

AIX 7.1 Essentials

Course Summary

Description

This course teaches basic and advanced topics in AIX and is equivalent to the IBM AN100 course. The AIX Essentials course provides students with the necessary knowledge and skills to use components of the AIX desktop system, manage files and directories, create and modify files, control the user work environment, archive files and use remote commands. In addition, this course explains fundamental command-line features of the AIX Operating System, including file system navigation, the vi text editor, file permissions, access control lists (ACLs), command shells, file compression, basic network use and reading shell scripts.

Objectives

By the end of this course, students will be able to:

- Log in and log out of an AIX system
- Understand AIX Korn shell concepts
- Compose command-line strings to perform functions
- Use command-line features and help resources
- Navigate the directory tree
- Manipulate text files
- Create files and directories
- Archive and restore user files and directories
- Change permissions of files and directories
- Use the vi text editor
- Identify and modify shell initialization files
- Customize the Korn shell environment
- 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
- Create simple shell scripts

Topics

- Overview of the UNIX Operating System
- Establishing Communication
- Introduction to the Filing System
- File Management
- UNIX Permissions
- User Administration
- Redirection Filters and Pipes
- UNIX Editors
- The Korn-shell and BASH User Environments
- Using Aliases and Functions
- Command Editing and Command History
- System Status and Command Information
- Multitasking Capabilities
- Advanced File Management
- Command line database processing
- Backing up User Data

Prerequisites

Basic Computer Skills

Duration

Four days

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Course Outline

- I. Overview of the UNIX Operating System**
 - A. UNIX features and benefits
 - B. UNIX history and evolution of AIX
 - C. UNIX standardization
 - D. The structure of AIX
 - E. Describe the client-server environment
 - F. Describe AIX shells (which shells are available, compare the common UNIX shells, how to choose a shell)
 - G. Describe the Unix kernel
- II. Establishing Communication**
 - A. Accessing the system
 - B. User access vs. root access
 - C. Logging in and starting a Unix session
 - D. Using emulation programs to access the AIX system (ie. Putty / AIX graphical user interface)
 - E. Setting your terminal environment (stty)
 - F. Using the AIX window (GUI) environment
 - G. Understand how to enter commands at the command line (CLI)
 - H. Using basic UNIX commands
 - I. Understanding the UNIX command syntax
 - J. Overview of Unix Processes
 - K. Using the UNIX "help" facility: manual pages
- III. Introduction to the Filing System**
 - A. Examining UNIX files and directories
 - B. Describe the UNIX file system and directory structure
 - C. Moving through the file system
 - D. Using full and relative paths
 - E. Understanding the current and parent directories
 - F. Understanding the differences between a Windows/DOS based filesystem and a UNIX JFS
 - G. Differences between Windows (DOS) files and Unix files
 - H. Describe links (hard links and symbolic links)
 - I. Describe home directories
- IV. File Management**
 - A. Creating directories
 - B. Copying files and directories
 - C. Moving and renaming files and directories
 - D. Removing files and directories
 - E. Using shell metacharacters
 - F. Locating files
- V. UNIX Permissions**
 - A. Understanding AIX permissions
 - B. File permissions
 - C. Directory permissions
 - D. Change permissions with symbolic mode
 - E. Change permissions with absolute (octal) mode
 - F. Determine and set the umask value
- VI. User Administration**
 - A. Describe userid (UID) and groups (GID)
 - B. Understanding your login and your rights and permissions
 - C. Describe the root (administrator) login
 - D. How to switch your user ID (and why)
 - E. Changing your password
 - F. Shell initialization files
 - G. Shell environmental variables
- VII. Redirection Filters and Pipes**
 - A. Exploring standard input, standard output, and standard error
 - B. Using filters
 - C. Using pipes
- VIII. Unix Editors**
 - A. Understand all of the Unix editors including ed, ex, sed, and vi
 - B. Using the vi Editor
 - C. Creating/viewing/manipulating/saving/deleting files using vi editor
- IX. The Korn-shell and BASH User Environments**
 - A. .exrc and .profile files
 - B. Modifying the PATH

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Course Outline (con't)

- X. Using Aliases and Functions**
 - A. Introducing the alias concept
 - B. Making your aliases permanent
 - C. Removing aliases
 - D. When to use a function
 - E. Create functions
- XI. Command Editing and Command History**
 - A. Enabling command editing
 - B. Using history to recall commands
 - C. Saving your command history to a file
 - D. File name completion and shortcuts
- XII. System Status and Command Information**
 - A. Determining your system and user status
 - B. Determining command locations
- XIII. Multitasking Capabilities**
 - A. Introduction to multitasking
 - B. Managing jobs and background processes
 - C. Using the process table to monitor and manage processes
 - D. Introducing delayed and detached jobs
 - E. Display system processes
 - F. Use processes and process identifiers (PIDs)
 - G. Identify parent and child processes
 - H. Terminate processes using the kill command
- XIV. Advanced File Management**
 - A. Creating links
 - B. Using "find" to locate files
 - C. Using "grep" to search file contents
 - D. Introducing the "egrep" command
 - E. Processing files with "awk", "tr", and "sed"
- XV. Command line database processing**
 - A. Using awk to display file contents
 - B. Formatting files with the tr command
 - C. Using sed to edit file contents
 - D. Scripting your database reporting
 - E. Editing the contents of a text file from the command line
 - F. Send the results of command-line editing to standard output
 - G. Use regular expression metacharacters to delete lines, add text to lines, or change characters with sed commands
 - H. Use awk to scan text files or standard input to display specific data, change data format, and add text to existing data
- XVI. Backing Up User Data**
 - A. Managing file space
 - B. Archiving files and directories
 - C. Compressing files
 - D. Use the tar utility to store files
 - E. Use the cpio utility to store files