



Linux Fundamentals



1 - 5 July 2024
Barcelona (Spain)



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REF: K2205 DATE: 1 - 5 July 2024 Venue: Barcelona (Spain) - Fee: 5565 Euro

Introduction:

This training program provides a comprehensive understanding of the Linux operating system. Through this program, individuals will be equipped to confidently work with Linux environments and pursue further specialization in Linux administration and development.

Program Objectives:

At the end of this program, participants will be able to:

- Understand Linux principles, features, and its historical timeline.
- Gain comprehensive knowledge of the Linux Filesystem, including its structure and organization.
- Develop proficiency in manipulating files, including creation, modification, and deletion.
- Acquire skills to effectively manage software packages, including installation, updating, and removal.

Targeted Audience:

- Beginners who want a solid foundation in Linux/Unix.
- Experienced Linux Professionals who want to enhance their knowledge of Linux/Unix Operating System.

Program Outline:

Unit 1:

Introduction to Linux Basics:

- Understanding the Linux operating system architecture.
- Navigating the Linux file system hierarchy.
- Performing basic file operations, such as creating, copying, and deleting files and directories.
- Getting familiar with essential Linux commands for system interaction.
- Exploring the concept of users, groups, and permissions in Linux.

Unit 2:

Command Line Essentials:

- Mastering the Linux command line interface CLI.
- Learning essential commands for file manipulation, text processing, and system administration tasks.
- Understanding input/output redirection and piping for efficient command chaining.
- Exploring command-line utilities for process management and system monitoring.
- Practicing command-line shortcuts and techniques for increased productivity.

Unit 3:

File System Management:

- Understanding disk partitions, file systems, and mounting in Linux.
- Learning to manage disk space and storage devices effectively.
- Exploring advanced file system operations, such as symbolic links and file attributes.
- Utilizing file system tools for disk maintenance, including checking and repairing file systems.
- Implementing strategies for backup and recovery in Linux environments.

Unit 4:

User and Group Administration:

- Managing user accounts and groups in Linux.
- Understanding user authentication mechanisms and password policies.
- Exploring user environment configuration and shell customization.
- Implementing user access controls through permissions and ownership.
- Troubleshooting common user account issues and security concerns.

Unit 5:

System Security and Networking:

- Understanding Linux security principles and best practices.
- Configuring firewall settings and implementing network security measures.
- Exploring encryption techniques for data protection and secure communication.



- Implementing user authentication mechanisms, such as SSH and PAM.
- Learning network configuration and troubleshooting techniques in Linux environments.