

IT 4423 UNIX/LINUX ADMIN STUDY GUIDE

MODULE 2: FILE SYSTEM AND OPERATIONS

OVERVIEW AND LEARNING OUTCOMES

1. Describe Linux file system and its components
 - a. inode
 - b. File information
 - c. File types and permissions
 - d. Directory hierarchy
 - e. File path: relative path and absolute path
 - f. Link, symbolic link, hard link
 - g. File permission symbols, octal number meanings
2. Use common file operation commands, particularly “cd” and “ls” to navigate directories and files.
 - a. Navigate and view files and directories: ls, cd, pwd
 - b. Manipulate files: mkdir, cp, mv, rm, rmdir, ln
 - c. View file attributes: file, stat, (ls)
 - d. Permission: chmod, umask

INSTRUCTION

1. Round 1 Study (3 to 4 hours)
 - a. Read (reading list) 1a, 1b, 1c, and follow the exercises in them.
 - b. Go through the lecture notes to preview the module content.
 - c. Complete the quiz for the first attempt.
2. Round 2 Study (4 to 8 hours)
 - a. Complete lab 2. Refer to the slides whenever needed. Compile all required screenshots in the labs in **one PDF file** and submit it in D2L. **All screens must be original and show the complete computer screen - no graphic editing or cropping is allowed.** Clearly name and label all screenshots. Please discuss in the D2L forum if you have questions.
 - b. Complete the quiz for the second attempt if necessary.
 - c. Review the lecture notes to see if you have anything missed.
 - d. Start assignment #1 by reading and understanding requirements.

READING LIST

1. Required readings
 - a. General overview of the Linux file system: [General Overview of the Linux file system](#)
 - b. Common directories: [Linux Directory Structure \(File System Structure\) Explained with Examples](#)
 - c. Basic commands: [UNIX Tutorial One](#)
2. Lecture notes “file-system.pdf”
3. Additional readings and resources
 - a. [Unix Permissions Model](#)
 - b. [What Are the Nine Deadly Keystrokes?](#)
 - c. [How UNIX File Permissions Work](#)

TASK LIST

1. Lab: follow Lab-2.pdf for file systems and commands.
2. Assessment: D2L quiz #2.