

Introduction to Linux

Learning Objective

Understand the basics of Linux and the importance of Open-source Software.

Topics

- What is Linux?
- Introduction to Open-source Software
- The UNIX & Linux-based Systems
- Setting Up Environment

Linux Command Line

Learning Objective

Develop an understanding of Linux architecture, command line and basic commands.

Topics

- Linux Architecture
- Linux Command Line
- Writing Commands at Shell Prompt
- Structure of a Command
- Basic Linux Commands
- Getting Help

Files & Directories

Learning Objective

Understand the basics of File systems in Linux and using directories and files.

Topics

- File System Basics
- Directories Navigation and Pathname

- Creating Files and Directories
- Viewing Files
- Copy, Move and Rename Files
- Deleting Files and Directories

Creating & Editing Files

Learning Objective

Get introduced to creating and editing files using different tools.

Topics

- Introduction to Creating & Editing Files
- Different Editors
- vi (and vim) Editor
- Nano Editor
- Command Line Redirection

User, Group and Permissions

Learning Objective

Learn access control by creating users, groups and assigning permissions and ownership.

Topics

- Users & Groups
- Creating Users and Groups
- Changing User su and sudo
- File Permissions
- Editing Other Users Files
- Changing Permissions and Ownership
- Directory Permissions

Other Essential Features

Learning Objective

Get introduced to a range of useful features in Linux.

Topics

- Installing and Updating Packages
- Miscellaneous Linux Commands
- Searching for Files from the Terminal
- Using Pipes
- Searching with grep
- Working with TAR and ZIP Archives
- Links
- Environment Variables

Processes in Linux

Learning Objective

Learn about the different processes employed in a Linux environment.

Topics

- Processes in Linux
- Exploring ps Commands
- States of a Process and Signals
- Managing Processes
- Background Processes and jobs

Networking in Linux

Learning Objective

Learn about the fundamentals of networking in Linux.

Topics

- What is a Network?
- Useful Commands
- Remote Connections
- SSH
- SCP

Shell Scripts

Learning Objective

Learn what a script is, how to write it, and run it in Linux.

Topics

- What is a Script
- Writing a Script
- Running a Script
- Variables and Data
- Math in Shell Scripts
- If Statement
- Operators
- While Statement