
UNIX: Advanced-Level 2

Course Length: 2 Days

Course Description

- Overview:** Students will learn more advanced skills to understand the UNIX environment and features.
- Prerequisites:** *UNIX: Introduction Level 1* course or equivalent knowledge.
- Delivery method:** Instructor-led, group-paced, classroom-delivery learning model with structured hands-on activities.
- Benefits:** Students will learn about the UNIX user environment, the components of the user interface, and how they can be modified to create a custom interface. In addition, students will learn several advanced file management techniques and how to use the find, grep, and egrep commands. Students also learn to create custom reports from database files by using the tr, sed, and awk programs.
- Target student:** Students enrolling in this course should understand the basic concepts involved in working with the UNIX operating system. For example, they should be familiar with such terms as home directory, directory structure, file management, and permissions. Students should also be familiar with the components that make up the personal computer, including input, output, and storage devices.

Performance-based objectives

Lesson objectives help students become comfortable with the course, and also provide a means to evaluate learning. Upon successful completion of this course, students will be able to:

- Explore the different UNIX shells available, such as the Bourne, C, and Korn Shells.
- Work with a user-defined interface, and modify existing files and create files that customize their user interface.
- Use the alias command, assign an alternate name to a command, and create user-defined commands.
- Understand the components that comprise the C-Shell history feature, and perform a complete installation of the history program by modifying and adding the necessary commands and assignments.
- Determine their user and terminal status, use commands to determine who else is on a system and some of their system attributes, and determine the location of commands that are available to users.
- Use multi-tasking to manage processes.
- Use the find command to search for files and directories that meet a criterion defined by them.
- Use file compression and restoration, the tar command, and the pr and lpr commands.
- Use the tr, sed, and awk commands to modify and manage file contents, to create files, or to output stream.

Course content

Lesson 1: UNIX shells and variables

- Understanding UNIX shells
- Displaying the default variables
- Creating user variables
- Removing user-created variables

Lesson 2: The UNIX C-Shell user environment

- Viewing and modifying your .login file
- Viewing and modifying your .cshrc file
- Creating and modifying your .exrc file
- Creating and modifying your .logout file
- Examining the order of execution of the environmental files

Lesson 3: Aliases in the C-Shell

- Introducing the alias concept
- Creating custom aliases at the prompt
- Making your aliases permanent

Lesson 4: History in the C-Shell

- Modifying your environment to use history
- Using history to recall commands
- History editing techniques

Lesson 5: System status and command information

- Determining the system and user status
- Command location and documentation

Lesson 6: Multitasking capabilities

- Introducing the multitasking capability
- Managing jobs and background processes by using the jobs table
- Managing processes by using the process table
- Introducing the delayed and detached jobs concept

Lesson 7: Advanced file management

- Using the find command to locate files
- Using advanced grep to search file contents
- Introducing the egrep command

Lesson 8: Transferring and printing files

- Managing file space requirements
- Using tar to archive files and directories
- Using the print format command
- Sending output to the printer

Lesson 9: Command line database processing

- Using awk to display file contents
- Formatting files with the tr command
- Using sed to edit file contents
- Scripting your database reporting

Appendices

- Glossary
- Shell command summary
- Shell metacharacters and regular expressions
- vi editor command summary