

## Linux Essentials: Foundations for System Administration & Cybersecurity

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### Introduction

Linux is one of the most widely used operating systems in servers, IT infrastructure, and open-source applications.

The Linux Fundamentals course is designed to provide beginners with the skills and knowledge needed to understand, operate, and manage Linux efficiently.

You will learn the basic concepts, most-used commands, file and directory management, user permissions, software management, and working with the terminal — building a solid foundation to advance into system administration or cybersecurity fields.

### Course Objectives

- Understand the concept of operating systems and Linux philosophy.
- Learn the structure and main components of Linux.
- Use essential commands in the terminal.
- Manage files and directories effectively.
- Manage users, groups, and permissions.
- Install, remove, and manage software packages.
- Explore the Linux file system hierarchy.
- Learn basic troubleshooting methods.

### Course Outlines

#### Day 1: Introduction to Linux and Its Structure

- Overview of Linux and its history.
- Main system components.
- Desktop environments and the terminal.
- Understanding different Linux distributions.
- Hands-on tour of the Linux interface.
- Practical exercise: Exploring the system.

A graphic featuring the text 'UK Training PARTNER' in black, with 'PARTNER' in a larger, bold font. The text is positioned above a chessboard with several chess pieces (a king, a queen, and a pawn) and concentric circles in the background.

## Day 2: Basic Linux Commands

- Navigating directories.
- Creating, deleting, and moving files.
- Searching for files and directories.
- Viewing and reading file content.
- Using help commands man, help.
- Practical exercise: Performing basic tasks in the terminal.

## Day 3: File and Directory Management

- Linux file system hierarchy.
- File permissions and using chmod & chown.
- Compressing and decompressing files.
- Backing up files.
- Creating hard and soft links.
- Practical exercise: Managing user files.

## Day 4: User and Group Management

- Creating and deleting user accounts.
- Adding users to groups.
- Managing passwords.
- Assigning different permission levels.
- Securing user accounts.
- Practical exercise: Setting up a secure user environment.

## Day 5: Software Management and Troubleshooting

- Installing and removing software using package managers.
- Updating the system.
- Searching for software in repositories.
- Troubleshooting common issues.
- Monitoring running processes.
- Practical exercise: Installing and updating software.

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A graphic of a chessboard with several chess pieces. A large gold king piece is in the foreground, with a silver pawn and a silver knight behind it. The board is checkered, and there are concentric circles in the background.

## Why Attend this Course: Wins & Losses!

- Start from zero and gain confidence using Linux.
- Acquire essential skills in file and user management.
- Understand the system structure for easier advanced learning.
- Learn the most important commands and system tools.
- Prepare to work with Linux servers.
- Build readiness for advanced courses in system administration or cybersecurity.
- Practice with real Linux environments.
- Receive a certificate of completion.

## Conclusion

The Linux Fundamentals course provides a strong starting point for anyone aiming to work in system administration or IT. Combining theoretical concepts with practical exercises, this course equips participants to confidently operate Linux and perform essential tasks.

**It's a stepping stone toward advanced training in cybersecurity, server administration, and automation.**

A graphic of a chessboard with several chess pieces. A large gold king piece is in the foreground, with a silver pawn and a silver knight behind it. In the background, there are concentric circles and the text 'UK Training PARTNER'.

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