



UNIX Fundamentals 51434S

This course is an extensive introduction to the UNIX[®] operating system and how to use its many commands and utilities. It also covers the standard UNIX system file editor and basic shell programming. This course is the foundation and prerequisite for most other courses in HPE Education's Tru64 and HP-UX curricula. The course is 60 percent lecture and 40 percent hands-on labs using HPE servers.

HPE course number	51434S
Course length	5 days
Delivery mode	ILT
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Why HPE Education Services?

- IDC MarketScape leader 4 years running for IT education and training*
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Audience

- System administrators, network administrators, software developers, programmers, operators, and technical users

Benefits to you

- Build your UNIX knowledge and command skills
- Increase your productivity

Prerequisites

- General computer literacy

Course objectives

At the conclusion of this course you should be able to:

- Prepare for our HP-UX system administration and software development courses
- Learn to use your UNIX system effectively and save time by automating tasks with shell programs
- Customize your UNIX system to meet your individual needs
- Learn how to use the full capabilities of your system through hands-on lab exercises

*Realize Technology Value with Training, IDC Infographic 2037, Sponsored by HPE, January 2016

Detailed course outline

Module 1: Introduction to UNIX	<ul style="list-style-type: none">• UNIX structure and capability overview• UNIX history and standards
Module 2: Logging In and General Orientation	<ul style="list-style-type: none">• Logging in and out• Viewing online man pages• Executing basic UNIX commands
Module 3: Navigating the File System	<ul style="list-style-type: none">• UNIX file system layout concepts• Absolute and relative pathname concepts• Navigating and viewing directories• Creating and removing directories• Searching directories
Module 4: Managing Files	<ul style="list-style-type: none">• File concepts and characteristics• Viewing and managing files• Printing files
Module 5: File Permissions and Access	<ul style="list-style-type: none">• UNIX file permission concepts• Managing file permissions• Managing other attributes with chgrp, chown, and touch• Changing user and group identities
Module 6: Introduction to the vi Editor	<ul style="list-style-type: none">• Editing files with vi editor
Module 7: Shell Basics	<ul style="list-style-type: none">• Shell features and types• Using command aliasing• Using command line recall and editing• Modifying TERM, PATH, and other environment variables
Module 8: Shell Advanced Features	<ul style="list-style-type: none">• Shell substitution capabilities• Set and modify shell variables• Transfer local variables to the environment• Make variables available to subprocesses• How a process is created
Module 9: File Name Generation	<ul style="list-style-type: none">• File name generation character concepts• File name generation characters: ?, [], and *
Module 10: Quoting	<ul style="list-style-type: none">• Quoting concepts and characters
Module 11: Input and Output Redirection	<ul style="list-style-type: none">• Redirecting standard input, standard output, and standard error• Using sort, wc, and grep filters
Module 12: Pipes	<ul style="list-style-type: none">• Shell pipeline concepts• Using tee, cut, tr, more, and pr filters
Module 13: Using Network Services	<ul style="list-style-type: none">• Local Area Networks (LANs)• Hostnames• Testing connectivity• ARPA services• Berkeley services• Secure shell Services

Course data sheet

Module 14: Process Control

- Process overview
- Listing processes
- Starting processes in the background
- Moving jobs to the background and foreground
- Prioritizing and scheduling processes
- Terminating processes

Module 15: Introduction to Shell Programming

- Writing simple shell programs
- Using environment variables in shell scripts
- Using positional parameters in shell scripts
- Using read in shell scripts

Module 16: Shell Programming—Branches

- Using if and case constructs for conditional branching
- Using and generating return codes
- Using string, integer, and file tests

Module 17: Shell Programming—Loops

- Performing arithmetic in the shell
- Shell script while loops
- Shell script until loops: Shell script for loops

Module 18: Offline File Storage

- Creating and using tar archives
 - Creating and using cpio archives
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Next steps

HP-UX System and Network Administration I (H3064S)

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