

RH124 - Red Hat System Administration - I

1. Getting started with Red Hat Enterprise Linux

- Introduction and History of UNIX & Linux
- Differences between centos, red hat enterprise linux & fedora
- Difference between UNIX & LINUX

. Describe and define open source, Linux distributions, and Red Hat Enterprise Linux

2. Downloading, Installing and Understanding Booting Process of OS - Redhat Linux

- download the virtual box and installing in your systems
- downloading and installing Redhat linux
- understanding and deep dive into

POST, BIOS(UEFI), MBR, GRUB(GRUB2), SYSTEMD(initd), RUNLEVELS(TARGET)

- understanding and deep dive into Linux architecture, kernel, interpreter, shells, memory

3. Linux FSH (File System Hierarchy)

- understanding and deep dive into FSH

4. Access the command line

- Log into a Linux system and run simple commands using shells
- understanding the terminals (TTY's) using the shell
- identifying the shells and usage of shells

5. Manage files from the command line

- Copy, move, create, delete, and organize files while working from the bash shell
- understanding the commands to create, move, create, delete, sorting with commands by recursively and forcefully head, more, less, tail, cat commands
- Use input-output redirection

6. Get help in Red Hat Enterprise Linux

- Resolve problems by using local help systems
- help , man commands understanding
- technical os support from enterprises linux

7. Create, view, and edit text files

- Manage text files from command output or in a text editor.
- understanding the vi, vim, gedit, nano editors and their modes
- understanding the inode

8. Symbolic links or Backup Methods

- understanding the hard link and soft links

9. Manage local users and groups Management

- Create, manage, and delete local users and groups, as well as administer local password policies
- understanding the commands useradd, userdel, usermod, groupadd, groupdel, groupmod, Passwd, gshadow commands and their policies implementation
- switching users and accessing the shells

10. Control access to files

- Set Linux file system permissions on files and interpret the security effects of different permission settings
- understanding the commands chmod, chown, setfacl, getfacl, sticky bits

11. Monitor and manage Linux processes

- Evaluate and control processes running on a Red Hat Enterprise Linux system.
- understanding the top, ps, lscpu commands

12. Control services and daemons

- Control and monitor network services and system daemons using systemd.
- understanding the systemctl,service commands (status,start,stop,restart,enable modes)

13. Configure and secure SSH

- Configure secure command line service on remote systems, using OpenSSH.
- SSH authentication by using asymmetric method by generating the public key and private key password less authentication modes
- SSH password authentication mode

14. File and Folder Transfer and downloading from linux -linux, linux-windows, linux-mac (viceversa)

- understanding SFTP, SCP, Rsync commands
- understanding the winscp and filezilla
- understanding the wget and curl commands

15. Analyze and store logs

- Locate and accurately interpret logs of system events for troubleshooting purposes.
- understanding the system logs, user logs etc

16. Manage networking

- Configure network interfaces and settings on Red Hat Enterprise Linux servers.
- understanding iptables, netstat, telnet, ss, ficonfig, nslookup, dig commands

17 Archive and transfer files

- Archive and copy files from one system to another.
- understanding the zip, gunzip, bzip, archive(tar) commands

18. Searching the Contents in linux

- understanding the grep, locate, find commands

19 Install and update software packages

- Download, install, update, and manage software packages from Red Hat and DNF package repositories.
- understanding the rpm, yum, wget commands

20. Access Linux files systems

- Access, inspect, and use existing file systems on storage attached to a Linux server.
- Understanding the fstab, mtab, blkid commands

21. Analyse servers and get support

- Investigate and resolve issues in the web-based management interface, getting support from Red Hat to help solve problems.

22. Comprehensive review

- Review the content covered in this course by completing hands-on exercises.

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1. Schedule future tasks

- Understanding the cron jobs, crons, anacron, crontab,

3. Tune system performance

- Understanding the system, memory, IOstat, Network
- Understanding the /proc and top and ps
- Understanding the virtual memory, system activity reported , iostat,

4. Manage SELinux security

- Understanding the selinux importance in linux
- Implementing the selinux modes target, permissive, enabled,disabled,enforcing

5. Maintain and manage basic storage

- Understanding the File system and file system types ext2,ext3,ext4 and xfs,btrfs,etc
- Harddisk storage partition and formatting
- Understanding the LVM, creating, resizing, extedning, LVM

7. network-attached storage or File server

- NFS creating ,accessing , deleting

8. Control the boot process

- Understanding the run levels to limit the boot process

9. Manage network security

- Ip tables, ethernet cards attaching