

# € TRAINING

Linux Fundamentals



20 - 24 January 2025  
Munich (Germany)



# Linux Fundamentals

REF: K2205 DATE: 20 - 24 January 2025 Venue: Munich (Germany) - Fee: 5300 Euro

## Introduction:

This training program provides a comprehensive understanding of the Linux operating system. Through it, participants 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:

- Navigate and interact with the Linux operating system effectively.
- Utilize essential command-line tools for efficient system management.
- Manage Linux file systems, storage, and backup processes.
- Administer user accounts, groups, and access controls securely.
- Implement robust security and networking measures in Linux environments.

## Targeted Audience:

- IT professionals transitioning to Linux-based systems.
- System administrators seeking foundational Linux skills.
- Developers working in Linux environments.
- Network engineers managing Linux-based networks.

## 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:

- How to manage 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.