HP Education Services Course Overview
Introduction to HP ProLiant Servers (HE643S)

This two-day course provides essential HP ProLiant training to system administrators who are responsible for ProLiant ML, DL, and BL servers. Students will be presented with an overview of HP products, tools, agents, and utilities that will help them to set up, deploy, monitor, and maintain their ProLiant servers. Practical hands-on lab exercises are presented on an HP ProLiant BL460c Gen8 server. This course is part of the HP ProLiant Essentials Curriculum you can find at: [http://www.hp.com/learn/proliant](http://www.hp.com/learn/proliant)

**Course title:** Introduction to HP ProLiant Servers
**HP product number:** HE643S
**Category/Subcategory:** ProLiant/Servers
**Course length:** 2 days
**Level:** Introductory
**Delivery language:** English
**To order:** You can order this course online at [http://www.hp.com/learn](http://www.hp.com/learn). At the site, select a country, then choose “registration” or “Book a course” and fill out the online registration form.

**Audience**
Administrators, engineers, and consultants who will configure and maintain HP ProLiant servers.

**Prerequisites**
Students taking this course should have a basic understanding of the following operating systems:
- Microsoft Windows Server 2012 R2 Standard
- SUSE Linux Enterprise Server (SLES) 11
- VMWare ESXi 5.5

**Course objectives**
- After completing this course, students should be able to:
  - Locate documentation for your HP ProLiant Gen8 server
  - Navigate the HP Customer Self-Repair Services Media Library
  - Describe the key features of the HP Integrated Lights-Out (iLO) 4 web user interface
  - Differentiate the capabilities of two main graphical consoles of the Integrated Remote Console (IRC)
  - Understand how to provide media to a server via the iLO web user interface and the IRC virtual media feature
  - Describe the ProLiant boot process and how to interact with option ROM
  - Configure systems by using the ROM-based setup utility (RBSU)
  - Configure the HP Intelligent Provisioning functionality
  - Configure a local drive by using the HP Smart Storage Administrator (HP SSA) utility
  - Describe the functionality of the HP Intelligent Provisioning Maintenance Menu
  - Use HP Intelligent Provisioning to complete an operating system installation (Windows Server 2012 R2, SUSE Linux Enterprise Server (SLES) 11 and optionally VMWare ESXi 5.5)
  - Describe how to manage HP Intelligent Provisioning (IP) Deployment Settings Packages
• Navigate the HP Service Pack for ProLiant (HP SPP) website for required documents and ISO files
• Perform an HP Smart Update Manager (HP SUM) "Localhost Guided Update" to install the HP SPP
• Explain how to use the HP Lights-Out Online Configuration (HPONCFG) utility(GUI) for Windows
• Describe the HPONCFG command line utility (CLI) to configure HP integrated Lights-Out (iLO)
• Explain how to configure iLO using the HP Scripting Tools for Windows PowerShell
• Describe iLO Federation

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Detailed course outline

Module 1: HP ProLiant Servers overview
• Introduction to the HP ProLiant server product line
• Overview of the new features and key technologies in HP ProLiant Gen8 servers
• HP Services Media Library, self-repair services, and online documentation

Lab 1: Using HP ProLiant website resources
• Locate documentation for your HP ProLiant Gen8 server and navigate the HP Customer Self-Repair Services Media Library

After completing this module, you should be able to:
• Provide a brief overview of the HP ProLiant Server family
• Identify key features and technologies used in HP ProLiant Gen8 servers and their benefits
• List the operating systems supported on ProLiant servers
• Identify information resources such as the HP Customer Self-Repair Services Media Library

Module 2: HP integrated Lights-Out
• Introduction to HP iLO 4 and its features
• Review of the HP iLO Web Administration Interface

Lab 2: Using HP integrated Lights-Out 4
• Describe the key features of the HP integrated Lights-Out (iLO) 4 web user interface (UI)
• Differentiate the capabilities of the two main graphical consoles of the Integrated Remote Console (IRC)
• Explain how to use iLO virtual media to upgrade the HP Intelligent Provisioning firmware and perform an automatic offline firmware update
• Understand how to access and use the iLO CLI

After completing this module, you should be able to:
• Describe HP integrated Lights-Out (iLO) Management, including the iLO Management Engine
• Describe HP iLO 4 functionality
• Describe the iLO licensing and identify key features included in the Advanced iLO License
• Review the HP iLO Web Administration Interface
• List features of the Integrated Remote Console (IRC) compared to the Java Integrated Remote Console
• Describe the iLO command line interface (CLI)

Module 3: Configuration using Option ROM
• Introduction to the HP ProLiant Gen8 System ROM and the boot process
• Overview of UEFI
• Using the RBSU
• Accessing the RBSU and Intelligent Provisioning

Lab 3: Configuring servers using Option ROM
• Explain how to configure systems by using the ROM-Based Setup Utility (RBSU)

After completing this module, you should be able to:
• Identify features of the HP ProLiant Gen8 server ROM
• Describe the HP ProLiant Gen8 server boot process
• Describe UEFI and list its benefits
• List the steps required to modify System ROM settings using the BIOS RBSU
• Explain how to configure iLO by means of the iLO RBSU
• Explain how to use the ORCA utility

Module 4: HP Intelligent Provisioning
• Overview of HP Intelligent Provisioning and how it is accessed
• Explain how to update and initially configure Intelligent Provisioning
• Identify the HP Intelligent Provisioning maintenance utilities
• Describe how to configure the HP Smart Array Controller using the HP Smart Storage Administrator (SSA) utility
Module 5: HP system software maintenance

- Review the steps involved in HP Intelligent Provisioning to install an IP supported operating system/hypervisor.
- Describe the multiple-server provisioning capabilities of HP Insight Control server provisioning.

Lab 4: Setting up systems with HP Intelligent Provisioning

- Explain how to configure the HP Intelligent Provisioning functionality.
- Explain how to configure a logical drive by using the HP Smart Storage Administrator (SSA) utility.
- Describe the functionality of the HP Intelligent Provisioning maintenance menu options.

Lab 5: Provisioning systems

- Explain how to use HP Intelligent Provisioning to complete an operating system installation.

Lab 5a: Provisioning systems - Windows Server 2012 R2

- Explain how to perform a Microsoft Windows Server installation using HP Intelligent Provisioning.
- Describe how to manage HP Intelligent Provisioning Deployment Settings Packages.

Lab 5b: Provisioning systems - SUSE Linux Enterprise Server (SLES) 11

- Explain how to use HP Intelligent Provisioning to install the SUSE Linux Enterprise Server (SLES) 11 operating system.

Lab 5c: Provisioning systems - VMware ESXi 5.5

- Explain how to use HP Intelligent Provisioning to perform a VMware ESXi 5.5 installation.

After completing this module, you should be able to:

- Describe HP Intelligent Provisioning and how it is accessed.
- Identify the HP Intelligent Provisioning maintenance utilities.
- Review the HP Intelligent Provisioning steps to install a supported operating system or hypervisor.
- Describe the multiple-server provisioning capabilities of HP Insight Control server provisioning.
- Explain how to update Intelligent Provisioning firmware.

Module 6: Continuous system monitoring

- Introduction to system updating—its importance and procedures.
- Introduction to the HP Service Pack for ProLiant.
- Review of the HP Smart Update Manager (HP SUM) options and installation methods.
- Navigate the HP Service Pack for ProLiant (SPP) website to access required documents and ISO files.
- Explain how to launch the HP Smart Update Manager (HP SUM) in Microsoft Windows and in SUSE Linux.
- Explain how to perform an HP SUM "Localhost Guided Update" to install the SPP.
- Describe other features of HP SUM such as customized baselines, report generation, node management, and the HP SUM Engine.

After completing this module, you should be able to:

- Describe the HP Smart Update solution.
- Review the HP Service Pack for ProLiant (SPP) and list the key benefits it provides.
- Describe the HP Smart Update Manager (HP SUM) utility and outline the key steps in performing a software or firmware update.

Module 7: Configuring continuous system monitoring

- Explain how to perform an HP SUM "Localhost Guided Update" to install the SPP.
- Describe other features of HP SUM such as customized baselines, report generation, node management, and the HP SUM Engine.
- After completing this module, you should be able to:
  - Describe the HP Smart Update solution.
  - Review the HP Service Pack for ProLiant (SPP) and list the key benefits it provides.
  - Describe the HP Smart Update Manager (HP SUM) utility and outline the key steps in performing a software or firmware update.

Lab 7: Configuring continuous system monitoring

- Describe the functionality of the Agentless Management Service (AMS).
- Identify key features of the HP System Management Homepage (SMH) and HP Insight Diagnostics.

Lab 8: Configuring iLO

- Explain how to use the HP Lights-Out online configuration (HPONCFG) utility graphical interface with Microsoft Windows.
- Explain how to use the HP Lights-Out online configuration (HPONCFG) utility command line interface with Microsoft Windows.
- Explain how to use the HP Lights-Out online configuration (HPONCFG) utility command line interface with Linux.
- Describe how to use the HPQLOCFG command line utility (CLI) to configure HP integrated Lights-Out (iLO) from a remote computer.
- Explain how to configure iLO using the HP Scripting Tools for Windows PowerShell.
- Describe iLO Federation.

After completing this module, you should be able to:

- Describe the benefits of HP Agentless Management and the HP Agentless Management Service.
- Explain the purpose and collection methods of the HP Insight Management SNMP Agents and WBEM Providers.
- List the benefits of the Active Health System and AHS log.
- Review the HP System Management Homepage.
- Identify the online and offline features of HP Insight Diagnostics.
Module 7: HP ProLiant ongoing system support

- Explain how to configure iLO with the HPONCFG, HPQLOCFG, LOCFG.pl, and HP Scripting Tools for Windows PowerShell utilities
- List the benefits of iLO Federation
- Identify the components of HP Systems Insight Manager

After completing this module, you should be able to:
- Describe the warranty and support for HP ProLiant servers
- Identify support options for HP ProLiant servers
- Describe what is provided by HP Insight Remote Support and how to apply it in your environment
- Identify key components available at the HP Support Center
- Describe the HP Insight Online Dashboard

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