



POSIX shell programming H4322S

This course covers advanced POSIX shell programming for technical users and system administrators. You will learn the tools necessary to automate complex tasks and increase productivity. The format of your course is 50 percent lecture and 50 percent hands-on. The duration of your course is five days.

POSIX shell programming

Price USD \$2,500

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HP course # H4322S

Category HP-UX / HP Integrity

Duration 5 days

Audience

- HP-UX and UNIX general users, system and network administrators, and software developers

Prerequisites

- UNIX Fundamentals (51434S) or equivalent experience
- Fundamental knowledge of programming

Benefits to you

- Understand POSIX shell programming and use it to save time with automated scripts
- Write efficient programs by understanding how shell scripts are processed
- Customize shell start-up files
- Easily control your administration tasks

Next steps

- Perl programming (H4311S)

Course outline

Introduction to POSIX shell scripts

- What is a shell script?
- Script execution
- The subprocess environment
- Shell features

Shell scripting

- Which shell?
- Recommended shell format
- Planning to write a shell script
- Portability issues

Variables

- Variables
- Displaying and using variables
- Concatenation and substrings
- Other sources of data for variables

User input

- Reading user input
- Positional parameters
- Creating positional parameters
- Conditional substitution
- External influences

Designing program output

- Variable attributes
- Formatted data
- Cursor positioning and terminal echo

Shell arithmetic

- Creating Integer-only Variables
- Base 10 and Others
- Working with arithmetic operators and data

Branching and logic testing

- Logic testing
- Conditional operators
- Multi-way branching and the 'case' statement

Shell patterns

- Basic expressions
- More complex patterns
- Pattern combinations

Program loops

- The 'while' loop
- The 'until' loop
- The 'for' loop
- Breaking out of a loop and continuing
- The 'select' loop

The 'getopts' Command

- Processing arguments
- The getopts and OPTARG variable
- The OPTIND variable

Array variables

- Substituting and counting
- Using integer variables as element numbers

Functions and function libraries

- Displaying current shell functions
- Declaring and using functions
- Variable scope
- Function libraries and recursion

Managing input and output

- File descriptors
- Reading / writing using file descriptors
- Redirecting, parameter lists and 'here' documents
- Creating parameter lists from input lines

Traps and signals

- Common signals
- The trap and stty commands

Regular expressions

- Regular expressions
- Metacharacters
- The grep command

Introduction to 'awk'

- Record processing
- Pattern matching and relational expressions
- 'awk' variables

Variables, strings and arithmetic operations

- 'awk' user defined variables
- Environment variables
- Arithmetic operations
- String manipulation
- Formatted output
- Command line arguments

'awk' flow control

- Conditional 'if', while and for loops
- Arrays
- 'getline', 'next' and 'exit'
- Processing arrays
- Associative arrays

Stream editing with 'sed'

- Substituting text
- Deleting and printing lines
- Reading and writing files
- Multiple 'sed' editor functions

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