

Dell EMC PowerEdge Installation Management and Diagnostics

Course Description

Course Duration

3 Days

Overview

The Dell EMC PowerEdge Installation, Management and Diagnostics course is part of the certification training path leading to Dell EMC Certified Specialist, PowerEdge.

This course assists you to successfully configure, manage, and troubleshoot Dell PowerEdge servers providing best practice information consisting of instructor-led training and hands-on activities.

Audience

This course is intended for System Administrators and others who install, manage and diagnose PowerEdge servers.

Prerequisite Knowledge/Skills

Knowledge of server concepts, components and typical use cases.

Suggested prerequisite courses

- Dell EMC Server Concepts and Products or
- Dell PowerEdge Fundamentals

Course Objectives

Upon successful completion of this course, participants should be able to:

- Demonstrate knowledge of key server components
- Identify hot swap components
- Identify Boot Mode and Boot Order
- Describe the role and features of the iDRAC9 and Lifecycle Controller
- Access and navigate the iDRAC9 and Lifecycle Controller user interfaces to configure and manage PowerEdge servers
- Configure RAID storage using the iDRAC user interface, the System Setup utility and OMSA
- Retrieve the hardware inventory using the Lifecycle Controller
- Configure the Parts Replacement settings
- Backup and restore the server profile
- Update component firmware
- Perform SupportAssist Collections using both the iDRAC9 and SupportAssist Enterprise

Support Contact

[Education Services](#)

DELL EMC Corporation

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- Install OpenManage Server Administrator (OMSA) and the iDRAC Service Module (iSM)
- Use the iDRAC to validate hardware health status
- Troubleshoot system issues using available diagnostic tools
- Install OpenManage Essentials and discover / monitor remote servers
- Deploy a server operating system using the iDRAC Virtual Console / Media

Course Outline

The content of this course is designed to support the course objectives.

- Server Platforms
 - Numbering and Tags
 - Key Specifications
- Integrated Dell Remote Access Controller with Lifecycle Controller
 - iDRAC8 / iDRAC9 accessing
 - iDRAC9 passwords
 - iDRAC9 Dashboard
 - iDRAC9 Virtual Console
 - iDRAC9 configuration
 - Lifecycle Controller accessing and menu options
- Server Components
 - Processors
 - Memory / NVDIMMs
 - Power
 - Cooling
 - Expansion slots
 - Networking
 - Backplanes
 - RAID
 - PERC10 and S140 controllers
 - Virtual Disk Management
 - Internal Dual SD Module (IDSDM) / vFlash
 - Boot Optimized Storage Solution (BOSS)
- Unified Extensible Firmware Interface (UEFI)
 - BIOS
 - CMOS
 - System Setup utility

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- Troubleshooting
 - LCD / LEDs / Codes / Messages
 - Logs
 - Video Capture
 - Server Profile
 - Parts Replacement
 - Erase system and user data
 - System Diagnostics
 - RACADM
 - iDRAC Direct
 - Quick Sync
 - Dell technical websites
- Security
 - Trusted Platform Module (TPM)
 - iDRAC Secure Password
 - BootGuard
 - BIOS / UEFI Recovery
- Systems Management
 - OpenManage Server Administrator (OMSA)
 - iDRAC Service Module (iSM)
 - OpenManage Mobile
 - SupportAssist Enterprise
 - OpenManage Essentials (OME)

In addition to lecture and demonstrations, this course includes labs designed to allow practical experience for the participant.

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- Lab Exercises:
 - iDRAC9 Dashboard and System Options
 - iDRAC9 Storage and Configuration
 - Maintenance and iDRAC Settings Options
 - iDRAC Virtual Console
 - Lifecycle Controller Navigation
 - iDRAC Information Gathering
 - Configuring RAID using iDRAC
 - RAID Level Migration
 - Boot Optimized Storage Subsystem (BOSS)
 - System Setup Utility
 - iDRAC Troubleshooting Tools

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- Server Profile Backup and Restore
- RACADM CLI
- Embedded System Diagnostics
- Virtual AC Cycle
- OpenManage Server Administrator (OMSA)
- iSM
- SupportAssist Collection
- Install SupportAssist Enterprise
- Install OME
- Out-of-Band Discovery
- In-Band Discovery
- Home Portal Navigation
- Operating System Installation

Course Delivery Modes and Product Version Information

Instructor led — Classroom based lectures and includes exercises and concepts in practice that reinforce the concepts covered in lectures.

Online ILT – Live course delivered via the Internet where participants attend virtual classroom interacting with instructors and other participants. A headset with microphone is REQUIRED to speak with the instructor and the rest of the class. Text communication is also available through the virtual classroom.

Video ILT-Stream — Streaming video provides a recording of an instructor-delivered course along with lab demonstrations and activities.

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This course includes and uses the 14th generation of the Dell EMC PowerEdge rack and tower servers.

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