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HPE BladeSystem Administration

Duration: 3 Days   Course Code: HE646S

Overview:

This course provides instruction on HPE BladeSystem administration and management. Discussion of the portfolio overview ensures an understanding of components, configurations, and solutions.

Target Audience:

System administrators, engineers and consultants who install, manage, and monitor the HPE BladeSystem c-Class environment

Objectives:

- After completing this course, the student should be able to:

- Explore the functional architecture of the HPE BladeSystem c-Class environment

- Identify the management infrastructure (Insight Display, Onboard Administrator)

- Review the HPE BladeSystem c-Class portfolio and equipment capabilities

- Review the power and cooling system

- Identify high-level functionalities of HPE ProLiant Generation 10 (Gen10) servers

- Describe the HPE BladeSystem c-Class interconnect module architecture

- Introduce Virtual Connect management (Virtual Connect Manager, HPE OneView)

- Become familiar with HPE BladeSystem scripting

- Explain how to update the firmware on an HPE BladeSystem

Prerequisites:

HPE recommends that students have attained the following credentials or levels of experience before taking this course:

- Introduction to HPE ProLiant Servers (HE643S) or similar experience

Content:

Module 1: HPE BladeSystem Portfolio Introduction

- Identify resources for information about the current HPE c-Class BladeSystem portfolio
- Differentiate the two types of HPE BladeSystem enclosures
- Identify HPE server blades
- Discuss enclosure connectivity
- Explain the HPE OneView management appliance
- Differentiate HPE storage blades
- Explain HPE BladeSystem update tools
- Discuss HPE infrastructure management and services

Module 2: HPE BladeSystem c-Class Enclosures

- Describe the HPE BladeSystem c-Class enclosures
- Describe the c-Class enclosure structure
- Explain c-Class enclosure signal midplane and power backplane
- Explain how to access the Onboard Administrator
- Define the enclosure numbering scheme

Module 3: HPE BladeSystem Enclosure Management

- List the initial steps involved in setting up the c7000 enclosure using the:

HPE Insight Display Initial Setup Wizard

HPE Onboard Administrator First Time Setup Wizard

- Describe the OA enclosure high availability
- Identify the OA configuration options
- Describe the OA command line interface

Module 4: HPE c-Class Power and Cooling

- Explain how to configure power for an HPE BladeSystem c-Class enclosure
- Explain how to control and view power consumption in a c-Class enclosure to configure its efficiency
- Explain HPE BladeSystem c-Class power management
- Describe HPE Intelligent Location and Power Discovery services
- Describe the structural cooling components and features of c-Class enclosures

Module 5: HPE BladeSystem c-Class BladeServers

- Describe the HPE BladeSystem I/O technologies on the system board:

InfiniBand

SAS

- Describe the mezzanine cards and slots available in the BladeSystem c-Class server blades
- Explain the enclosure signal pathing
- Describe the port mapping for HPE BladeSystem enclosures

c7000

c3000

- Explain the HPE Virtual Connect technology
- Explain the HPE OneView management appliance

Module 7: HPE BladeSystem OneView Management

- Explain the HPE OneView management appliance
- Explain physical and logical resources in HPE OneView
- Explain Converged Infrastructure management
- Explain how to manage HPE OneView server profiles
- Describe differences between HPE OneView or VCM/
- VCEM management

Module 8: HPE BladeSystem c-Class Firmware

- Determine the firmware that is embedded in various components in the enclosure and how to update it
- Explain how to access the SPP, SUM and supporting documentation
- Define the interdependencies and update best practices for HPE enclosure components
- Describe how to update the firmware for the HPE OA
- Explain how to use SUM for enclosure-based firmware management and software updates
- Explain how to update the firmware on HPE Blade servers
- Explain how to update the firmware on Integrity servers
- Explain how to update the firmware on HPE OneView managed systems

Module 9: Configuring the Enclosure Using Scripting

Detailed lab outline

Lab 1: Using the BladeSystem Insight Display

Lab 2: Using the Onboard Administrator GUI Lab

Lab 3A: Using the Onboard Administrator CLI Lab

Lab 3B: Using the PowerShell cmdlets

Lab 4A: Managing Power with the Onboard Administrator

Lab 4B: Using the HPE Power Advisor

Lab 5: Using HPE BladeSystem c-Class Enclosure-based USB Devices

Lab 6: HPE BladeSystem c-Class c7000 Port Mapping

Lab 7: Using Enclosure Firmware Management

Lab 8: Using the Service Pack for ProLiant in Online Mode

Appendix Lab 1: Exploring HPE Virtual Connect Manager

Appendix Lab 2: Using the Service Pack for ProLiant in Offline Mode

FlexibleLOM

Mezzanines

USB and SD cards

- Describe the features and components of storage blades, tape blades, and expansion blades
- Identify c-Class Integrity servers and their requirements
- Manage certain options of your server blades from the OA GUI
- Describe the server iLO interaction with the OA

Module 6: HPE BladeSystem c-Class connectivity options

- Describe the HPE BladeSystem c-Class interconnect module architecture
- List the BladeSystem c-Class interconnect modules

Ethernet

Fiber Channel

- Review the OA CLI access
- HPE iLO scripting via the Onboard Administrator (HPONCFG)
- Introduce PowerShell OA configuration commands
- Introduce PowerShell iLO configuration commands
- Introduce other iLO RESTful API libraries
- Discuss OA CLI scripting

Module 10: Course Closing

- Closing the course
- Learning objectives

Participant learning goals

- Training from HPE Education Services
- HPE Education Services
- HPE certification and learning program
- Concepts
- HE646 Course objectives review
- Energizers

Conversations

Eye on blades blog: Trends in infrastructure

HPE Discover conference

- Case studies

HPE server customer case studies

Further Information:

For More information, or to book your course, please call us on 0800/84.009

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