Hewlett Packard Enterprise

HP NonStop NS-series server support

Course description

This course provides the knowledge needed to perform preventive and corrective maintenance on an HPE Integrity NonStop NS-series server. Learn how to perform system configuration and installation, diagnose failures to a field replaceable unit (FRU) level, perform system updates, and monitor, modify, and control an NS-series server utilizing the Open System Management (OSM) and Subsystem Control Facility (SCF) products. The course is 55 percent lecture and 45 percent hands on labs using HP servers.

Who should attend

Account or support engineers and customer service personnel who are responsible for installing and fully maintaining the NonStop NS-series servers and the NonStop Kernel operating system

Prerequisites

Required:
• Introduction to HP NonStop™ S-series server support (U4158S) or NonStop S-series Field Support (U4170S) or
• Previously offered comprehensive hardware support course and
• At least six months experience maintaining HP NonStop™ systems
For complete prerequisites and requirements to achieve any of the related certifications or upgrade paths, see the certification description on the Certification and Learning website.

Topics

- Module 2: Introduction to NonStop Advanced Architecture
  - Terms and definitions
  - NonStop Itanium based advanced architecture server configurations
  - NonStop advanced architecture mechanisms
  - Hardware error recovery options

- Module 3: NS-series Hardware Components
  - Hardware components overview
  - Modular cabinet
  - UPS and modular rack changes
  - Blade element
  - LSUE and modules
  - Processor Switch Enclosure (p-switch)
  - Introduction to the IOAME
  - Lab exercise: NS-series hardware discovery

- Module 4: Processor Switch (P-Switch) Functionality and Connectivity
  - Hardware overview and functionality
  - ServerNet topology
  - Connectivity to LSU, IOAME and IOMF2
  - ME firmware

- Module 5: Blade Element, LSU, and P-Switch Connectivity
  - Connectivity for DMR and TMR
  - Lab exercise: cabling an NS-series server

- Module 6: Open System Management (OSM)
  - OSM low level link and system startup

Course ID	00078632
HP product number	U8584S
Course format	ILT
Typical Course length	10 days
Skill level	Expert
Delivery languages	English
Related certifications	• Master ASE - HP NonStop Systems Support [2007] • Master ASE - HP NonStop Solution Architect [2007] • ASE - HP NonStop Systems
In preparation for these exams	Selected items from this course are included in these exams: • HP0-A20: Install, Maintain and Upgrade NonStop NS-Series Hardware

Register for this course.
Find this course in the Training calendar and click the "Register" link.

- OSM service connection
- Instant Support Enterprise Edition (ISEE)
- Lab exercise: using the OSM low-level link

- Module 7: MIOP on the NS-Series Server
  - Product features and functions
  - MIOP software architecture
  - Driver and service layers
  - Event handling

- Module 8: Modular Systems Installation and Configuration
  - Modular systems, DMR, and TMR configurations
  - Site planning and preparation
  - Installation and configuration
  - Lab exercise: NS-series server configuration

- Module 9: Storage Subsystem
  - NS-series storage
  - FCSA installation and configuration
  - Disk storage subsystem
  - Tape storage
    Lab exercises: disk drive enclosure familiarization; disk drive enclosure FRU removal and replacement; FCSA installation; configuring fibre channel storage devices

- Module 10: System Maintenance
  - Front component removals
  - Top down component removals
  - Blade element and I/O board removal and replacement
  - Lab exercises: replacing blade FRUs; replacing the I/O interface board; replacing LSU FRUs; replacing p-switch FRUs; IOAME FRU removal and replacement using guided procedures

- Module 11: System Troubleshooting
  - Data collection
  - Debug and replacement procedures
  - Blade element and LSU power on failures
  - Run time failures
  - Processor complex - troubleshooting and health monitoring
  - Lab exercise: NS-series power cycle options

- Module 12: System Upgrade
  - Processor upgrades
  - Capacity upgrades
  - Fault tolerance upgrade
  - Adding NonStop S-series I/O enclosures

- Module 13: First Failure Data Capture (FFDC)
  - FFDC/TFDS definitions and benefits
  - NS-series new features
  - CPU failure handling
  - Installation, configuration, dependencies, best practices, and troubleshooting

- Module 14: Operational Changes
  - Operations
  - DSM/SCM and OS Builder

- Module 15: Communications Subsystem
  - G4SA overview, installation, and configuration
  - Introduction to NonStop ServerNet Cluster
  - Lab exercise: G4SA installation and configuration

- Module 16 – Introduction to Versatile I/O (VIO)
  - Versatile I/O hardware and feature overview
  - IOAME core compared to VIO
  - Hardware and software requirements
  - Architectural overview
  - Configure FCSA and G4SA adapters

- Embedded and expanded G4SA Ethernet port configurations
- OSM support for VIO

- Module 17 – The NS-Series Server Family
  - Mid-Range NS-Series Servers
  - Low-end NS-Series Servers
  - NS-Series Carrier Grade Systems
  - OSM Support for NS1x00, NS5000T, and NS5000CG
  - Introduction to NonStop NS3000AC

Objectives

After completing this course, you should be able to do the following:

- Understand the NonStop advanced architecture
- Use the Open System Management (OSM) tool to operate, manage, and maintain the NonStop NS-series server
- Describe changes made to the system configuration for the NonStop NS-series server
- Install, configure, and troubleshoot a NonStop NS-series server
- Install, configure, and troubleshoot the NonStop NS-series server storage and communications subsystems
- Understand migration issues relating to the new NonStop NS-series servers
- Perform expansion and/or reduction of a NonStop NS-series server
- Configure FCSA ad G4SA adapters
- Use Modular I/O and Versatile I/O
- Understand the differences of the mid-range, low-end, and Carrier Grade NS-series servers

How to register

View the Certification and Learning Global Training Calendar to register for the training offerings that best meets your needs.

Policies, fees and cancellations

Course fees may vary and are established and collected by the training center delivering the course. Cancellation fees may apply. Contact your HPE Authorized Training Partner for their respective policies.

For more information

Contact our program

Valuable and relevant learning resources developed before the Hewlett-Packard Company separation might contain some content and brand elements that have not been updated for Hewlett Packard Enterprise. Learning resources with the highest usage will be updated.

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