



hp services

education

course description

open system services (OSS) for guardian developers (U4159S)

course overview

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.

audience

- Application developers
- System programmers

benefits to you

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

prerequisites

- Concepts and Facilities course
- At least six months of NonStop server experience

next steps

Web Foundations for NonStop Servers course

to order

You can order this course online at <http://education.hp.com>. At the site, select a country, then choose "registration" or "Book a course" and fill out the online registration form.

why hp education?

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module	key topics
introduction to OSS	<ul style="list-style-type: none">• History of UNIX• The POSIX standard• NonStop servers that use OSS• Guardian and OSS interface differences
OSS file system basics	<ul style="list-style-type: none">• Accessing OSS• The OSS file system• Permissions• File types• Typical directories
basic commands and utilities	<ul style="list-style-type: none">• Navigational and display commands• TACL/OSS command equivalents• Printing from OSS• Process management• Lab Exercise: Basic Commands and Utilities
advanced commands and utilities	<ul style="list-style-type: none">• 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
OSS file editing	<ul style="list-style-type: none">• The vi editor• Use of TACL commands from the OSS environment• Use of OSS commands from TACL• Copying files between OSS and Guardian environments• Text file conversion between OSS and Guardian environments• Lab Exercise: File Editing
command scripting	<ul style="list-style-type: none">• Command files• Variable usage• Aliases• Control structures• Functions• Argument processing• Tracing• Use of gtacl• Lab Exercise: Command Scripting
OSS development	<ul style="list-style-type: none">• Tools and utilities such as c89, nmcobol, tar, pax, nld, and noft• Compiling and linking• The Tandem Development Suite• Debugging with Inspect• Debugging with Visual Inspect• Lab Exercise: Development and Visual Inspect
porting issues	<ul style="list-style-type: none">• General porting considerations• Porting design issues• Interprocess communications features• Pipes and FIFOs• Performance considerations• \$RECEIVE handling• Lab Exercises: Porting
OSS subsystem architecture	<ul style="list-style-type: none">• Subsystem processes• Subsystem files• OSS subsystem startup• OSS configuration overview• The gname and pname utilities• DEFINE usage• Lab Exercise (1 hour): Architecture

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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 (45 minutes): API Usage

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 (45 minutes): OSS Sockets

onsite-delivery equipment requirements

Equipment:

- PCs or workstations with an emulator such as OutsideView
- NonStop server with the NonStop Kernel operating system, version D48 or later for NonStop K-series servers, G06 or later for NonStop S-series servers

Software:

- Safeguard activated
- OSS configured and activated
- Language compilers such as c89 and COBOL
- Utilities such as nld and noft

Recommended Software:

- Tandem Development Suite (TDS) and Visual Inspect (VI) installed on each student workstation
- Host components for TDS and VI

for more information

For more information on HP Education Services, contact any of our worldwide offices or visit our worldwide web site on the internet at <http://education.hp.com>

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