Introduction to Linux Systems Administration (TTLX2220)

Category: Infrastructure & IT Operations | **Vendor:** Trivera Tech

Duration: 40.00 hours (5 days) **32.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

Linux System Administration®is a comprehensive hands-on course that teaches students how to install, configure and maintain an Enterprise Linux system in a networked environment.®

About This Course

Linux System Administration is a comprehensive hands-on course that teaches students how to install, configure and maintain an Enterprise Linux system in a networked environment.

This lab-intensive class explores core administrative tasks such as: creating and managing users, creating and maintaining file systems, determining and implementing security measures and performing software installation and package management. Linux networking topics include installing and supporting SSH, NFS, Samba and the Apache Web server. Students will explore common security issues, as well as several tools, such as the PAM modules that help secure the operating system and network environment. Upon successful completion of this course, students will be prepared to maintain Linux systems in a networked business environment.

Although the course includes installing and configuring a CentOS 7 / RHEL 7 Linux system, much of the course content also applies to Oracle, Ubuntu, Scientific and other current versions of mainstream Linux distributions. Labs include user and group maintenance, system backups and restoration, software management, administration tasks automation, file system creation and maintenance, managing remote access, working with cron, and configuring basic file sharing and Web services, as well as working with system logging utilities such as rsyslog and much more.

Who Should Attend

This is an introductory-level systems administration course geared for Systems Administrators and users who wish to learn how to how to install, configure and maintain an Enterprise Linux system in a networked environment. Attendees should have incoming experience with common UNIX/Linux user-level commands, such as moving, copying and editing files. Experience with the vi editor is a plus

Prerequisites & Entry Requirements

General Prerequisites:

This is an introductory-level systems administration course geared for Systems Administrators and users who wish to learn how to how to install, configure and maintain an Enterprise Linux system in a networked environment. Attendees should have incoming experience with common UNIX/Linux user-level commands, such as moving, copying and editing files. Experience with the vi editor is a plus

Learning Outcomes

Upon successful completion of this course, participants will be able to:

This course is about 50% lab to lecture ratio, combining expert instructor-led discussions with practical hands-on skills that emphasize current techniques, best practices and standards. Working in this hands-on lab environment, guided by our expert practitioner, attendees will explore:

-Installing the Linux operating system and configuring peripherals

-Performing and modifying startup and shutdown processes

-Configuring and maintaining basic networking services

-Creating and maintaining system users and groups

-Understanding and administering file permissions on directories and regular files

-Planning and creating disk partitions and file systems

-Performing maintenance on file systems

-Identifying and managing Linux processes

-Automating tasks with cron

-Performing backups and restoration of files

-Working with system log files

-Troubleshooting system problems

-Analyzing and taking measures to increase system performance

-Configuring file sharing with NFS

-Configuring Samba for file sharing with the Windows clients

-Setting up a basic Web server

-Understanding the components for setting up a LAMP server

-Implementing basic security measures

Detailed Course Outline

System Administration Overview

UNIX, Linux and Open Source

Duties of the System Administrator

Superusers and the Root Login

Sharing Superuser Privileges with Others (su and sudo Commands)

TCP/IP Networking Fundamentals

Online Help

Installation and Configuration

Planning: Hardware and Software Considerations

Site Planning

Installation Methods and Types

Installation Classes

Partitions

Logical Volume Manager - LVM

File System Overview

Swap Partition Considerations

Other Partition Considerations

The Linux Boot Loader: grub

Software Package Selection

Adding and Configuring Peripherals

Printers

Graphics Controllers

Basic Networking Configuration

Booting to Recovery Mode

Booting and Shutting Down Linux

Boot Sequence

The systemd Daemon

The systemctl Command

Targets vs. Run Levels

Modifying a Target

Service Unit Scripts

Changing System States

Booting into Rescue Mode

Shutdown Commands

Managing Software and Devices

Identifying Software Packages

Using rpm to Manage Software

Using yum to Manage Software

Installing and Removing Software

Identifying Devices

Displaying Device and System Information (PCI, USB)

Plug and Play Devices

Device Configuration Tools

Managing Users and Groups

Setting Policies

User File Management

The /etc/passwd file

The /etc/shadow file

The /etc/group file

The /etc/gshadow file

Adding Users

Modifying User Accounts

Deleting User Accounts

Working with Groups

Setting User Environments

Login Configuration Files

The Linux File System

Filesystem Types

Conventional Directory Structure

Mounting a File System

The /etc/fstab File

Special Files (Device Files)

Inodes

Hard File Links

Soft File Links

Creating New File Systems with mkfs

The lost+found Directory

Repairing File Systems with fsck

The Journaling Attribute

File and Disk Management Tools

Linux File Security

File Permissions

Directory Permissions

Octal Representation

Changing Permissions

Setting Default Permissions

Access Control Lists (ACLs)

The getfacl and setfacl commands

SUID Bit

SGID Bit

The Sticky Bit

Controlling Processes

Characteristics of Processes

Parent-Child Relationship

Examining Running Processes

Background Processes

Controlling Processes

Signaling Processes

Killing Processes

Automating Processes

cron and crontab

at and batch

System Processes (Daemons)

Working with the Linux Kernel

Linux Kernel Components

Types of Kernels

Kernel Configuration Options

Recompiling the Kernel

Shell Scripting Overview

Shell Script Fundamentals

Bash Shell Syntax Overview

Shell Script Examples

System Backups

Backup Concepts and Strategies

User Backups with the tar Command

System Backup Options

The xfsdump and xfsrestore Commands

Troubleshooting the System

Common Problems and Symptoms

Troubleshooting Steps

Repairing General Boot Problems

Repairing the GRUB 2 Boot Loader

Hard Drive Problems

Restoring Shared Libraries

System Logs and rsyslogd

Basic Networking

Networking Services Overview

NetworkManager Introduction

Network Configuration Files Locations and Formats

Enabling and Restarting Network Services with systemtcl

Configuring Basic Networking Manually

Configuring Basic Networking with NetworkManager

LAMP Server Basics

LAMP Overview

Configuring the Apache Web Server

Common Directives

Apache Virtual Hosting

Configuring an Open Source Database

MySQL

MariaDB

PHP Basics

Perl CGI Scripting

Introduction to System Security

Security Overview

Maintaining System Security

Server Access

Physical Security

Network Security

Security Tools

Port Probing with nmap

Intrusion Detection and Prevention

PAM Security Modules

Scanning the System

Maintaining File Integrity

Using Firewalls

Introduction to firewalld

The Samba File Sharing Facility

Configure Samba for Linux to Linux/UNIX File Sharing

Configure Samba for Linux to Windows File Sharing

Use the smbclient Utility to Transfer Files

Mount/Connect Samba Shares to Linux and Windows Clients

Networked File Systems (NFS)

Using NFS to Access Remote File Systems

Configuring the NFS Server

Configuring the NFS Client

Exporting File Systems from the NFS Server to the NFS Client

Additional Course Details

Nexus Humans Introduction to Linux Systems Administration (TTLX2220) training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Introduction to Linux Systems Administration (TTLX2220) course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Introduction to Linux Systems Administration (TTLX2220)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 5-day Introduction to Linux Systems Administration (TTLX2220) course provides up to 32.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Introduction to Linux Systems Administration (TTLX2220) training?

The training takes place over 5 day(s), with each day lasting approximately 40.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Introduction to Linux Systems Administration (TTLX2220)?

Yes, we provide corporate training, dedicated training, and closed classes for Introduction to Linux Systems Administration (TTLX2220). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Linux; SysAdmin

Q: Why choose Nexus Human for Introduction to Linux Systems Administration (TTLX2220)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Introduction to Linux Systems Administration (TTLX2220) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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