HP-UX Posix Shell Programming

Duration: 5 Days   **Course Code: HPSP**   **Delivery Method: Virtual Learning**

Overview:

This Hewlett Packard HP-UX Posix Shell Programming training course is designed to give delegates practical experience in developing and writing shell scripts. Most of the built-in shell commands are introduced together with the main program control structures.
The course also gives practical experience using a range of HP-UX tools to manipulate text and incorporate into HP-UX shell scripts.

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

Programmers,developers and system administrators who need to construct shell scripts and process text files using advanced text handling facilities.
The HP-UX Posix Shell Programming course assumes knowledge of the HP-UX Operating System to the level covered in the HP-UX Introduction course. Some programming experience may also prove advantageous.

Objectives:

■ To provide the skills needed to develop and customise shell
   programs and to make effective use of a wide range of standard
   HP-UX programming and development tools.

Prerequisites:

The HP-UX Posix Shell Programming course assumes knowledge of the HP-UX Operating System to the level covered in the HP-UX Introduction course. Some programming experience may also prove advantageous.

Follow-on-Courses:
■ HP-UX System Administration (HSA)
■ Oracle SQL (OSP)

Content:

HP-UX Posix Shell Programming Training Course   Course Contents - DAY 1

Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

Session 1: UNIX COMMAND REVIEW

- Basic Unix commands
- General commands
- File and directory handling commands
- Filename generation characters
- I/O Redirection features
- Other commands

Session 2: GETTING STARTED

- What is a shell script?
- Development guidelines
- Creating and editing shell scripts
- Naming and storing shell scripts
- Executing shell scripts
- Exercise: Write a simple shell script

Session 3: USING VARIABLES

- Environment variables
- Local variables
- Assigning values to variables
- Assessing variable values
- Using quotes
- Delimiting variable names
- Echo control sequences
- Exercise: Add variables to a script

Session 4: INTEGER ARITHMETIC

- Using the expr command
- Using the (( )) notation
- Exercises: Add integer arithmetic to a shell script

Session 5: HANDLING RUN TIME DATA

- The read command
- Command line arguments
- Exercise: Writing a generic shell script
- Exercise: Writing an interactive shell script

Session 6: CONDITIONAL EXECUTION

- The if statement
- The test command
- Exercise: Adding validation to previous scripts

Session 7: ADDITIONAL KORN,BASH ; POSIX SYNTAX

Session 8: LOOP CONSTRUCTS

- The while loop
- The until loop
- The for loop
- The while true and until false loops
- Loop control commands
- Exercise: Enhancing the previously written scripts
- Exercise: Writing a script to copy files using a 'for' loop
- Exercise: Writing a script to generate numbers with the 'while' loop

Session 9: MULTI-BRANCH DECISIONS

- The case statement
- Menu driven applications
- Exercise: Developing and writing a menu system

Session 10: FUNCTIONS

- What is a function?
- Syntax
- Examples
- Creating a Function Library
- Exercise: Add a function to a script

Session 11: INTERRUPT HANDLING

- Interrupt signals
- Trapping interrupts
- Exercise: Adding traps to the menu script

Session 12: ADDITIONAL FEATURES AND FACILITIES

- The exec commands
- The includes notation
- More about loops
- Arrays
- Here Documents
- Exercise: Create a here script
  HP-UX Posix Shell Programming Training Course   Course Contents - DAY 3

Session 13: BACKUP AND RESTORE UTILITIES

- Backing-up and restoring files
- Basic and advanced use of tar
- Compression utilities gzip,bzip2,zip and compress
- Exercise: Backing up and restoring files using tar
- Exercises: Compressing files

Session 14: BACKGROUND JOB SCHEDULING

- Scheduling jobs with the cron command

Session 17: IDENTIFYING AND TRANSLATING CHARACTERS

- od - octal dump
- Use cat to display non-printing characters
- The expand and unexpand commands to convert between tab and space characters
- The tr command for character translation
- Exercises: Translating characters with tr

Session 18: REGULAR EXPRESSION NOTATION REVIEW

- Standard regular expressions
- Extended regular expressions

Session 19: THE STREAM EDITOR sed

- sed command line syntax
- sed script files
- sed command processing
- sed addresses and simple instructions
- sed pattern space and hold space
- Grouping sed commands
- Hold and get functions
- Advanced flow control
- Exercises: Text processing with sed

Session 20: FUNDAMENTALS OF AWK

- Basic AWK usage
- AWK program-files
- AWK scripts
- AWK variables
- Pattern matching with AWK
- AWK extended patterns
- AWK operators
- AWK arithmetic operations
- AWK output
- Formatting output with printf
- Exercises: Create awk scripts to extract selected data from a file and generate reports   HP-UX Posix Shell Programming Training Course   Course Contents - DAY 5

Session 21: AWK PROGRAM CONTROL STRUCTURES

- The BEGIN and END functions
- The AWK if construct
- The AWK else if construct
- The AWK while construct
- Other program control statements
- The AWK break,continue and exit statements
- User defined functions
- Exercises: Create AWK scripts and program-files utilising program control structures

Session 22: AWK FUNCTIONS

- Other test notations
- Default and substitute variables
- Exit status codes
- Exercise   HP-UX Posix Shell Programming Training Course   Course Contents - DAY 2

- Scheduling jobs with the at command
- Exercises: Running background jobs

Session 15: COMMANDS FOR COMPARING FILES

- Compare two files with the cmp command
- Compare two files with the comm command
- Compare two files with the diff and sdiff commands
- Compare large files with the bdiff command
- Exercises: Identifying file differences

Session 16: SPLITTING FILES

- The split and csplit commands
- Exercises: Splitting files   HP-UX Posix Shell Programming Training Course   Course Contents - DAY 4

- AWK string functions
- AWK length,tolower,toupper,index,sub,gsub,match,substr,split,sprintf,system and getline functions
- Exercises: Generate AWK scripts and program-files to extract and format data using AWK functions

Session 23: AWK ARRAYS

- AWK associative arrays
- Multi-dimensional arrays
- Exercises: Create AWK associative arrays to process text files and generate reports

Session 24: MISCELLANEOUS TOOLS

- bc (calculator)
- fuser (testing for files in use)
- getops (checking options passed to shell scripts)
- printf (formatting screen output)
- logger (script logging)
- xargs (generating arguments for a command)
- eval (re-evaluating variables)
- Exercises: Using tools within a shell script

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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