Courses Listed

Beginner
- HA100 - SAP HANA Introduction
- HA100E - SAP HANA Introduction

Advanced
- HA450 - SAP HANA 2.0 SPS03 - Application Development for SAP HANA

Certification Exam
- C_HANADEV_14 - SAP Certified Development Associate - SAP HANA 2.0 SPS02
- C_HANADEV_15 - SAP Certified Development Associate - SAP HANA 2.0 SPS03
### HA100E  SAP HANA Introduction

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### HA450  SAP HANA 2.0 SPS03 - Application Development for SAP HANA

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### HA100  SAP HANA Introduction (continued)

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## C_HANADEV_14  SAP Certified Development Associate - SAP HANA 2.0 SPS02

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HA100E - SAP HANA Introduction

Course announcements
• In this course, you will get an overview of SAP HANA. You will learn about in-memory computing, SAP HANA architecture and main implementation scenarios. You will also learn about modeling and data processing, data provisioning, as well as the different types of applications that run on SAP HANA, such as SAP BI tools, SAP Business Warehouse and SAP HANA XS applications. This course is also valuable for everyone who is part of an S/4HANA project, as it helps understand the key innovations in SAP Business Suite that the underlying SAP HANA Platform permits.

Goals
• This course will prepare you to:
• Understand the Key Concepts of SAP HANA and in-memory computing
• Create a Data Model with SAP HANA Native Modeling Tools
• Provision Data Into SAP HANA
• Consume SAP HANA Information Models and Run Applications on SAP HANA

Audience
• Application Consultant
• Change Manager
• Data Consultant / Manager
• Developer

Essential
• None

Course based on software release
• SAP HANA SPS11

Content
• Introduction
• Architecture
• Explore the SAP HANA landscape
• Interfaces for Administrators and Developers
• Learn about the database
• Explain High Availability
• Describe the Main Security Features
• Modeling and Data Processing
• Create Information Models
• Discover SAP HANA Live
• Define Spatial Processing, Text Search and Analysis, and Predictive Modeling
• Data Provisioning
• Understand the Main Data Provisioning Scenarios
• Load Data Using Flat File Import
• Access Remote Data with Smart Data Access
• Implement Data Replication
• Describe SAP HANA Enterprise Information Management
• Process Event Streams in Real Time
• Running Applications on SAP HANA
• Describe the Different Types of Applications
• Connect SAP Business Intelligence Tools to SAP HANA
• Use SAP Business Warehouse with SAP HANA
• Build SAP HANA Applications using XS
Due to the similarity of the two architectures, Native applications al run in the SAP Cloud Platform, within the Cloud Foundry application server. This course also fits in case you plan to develop applications for the SAP Cloud Platform. Specific exercises are included to show the way to move applications across the two environments.

The basis of Application Development on the deprecated SAP HANA XS Classic application server (still part of the SAP HANA Platform) are also provided, as a useful piece of information for migrating the existing applications from SAP HANA XS Classic to SAP HANA XS Advanced.

Along the course, you will be guided to "break the ice" with all the development tools and development languages used to realize the different parts of a software application in SAP HANA:

- The persistency layer, based on Core Data Services
- The client-server communication services, based on Node.js and XSODATA
- The user interface, based on SAPUI5

**Duration**

4 days

**Course announcements**

- In this course you will learn how to develop SAP HANA Native software applications, running on both the SAP HANA Platform and the SAP Cloud Platform.

**Goals**

- This course will prepare you to:
- develop SAP HANA native software applications, running on both the SAP HANA Platform and the SAP Cloud Platform.

**Audience**

- Developer
- Developer Consultant

**Essential**

- Experience of Object Oriented software development
- Experience with database development and SQL query language

**Course based on software release**

- SAP HANA 2.0 SPS03

**Content**

- This course is the natural starting point to learn "native" software development for the SAP HANA Platform. Native means "independent from the ABAP world", the whole application runs based on the SAP HANA platform, no SAP NetWeaver Application Server is used.
- Native applications run based on the SAP HANA extended application services, advanced model (XS Advanced), the application server, natively available in the SAP HANA Platform.
At the end, you will be able to code simple, but fully functional SAP HANA Software Applications.

Table of contents:
- Unit 1: Introduction to SAP HANA
- Unit 2: Development Tools
- Unit 3: The Development Project
- Unit 4: The Persistence Model
- Unit 5: OData Services
- Unit 6: Building UIs with SAPUI5
- Unit 7: SQLScript
- Unit 8: Server-Side JavaScript (Node.js)
- Unit 9: Application Deployment
- Unit 10: Authorization in the SAP HANA Database
- Unit 11: Application Development in XS Classic

Notes
- The following courses are suited to follow up and/or deepen this subject: HA300 SAP HANA Modeling, HA150 SQL Script, and UX402 Developing UIs with SAPUI5.
HA100 - SAP HANA Introduction

Duration
2 days

Course announcements
- This course introduces SAP HANA. Through lectures and exercises you will quickly develop a broad understanding of all key areas of SAP HANA including technology, architecture, data modeling, data management and application development. This course is an important prerequisite for many detailed follow-on SAP HANA courses.

Goals
- This course will enable you to:
  - Understand the key concepts of SAP HANA
  - Work with the various SAP HANA interfaces used by developers and administrators
  - Create a data model using SAP HANA modeling tools
  - Acquire and enrich data and load to SAP HANA
  - Build a report that runs on an SAP HANA data model
  - Get started with the application development environment

Audience
- Application Consultant
- Change Manager
- Business Analyst
- Application Developer
- BI / BW consultant
- Data Scientist
- Database Administrator
- SAP HANA Project Manager
- SAP HANA Support Staff

Essential
- None

Course based on software release
- SAP HANA 2.0 SPS04

Content
- Describing SAP HANA
- Understanding the Need for a Modern Digital Platform
- Describing how SAP HANA Powers a Digital Platform
- Architecture of SAP HANA
- Outlining Components of SAP HANA
- Working with SAP HANA interfaces
- Understanding Key Features of the SAP HANA Database
- Describing High Availability
- Analytical Processing with SAP HANA
- Understanding Core Modeling with SAP HANA
- Advanced Analytics with SAP HANA
- Data Management with SAP HANA
- Data Tiering
- Describing Data Acquisition Tools
- Developing and Running Applications on SAP HANA
- Running SAP Enterprise Suites on SAP HANA
- Connecting SAP Business Intelligence Tools to SAP HANA
- Outlining SAP Business Warehouse on SAP HANA
- Developing SQL Data Warehouses with SAP HANA
- Building Native HANA Applications
Notes

- This course covers SAP HANA (the platform) and not SAP S/4HANA (the application suite). But a basic understanding of the platform is essential for anyone who works with SAP S/4HANA and so this course is highly recommended for SAP S/4HANA consultants.
The "SAP Certified Development Associate - SAP HANA 2.0 SPS02" certification exam verifies that the candidate has the knowledge to develop native software applications running on the SAP HANA Platform. This certificate builds on the basic knowledge gained through related SAP HANA training. The training covers the development tools and languages used to realize the different parts of a software application in SAP HANA.

Notes
- To ensure success, SAP recommends combining education courses and hands-on experience to prepare for your certification exam as questions will test your ability to apply the knowledge you have gained in training.
- You are not allowed to use any reference materials during the certification test (no access to online documentation or to any SAP system).
C_HANADEV_15 - SAP Certified Development Associate - SAP HANA 2.0 SPS03

Description
The "SAP Certified Development Associate - SAP HANA 2.0 SPS03" certification exam verifies that the candidate has the knowledge to develop native software applications running on the SAP HANA Platform. This certificate builds on the basic knowledge gained through related SAP HANA training. The training covers the development tools and languages, used to realize the different parts of a software application in SAP HANA.

Notes
• To ensure success, SAP recommends combining education courses and hands-on experience to prepare for your certification exam as questions will test your ability to apply the knowledge you have gained in training.
• You are not allowed to use any reference materials during the certification test (no access to online documentation or to any SAP system).
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