



Open System Services (OSS) NonStop for guardian developers U4159S

This 4-day class will provide you with the knowledge to use UNIX commands and utilities and to develop applications in the Open System Services (OSS) environment on HP NonStop™ Servers. The lectures and labs will focus on OSS basics, commands, utilities, and development tools. In addition you will be introduced to OSS application programming interface (API) usage and the OSS sockets interface. This class is targeted at Guardian knowledgeable developers who want to obtain a thorough grounding in the OSS environment.

Open System Services (OSS) NonStop for guardian developers

Price USD \$3,200

Links to local schedules, pricing and registration [US/Canada](#)
[Mexico/Latin America](#)
[Brazil](#)

HP course # U4159S

Category NonStop

Duration 4 days

Audience

- Application developers
- System programmers

Prerequisites

- Six months experience as a NonStop Administrator and
- Concepts and Facilities for HP NonStop Systems (U4147S)

Course objectives

- Get an introduction to OSS

At the conclusion of this course the student will have a basic knowledge of:

- OSS file system basics
- OSS architecture, commands, and utilities
- OSS development environment
- OSS API usage and sockets basics

Benefits to you

- Become familiar with Open System Services (OSS) architecture, interfaces, and procedures
- Gain skills needed to optimize HP NonStop systems so users experience smooth functioning IT operations
- Gain valuable hands-on experience managing an Open System Services (OSS) environment

Next steps

- Consider attending the other advanced learning courses in the HP NonStop Operations Management curriculum

Course outline

Module 1 - Introduction to OSS

- History of UNIX
- The POSIX standard
- NonStop servers that use OSS
- Guardian and OSS interface differences

Module 2 - OSS file system basics

- Accessing OSS
- The OSS file system
- Permissions
- File types
- Typical directories

Module 3 - Basic commands and utilities

- Navigational and display commands
- TACL/OSS command equivalents
- Printing from OSS
- Process management
- Lab Exercise: Basic Commands and Utilities

Module 4 - Advanced commands and utilities

- More advanced commands
- Redirection and piping
- Profile files
- Environment variables
- Command line editing
- Miscellaneous commands such as grep and awk
- Lab Exercise: Advanced Commands and Utilities

Module 5 - OSS file editing

- The vi editor
- Copying files between OSS and Guardian environments
- Text file conversion between OSS and Guardian environments
- Lab Exercise: File Editing

Module 6 - Command scripting

- Command files
- Use of TACL commands from OSS
- Use of OSS commands from TACL
- Variable usage
- Aliases
- Control structures
- Functions
- Argument processing
- Tracing
- Lab Exercise: Command Scripting

Module 7 - OSS development

- Tools and utilities such as c89, c99, ecobol, tar, pax, eld, and enoft
- Compiling and linking using make
- Compiling and linking for SQL/MX
- NonStop Development Environment for Eclipse
- Debugging with Inspect
- Debugging with Visual Inspect
- Lab Exercise: Development and Visual Inspect

Module 8 - Porting issues

- General porting considerations
- Porting design issues
- Interprocess communications features
- Pipes and FIFOs
- Performance considerations
- \$RECEIVE handling
- Lab Exercises: Porting

Module 9 - OSS subsystem architecture

- Subsystem processes
- Subsystem files
- OSS subsystem startup
- OSS configuration overview
- The gname and pname utilities
- DEFINE usage
- Lab Exercise: Architecture

Module 10 - Application programming interface (API) usage

- Accessing standard POSIX system calls
- Accessing NonStop server specific extensions to the system calls
- Accessing Guardian objects from POSIX system calls
- Differentiating between the different forms of process creation calls
- Accessing Guardian procedures from within an OSS program
- Lab Exercise: API Usage

Module 11 - OSS sockets basics

- What is a socket?
- Client/server support
- Protocols and addressing
- Sockets function library
- Library headers and data structures
- OSS and Guardian sockets differences
- Lab Exercise: OSS Sockets

Onsite Delivery Equipment Requirements

Equipment:

- PCs or workstations with an emulator such as MR-Win6530 or OutsideView
- NonStop server with the NonStop operating system, version G06 or later for NonStop S-series servers, H06.03 or J06.03 for Integrity NonStop servers

Software:

- Safeguard activated
- OSS configured and activated
- Language compilers such as c89 and ecobol
- Utilities such as eld and enoft

Recommended Software:

- Visual Inspect (VI) installed on each student workstation
- Host components for VI

Learn more at

hpe.com/us/training/nonstop