

HP Education Services Course Overview

HP BladeSystem Solution Planning, Deployment and Automated Management (U8693S)



In this 5-day course, you will learn how to identify, deploy and manage HP BladeSystem server blades. You will also learn how to connect the HP BladeSystem server blades to network storage devices. This course also provides a technical overview and hands on experience with automating HP server blade management.

Audience

Administrators, solution designers, engineers and consultants who will plan and manage the deployment of HP ProLiant BladeSystem servers.

Prerequisites

It is recommended that the student has an MCSE for Windows 2000/2003, Red Hat/SuSE Linux, and ASE certification or equivalent knowledge. Furthermore, it is recommended to have completed the following training:

- Deploying HP ProLiant Servers - Using Rapid Deployment Pack (U3976S)
- HP StorageWorks Full-line Technical WBT (U4220aae)
- Installing and Using HP Systems Insight Manager (U8474S) (recommended)

Course Objective

- Discuss the tools available for HP BladeSystem solutions.
- Identify the ProLiant BL p-Class system components.
- Discuss the architecture of the ProLiant BL p-Class system components and benefits.
- Plan a deployment site for HP BladeSystem servers and of a target environment.
- Design the power infrastructure of HP ProLiant BL p-Class server blades.
- Deploy HP ProLiant BladeSystem servers using HP ProLiant Essentials RDP, HP integrated Lights-Out (iLO), and HP Systems Insight Manager.
- Prepare a deployment server and deploy HP BladeSystem servers.
- Choose the appropriate interconnect options for HP BladeSystem servers.
- Explain how to connect ProLiant BL p-Class server to an HP SAN.
- Discuss the process of booting from a SAN.
- Identify functions and components of SIM.



Benefits to You

- Describe HP ProLiant BL server blade technology.
- Discuss the site planning and infrastructure design needed to deploy an HP BL server blade line.
- Discuss server deployment with the HP ProLiant Essentials Foundation Pack for BL servers and management tools.
- Describe the standard components and technologies included with the ProLiant BL e-class and p-Class systems.
- Discuss networking using interconnect technology with BL server blades.
- Use Insight Manager 7 Service Pack 2 on BL server blades.
- Support and troubleshoot BL server blades.

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Course Title: HP BladeSystem Solution Planning, Deployment and Automated Management

HP Product Number: U8693S

Category/Subcategory: ProLiant

Course Length: 5 days

Level: Intermediate

Delivery Language: English

To Order: You can order this course online at <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.

Detailed Course Outline

Introducing the HP BladeSystem portfolio

- Define server blade and server blade enclosure.
- Describe the HP BladeSystem product line.
- Identify the deployment and management tools available for the HP BladeSystem solutions.
- Discuss the benefits of server blades and HP BladeSystem solutions TCO.

Classroom setup and configuration

- Describe the classroom arrangement.
- Verify the initial classroom configuration.
- Explain the hardware layout.
- Identify the blade server assignments for each student group.
- Validate the HP StorageWorks Modular Smart Array 1000 (MSA1000) configuration.
- Describe the HP ProLiant BL p-Class GbE2 Interconnect Switch configuration.

ProLiant BL p-Class server blades and infrastructure

- Discuss the HP ProLiant BL p-Class system anatomy.
- Describe the server blade enclosure.
- Compare the differences among the ProLiant BL20p G2, BL20p G3, BL30p, and BL40p server blades.
- List and describe the server blade options.
- Design the ProLiant BL p-Class power infrastructure.

Site planning and infrastructure design

- Plan a deployment site for HP BladeSystem solutions.
- Plan a target data center environment.
- Design the power infrastructure for ProLiant BL p-Class servers.

Using the HP ProLiant BL p-Class sizing utility

- Access the ProLiant BL p-Class sizing utility.
- Use the sizing utility graphical user interface (GUI).

- Configure the blade enclosures.
- Configure the server blades.
- Configure the rack-centralized power subsystem.
- Obtain the equipment list summary.
- Reset the sizing utility.
- Determine the maximum rack density.

Setting up and configuring a p-Class blade system

- Identify the HP BladeSystem components.
- Install the power supplies in the power enclosure.
- Install the interconnects.
- Cable and power on the system.

ProLiant BL p-Class Network connectivity options

- Networking concepts (VLAN, STP, Port trunking, load balancing, and teaming).
- Discuss ProLiant BL p-Class server blade signal routing.
- Identify the available HP BladeSystem interconnect options.
- Choose the appropriate interconnect options for HP BladeSystem servers.
- Describe GbE interconnect switch best practices.

Configuring the HP ProLiant BL GbE2 interconnect switch

- Set up and cable the HP ProLiant BL GbE2 interconnect switch.
- Access the switch console interface.
- Set a static IP address for the switch management interface.
- Manipulate the switch configuration files and firmware images.
- Access the GbE2 interconnect switch with a web browser.
- Configure port trunking.

Configuring VLANs and STP with the HP ProLiant BL GbE2 interconnect switch

- Verify connectivity between server blades on two separate switches and a single connection between the switches.
- Add Virtual Local Area Network (VLAN) connectivity between servers on separate switches.
- Apply the basic concepts of the Spanning Tree Protocol (STP) by using VLANs in conjunction with STP.

Accessing and configuring iLO

- Access the HP integrated Lights-Out (iLO) of your server blade.
- Upgrade the iLO and management module firmware.
- Configure the iLO with the BladeSystem Configuration Wizard.
- Navigate the iLO BL p-Class tab.
- Troubleshoot the iLO.
- Upgrade the HP BladeSystem firmware.

Deploying ProLiant BL p-Class server blades

- Deploy an HP BladeSystem server using RDP, iLO, and Systems Insight Manager.
- Prepare a deployment server.
- Use RDP and iLO to manage an HP BladeSystem solution.

Preparing the deployment server

- Install the Altiris Deployment Solution 6.1 on a deployment server running Microsoft Windows Server 2003.
- Install the HP ProLiant Integration Module for the deployment solution 1.60.
- Complete the HP ProLiant Essentials Rapid Deployment Pack (RDP) predeployment configuration.

Creating a Windows server 2003 reference server

- Connect the server blade to an HP StorageWorks

Modular Smart Array 1000 (MSA1000)

- Deploy a scripted Microsoft Windows Server 2003 installation to a Pre-boot eXecution Environment (PXE)-enabled server blade.
- Install the Altiris eXpress Deployment Server Agent on the reference server blade.
- Remotely access the server blade.
- Capture the reference server blade hardware configuration and disk image.

Creating a Red Hat Enterprise Linux AS 3 reference server

- Add Linux jobs to the deployment server console.
- Erase the target server.
- Deploy a scripted Linux installation.
- Configure the HP StorageWorks Modular Smart Array 1000 (MSA1000).
- Capture the reference server blade hardware configuration and disk image.

Deploying Windows server 2003 using disk imaging

- Deploy Windows server 2003 using the hardware configuration files and the disk image previously created.
- Configure and demonstrate the rip-and-replace functionality.

Deploying Red Hat Enterprise Linux AS 3 using disk imaging

- Deploy Red Hat Enterprise Linux AS 3 using the hardware configuration files and the disk image previously created.
- Configure and demonstrate the rip-and-replace functionality.

ProLiant BL p-Class storage connectivity options

- Identify the storage solutions supported by the HP BladeSystem.
- Describe HP BladeSystem SAN support.

- Explain how to connect an HP ProLiant BL p-Class server to an HP SAN.
- Discuss the process of booting from a SAN.

Booting Windows server 2003 from a SAN

- Connect the server blade to an HP StorageWorks Modular Smart Array 1000 (MSA1000).
- Disable the integrated array controller and change the boot order.
- Configure the QLogic Host Bus Adapters (HBAs)
- Modify the deployment job to support a SAN boot.
- Install the operating system.

Booting Red Hat Enterprise Linux AS 3 from a SAN

- Connect the server blade to an HP StorageWorks Modular Smart Array 1000 (MSA1000).
- Disable the integrated array controller and change the boot order.
- Configure the QLogic Host Bus Adapters (HBAs).
- Modify the deployment job to support a SAN boot.
- Install the operating system.

ProLiant BL p-Class server blade management

- Identify functions and components of Systems Insight Manager.
- Discuss how OVO for Windows provides management services for HP BladeSystems.
- Explain how Systems Insight Manager integrates with OVO for Windows to manage HP BladeSystems.
- Describe how to manage HP BladeSystems using iLO technology.

HP SIM 4.2 installation and discovery

- Verify the HP System Insight Manager (HP SIM) 4.2 hardware and software requirements.
- Install and configure HP SIM 4.2 on a Microsoft Windows server 2003 system.
- Navigate the HP SIM 4.2 home page.

- Run the first device discovery.
- Use the HP BladeSystem Integrated Management.

ProLiant BL p-Class service and troubleshooting

- Use the ProLiant BLp-Class diagnostic station to communicate with an HP BladeSystem solution.
- Discuss the service and troubleshooting procedures for HP BladeSystems.
- List the HP warranty and support options for HP BladeSystem servers.

Introduction to automated server provisioning and recovery

- Purpose and limitations of solutions.
- Tools available today.
- Tools available in the future.
- Automation manager.

Automated server provisioning

- Automated server provisioning solution toolkit.
- Pre-provisioning, provisioning, and post-provisioning phases.
- BLS start job actions.
- SAN boot Windows job actions.
- BladeCFG.txt format and constraints.
- Logging and resetting after failure.

Automated server provisioning of Windows server 2003

- Requirements.
- Completing the pre-provisioning tasks.
- Installing and configuring Perl.
- Installing the automated server provisioning solution toolkit.
- Provisioning Windows Server 2003.

Automated server provisioning of Red Hat Enterprise Linux AS 3

- Requirements.
- Completing the pre-provisioning tasks.
- Installing and configuring Perl.
- Installing the automated server provisioning solution toolkit.
- Provisioning Red Hat Enterprise Linux AS 3.

Script-assisted server recovery

- Script-assisted server recovery overview.
- Sample RDP jobs.
- Implementing automation.
- Improvements to the server recovery process.
- Requirements.
- Importing the sample tools and scripts.
- Validating the sample RDP jobs.
- Implementing automation.
- Improving the script-assisted server recovery.

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