

HP-UX Essentials Course Summary

Length: 3 Days

Prerequisite: Basic computer skills

Recommendation Statement:

Student should be able to use a computer monitor, keyboard, mouse. Student needs to be able to input commands and control characters from a keyboard.

Course Description:

For those new to HP-UX, this is the first course you will take.

The course starts at the beginner level and works into intermediate and advanced HP-UX commands and utilities. The student is introduced to the HP-UX Korn shell, the command line and command syntax. Although you will be exposed to the various windowing platforms available in HP-UX, this course teaches UNIX at “the command line level” to develop a thorough understanding of the HP-UX operating environment.

The student learns how to navigate the HP-UX file systems and how to work with files, directories and permissions. The student will learn how to use the HP-UX editors “ex” and “vi.” Once the student is comfortable with basic HP-UX commands, they’ll move onto advanced power tools as well as how to customize the POSIX Korn shell.

The classroom labs are run in a real-world UNIX environment, are structured to allow you to learn by doing, and are developed to simulate “real world” situations. The hands-on labs progressively build your HP-UX knowledge and command skills in a clear and concise manner.

Working in a controlled UNIX classroom environment with an expert instructor, you will learn HP-UX concepts and commands. You will receive professional tips and techniques that will help you build your HP-UX confidence and skills.

Upon completion of this course, you should be able to:

- Log in and log out of HP-UX
- Use the Common Desktop Environment tools (CDE) and GNome window system
- Compose command-line strings to perform functions
- Navigate the directory tree
- Manipulate text files
- Create files and directories
- Back up and restore user files and directories
- Change permissions of files and directories
- Use the vi text editor
- Identify and modify initialization files
- Employ shell features to streamline command execution
- Use basic network commands
- Use commands to search directories and files
- List active user processes and selectively kill user processes

HP-UX Essentials

Detailed Course Outline

Introduction to the UNIX Operating System

- Describe the HP-UX Operating Environment and OS releases
- UNIX standardization - an overview of standards in the UNIX community
- Describe Unix shells (which shells are available, compare the common Unix shells, how to choose a shell)
- Describe the Unix kernel

Establishing Communication

- Logging in and starting a Unix session
- Window environments available to the UNIX user
- Understanding the UNIX command syntax
- Using the UNIX "help" facility: manual pages
- Using emulation programs to access the system (ie. Putty / X-Windows / Telnet / CDE - Common Desktop Environment / Gnome Desktop)
- Setting your terminal environment (stty)
- Executing commands from the command line; UNIX Command syntax
- Using the UNIX "help" facility: manual pages

Introduction to the Filing System

- Examining UNIX files and directories
- Describe the UNIX file system and directory structure
- Navigating the UNIX directory hierarchy
- Understand the difference between full and relative paths
- Understanding the current and parent directories
- Understanding the differences between a Windows/DOS based filesystem and a UNIX JFS
- Differences between Windows (DOS) files and Unix files
- Describe mount points - mounting and unmounting filesystems
- Describe hard and symbolic links
- Describe home directories
- Disk space and checking the status of disks, filesystems, and directories (ie. du and df commands)

File Management

- Creating directories
- Copying files and directories
- Moving and renaming files and directories
- Removing files and directories
- Using shell metacharacters
- Locating files by name, owner, type and other parameters using the 'find' command

UNIX Permissions

- Understanding permissions
- File permissions
- Directory permissions
- Change permissions with symbolic mode
- Change permissions with absolute (octal) mode
- Determine and set the umask value

Redirection Filters and Pipes

- Exploring standard input, standard output, and standard error
- Using filters
- Using pipes

Using the vi Editor

- Understand the UNIX editors
- Understand the VI modes
- Creating/viewing/manipulating/saving/deleting files using the vi editor
- Using a .exrc file

Introduction to shell scripts

- Creating simple shell scripts
- Choosing a Shells
- UNIX Shells and Variables
- Understanding the UNIX shells
- Displaying the default variables
- Creating/Removing user variables
- stty to set terminal types (backspace, etc.)

Introduction to the POSIX shell

- Shells: Bourne, Korn, C, bash
- Startup Scripts (.profile, .kshrc)
- Using ENV for automatic environment tailoring
- Use Bourne and Korn shell variables
- Assign values to shell variables
- Display the value of shell variables
- Make variables available to subprocesses using the export statement
- Display the value of environment variables
- Unset shell and environment variables
- Customize the user environment using the .profile file
- Perform arithmetic operations
- Create and use aliases
- Display aliases and the values assigned to them
- Display the built-in aliases
- Customize the Bourne and Korn shell environments
- Use the tilde expansion and command substitution features of the Korn shell

Using Aliases and Functions

- Introducing the alias concept
- Using functions
- Making your aliases and functions permanent
- Removing aliases and functions

Command Editing and Command History

- Enabling command editing in the Korn shell
- Using history to recall commands
- The command history file

System Status and Command Information

- Displaying system information and user status
- Determining command locations

Multitasking Capabilities

- Introduction to multitasking in the UNIX environment
- Managing jobs and background processes
- Using the process table to manage processes
- Introducing delayed and detached jobs
- Display system processes
- Use processes and process identifiers (PIDs)

- Identify parent and child processes
- Terminate processes using the kill command
- Use the pgrep and pkill commands

Advanced File Management

- Creating links
- Processing files with "awk", "tr", and "sed"
- Use awk/nawk commands from the command line
- Write awk programs to generate data reports from text files
- Write awk programs to generate numeric and text reports from text files

Command line data processing

- Using awk to display file contents and process data
- Formatting files with the tr command
- Using UNIX filters to filter, sort and restructure data
- Use awk to scan text files or standard input to display specific data, change data format, and add text to existing data

Archiving User Data

- Managing file space
- Archiving files and directories
- Compressing files
- Use the tar utility to store files
- Backup files with the tar and compress commands
- Use compression tools to save storage space (compress, gzip, etc)

Printing

- lp, lpstat, cancel

Remote Connections

- Connect remotely using telnet and ssh
- Remotely access a system using rlogin or ssh
- Transfer files with ftp and sftp (using the command line)

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Regular Expressions and the grep Command

- Use and describe regular expressions
- Describe the grep command
- Use the grep command to find patterns in a file
- Use the regular expression characters with the grep command
- Metacharacters
- The grep command

Command line database processing

- Using awk to display file contents and process data
- Formatting files with the tr command
- Using UNIX filters to filter, sort and restructure data

- Use `awk` to scan text files or standard input to display specific data, change data format, and add text to existing data

Stream Editing with 'sed'

- Use `sed` to perform noninteractive editing tasks
- Substituting text
- Deleting and printing lines
- Reading and writing files
- Multiple 'sed' editor functions
- Use regular expression characters with the `sed` command

