

Rocky Linux Server: An Alternative to Red Hat

Introduction

1. Introduction

Provides an overview of the course and outlines the learning objectives.

2. What is a computer server?

Explains the concept of a computer server, its functions, and its significance in various environments.

3. What is Linux?

Describes Linux, including its history, core features, and its role in the server ecosystem.

4. Rocky Linux: An Alternative to Red Hat

Introduces Rocky Linux, highlighting its development as a community-driven alternative to Red Hat Enterprise Linux (RHEL).

5. Downloading Rocky Linux 9

Guides on how to download the latest version of Rocky Linux 9, including verification of the downloaded files.

6. Virtualbox install

Provides step-by-step instructions for installing VirtualBox, a popular virtualization software.

7. Installing Rocky Linux 9 Server

Detailed procedure for installing Rocky Linux 9 on a server, including initial configuration steps.

Command Line Fundamentals

8. Navigating the system (ls, cd)

Teaches how to navigate the file system using basic commands such as **ls** and **cd**.

9. Working with directories and files (mkdir, rmdir, nano, rm)

Covers commands for creating, deleting, and editing directories and files, including **mkdir**, **rmdir**, **nano**, and **rm**.

10. Basic output (cat, TAB, &&, "",)

Explains how to display file contents and use command-line shortcuts and operators like **cat**, TAB completion, **&&**, **"**, and ****.

11. Security basics (sudo)

Introduces the **sudo** command for executing commands with superuser privileges and includes practical exercises.

12. Managing output (|, grep, less)

Demonstrates how to manage and filter command output using pipes (|), **grep**, and **less**.

13. Copying and moving files (cp, mv, rsync)

Shows how to copy and move files using **cp**, **mv**, and **rsync**, including practical examples.

14. Shutting down the system (reboot, shutdown)

Details the commands for safely rebooting and shutting down the system.

15. Additional content: Runlevels (telinit)

Explores system runlevels and how to change them using the **telinit** command.

16. The 'sudoers' file

Explains how to configure the **sudoers** file to manage user privileges.

17. More learning: HELP!

Provides resources and commands for getting help within Rocky Linux, such as **man**, **info**, and online documentation.

User Management and Permissions

18. Changing the system date and time

Guides on how to change and configure the system date and time.

19. User management, part 1 (useradd, groupadd, passwd)

Covers the basics of user management, including adding users and groups with **useradd**, **groupadd**, and setting passwords with **passwd**.

20. User management, part 2 (userdel, groupdel, usermod)

Continues user management with commands for deleting users and groups (**userdel**, **groupdel**) and modifying user accounts (**usermod**).

21. Package management and understanding dependencies (dnf)

Explains how to manage software packages and their dependencies using the **dnf** package manager.

22. Basic Networking, Part 1

Introduces basic networking concepts, including configuring network interfaces.

23. Basic Networking, Part 2

Continues with more advanced networking topics, such as network troubleshooting and configuration.

24. Additional Network lesson

Provides additional networking content and advanced configurations.

25. Permissions, Part 1

Covers the basics of file and directory permissions, including how to read and set them.

26. Permissions, Part 2

Continues with advanced permission topics, such as special permissions (setuid, setgid, sticky bit).

27. Additional content: Managing Permissions with ACLs

Introduces Access Control Lists (ACLs) for more granular permission management.

Filesystem and Storage Management

28. Filesystem Management, Part 1

Explains how to manage filesystems, including mounting and unmounting.

29. Filesystem Management, Part 2

Covers advanced filesystem management tasks such as resizing and creating filesystems.

Advanced Administration

30. An Introduction to RAID

Provides an overview of RAID technology and its benefits.

31. Forming a RAID array

Step-by-step guide on creating a RAID array.

32. Replacing a failed disk in a RAID array

Explains how to identify and replace a failed disk in a RAID array.

33. Destroying an array

Instructions on safely dismantling a RAID array.

34. Samba: Preliminary configuration

Introduces Samba and covers its initial configuration.

35. Samba: Working with shares

Guides on setting up and managing file shares with Samba.

36. Using SSH to remote connect to the server

Explains how to use SSH for secure remote connections to the server.

37. Setting up and using the Apache Web Server

Provides instructions for installing and configuring the Apache Web Server.

38. Automating tasks with cron jobs

Covers how to schedule and manage automated tasks using **cron**.

Additional Tools

39. Browsing the web with 'links'

Shows how to use the **links** command-line web browser.

40. GUI management with Cockpit

Introduces Cockpit for web-based GUI management of Rocky Linux.

41. Process management (ps, top, fg, kill)

Teaches how to monitor and manage system processes using **ps**, **top**, **fg**, and **kill**.

42. Using WinSCP for FTP access

Explains how to use WinSCP for file transfers between Windows and Rocky Linux.

This comprehensive program covers various aspects of Rocky Linux Server administration, providing both fundamental and advanced knowledge.