

## Course Duration

3 days

Unix-Linux-Solaris-Virtualisation

## Unix & Linux Essentials

### Course Overview

The **Unix & Linux Essentials** course provides end users and administrators with a basic understanding of Unix & Linux environments including Solaris, HP-UX, Red Hat™, Fedora™, SUSE™, Debian™, Ubuntu™ plus others. Delegates will learn the concepts of the command line features including file system navigation, permissions, command shells and the *vi* editor.

The **Unix & Linux Essentials** course can be used as a pre-requisite to the various Unix & Linux System Administration courses offered by **NKT Training**.

### Who should attend

End users who require a knowledge of Unix & Linux to perform their day-to-day tasks and System Administrators prior to attending the System Administration courses.

### Course Objectives

At the end of the course, delegates will be able to:

- Describe the history of Unix and Linux
- Logging in and logging out of the system
- Find system and web based documentation
- Use the XWindow system
- Understand the command line
- Introduction to the command shells
- Navigating the filesystem
- List files and directories
- Understand file ownership and permissions
- Manipulating files and directories
- View and edit files
- Use filters and pipes
- Use wildcards, meta-characters & regular expressions
- Understand the basics of the *vim* editor
- Use advanced shell interaction
- Use basic job control
- Send print jobs

- Archiving and the use of tape devices

## Course Outline

### 1. Introduction to Linux

- History of Unix
- History of Linux

### 2. Introduction to the XWindow system

- The XWindow system
- Selecting a window manager
- Logging into Linux
- The Gnome window manager
- The KDE window manager
- Other available window managers

### 3. Window Manager tools

- KDE
  - Konqueror
  - KDE control centre
  - Kpdf
  - Kontact
  - Konsole
  - K3b
  - Other KDE applications
- Gnome
  - Nautilus
  - Evolution
  - GnuCash
  - AbiWord
  - Gnumeric
  - Other Gnome applications
- Generic applications
  - Firefox
  - Thunderbird
  - OpenOffice
  - Gimp

### 4. Using the Linux environment

- *cat, tac, zcat, head, tail, uniq, & sort* commands
- Extracting lines from files
- Working with fields within files
- Replacing text
- Formatting files
- Comparing Files
- File conversion tools
- Printing

### 5. Linux File Structure

- The file structure hierarchy
- File naming conventions
- The *pwd* & *cd* commands
- Creating & removing directories
- Copying, renaming and moving files & directories
- Using links
- Deleting files and directories

## 6. Text Editors

- the *vi* & *vim* editors
- Graphical based editors

## 7. The Linux shell environment

- Special & meta-characters
- Local & environmental variables
- History mechanism

## 8. File System Security

- Access Permissions
- Access Rights
- Changing permissions
- Permission masks

## 9. Advanced Shell Functionality

- File descriptors
- Shell redirection
- File & devices
- Using pipes
- Using shell aliases

## 10. Unix Filters & Tools

- Tools & pipelines
- Using *tr*, *cut*, *sort*, & *uniq*
- Command substitutions

## 11. Advanced Text Manipulation Tools

- Using the *find* command
- Comparing files
- Pattern matching
- Using *grep*, *sed* & *awk*

## 12. Network Access to Linux

- Introduction to Linux networking
- The *ping* command
- Using *telnet* & *ftp*
- The Berkley *R* commands
- Using the secure shell package

### 13. Archiving data

- Archiving data with *tar*, *cpio* & *zip*
- Accessing tape and USB storage devices

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