



# HPE BladeSystem Administration HE646S

This 3-day course provides instruction on HPE BladeSystem administration and management. Discussion of the portfolio overview ensures an understanding of components, configurations, and solutions.

**HPE course number** HE646S

**Course length** 3 days

**Delivery modes** ILT, VILT

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## Audience

- System administrators, engineers and consultants who install, manage, and monitor the HPE BladeSystem c-Class environment
- New HPE BladeSystem customers or past customers who purchased Gen9 or earlier HPE c-Class servers

## Course objectives

- Explore the functional architecture of the BladeSystem c-Class environment, including management infrastructure (Insight Display, Onboard Administrator), power and cooling and servers
- Review the BladeSystem c-Class Portfolio and equipment capabilities
- Introduce Virtual Connect (basic concepts)

## 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 is recommended

### Why HPE Education Services?

- IDC MarketScape leader 4 years running for IT education and training\*
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- Complete continuum of training delivery options—self-paced eLearning, custom education consulting, traditional classroom, video on-demand instruction, live virtual instructor-led with hands-on lab, dedicated onsite training
- Simplified purchase option with HPE Training Credits

## Detailed course outline

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**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
  - Discuss HPE Infrastructure Management and Services
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**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
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**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
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**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 c-Class Power Management
  - Describe HPE Intelligent Location and Power Discovery services
  - Describe the structural cooling components and features of c-Class enclosures
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**Module 5: HPE BladeSystem c-Class Blade servers**

- Describe the HPE BladeSystem I/O technologies on the system board:
    - FlexibleLOM
    - Mezzanines
    - USB and SD cards
  - Describe the features and components of: storage blades, tape blades, 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
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**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
    - 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
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**Module 7: HPE BladeSystem c-Class firmware**

- Determine what firmware 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

**Module 8: Configuring the enclosure using scripting**

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

**Module 9: 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 BladeSystem for client virtualization
  - HPE Discover conference
- Case studies
  - HPE server customer case studies

## Detailed lab guide

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**Lab 0: HPE Virtual Labs User Access Guide****Lab 1: Using the BladeSystem Insight Display****Lab 2: Using the Onboard Administrator GUI****Lab 3A: Using the Onboard Administrator CLI****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 the Service Pack for ProLiant****Appendix Lab A: Exploring HPE Virtual Connect Manager****Appendix Lab B: Using Enclosure Firmware Management**

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