation of End to End Hierarchy Scenario of Employee Manager Hierarchy by Fiori App
- Describing Functional Information of Hierarchy

Session: 17

- Create Fiori App with annotation File on Top of CDS
- Describing Details about Idoc
- Understanding CDS Metadata Extensions
- Create your OVP (Overview page) Fiori Elements show Analytical dashboard

Session: 18

- S/4HANA End to End POC of list report
- Using @UI Annotations
- Create Analytic App using OVP Floorplan and @Chart Annotations
- Describing Lifecycle of App
- Understanding Deployment of App's using BAS and CDS

Session: 19

- S/4HANA End to End POC

Session: 20

- ALV IDA (Integrated Data Access)
- Fuzzy Search

Complementary

- Basics of OData Services
- OOPS – RTTI Concepts