

# **CAREER PATH -SAP CONSULTANT – (TECHNICAL)**

## **CAREER PATH -SAP CONSULTANT – (TECHNICAL) – COURSE SYLLABUS**

### **SAP ABAP**

#### **1. Introduction to ABAP/4**

- Introduction to ERP
- Introduction to SAP/3, ABAP/4
- ABAP Editor
- System Landscapes
  - ✓ 3 – Landscapes
  - ✓ 4 – Landscapes
  - ✓ 2 – Landscapes
- Data Types & Keywords

- Output Statements
- Arithmetic Operations
- Relational Operations
- Writing Small Programs
- String Operations
  - ✓ Translate
  - ✓ Condense
  - ✓ Concatenate
- Control Statements
- Selection Screens
  - ✓ Parameters
  - ✓ Select-Options
- Open SQL Statements (Insert, Modify, Delete, Update)
- Simple Reporting

## 2. Transport Organizer & Package Builder

- Why to Transport?
- Creation of a Task
- What is a Transport Request?
- Releasing of Request
- Package Creation

## 3. Data Dictionary

- Creation of Database Tables
- Data Element & Data Domain
- Structures & Table Types
- Search Helps
  - ✓ Elementary Search Help
  - ✓ Collective Search Help
- Creation of Views
  - ✓ Database View
  - ✓ Projection View
  - ✓ Maintenance View
  - ✓ Help View
- Type Groups
- Creation of Foreign Keys
- Check & Value Tables

## 4. Reporting

- Debugging Techniques
- Pillars of ABAP
  - ✓ Work Area
  - ✓ Internal Table
- Modularization Techniques
  - ✓ Sub-Routines
  - ✓ Includes
  - ✓ Function Modules
- For All Entries & Joins
- Events for Classical Reports
- Events for Interactive Reports
- Types of Messages & Message Class Creation

## 5. ABAP List Viewer

Introduction to ABAP List Viewer

Types of ABAP List Viewer

- Function Module for List Display
- Function Module for Grid Display
- Interactive ALV (SLIS)

## 6. Interfaces

- Introduction to Cross Applications
- Working with RFC Function Modules
- Overview of Business Objects
- Creation of Business Objects
- Creation of BAPI

## 7. Conversion

Why Data Transfer?

- Introduction to BDC
- Recording a Transaction
- Methods in BDC
  - ✓ Call Transaction
  - ✓ Session Method
- Flat File Creation
- Uploading Data
- LSMW (Legacy System Migration Workbench)

## 8. Enhancements

- Introduction to Enhancements
- User Exits
- Customer Exits
- Introduction to BAdIs (Business Add Ins)
- Implementation of a BAdI
- Overview of Enhancement Spots, Enhancement Sections, Enhancement Implementations, Class Enhancements

### **9. Forms (Scripts & SMARTFORMS)**

- Introduction to Scripts
- Layout Sets
- SAP Scripts Elements
- Logo Inclusions
- Working with SMARTFORMS
- Standard Text
- Graphics Managements
- Writing Print Programs & Designing Layouts
- Output Type Configuration to Standard Orders

### **10. Object Oriented ABAP**

- Fundamentals of Object Orientation
- Introduction to Local Classes & Methods
- Importance of Access Specifiers
- Simple Reporting using Local Classes & Methods
- Introduction to Global Classes & Interfaces
- Uses of Global Classes in Reports

### **11. Module Pool Programming**

- Introduction to Module Pool
- Flow Logic
  - ✓ PAI (Process After Input)
  - ✓ PBO (Process Before Output)
- Screen Designing
- Programming in Object Browser
- Creation of Table Controls
- Dynamic Screens
  - ✓ Call Screen
  - ✓ Set Screen
  - ✓ Leave to Screen

- ✓ Leave Screen

## 12. Sales & Distribution Flow

- Sales Cycles
  - ✓ Inquiry
  - ✓ Quotation
  - ✓ Purchase Order (MM)
  - ✓ Sales Order
  - ✓ Delivery
  - ✓ Billing
  - ✓ Returning Customer

## **SAP ABAP on HANA** **Course Syllabus**

### **Unit 1: Introduction**

1. SAP HANA Basics and Technical Concepts
2. Introducing the SAP HANA Studio
3. ABAP and SAP HANA
4. Introducing the ABAP Development Tools (ADT)

### **Unit 2: Database Independent Code-to-Data**

1. Classical Open SQL and Its Limitations
2. New Open SQL
3. Core Data Services in ABAP
4. Associations in Core Data Services
5. Core Data Services with Input Parameters
6. Incorporating Authorization Checks with CDS

### **Unit 3: SQL and SQL Script Basics for SAP HANA**

1. Reading data from a table or view
2. Calculated Columns and Functions
3. Duplicate Elimination
4. Sorting and limiting result sets
5. The WHERE clause
6. Aggregating and grouping data
7. SQL Script basics

### **Unit 4: SAP HANA specific Code-to-Data**

1. ABAP Database Connectivity (ADBC)
2. Native SQL Syntax
3. ABAP-Managed Database Procedures
4. Debugging ABAP-Managed Database Procedures
5. Core Data Services with Table Function

### **Unit 5: SAP HANA Proxy Objects**

1. Creating and using External Views
2. Database Procedure Proxies
3. HANA Transport Container

### **Unit 6: Advanced Topics**

1. Using SAP HANA Full-Text Search in ABAP
2. Enabling input fields for type-ahead search
3. SAP List Viewer (ALV) for SAP HANA

**SAP BW/4HANA**

- **Getting started**
  - SAP HANA
  - SAP BW/4HANA
  - SAP BW/4HANA Modeling Tools in Eclipse and SAP BW/4HANA Cockpit
- **Paths to SAP BW/4HANA**
  - Overview with additional details for In-Place Conversion as well as Remote Conversion.
- **SAP HANA Modeling**
  - SAP HANA native Modeling of Calculation Views
- **Modeling and Running the SAP BW/4HANA Data Warehouse**
  - InfoObject Enhancements
  - Advanced DataStore-Objects
  - Composite Providers
  - BAdI-Providers
  - HANA-optimized Transformations
  - Process Chain Enhancements
  - HANA-optimized Analytic Manager
  - HANA Analysis Processes
  - Changes regarding Authorizations
  - SAP BW/4HANA Statistical Analysis based on ABAP CDS Views
  - SAP BW/4HANA Tool Collection
- **Modeling with SAP's Reference Architecture LSA++**
  - Review of Layered Scalable Architecture (LSA)
  - From LSA to LSA++: Streamline Core Layers
  - LSA++: Open Operational Data Store Layer based on Open ODS Views
  - LSA++: BW/4HANA Workspaces
- **Hybrid Modeling in Mixed Scenarios**
  - Generation of external HANA-Views for BW/4HANA Objects
  - Modeling Mixed Scenarios
  - SAP BW/4HANA Content Add-On
  - Use case for Mixed Scenarios: SAP Predictive Analytics (optional)
- **SAP BW/4HANA Data Lifecycle Management**
  - Multi-Temperature Data Management
  - SAP BW/4HANA Data Tiering Optimization
  - Additional Tiering Concepts
- **Data Provisioning into SAP HANA and SAP BW/4HANA**
  - Overview of Data Provisioning Methods into SAP HANA

- SAP LT Replication into SAP HANA
- SAP HANA Smart Data Access
- SAP HANA Smart Data Integration incl. real-time Streaming
- Operational Data Provisioning into SAP BW/4HANA based on SAP Extractors, ABAP CDS Views, HANA Information Views and BW InfoProviders
- Integration of Big Data

## **SAP BUSINESSOBJECTS BUSINESS INTELLIGENCE**

SAP BusinessObjects (BO) Business Intelligence is a reporting tool offered by SAP. SAP BO offers intelligent solutions that can be made use of by people ranging from analysts and other people who work with information to CEO's.

### **1. Introduction:**

- Understanding BusinessObjects Enterprise
- What is BusinessObjects Enterprise?
- Working with SAP BO Launchpad (Infoview)

### **2. SAP Business Objects Web Intelligence and BI Launch Pad 4.1**

- SAP Business Objects Dashboards 4.1
- BI launch pad: What's new in 4.1
- Restricting data returned by a query
- Enhancing the presentation of data in reports
- Formatting reports
- Calculating data with formulas and variables
- Using multiple data sources
- Analyzing data
- Managing and sharing Interactive Analysis documents
- Reporting from Other Data Sources
- Introducing Web Intelligence
- Accessing corporate information with Web Intelligence
- Understanding how universes allow you to query databases using everyday business terms.
- Managing documents in InfoView
- Viewing a Web Intelligence document in InfoView
- Setting Info View Preferences
- Creating Web Intelligence Documents with Queries
- Getting new data with Web Intelligence
- Creating a new Web Intelligence document
- Modifying a document's query



- Working with query properties
- Restricting Data Returned by a Query
- Modifying a query with a predefined query filter
- Applying a single-value query filter
- Using prompts to restrict data
- Using complex filters
- Displaying data in tables and charts
- Presenting data in free-standing cells
- Enhancing the Presentation of Reports
- Using breaks, calculations, sorts and report filters
- Ranking data to see top or bottom values
- Using alerter to highlight information
- Organizing a report into sections
- Copying data to other applications
- Alternative Query Techniques Using Combined Queries Using Sub-Queries
- Creating a Query based on another Query
- Character and Date String Functions Using the character string functions  
Concatenating different data types Using date functions
- Using If Logic
- Grouping data using If() logic
- Using If() to modify calculation behaviour
- Advanced Reporting Features Formatting breaks
- Creating custom sorts
- Displaying document data in free-standing cells
- Alternative Query Techniques Defining Combined Query Types Using Combined Queries
- Using Sub-Queries
- Creating a Query on a Query
- Character and Date String Functions Understanding Character Strings
- Using Date Functions User-Defined Objects Creating User Objects
- Using a User Object in a Query
- Editing a User Object Deleting a User Object Storing a User Object Grouping Data

### **3. Information Design Tool 4.0**

- What is the Information Design Tool (IDT)
- Create a project
- Create a connection to a relational database (Single and Multiple databases)
- Create the data foundation with Single & Multiple databases
- Define the different types joins in a data foundation
- Create a business layer
- Create folders and objects
- Resolve Loops and Use alias

- Resolve Loops Use contexts
- Resolving the fan traps and Chasm traps problem
- Define data restrictions
- Work with LOVs
- Use Parameters restrict data
- Use @functions also Aggregate Awareness
- Create Derived Tables and Index Awareness
- Maintain universes
- Deploy and manage and maintain universes

#### 4. Universe Designer Tool 4.0

- Understanding Business-Objects Universes.
- Understanding how universes allow users to query databases using their everyday business terms.
- Creating Universe Connections.
- The course database and universe.
- Creating the universe.
- Building and populating the Universe Structure.
- Defining joins in a universe.
- Creating Dimension Objects.
- Understanding classes and objects.
- Creating Measure Objects.
- Understanding measure objects.
- Using List of Values.
- Resolving Loops.
- Resolving loops using aliases.
- Resolving loops using contexts.
- Chasm traps and Fan traps.
- Restricting the data returned by objects.
- Using Functions with Objects.
- Using @ Functions.
- Using Hierarchies.
- Working with hierarchies.
- Aggregate Awareness.
- Derived Tables
- Securing Universes.
- Managing Universes

#### 5. SAP Business Objects Dashboards 4.0 (Crystal Xcelsius 2011)

- Crystal Xcelsius Overview
- Creating Dashboards using Query As A Web Service (QAAWS) and Live Office

- Create Drill Down dashboard reports
- What's new in SAP Business Objects Dashboards 4.0
- Creating a Visualization
- Producing interactive visualizations
- Getting around in Xcelsius
- Working with your Excel workbook
- Visualizing data with charts
- Using Xcelsius Components
- Formatting a Visualization
- Applying formatting options
- Using themes and templates to apply formatting
- Adding Interactivity to a Visualization
- Using selectors
- Adding dynamic visibility
- Using live data sources
- Connecting to BO Universes using Query as a Web Service
- Using Live Office data
- Creating Complex dashboards
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## 6. SAP Crystal Reports 2011

- Creating reports
- Selecting records
- Organizing data on reports
- Formatting & section formatting
- Creating basic and complex formulas
- Using variables
- Using report templates
- Applying conditional reporting
- Building parameterized and specialized reports
- Summarizing data with cross tabs
- Using report sections
- Representing data visually
- Managing reports
- Distributing reports
- Using repository and repository data sources
- Report processing
- Linking Crystal Reports to Webi reports
- Drill down reports

**SAP Data Services (BODS) - Course Syllabus**

1) BODS overview

1. Over view of the Data services
2. Data services benefits, associated products, interfaces
3. Data services Architecture on single and distributed environment

2) BODS Designer concepts

1. Creating the repository (Local, Central repository)
2. Exploring the menu options in the designer
3. Creating the project, Job flow, Data flow, Work flows etc., defining different types of Data stores (Source and destination data stores)
4. Use data store and system configurations
5. Defining file formats for flat, Excel, XML files

3) Batch Jobs

1. Creating Batch Jobs
2. Work with objects
3. Create a data flow
4. Adding the Query transform to the data flow
5. Use target tables
6. Execute the job

4) Defining Data Integrator Transforms

1. Date Generation Transform
2. Pivot Transform
3. Reverse Pivot Transform
4. XML\_Pipeline Transform

5) Defining Data Platform Transforms

1. Query Transform
2. Case Transform
3. Merge Transform
4. Validation Transform
5. Row Generation Transform
6. SQL Transform

6) Defining Data Quality Transform

1. Address Cleanse
2. Geocoder

7) Implementation of SCD

1. SCD Type0
  - Query Transform
2. SCD Type1
  - Table Comparison Transform
  - Map\_Operation Transform
3. SCD Type2
  - Table Comparison Transform
  - History Preserving Transform
  - Key Generation Transform

8) Using Functions, Scripts, and Variables

1. Define built-in functions
2. Use functions in expressions
3. Use variables and parameters
4. Create Custom functions
5. Use Data Services scripting language

9) Data Assessment

1. Using the data profiler
2. Using the validation transform

10) Setting up Error Handling

1. Set up recoverable work flows

11) Setting up Exception Handling

1. Try/Catch Techniques

12) IF Conditional

13) While-Loop Implementation

14) Capturing Changes in Data

15) Data Assessment

1. Update data over time
2. Use source-based CDC
3. Use target-based CDC

- SCD Type 2

16) Multi-User Environment(Local Repo Vs Central Repo)

17) SAP Integration

1. Data extraction from ECC system to File, Table and SAP BI
2. Data extraction from ECC Extractors
3. Data Extraction from SAP BW
4. ABAP Workflows

18) SAP HANA and SAP BODS Integration

1. Introduction to SAP HANA
2. Introduction to SAP HANA Studio
3. Create Data Store for SAP HANA
4. Perform the load into SAP HANA
5. Store the data in Column Store
6. Preview the data in SQL console of SAP HANA Studio

19) Information Steward

1. Data Insight
2. Metadata management
3. Metapedia

## **SAP HANA 2.0**

### **COURSE DETAILS & CURRICULUM**

**Lesson 1: SAP HANA Foundation**

**Lesson 2: Deployment Strategies**

- On-Premise
- On-Cloud
- Side-Car

**Lesson 3: Architecture of SAP HANA**

**Lesson 4: Replicating Data to SAP HANA**

- Business Objects Data Services (BODS)

- SAP Landscape Transformation (SLT)

#### **Lesson 5: SAP HANA Studio Interface**

- Attribute View
- Analytic View
- Calculation View
- Catalog - Schemas, HANA Live Package
- SAP HANA - SQL Overview
- SAP HANA Transports Options
- SAP ABAP - HANASAP HANA CDS Views

#### **Lesson 6: SAP HANA Reporting Overview (BOBJ)**

- BO WEBi
- BO Crystal Reports Enterprise
- BO IDT (BO UNX)
- BO CMC (Admin-SSO)
- BO AO (Analysis Office)
- BO Design Studio
- SAP Lumira & Smart Business Client
- SAP Fiori & SAP NetWeaver Business Client7

#### **Lesson 7: SAP HANA System Monitoring & Administration**

- DBA Cockpit
- Database Migration Option (DMO)

#### **Lesson 8: SAP HANA Security & Authorization**

- User Management
- Role Management

#### **Lesson 9: Advanced Features Overview**

- SAP HANA Web IDE
- SAP Predictive Analytics on HANA
- SAP BW-BPC embedded on HANA
- SAP S/4HANA

- Rapid Deployment Solutions (RDS) for HANA
- SAP Activate Solution Manager

### SAP HANA ADMIN

#### Lesson 00 - SAP HANA ARCHITECTURE

##### Lesson 01 - SAP HANA Architecture

- In-Memory Computing
- Hardware-Innovations
- Software –Innovations
- SAP HANA simplified Architecture
- SAP HANA Extended Architecture
- Business Intelligence Clients with HANA
- HANA Columnar Store
- SAP HANA row store VS Columnar store
- Understanding Columnar Storage

##### Lesson 02 - SAP HANA Edition

- SAP HANA Enterprise Edition
- SAP HANA Enterprise Extended Edition (As of SPS03)
- SAP HANA Platform Edition

##### Lesson 03 - SAP HANA Sizing

- SAP HANA In-Memory Database Sizing elements
- RAM, Disk, CPU
- Memory Sizing
- Disk Sizing
- CPU sizing

##### Lesson 04 - SAP HANA Versions

- HANA 1.0 SPS03
- HANA 1.0 SPS04—New Features
- HANA 1.0 SPS05—New Features
- HANA 1.0 SPS06—New Features

##### Lesson 05 - SAP HANA INSTALLATION OVERVIEW

##### Lesson 06 - SAP HANA Hardware and Software Requirements

- Certified Hardware
- SLES 11 Sp1



- Preparing file system & directories
- Prepare Installation parameters
- Users created during Installation
- Required Installation media
- Prepare Installer configuration file

#### **Lesson 07 - Installing SAP HANA**

- SAP HANA unified Installer Tool
- Running Unified Installer to install the SAP HANA SERVER
- Components installed by Installer

#### **Lesson 08 - Install HANA Client**

- Available Clients on Linux
- Available Clients on windows
- Install SAP HANA Client on LINUX Host
- Install SAP HANA Client on Windows Host

#### **Lesson 09 - Install HANA Studio**

- System Requirements
- Supported Platforms
- Install SAP HANA Studio on LINUX Host
- Install SAP HANA Studio on Windows Host

#### **Lesson 10 - Post – Installation Steps**

- Starting and Stopping SAP HANA System
- Displaying Process List
- Logging on to HANA system using HANA studio
- User Security
- Configuring SUM for HANA
- Automatic Start of HANA
- Applying Support packages and Updates
- Monitoring HANA Landscape

#### **Lesson 11 - Enabling High availability of SAP HANA**

- Concept of HANA high- availability
- Disaster Tolerance
- Redundant Hardware
- Distributed System
- Standby Host
- Installation Planning for Distributed System

- Install HANA distributed system
- Monitoring and Configuring Standby Hosts

#### Lesson 12 - SAP HANA DATA PROVISIONING

#### Lesson 13 - Configuring Data Replication with SLT

Positioning and benefits of SLT for SAP HANA

Key benefits of Trigger-Based Approach

Architecture and building Blocks

Architecture for SAP Source Replication

Architecture for Non-SAP source Replication

Set-up of SAP LT replication server

Installation Aspects

Configuration Steps for SLT replication server

Setup Data Replication

Database-Supportability

Landscape strategy of SLT replication server

SLT replication server Installation Options

Technical Requirements and system setup Information

DMIS2010 and relevant Support packs

SAP Kernel and DBSL Installation

Creating RFC Connections

Creating DB Connections

Configuring and Monitoring Dashboard

Creating New Configuration for SAP source

- Creating New Configuration for NON-SAP source

- Monitoring of Replication

- Mass Transfer IDS

- IUUC Synchronisation Cockpit

- Data Transfer Monitor

- Backup and Recovery Strategy

- Data Volume Management

#### Lesson 14 - SAP HANA Direct Extractor Configuration Overview

- Introduction to SAP HANA Direct Extractor Connection (DXC)

- Limitations of DXC

- Setup and Configurations

- Enabling Services

- HTTP connection

- Test Connection

#### Lesson 15 - Configuring Data Replication with SAP BODS

- SAP BODS 4.0 and SAP HANA
- SAP BODS 4.0 Architecture
- Configuring BO Data services
- Installing HANA ODBC Driver
- Creating SAP HANA Data store in Data Services
- Creating SAP ERP Data store in Data Services
- Configuring HANA Studio for Importing Metadata
- Import Metadata
- Mass Import
- Selective Import
- Load Data via Data services into SAP HANA

#### **Lesson 16 - SAP HANA TECHNICAL OPERATIONS**

##### **Lesson 17 - Operate SAP HANA**

- Starting & Stopping SAP HANA
- Starting SAP HANA Database
- Stopping SAP HANA Database
- Displaying Process List
- Monitoring HANA landscape

##### **Lesson 18 - Configuring SAP HANA DB**

- System Configuration Parameters
- Monitoring and system state Parameters

##### **Lesson 19 - Backup & Recovery SAP HANA**

- Need of Backup
- Backup Types
- Data Backup
- Log Backup
- Recovery Options
- Recovery in Replication Scenarios
- Backup to External Backup Destinations
- Recovery scenarios
- Power Failure
- Disk Failure
- High Availability for SAP HANA

##### **Lesson 20 - SAP HANA Security**

- Create Users
- User and Role Concept

- Creating Roles
- Assigning Privileges to Roles
- Privileges
- SQL privileges
- System Privileges
- Analytic Privileges
- Reporting and Privileges
- Modeling required privileges

#### Lesson 21 - SAP HANA Monitoring & Troubleshooting

- Configuring Remote Support
- Solution Manage Integration
- Remote Service Connection
- EWA for HANA
- Availability Monitoring
- Setting up Monitoring
- System Monitoring Setup
- Status Overview
- Services Overview
- System Load History
- Disk usage Details
- Checking System Configuration Alerts

#### Lesson 22 - Analyzing logs & traces

- Regular administration tasks
- Troubleshooting
- Analyzing performance

#### Lesson 23 - Software Life cycle Management

- Transporting Changes
- CTS/CTS+
- SAP HANA with CTS+
- Exporting and Importing
- Developer Mode
- Delivery Unit
- SAP support Mode
- Exporting Tables
- Updating SAP HANA
- SAP HANA Update and Patching
- SP stack Update

#### Lesson 24 - SAP HANA PLATFORM

- SAP HANA Native Applications
- Non-Native SAP HANA Applications

Lesson 25 - SAP HANA in Cloud overview

- Access to HANA systems in cloud
- SAP HANA Developer Edition Environment

Lesson 26 - MIGRATION TO SAP HANA

Lesson 27 - SAP BW Powered by HANA

Lesson 28 - SAP ERP on HANA

Lesson 29 - SAP CRM on HANA

Lesson 30 - SAP HANA Rapid Deployment Solutions (RDS)

**SAP Cloud Platform Integration**

**Course Syllabus**

1. Introduction to SAP Cloud Platform Integration

- o Explore the SAP Cloud strategy
- o Explain the positioning of SAP Cloud Platform Integration in the SAP Cloud strategy
- o Explain the positioning within the Application Integration and Infrastructure
- o Perform a classification according to ISA-M
- o Explore use cases

2. Product Overview

- o Explain the integration Platform-As-A-Service
- o Explain the architecture
- o Get an overview about integration capabilities

- o Explain connectivity and converter options

- o Use development tools

### 3. Basic Building Blocks of an Integration Scenario

- o Explain the main phases of an integration project

- o Explore the elements of an integration flow

- o Use SAP Cloud Platform Integration, integration patterns

### 4. Twitter Basic Scenario, Foundation

- o Explore the complete sample process

- o Configure inbound communication

- o Configure outbound communication

- o Use events

- o Use persistence

### 5. Twitter Basic Scenario, Advanced

- o Use calls in an advanced integration scenario

- o Explain the camel message model

- o Manipulate the message with message transformers

- o Explain message converters

- o Use mappings

- o Use XST mappings

### 6. Twitter Scenario, Extended

- o Define message routers

- o Explain scripting in message processing
- o Define additional components
- o Specify the runtime configuration

#### 7. Concepts of Secure Communication

- o Explain secure communication
- o Explore concepts of secure communication
- o Explain security elements related to the mail adapter
- o Explain the relation of security artifacts to integration flow configuration

#### 8. Other Security Aspects

- o Explain the technical landscape
- o Explain data storage security
- o Perform user management for cloud integration
- o Add members to an account

#### 9. Operations and Monitoring

- o Explain the operating model
- o Explain web-based monitoring
- o Explain APIs for monitoring

#### 10. Additional Topics

- o Perform the complete never bounce process
- o Explain content transport
- o Explain B2B support

o Design cloud integration content for SAP Process Orchestration 7.5 SP10

## **SAP HCI - Course Syllabus**

### **1. Introduction to SAP HANA Cloud Integration**

- SAP HANA Cloud Integration Capabilities
- Architecture Overview
- Technical System architecture
- Network Infrastructure
- SAP Data Centers
- Secure Communication

### **2. Integration Scenario**

- Integration Content Catalog
- Consuming Pre-packaged Content
- Configure Integration package
- Modify pre-packaged content
- Pre-packaged Content provided by SAP
- Creating your own content package

### **3. SAP Cloud Tools**

- Web UI
- Eclipse platform
- SAP Cloud platform
- SAP Cloud Connector

### **4. Design (Developing Integration Flow)**

- Camel's Message model
- Content enrichment
- Data transformation and mappings
- Content based routing
- Working with lists
- Asynchronous Message Handling

### **5. Message Converter and Decoder**

- MIME multipart messages
- Timer-Based Message Transfer
- Structuring of Large Integration flows
- Message persistence
- Working with Value mappings



## **6. Build Groovy Scripting and Exception Handling**

- SAP Cloud Adapters
- SOAP Adapter
- SuccessFactors Adapter
- Mail Adapter
- Twitter Adapter
- OData Adapter
- IDOC Adapter

## **7. Sap Cloud Integration Operations**

- Monitor Message processing
- Manage Integration Content
- Manage Security Material
- Managing Certificate to user mappings
- HTTP Adapter
- SFTP Adapter
- Ariba Adapter
- Developing Custom Adapter

## **8. SAP Cloud Integration Security**

- Transport-level Security Options (TLS)
- Message-level Security Options (MLS)
- Data Protection and Data flow Security
- Certificate based Communication
- Private Key and Public Key certificate
- Basic Cryptography
- Authentication and OAuth scenario
- User administration and Authorization

## **9. SAP Cloud Integration Enhancements**

- Transport Management
- Payload monitoring
- Trace Function
- Hybrid Deployments

## **10. Real Time Business Scenarios**

- Build new interface for SFSF to SAP ERP HCM
- Configuration in ERP HCM
- Create new interface for SFSF to SFTP
- Setting up Cloud integration with Cloud Connectors

## **SAP MDG - Course Syllabus**

## **1. Master Data Introduction**

- Explore SAP ERP Basics Master Data

## **2. MDG Overview, Roadmap and Product Portfolio**

- Explore MDG Introduction Central Governance and Mass Processing
- Describe the general concepts and capabilities of SAP MDG, central governance
- Illustrate the scope of SAP MDG, central governance in the current version
- Understand EIM Product Portfolio

## **3. MDG Domain Material, Overview**

- Get an Introduction to Domain Material
- Process Simple Material Objects

## **4. MDG Domain Business Partner, Supplier, Customer**

- Explain business partner, customer, vendor, and CVI
- Describe simple business partner processing
- Introduce the current reality and the needs for the future
- Understand functions in detail, integration scenarios, and the benefits from the solution

## **5. MDG Domain Finance, Overview**

- Explain Domain Finance Change Request and Hierarchy Management
- Process simple Financial objects

## **6. MDG Multiple-Records Processing and Mass Processing Including Hierarchy Management**

- Explore Multiple-Records Processing and Mass Processing
- Explore Hierarchy Processing

## **7. SAP User Experience with MDG (Fiori)**

- Get an introduction to SAP Fiori for SAP MDG

- Perform Fiori Apps for request and approve master data processes

## **8. MDG Analytics, Monitoring, Smart Business**

- Explore Analytics in MDG
- Describe Contextualized HANA Based Analytics

## **9. MDG Consolidation and Mass Processing**

- Explain Consolidation
- Explain Mass Processing
- Explore Consolidation and mass processes

## **10. MDG Data Quality and Search Overview**

- Get an Overview of Data Quality and Search

## **11. MDG Data Quality and Search Implementation**

- Configure Search and Duplicate Checks
- Define Derivations, Validations, Checks, and Deviations
- Understand Concepts of BRFplus

## **12. MDG Processing with Business Workflow**

- Learn Workflow Basics
- Explore concepts of process modeling with rule based workflow

## **13. MDG Data Transfer and Exchange**

- Explain Concepts of Key and Value Mapping
- Perform Data Replication
- Consider Data Export and Data Import via Transfer

## **14. MDG Customizing, Setup and Project Strategies**

- Activate and configure the default processes for MDG
- Understand and use advanced customizing e.g. in the area of workflow
- Understand the new and updated functionality that is offered with MDG

- Start first MDG projects that use the standard data models

## **15. MDG Custom Objects and MDG Enhancements**

- Explore Data Modeling Concepts
- Explain the Process of Reference Data Governance with MDG CO
- Explain the Configuration of Reference Data Governance with MDG CO
- Configure User Interfaces
- Process Custom Objects: Hierarchy Management