

CIT 217—Unix Administration (3)

Course Description

This course provides students with the knowledge and skills necessary to perform post-installation and day-to-day administration tasks in a single-domain or multiple-domain UNIX based network. Lecture: 2 hours, lab: 2 hours. Prerequisites: CIT 160; or consent of instructor.

Course Competencies

Upon successful completion of this course, the student can:

1. Create and administer user and group accounts.
2. Troubleshoot problems that prevent users from logging on to the network.
3. Manage network resources.
4. Setup and administer permissions for files and directories.
5. Setup a printing environment.
6. Use auditing functions to generate and view security logs, monitor network resources and track usage and disk space.
7. Backup and restore files and directories using tapes.

Course Outline

- I. Introduction
 - A. Using the Unix operating system
 - B. Logging on to a computer
 - C. Basic commands
 - D. Shells
- II. Setting up user and group accounts
 - A. Planning new user accounts
 - B. Creating new user accounts
 - C. Deleting and renaming user accounts
 - D. Managing the user work environment
 - E. Setting up group accounts
- III. Administering User and Group Accounts
 - A. Creating user account profiles
 - B. Implementing an account policy
 - C. Resetting user account passwords
 - D. Troubleshooting logon problems
- V. Working with files and directories
 - A. Introduction to Unix file system permissions
 - B. Securing network resources with permissions
 - C. Assigning file and device permissions
 - D. Changing the owner, group, and permissions
 - E. Copying, creating, moving or removing files and directories
 - F. Identifying permission problems
- VI. Accessing files on the network
 - A. Using the Network File System
 - B. Setting up the fstab file

- VII. Setting up a Network Printer
 - A. Introduction to Unix printing
 - B. Ghostview postscript previewer
 - C. Setting up a network printer
 - D. Setting up a printcap file
 - E. Accessing a network printer
- VIII. Administering Network Printers
 - A. Printing documents
 - B. Managing the printer queues using 'lpq', 'lpc', and 'lprm'
 - C. Setting a notification, priority, and printing time
 - D. Redirecting documents to a different printer
 - E. Identifying printing problems
- IX. Auditing Resources and Events
 - A. Introduction to auditing
 - B. Planning and implementing an audit policy
 - C. Examining log files
 - D. Archiving the security log
- X. Monitoring Network Resources
 - A. Introduction to monitoring network resources
 - B. Monitoring computer properties
 - C. Viewing system configurations
- XI. Backing up and Restoring Data
 - A. Introduction to backups and archiving devices
 - B. Using '(un)compress', 'g(un)zip', and 'tar'
 - C. Planning a backup strategy
 - D. Backing up data
 - E. Scheduling a backup using a script
 - F. Implementing a restore strategy
 - G. Restoring data