HA201
SAP HANA 2.0 SPS03 - High Availability and Disaster Tolerance Administration

COURSE OUTLINE

Course Version: 15
Course Duration:
SAP Copyrights and Trademarks

© 2018 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 http://global12.sap.com/corporate-en/legal/copyright/index.epx 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 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.
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** |
| **Window title** |
Contents

<table>
<thead>
<tr>
<th>vii</th>
<th>Course Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Unit 1: SAP HANA High Availability Features Overview</td>
</tr>
<tr>
<td>1</td>
<td>Lesson: Explaining the SAP HANA High Availability Features</td>
</tr>
<tr>
<td>1</td>
<td>Lesson: Exploring Fault Recovery in SAP HANA</td>
</tr>
<tr>
<td>1</td>
<td>Lesson: Exploring Disaster Recovery in SAP HANA</td>
</tr>
</tbody>
</table>

| 3   | Unit 2: SAP HANA Fault Tolerance |
| 3   | Lesson: Explaining SAP HANA Scale-out |
| 3   | Lesson: Installing High Available SAP HANA |
| 3   | Lesson: Reconfiguring a Scale-out SAP HANA System |
| 3   | Lesson: Understanding Failure of a SAP HANA Slave Node |
| 3   | Lesson: Understanding Failure of the SAP HANA Master Node |
| 3   | Lesson: Removing a Host from a Scale-out System |
| 4   | Lesson: Adding a Host to a Scale-out System |

| 5   | Unit 3: Scale-out and Multitenant Database Containers |
| 5   | Lesson: Creating a Scale-out Tenant |
| 5   | Lesson: Starting and Stopping Tenants |
| 5   | Lesson: Backing up a Tenant |
| 5   | Lesson: Renaming and Deleting a Scale-out Tenant |
| 5   | Lesson: Restoring a Tenant Database |
| 5   | Lesson: Reinitializing a not recoverable system database |

| 7   | Unit 4: SAP HANA Disaster Tolerance |
| 7   | Lesson: Introducing SAP HANA Disaster Tolerance |
| 7   | Lesson: Explaining SAP HANA Storage Replication |
| 7   | Lesson: Explaining SAP HANA System Replication |
| 7   | Lesson: Setting up SAP HANA System Replication |
| 7   | Lesson: Setting up Active/Active System Replication |
| 7   | Lesson: Setting up SAP HANA System Replication with Secondary Time Travel |
| 8   | Lesson: Introducing Multitier and Multitarget System Replication |
| 8   | Lesson: Explaining Tenant Replication |

| 9   | Unit 5: Python Support Scripts |
| 9   | Lesson: Using Python Support Scripts in SAP HANA |
TARGET AUDIENCE
This course is intended for the following audiences:

- Technology Consultant
- Database Administrator
- System Administrator
- Technology Consultant
Lesson 1: Explaining the SAP HANA High Availability Features

Lesson Objectives
After completing this lesson, you will be able to:

- Understand the different SAP HANA high availability features

Lesson 2: Exploring Fault Recovery in SAP HANA

Lesson Objectives
After completing this lesson, you will be able to:

- Explain the fault recovery features of SAP HANA

Lesson 3: Exploring Disaster Recovery in SAP HANA

Lesson Objectives
After completing this lesson, you will be able to:

- Learn about the disaster recovery features in SAP HANA
Lesson 1: Explaining SAP HANA Scale-out

Lesson Objectives
After completing this lesson, you will be able to:
• Get an introduction to SAP HANA scale-out systems

Lesson 2: Installing High Available SAP HANA

Lesson Objectives
After completing this lesson, you will be able to:
• Install a high available SAP HANA system

Lesson 3: Reconfiguring a Scale-out SAP HANA System

Lesson Objectives
After completing this lesson, you will be able to:
• Reconfigure a scale-out SAP HANA system

Lesson 4: Understanding Failure of a SAP HANA Slave Node

Lesson Objectives
After completing this lesson, you will be able to:
• Understand what happens during a failure of a slave node

Lesson 5: Understanding Failure of the SAP HANA Master Node

Lesson Objectives
After completing this lesson, you will be able to:
• Understand what happens during a failure of the master node

Lesson 6: Removing a Host from a Scale-out System

Lesson Objectives
After completing this lesson, you will be able to:

• Remove a host from a scale-out system

**Lesson 7: Adding a Host to a Scale-out System**

**Lesson Objectives**
After completing this lesson, you will be able to:

• Add a host to a scale-out system
UNIT 3
Scale-out and Multitenant Database Containers

Lesson 1: Creating a Scale-out Tenant
Lesson Objectives
After completing this lesson, you will be able to:
• Create scale-out tenants

Lesson 2: Starting and Stopping Tenants
Lesson Objectives
After completing this lesson, you will be able to:
• Start, stop, and set the start mode of SAP HANA tenants

Lesson 3: Backing up a Tenant
Lesson Objectives
After completing this lesson, you will be able to:
• Perform a backup of a tenant database

Lesson 4: Renaming and Deleting a Scale-out Tenant
Lesson Objectives
After completing this lesson, you will be able to:
• Rename and delete a tenant database from a scale-out SAP HANA system

Lesson 5: Restoring a Tenant Database
Lesson Objectives
After completing this lesson, you will be able to:
• Restore a tenant database into a scale-out SAP HANA system

Lesson 6: Reinitializing a not recoverable system database
Lesson Objectives
After completing this lesson, you will be able to:

- Reinitialize a not recoverable system database
Lesson 1: Introducing SAP HANA Disaster Tolerance

Lesson Objectives
After completing this lesson, you will be able to:

- Explain the available disaster tolerance options for SAP HANA

Lesson 2: Explaining SAP HANA Storage Replication

Lesson Objectives
After completing this lesson, you will be able to:

- Explain SAP HANA storage replication

Lesson 3: Explaining SAP HANA System Replication

Lesson Objectives
After completing this lesson, you will be able to:

- Explain SAP HANA system replication

Lesson 4: Setting up SAP HANA System Replication

Lesson Objectives
After completing this lesson, you will be able to:

- Set up SAP HANA system replication

Lesson 5: Setting up Active/Active System Replication

Lesson Objectives
After completing this lesson, you will be able to:

- Set up Active/Active SAP HANA system replication

Lesson 6: Setting up SAP HANA System Replication with Secondary Time Travel
Lesson Objectives
After completing this lesson, you will be able to:

- Set up SAP HANA system replication with Secondary Time Travel

Lesson 7: Introducing Multitier and Multitarget System Replication
Lesson Objectives
After completing this lesson, you will be able to:

- Explain Multitier and Multitarget System Replication

Lesson 8: Explaining Tenant Replication
Lesson Objectives
After completing this lesson, you will be able to:

- Understand the setup of tenant replication
Lesson 1: Using Python Support Scripts in SAP HANA

Lesson Objectives
After completing this lesson, you will be able to:

- Understand the Python support scripts used in SAP HANA