

# HA200

## SAP HANA 2.0 SPS06 - Installation and Administration

### COURSE OUTLINE

Course Version: 18

Course Duration:

# SAP Copyrights, Trademarks and Disclaimers

© 2022 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. Please see <https://www.sap.com/corporate/en/legal/copyright.html> for additional trademark information and notices.

Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors.

National product specifications may vary.

These materials may have been machine translated and may contain grammatical errors or inaccuracies.








These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP SE or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP SE or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

In particular, SAP SE or its affiliated companies have no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platform directions and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.

# Typographic Conventions

American English is the standard used in this handbook.

The following typographic conventions are also used.

This information is displayed in the instructor's presentation	
Demonstration	
Procedure	
Warning or Caution	
Hint	
Related or Additional Information	
Facilitated Discussion	
User interface control	<i>Example text</i>
Window title	<i>Example text</i>



# Contents

vii **Course Overview**

**1 Unit 1: SAP HANA Introduction**

1 Lesson: Introducing SAP HANA

**3 Unit 2: Installation Preparations**

3 Lesson: Performing SAP HANA Sizing

3 Lesson: Understanding Linux Operating System Requirements

3 Lesson: Checking SAP HANA Hardware

**5 Unit 3: SAP HANA Installation**

5 Lesson: Installing SAP HANA 2.0

5 Lesson: Describing Advanced Installation Options

5 Lesson: Explaining a Distributed System

5 Lesson: Identifying Deployment Options

**7 Unit 4: SAP HANA Multitenant Database Container Architecture**

7 Lesson: Understanding SAP HANA Architecture and Technology

**9 Unit 5: SAP HANA Cockpit 2.0**

9 Lesson: Installing SAP HANA Cockpit 2.0

9 Lesson: Introducing SAP HANA Cockpit 2.0

9 Lesson: Configuring SAP HANA Cockpit 2.0

9 Lesson: Updating SAP HANA Cockpit 2.0

**11 Unit 6: SAP HANA Architecture**

11 Lesson: Explaining SAP HANA Memory Management and Data Persistence

**13 Unit 7: Post-Installation Tasks**

13 Lesson: Performing Post-Installation Steps

13 Lesson: Updating SAP HANA

13 Lesson: Using the Resident SAP HANA Database Lifecycle Manager Tool

13 Lesson: Importing Catalog Objects

13 Lesson: Creating, Renaming, and Deleting a Tenant Database

13 Lesson: Explaining the Revision Strategy of SAP HANA

**15 Unit 8: Administration Tools**

- 15 Lesson: Explaining the Administration Tools
- 15 Lesson: Using the SAP HANA HDBSQL Command Line Tool
- 15 Lesson: Using the SAP HANA Database Explorer and SQL Console
- 15 Lesson: Explaining SAP HANA as Primary Persistence for SAP NetWeaver-based Applications
- 15 Lesson: Appendix: Working with the DBA Cockpit
- 15 Lesson: Appendix: Managing SAP Landscapes

**17 Unit 9: Database Administration Tasks**

- 17 Lesson: Starting and Stopping SAP HANA
- 17 Lesson: Checking for SAP HANA Alerts
- 17 Lesson: Daily Database Administration Tasks
- 17 Lesson: Configuring the SAP HANA Database
- 17 Lesson: Using SAP HANA Mini Checks
- 17 Lesson: Working with SAP HANA Traces

**19 Unit 10: Backup and Recovery**

- 19 Lesson: Explaining Backup and Recovery
- 19 Lesson: Performing Data Area Backup
- 19 Lesson: Configuring a Log Area Backup
- 19 Lesson: Describing Additional Backup Topics
- 19 Lesson: Performing Database Recovery
- 19 Lesson: Using Advanced Recovery Techniques
- 20 Lesson: Creating a Fallback Snapshot
- 20 Lesson: Explaining Backup and Recovery Using Data Snapshots
- 20 Lesson: Explaining Database Copy

**21 Unit 11: Security**

- 21 Lesson: Describing Security Functions
- 21 Lesson: Explaining Encryption
- 21 Lesson: Describing Auditing

**23 Unit 12: User and Authorization Maintenance**

- 23 Lesson: Understanding SAP HANA Authentication and Authorization
- 23 Lesson: Explaining Types of Privileges
- 23 Lesson: Understanding SAP HANA Roles
- 23 Lesson: Performing Administrative Tasks
- 23 Lesson: Explaining Information Sources for Administrators

# Course Overview

## TARGET AUDIENCE

This course is intended for the following audiences:

- System Administrator





## Lesson 1: Introducing SAP HANA

### Lesson Objectives

After completing this lesson, you will be able to:

- Understand the need for SAP HANA
- Explain SAP HANA as an application platform
- Find additional documentation



## Lesson 1: Performing SAP HANA Sizing

### Lesson Objectives

After completing this lesson, you will be able to:

- Perform SAP HANA sizing

## Lesson 2: Understanding Linux Operating System Requirements

### Lesson Objectives

After completing this lesson, you will be able to:

- Understand the Linux operating system requirements for SAP HANA

## Lesson 3: Checking SAP HANA Hardware

### Lesson Objectives

After completing this lesson, you will be able to:

- Using the Hardware Measurement Tool



## Lesson 1: Installing SAP HANA 2.0

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain the SAP HANA lifecycle management tools

## Lesson 2: Describing Advanced Installation Options

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain the advanced installation options

## Lesson 3: Explaining a Distributed System

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain a multi-host system

## Lesson 4: Identifying Deployment Options

### Lesson Objectives

After completing this lesson, you will be able to:

- Identify deployment options for SAP HANA



## Lesson 1: Understanding SAP HANA Architecture and Technology

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain the SAP HANA architecture and technology





## Lesson 1: Installing SAP HANA Cockpit 2.0

### Lesson Objectives

After completing this lesson, you will be able to:

- Install SAP HANA cockpit 2.0

## Lesson 2: Introducing SAP HANA Cockpit 2.0

### Lesson Objectives

After completing this lesson, you will be able to:

- Understand the SAP HANA cockpit 2.0 architecture

## Lesson 3: Configuring SAP HANA Cockpit 2.0

### Lesson Objectives

After completing this lesson, you will be able to:

- Configure SAP HANA cockpit 2.0

## Lesson 4: Updating SAP HANA Cockpit 2.0

### Lesson Objectives

After completing this lesson, you will be able to:

- Update SAP HANA cockpit 2.0 to a newer Support Package



## **Lesson 1: Explaining SAP HANA Memory Management and Data Persistence**

### **Lesson Objectives**

After completing this lesson, you will be able to:

- Explain SAP HANA memory management and data persistence



## Lesson 1: Performing Post-Installation Steps

### Lesson Objectives

After completing this lesson, you will be able to:

- Perform the post-installation steps after an SAP HANA installation

## Lesson 2: Updating SAP HANA

### Lesson Objectives

After completing this lesson, you will be able to:

- Update an SAP HANA database using the HDBLCM tool

## Lesson 3: Using the Resident SAP HANA Database Lifecycle Manager Tool

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain the resident HDBLCM functions

## Lesson 4: Importing Catalog Objects

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain the import of SAP HANA demo data

## Lesson 5: Creating, Renaming, and Deleting a Tenant Database

### Lesson Objectives

After completing this lesson, you will be able to:

- Create, rename and delete tenants

## Lesson 6: Explaining the Revision Strategy of SAP HANA

## **Lesson Objectives**

After completing this lesson, you will be able to:

- Understand the SAP HANA revision strategy
- Understand the SAP HANA cockpit 2.0 revision strategy

## Lesson 1: Explaining the Administration Tools

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain the available administration tools

## Lesson 2: Using the SAP HANA HDBSQL Command Line Tool

### Lesson Objectives

After completing this lesson, you will be able to:

- Use the HDBSQL command line tool

## Lesson 3: Using the SAP HANA Database Explorer and SQL Console

### Lesson Objectives

After completing this lesson, you will be able to:

- Perform SAP HANA table administration

## Lesson 4: Explaining SAP HANA as Primary Persistence for SAP NetWeaver-based Applications

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain SAP HANA as primary persistence for SAP NetWeaver-based applications

## Lesson 5: Appendix: Working with the DBA Cockpit

### Lesson Objectives

After completing this lesson, you will be able to:

- Work with the DBA Cockpit

## Lesson 6: Appendix: Managing SAP Landscapes

## Lesson Objectives

After completing this lesson, you will be able to:

- Manage complex SAP landscapes



## Lesson 1: Starting and Stopping SAP HANA

### Lesson Objectives

After completing this lesson, you will be able to:

- Use the different tools to start and stop SAP HANA

## Lesson 2: Checking for SAP HANA Alerts

### Lesson Objectives

After completing this lesson, you will be able to:

- Check for SAP HANA alerts

## Lesson 3: Daily Database Administration Tasks

### Lesson Objectives

After completing this lesson, you will be able to:

- Perform daily database administration tasks

## Lesson 4: Configuring the SAP HANA Database

### Lesson Objectives

After completing this lesson, you will be able to:

- Configure the SAP HANA database

## Lesson 5: Using SAP HANA Mini Checks

### Lesson Objectives

After completing this lesson, you will be able to:

- Use the SAP HANA Mini Checks

## Lesson 6: Working with SAP HANA Traces

### Lesson Objectives

After completing this lesson, you will be able to:

- Configure SAP HANA traces
- Check SAP HANA traces

## Lesson 1: Explaining Backup and Recovery

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain backup and recovery

## Lesson 2: Performing Data Area Backup

### Lesson Objectives

After completing this lesson, you will be able to:

- Perform data area backup

## Lesson 3: Configuring a Log Area Backup

### Lesson Objectives

After completing this lesson, you will be able to:

- Configure a log area backup

## Lesson 4: Describing Additional Backup Topics

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe additional backup topics

## Lesson 5: Performing Database Recovery

### Lesson Objectives

After completing this lesson, you will be able to:

- Recover a database

## Lesson 6: Using Advanced Recovery Techniques

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe advanced recovery techniques

## **Lesson 7: Creating a Fallback Snapshot**

### **Lesson Objectives**

After completing this lesson, you will be able to:

- Create a fallback snapshot

## **Lesson 8: Explaining Backup and Recovery Using Data Snapshots**

### **Lesson Objectives**

After completing this lesson, you will be able to:

- Explain backup and recovery using data snapshots

## **Lesson 9: Explaining Database Copy**

### **Lesson Objectives**

After completing this lesson, you will be able to:

- Explain the scenarios for a database copy

## Lesson 1: Describing Security Functions

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe the SAP HANA security functions

## Lesson 2: Explaining Encryption

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain encryption

## Lesson 3: Describing Auditing

### Lesson Objectives

After completing this lesson, you will be able to:

- Describe auditing



## Lesson 1: Understanding SAP HANA Authentication and Authorization

### Lesson Objectives

After completing this lesson, you will be able to:

- Understand user management
- Understand authentication and authorization

## Lesson 2: Explaining Types of Privileges

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain the different types of privileges

## Lesson 3: Understanding SAP HANA Roles

### Lesson Objectives

After completing this lesson, you will be able to:

- Understand roles

## Lesson 4: Performing Administrative Tasks

### Lesson Objectives

After completing this lesson, you will be able to:

- Perform administrative tasks

## Lesson 5: Explaining Information Sources for Administrators

### Lesson Objectives

After completing this lesson, you will be able to:

- Explain information sources for administrators
- Analyze which privileges a user has been granted