

Training for Database & Technology with Development in Application Development for SAP HANA

Courses Listed

Beginner

- HA100 - SAP HANA® – 360° Introduction

Advanced

- HA450 - SAP HANA 2.0 SPS06 - Application Development for SAP HANA ®
- HA150 - SAP HANA® 2.0 SPS07 SQLScript for SAP HANA
- HA300 - SAP HANA 2.0 SPS06 Modeling

All available schedules in your selection

HA150 SAP HANA® 2.0 SPS07 SQLScript for SAP HANA

There are currently no events available for this course. Please feel free to register interest for this course on SAP Training. We will then notify you when a course has been scheduled.

HA450 SAP HANA 2.0 SPS06 - Application Development for SAP HANA®

There are currently no events available for this course. Please feel free to register interest for this course on SAP Training. We will then notify you when a course has been scheduled.

HA300 SAP HANA 2.0 SPS06 Modeling

There are currently no events available for this course. Please feel free to register interest for this course on SAP Training. We will then notify you when a course has been scheduled.

HA100 SAP HANA® – 360° Introduction

There are currently no events available for this course. Please feel free to register interest for this course on SAP Training. We will then notify you when a course has been scheduled.

HA150 - SAP HANA® 2.0 SPS07 SQLScript for SAP HANA

Course announcements

- To maximize the performance of data models and applications running on SAP HANA, it is essential that all data related tasks are effectively and according to best practices programmed at the database level. The language used is SQL and its SAP HANA specific extended variant called SQLScript. This course covers programming with SQL and SQLScript in the SAP HANA database and includes all key areas for writing efficient declarative and imperative code and much more. Through examples and exercises you will be guided through recommended approaches from SAP intensively.

Goals

- This course will prepare you to:
- Find smart ways in SAP HANA to push down data intensive tasks to SAP HANA with SQLScript and guarantee performance over time
- Understand how to code using advanced SQLScript techniques with guided best practices
- Follow recommended best practices in data models for writing in- memory optimized SQL code
- Gain solid knowledge on how to fix performance issues on behalf of SAP HANA's traces and solve those issues in an enduring way

Audience

- Application Developer
- Data Modeler
- BI / BW Consultant
- Data Scientist
- Database Administrator
- SAP HANA Support Personnel

Essential

- none

Course based on software release

- SAP HANA 2.0 SPS07

Content

- Getting Started
- Fast and effective walk through HDBSQL and SQLScript and its special functionalities
- Understanding SAP HANA extended application services and HDI to support SAP HANA development in SQL
- Learn to work with Web IDE for SAP HANA
- Quickly finding the right way to SQL solutions
- SQL Essentials
- SQL Logic Containers
- Creating user-defined functions
- Creating database procedures
- Trapping errors in SQLScript
- User defined libraries, functions and stored procedures
- Declarative Logic
- Using declarative logic
- Imperative Logic
- Using imperative logic if needed
- How to implement transactional save points
- Working with temporal tables
- OLAP operations
- Using OLAP analytic features

- Working with hierarchies
- Troubleshooting and best practices
- Tools for troubleshooting and creating professional performance tuning
- Best practices and how to reduce code volume while leveraging smart SAP HANA functionalities
- Appendix: Starting from the beginning with SQL fundamentals

Notes

- This course assumes students already have basic knowledge of standard SQL as the focus is on SQLScript and SAP HANA functions in particular. Nevertheless, the course does include excellent and comprehensive coverage of standard SQL in the introduction and in the appendix part.
- This course is based on SAP HANA 2.0 and uses SAP Web IDE / SAP HANA extended application services but is useful as well for customers coming from SAP HANA 1.0 using SAP HANA studio / XSC and other SQL clients.

HA450 - SAP HANA 2.0 SPS06 - Application Development for SAP HANA ®

Course announcements

- In this course, you will learn how to develop SAP HANA native software applications running on the SAP HANA platform.

Goals

- This course will prepare you to:
- Develop SAP HANA native software applications running on the SAP HANA platform.
- Learn about 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
- Code simple, but fully functional SAP HANA software applications.

Audience

- Developer
- Development Consultant

Essential

- HTTP (an application-level protocol)
- HTML (a standard markup language for Web pages)
- JavaScript (a programming language of HTML and the Web)
- Node.js (an open-source server environment)
- Express.js (a minimal and flexible Node.js web application framework)
- SQL

Course based on software release

- SAP HANA 2.0 SPS06

Content

- Develop native applications on the SAP HANA extended application services
- Similarities between the SAP HANA extended application services and Cloud Foundry application development model
- Create multi-target applications and debug a simple Node.js application
- Persistence via core data services and analytical data model via calculation views
- Create and debug SQLScript procedures and access remote data from your application
- Access the database from the Node.js application and expose data as OData services
- Create the application front-end using HTML5 and integrate front-end and back-end using the router
- Define the application security roles and create basic user interfaces based on SAPUI5
- Create a basic application using the SAP Cloud Application Programming Model

Notes

- This course is a 'starting point'. Some significant contents are just introduced briefly and can be deepened in the follow-up courses below: - The development of the SAP UI5 user interface is covered in UX400 - The use of SQLScript is covered in HA150 - The use of Calculation Views is covered in HA300 - The use of Flowgraphs and Replication objects are covered in HA550.

HA300 - SAP HANA 2.0 SPS06 Modeling

Course announcements

- This course is also available in a self-paced e-learning format with an active subscription to the SAP Learning Hub, as HA300E.
- This course teaches the core capabilities of SAP HANA for calculation view modeling, and covers mainly graphical modeling, as well as SQL- based modeling (table functions and procedures) with a focus on performance. It also introduces core data services as a flexible method to model a persistence layer.
- The participants will gain knowledge about the management of modeling content in the SAP Web IDE for SAP HANA, and the key principles of object and data access security in a modeling context.

Goals

- This course will prepare you to:
- Develop information models following SAP best practices for maximum performance and flexibility
- Get started with SQL and SQL-Script based modeling
- Manage projects and modeling content in the SAP Web IDE for SAP HANA
- Implement security and data access controls around SAP HANA data models

Audience

- Application Consultant
- Data Consultant / Manager
- Database Administrator
- Application Developer
- BI specialist

Essential

- HA100 SAP HANA - 360° Introduction

Course based on software release

- SAP HANA 2.0 SPS06

Content

- Calculation Views
- Introducing Calculation Views
- Understanding the Different Types of Views
- Working with Common View Design Features
- Using Nodes in Calculation Views
- Using Projection Nodes
- Using Join Nodes
- Working with Data Sets
- Aggregating Data
- Creating CUBE with Star Join Calculation Views
- Extracting Top Values with Rank Nodes
- Modeling Functions
- Create Restricted and Calculated Columns
- Filtering Data
- Using Variables and Input Parameters
- Implementing Hierarchies
- Implement Currency Conversion
- Defining Time-Based Dimension Calculation Views

- Using SQL in Models
- Introducing SAP HANA SQL
- Query a Modeled Hierarchy Using SQLScript
- Working with SQLScript
- Creating and Using Functions
- Creating and Using Procedures
- Persistence Layer
- Defining the Persistence Layer
- Loading Data into Tables
- Accessing Remote Data
- Optimization of Models
- Implementing Good Modeling Practices
- Implementing Static Cache
- Controlling Parallelization
- Implementing Union Pruning
- Using Tools to Check Model Performance
- Developing a Data Management Architecture
- Management and administration of Models
- Working with Modeling Content in a Project
- Creating and Managing Projects
- Enabling Access to External Data
- Working with GIT Within the SAP Web IDE
- Migrating Modeling Content

- Security in SAP HANA Modeling
- Understanding Roles and Privileges
- Defining Analytic Privileges
- Defining Roles
- Masking Sensitive Data
- Anonymizing Data

HA100 - SAP HANA® – 360° Introduction

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. Topics covered in this course are included in most SAP HANA certifications.

Goals

- This course will prepare you to:
- Understand the key technology of SAP HANA
- Understand the key roles and their responsibilities in an SAP HANA project
- 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
- Business Analyst
- Change Manager
- Database Administrator
- Application Developer
- BI / BW consultant
- Data Scientist
- SAP HANA Project Manager

- SAP HANA Support Staff

Essential

- None

Course based on software release

- SAP HANA 2.0 SPS07

Content

- Describing SAP HANA
- Technical requirements of SAP HANA
- Data management with SAP HANA
- Analytical processing with SAP HANA
- Powering data warehouses with SAP HANA
- Running SAP applications on SAP HANA
- Developing Applications of SAP HANA
- Monitoring SAP HANA
- Security and data privacy with SAP HANA
- Migration to SAP HANA

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