

ABAP CONTENTS

1. Introduction of ERP

- ERP Fundamentals.
- Why ERP ?
- Features and advantages of ERP
- About SAP R/3 ERP
- Comparison of SAP R/3 with other products

2. SAP R/3 Architecture

- Presentation Server, Application Server, Database Server
- Defining an R/3 Instance
- Understanding a User Context
- Understanding a Roll Area
- List and their jobs of background services

3. Introduction to ABAP/4

- ABAP/4 Programming concept
- Introduction of various types of program
- Fundamentals of creation of programs
- Introduction of standard Data Types
- Declaration of different types of variables
- Loop and Controls
 - IF structure
 - Case statement
 - Loop statement
 - Control break statement
 - Data structure
 - User-Defined Data Types
 - System Fields

4. Introduction of ABAP Dictionary

- Overview of Dictionary objects
- Overview of Types of Base tables
- Creation of Client independent base tables
- Creation of Client dependent base tables
- Understanding of standard database tables
- Views
- Structure
- Data Element
- Domain
- Search Help

5. Introduction of Database Operations

- Understanding of Open SQL statement
- Understanding of Native SQL statement
- Working with Insert, Update, Delete statement
- Addition of corresponding fields of statement

6. Introduction of Internal Table

- Overview of types of Internal tables
- Creation of an Internal table with an implicit header line
- Creation of an Internal table with an explicit header line
- Processing on internal table using following statements
- Append, Insert, Modify, Sort, Read, Collect, Clear, Refresh, Delete, Free
- Processing logic Read table statement Loop at

7. Message class

- Creation of user define messages
- Overview of types of messages
- Displaying messages

8. Modularization technique

- Include programs
- Subroutines
- Function modules

9. Introduction of dialogue programming

- Understanding of module pool programming
- Creation of module pool program
- Designing screens using various screens elements
- Navigation in between multiple screens
- Displaying data into table control
- Screen painter
- Menu painter
- Creation of menu bar, tool bar, title bar etc.,

10. Introduction of object transportation

- Understanding of development class / package
- Creation of development class / package
- Creation of workbench request
- Transportation of objects
- Understanding of TMS technique

11. Reports

- Understanding of types of reports
- Generation of various types of reports
- Classical report
- ALV report
- ABAP Query

12. Understanding of report events

- Initialization
- Start-of-selection
- Add-selection-screen
- Top-of-page
- End-of-page
- At line-selection
- At user-command

13. Introduction of selection screen

- Understanding of selection screen methods
- Creation of selection screen using SELECT-OPTIONS
- Usage of SELECT-OPTIONS in function module

14. Introduction of logical database

- Creation of LDB
- Usage of LDB
- LDB events

Get, Put

15. Introduction of BDC

- Overview of BDC
- Methods of BDC
- I/O method
- Direct input method
- Call transaction method
- Session method
- Working with foreground and background techniques
- Recording method

16. Introduction of SAP Script

- Designing of layout
- Working with standard text object
- Creation of various elements of SAP Script
- Working with standard SAP Script
- Writing print programs

ADVANCED ABAP CONTENTS

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- **Ø SMART FORMS.**
 - Creation of smart form with different Window Types
 - Passing Parameters into Smart Form
 - Smart Form with Database using Tables
 - Smart Form with Derived Fields to perform Calculations
 - Or validations using with FLOWLOGIC
 - Smart Form with Table Format Output.
 - Smart Form with Graphic window, Address Window
 - Calling Smart at Runtime using Module Programming

By passing Parameters

- Smart Form at runtime to export report output into

Client independent

- Sending Mail process with Smart Form

- **Ø OBJECT ORIENTED ABAP**
 - OBAP Programming.
 - Local Classes, Global Classes.
 - Class, Encapsulation, Inheritance, Polymorphism....
 - ABAP OBJECTS with BDC Applications.

- **Ø BADI'S**
 - API application programming Interface.
 - Add-Ins Programming
 - User Exits, Menu Exits, Function Module Exits

- Reports with SCREEN PAINTER LAYOUT CONTAINER
- Using GRID, HOTSPOT and interactive selection process.

- **Ø User Exits**
- **Ø Enhancements**

- **Web Dynpro**

CROSS APPLICATIONS

- Introduction of Cross Application
- Overview of Tools of Cross Application

- **Ø RFC (Remote Function Calling)**
 - Introduction of Client / Server Architecture
 - Introduction of RFC
 - Setup of Remote Access of a client
 - Communication between two clients
 - Accessing Function Remotely

- **Ø IDOC (Intermediate Document)**
 - Introduction of IDOC
 - Architecture of IDOC
 - Creation of Field Type
 - Creation of Segment
 - Creation of IDOC
 - Creation of Message Type

- Ø ALE (Application Link Enabling)
 - What is ALE ?
 - Why ALE
 - Phases in ALE
 - About IDOC
 - Idoc Structure
 - Idoc Records
 - Transporting data using Idoc
 - Defining Logical System
 - Mapping of Logical System with Clients
 - Defining Port
 - Defining Partner Profile
 - Defining Distribution Model
 - Transfer of data between two clients
 - Transfer of data using Message Control

- EDI (Electronic Data Interchange)
 - Introduction of EDI
 - Architecture of EDI
 - Generation of Partner Profile
 - Distribution of data using EDI

- Ø LSMW (Legacy System Migration Workbench)
 - Overview of LSMW
 - Customization of steps
 - Understanding of SAP Standard Application
 - Distribution of data using Standard Application
 - Ø BAPI'S
 - Third Party Clients API programming functions.
 - Creation of BOR Objects using Remote Function modules, Remote Function call system

SAP HANA 2.0 SPS03 – Installation and Administration

1st Elecose IT Training

- This course is the best starting point to learn about SAP HANA installation, update, configuration and system administration.
- The course is independent from the SAP Net Weaver administration world, as it teaches how to perform system administration on the SAP HANA platform. The system administration tools used are native to the SAP HANA platform.
- Throughout the course, you will learn about the following SAP HANA too for installation, update, configuration and system administration.
 - SAP HANA database lifecycle manager (HDBLCM)
 - SAP HANA cockpit 2.0
 - SAP HANA studio
 - SAP HANA HDBSQL command line
- At the end, you will be able to perform all the required daily system administration tasks on the SAP HANA database platform.
- Contents:
 - SAP HANA introduction
 - Installation sizing and OS preparations
 - SAP HANA installation and upgrade/conversion to a multitenant database
 - SAP HANA architecture and deployment options
 - SAP HANA cockpit 2.0 installation, configuration and upgrade
 - SAP HANA Administration tools
 - Post installation steps
 - Database administration tasks using SAP HANA cockpit 2.0
 - Backup and recovery using SAP HANA cockpit 2.0
 - SAP HANA Security
 - User and authorizations

SAP HANA 2.0 SPS03 – High Availability and Disaster Tolerance Administration

- This course is the best starting point to learn about SAP HANA high availability, disaster tolerance and multitenant capabilities in larger SAP HANA landscapes.
- The course is independent from the SAP NetWeaver administration world, as it teaches how to perform system administration on the SAP HANA platform. The system administration tools used are native to the SAP HANA platform.
- Throughout the course, you will learn about the following advanced SAP HANA administration topics.
 - SAP HANA scale-out and host auto failover.
 - SAP HANA multitenant features
 - SAP HANA system replication between datacenters
 - SAP HANA python scripts provided by SAP
- At the end, you will be able to perform all the required advanced system administration tasks on the SAP HANA database platform.
- Contents:
 - SAP HANA High Availability and Disaster Tolerance
 - SAP HANA multi host scale-out and host auto failover
 - SAP HANA storage and system replication

- SAP HANA system replication options
- SAP HANA multitenant features
- SAP HANA python scripts provided by SAP

SAP HANA 2.0 SPS03 – Using Monitoring and Performance Tools

- This course is the best starting point to learn about the SAP HANA Monitoring and Performance Tools.
- Contents:
- Emergency Analysis and Troubleshooting using SAP HANA cockpit 2.0
 - Handling System Offline Situations
 - Handling System Hanging but Reachable Situations
 - Analyzing a Suddenly Slow System
- Structural System Performance Root Cause Analysis
 - Analyzing Memory Issues
 - Analyzing CPU Issues
 - Analyzing Expensive Statements Issues
 - Analyzing Disk and I/O Issues
- Proactive Monitoring and Performance Safeguarding
 - Configuring SAP HANA Alerting Framework
 - Setting up SAP HANA Workload Management
 - Using SAP HANA Capture and Replay

SAP HANA 2.0 SPS03 – Authorizations, Scenarios & Security Requirements

- The aim of this course is to prepare the student to work on authorizations and security on the SAP HANA Platform. The course initially covers system level security including Network and Communication security and Data Storage encryption, then it focuses on user management, authentication, authorizations, and auditing. Specific exercises are proposed, about LDAP Group authorization, User Groups, Data Masking, Authorization trace.
- Some basic concepts of application development on the XS Advanced are introduced since they are required to properly work on authorization roles.
- Table of contents:
 - SAP HANA Overview
 - Network and Communication Security
 - Certificate Management
 - Data Storage Security
 - Object Ownership
 - User Management
 - Authentication and Single Sign-On
 - Elements of application development in XS Advanced
 - Elements of application development in XS Classic (optiona

- Authorizations
- Analyzing Users and Authorizations
- Auditing
- Security for SAP HANA Extended Application Services, class model (XSC, optional)
- Security for SAP HANA Extended Application Services, advan model (XSA)
- SAP BW Models in SAP HANA
- Integration with SAP Business Objects BI 4.X (optional)
- SAP HANA with ERP or S/4HANA and the Analytics Authorizati Assistant (optional)
- Integration with SAP GRC (optional)
- Integration with SAP Identity Management (optional)
- Note: content, which is marked as “optional”, refer to secondary Lesso and Exercises and won’t be covered in this 2 days classroom course (due to lack of time, they mostly cover security on the deprecated XS Classic architecture, plus some overview lessons on related subjects). Nevertheless, we left such contents in the training material, since they could be of interest for a subsequent review by the student.

SAP HANA 2.0 SPS02 – Database Migration

- Getting Familiar with Database Migration Option (DMO)
 - Listing DMO Benefits
 - Explaining DMO Basics
- Preparing Database Migration Option (DMO) Procedure
 - Ensuring DMO Prerequisites are Fulfilled on the Host
 - Configuring SAP Host Agent for DMO
 - Examining the SUM UI
- Configuration of Database Migration Option (DMO) Procedure
 - Starting the DMO Run
 - Continuing DMO with Roadmap Steps Configuration and Checks
 - Continuing DMO with Roadmap Steps Preprocessing
 - Listing DMO Procedure Steps
 - Monitoring the Migration
 - Resetting the DMO Procedure
 - Tuning the DMO Downtime
 - Listing the DMO Steps After Roadmap Step Preprocessing
 - Explaining the DMO Release Schedule
- Listing Migration Options to SAP HANA