

Course 619: Introduction to Unix (4 days)

Course Description...

This hands-on course provides the necessary background and tools needed to start using a Unix/Linux system effectively. By the end of the course, the student can secure and organize files under their control; modify and extract data from text files; create custom commands thru pipelines, and simple shell scripts; customize their personal environment; create personal, compressed backups; and print files. This class emphasizes *learning by doing!*

Learning objectives...

- How to login and out
- How to effectively use file and directory permissions
- How to make the most of command line editing and history
- How to build shell scripts
- Learn how to use redirection to create files and save work
- Learn how to be a power user by working on the command line, editing commands and making aliases
- Learn how to build complex commands thru pipelines
- Learn to use the commands the power users' use to manipulate files quickly
- Learn how to use commands to find files
- Learn how to use Unix Documentation

Who should attend...

Anyone who wants to use a Unix system. The course favors those who have little time to learn a new system and yet need to become proficient in the least amount of time. Because of the emphasis on learning by doing, skills are mastered quickly.

Prerequisites...

A desire to become proficient at using Unix. The ability to use a mouse and a Graphical User Interface are helpful, but not necessary. If you want to learn Unix, this course will provide you the background, tools and experience necessary to effectively increase your Unix productivity.

See the following page for a detailed course description...



Course Outline...

Chapter 1 - Quick Tour

- Login and Logout
- Using a Graphical User Interface
- Introduction to the Command Line
- Users, Groups, and Root
- Introduction to the File System
- Getting Help

Chapter 2 - Command Line Manipulation

- Command Line Completion
- Command Line Editing
- File Name Expansion
- History
- Aliases

Chapter 3 - File Access Permissions

- Owner (User), Group, and Others
- Non-Directory File Permissions
- Changing File Permissions
- File Creation and the umask
- Access Permissions thru the GUI

Chapter 4 - File Manipulation

- Copying Files: cp
- Moving and Renaming Files: mv
- Giving Files a Second Name: ln
- Shortcuts: Symbolic Links
- Removing Files
- File Manipulation thru the GUI

Chapter 5 - Directory Manipulation

- Directory Architecture
- Directory Permissions
- Creating and Removing Directories
- Copying, Moving, and Linking into Directories
- Removing Directories
- Directory Manipulation thru the GUI

Chapter 6 – Boot, Initialization, Run Levels, and Shutdown

- Traditional Booting
- Run Levels, Daemons and init
- Solaris 10 Booting
- Services, Daemons and init
- Understanding GRUB
- Shutdown



Chapter 7 – Managing Users and Groups

- Adding a User
- Deleting a User
- User setup
- Security and PAM
- LDAP and NIS

Chapter 8 - Accessing Removable Media

- Volume Daemon
- CDROM
- USB Devices

Chapter 9 - Personal Backup

- Using tar
- Using cpio
- Backup to a Removable Media
- Compressing the Files

Chapter 10 - I/O Redirection

- Standard File Handles
- Redirecting Standard In, Out, and Error
- Redirecting Standard Out and Error to the Same File

Chapter 11 - Command Building

- Process Definition
- Filter Commands
- Pipelines
- Command Substitution
- Send a Signal to a Process

Chapter 12 - Introducing Regular Expressions

- Syntax of Basic Regular Expressions
- How to Create a Regular Expression
- How to Read a Regular Expression

Chapter 13 - Text File Manipulation

- File Characteristics
- Seeing the Contents of a File
- File Differences
- Text Manipulation
- Sorting
- Text Extracting

Chapter 14 - Editing

- Using vi
- Using a GUI Text Editor



Chapter 15 - Basic Shell Scripting

- Script Setup
- Displaying Data
- Shell Variables
- Conditional Execution
- Account Customization

Chapter 16 – Advanced Commands

- Job Control
- Variable Manipulation
- Shell Variables
- Time Commands: cron, anacron, at, batch
- Using xargs
- Locating Files: which, whereis, locate, find
- Simple sed processing

Chapter 17 - Accessing Removable Media

- Overview of TCP/IP: Address, DNS
- Host Configuration: Static and DHCP
- Client Side Services
- Personal Firewall: iptables

Appendix Sections

- vi Commands
- info Commands
- Command Line Editing
- History Re-Use Commands

Please contact your ROI representative to discuss course tailoring!!!