

Bits & Bytes Learnings Time: 10PM IST

+91 6384932879 (fee : 7.5k inr)

Linux By Bits & Bytes Learnings (mastering linux skills) Around 80 to 100 hours a kickstart to DevOps journey further strong foundation linux to upskill in Aws / Azure / GCP

Module 1:

(Day -1)

1. Servers
2. Introduction of Linux
3. Brief intro of Unix
4. Brief intro of Linux and its distributors Redhat and Ubuntu versions
5. Windows vs Linux.

(Day-2)

6. Directory Structure and its use (file System hierarchy on rough note)
7. Operating System
 - a. Types of Operating System
 - b. History Of Linux Operating System
 - c. Benefits of Linux Operating System
 - d. Linux flavours
8. IT/Software Business Environment Full Flow
9. Roles of a Linux Administrator (brief view)
10. What is kernel and shell
11. AWS Instance creation with RHEL Operating System for practicing purposes.
 12. Administrating Remote Systems
 13. Understanding of VMware and related types of Software
 14. Necessity of the Servers
 15. Types of servers

Bits & Bytes Learnings Time: 10PM IST

+91 6384932879 (fee : 7.5k inr)

16. Components of Server (Cpu, Ram, Rom, NIC Card)

17. Different Terminal

17.1. Utilization of different tools for accessing the servers

- a. 17.1. Putty
- b. 17.2 Mobexterm
- c. 17.3 Terminal
- d. 17.4 Gitbash
- e. 17.5 Powershell etc

Module 2:

(Day-3, Day-4, Day-5)

- 1. Booting Procedure (brief explanation)
- 2. Linux Installation Procedure max aws account

Server login via ssh with various clients

3. Linux basic Commands

3.1 Basic Commands:

Main focused topics are

1. File-hierarchy (in detail)

1.1. Command detailed syntax (command switches (or) options (or) flags arguments

Commands like (ls, pwd, mkdir, mdir, rm, rm -rf, ed, touch, touch with range operator touch {1.10}, touch before file addition, touch txt after extension,

mkdir with range operator cat, echo, mkdir-p, diff, which packagename, cp -rvfp mv, rename, whatis, cmp, cp, cp -p, more +5, less -5, head, tail, history, touch, sort, echo-n, cat-n, less -N filename, grep, sed, wc-1, wc-c, we -w, ctrl+c, cd, cd., cd-, cd., cd ~, cd, locate, grep (brief when topic comes in detail, absolute path and relative path, range operator between with files and folders , man, -help, cal, date, q when using less or more, find on brief (in detail with shell scripting), ls -lrtha, still commands like below that comes when we touch that topic.) , redirection operators >, >> with cat

Bits & Bytes Learnings Time: 10PM IST

+91 6384932879 (fee : 7.5k inr)

and echo , su, clear, eject, history, uptime, fdisk, whoami, date, q, ps, top, kill, init 6, init 0, reboot, shutdown, find, use of pipe, whereis, du, df, free, mount, umount, hostname, ping, nslookup, passwd, logout , awk etc. (depending on concept wise the commands will be coming in to the play)

(Day-6,,Day-7,Day-8)

Pending commands like

1. Vim like pro for devops ,du -sh, du -Th, w, whoami, who, hostname, set hostnamectl hostname, whereis, | (pipe) ,cut on brief, soft links and hard links, redirection operators. 2. Password based login (disabling which entries in file like /etc/ssh/sshd_config)

Module 3:

(Day-9, Day-10,Day-11)

[useradd, usermod, userdel , groupadd, groupmod , groupdel, gpasswd, chage commands] playing with files of cat /etc/passwd, /etc/group, /etc/shadow, /etc/gshadow, /etc/passwd-, /etc/group-, /etc/login.defs, compgen -u , compgen -g etc

1. Users and Group Administration.

2. User accounts and group accounts

- Creating user, setting password, modifying user, deleting, switching user
- Creating Group, Deleting Group
- Adding Users in a group one by one or at a one go.
- Important files for user and group.

Giving root access to normal users. (visudo)

Restrict users to use specific commands (grouping commands to one set)

- Restrict some users , only allowed users can login.
- Setting up account expiry of users and other things by things by using chage
- Locking the user in all the ways possible not allowing in /etc/ssh/sshd_config : allowed
users are only few, restricting users
- Usermod -L username
- Usermod -s /sbin/nologin username

Module 4:

Bits & Bytes Learnings Time: 10PM IST

+91 6384932879 (fee : 7.5k inr)

(Day-12)

1. Permissions in detail (chmod, chown, umask)

(Day-13)

1. Special permissions Suid, Sgid, Sticky bit

(Day-14)

1. Selinux and firewall in detail (securing files and directories) acl

(Day-15, Day-16, Day-17, Day-18)

1. Linux partition
2. What is partitions? Why partitions are important
3. Detailed understanding of mbr, gpt
4. Making partitions, file systems, making entries in /etc/fstab, mounting etc
5. Importance of uuid, mount -a usage
6. PV and LVM
 - 6.1. Managing file system and volumes.
LVM Storage.
 - 6.1.1 Physical volume creation, deletion.
 - 6.1.2 Volume group creation, deletion.
 - 6.1.3 Logical volume creation, deletion, resizing.
7. Permanently mounting logical volume.
8. Booting process (BIOS-MBR-Grub-Kernel-Init-Runlevel).
9. Recovering root password.

Module 5:

(Day-19, Day-20, Day-20)

1. Install, update, remove packages or applications in Linux using APT and Yum.

YUM package managers. Importance of yum with rpm

Understand the importance of /etc/repos.d and /etc/apt/sources.list

- 1.2. Software Management .
 - 1.2.1. Installing Methods .
 - 1.2.2. Uninstalling Methods .

Bits & Bytes Learnings Time: 10PM IST

+91 6384932879 (fee : 7.5k inr)

Installing few packages like devops tools which are useful

Jenkins
Maven
Sonarqube
Nexus Jfrog
Docker
Terraform
Prometheus
Grafana
Elastic search engine
Apache, httpd in both redhat and Ubuntu
Kafka Golden gate
Data dog
Nginx
Java
Packer
Python
Zookeeper (if time permits)
Still many

*While installing understanding the drawbacks of rpm and advantages of yum and dnf and importance of variables
.bashrc, .bash_profile, /etc/profile for global setting when package need to available globally and making an installation
with systemd*

Module 6:

(Day-21, Day-22, Day-23)

- 18. Services and Processes*
- 19. Enhanced User Security with SUDO (brief because already done)*
- 20. Backup and Restore (tar, zip, creating, unarchiving, zipping and unzipping)*
- 21. Cron jobs scheduling (Schedule future Linux tasks (at and cron jobs).*

(Day-24, Day-25, Day-26) [will see only some]

- 22. FTP (File Transfer Protocol) Server*
- 23. NFS (Network File System) Server*
- 24. Samba Server.*
- 25. Apache Web Server.*
- 26. SCP.*

Bits & Bytes Learnings Time: 10PM IST

+91 6384932879 (fee : 7.5k inr)

(Day-27,Day-28, Day-29,Day-30,Day-31) [will see some practicals and importance of some things]

27. NTP

28. DNS (Domain Name System) understanding the importance of records

29. Controlling multiple servers at a time using Ansible.

(Day-32, Day-33, Day-34, Day-35, Day-36,Day-37)

1. Monitoring Linux Servers using Prometheus. (understanding)

2. Basic understanding of a ticketing tool

3. Basic understanding of a messaging tool

4. Basic understanding of a supporting project

5. Basic SQL Concepts (if time permits 38 and 39)

6. Basic Python Data Types

7. Real-time Project experience

8. Top 100 Linux interview Questions

Day-(38-50)

Shell scripting

- Introduction to Shell and Shell Scripting
- Steps to write and execute shell script
- What is shebang line ?
- Variable and Types of variables
- Data types
- Input and output commands or statements
- Unix-commands
- Command Substitution
- Command line arguments
- Conditional statements
- Loops and Control statements

Bits & Bytes Learnings Time: 10PM IST

+91 6384932879 (fee : 7.5k inr)

- Functions
- Schedulers
- Advanced Shell Scripting
- Real Time Project

Day-(51-60)

Doubts in any topic Troubleshooting

skills Interview preparation guidance

Resume preparation help

Module 7:

5 – 10 years skills must should be known(a Brief understanding on each topic is good)

1. Secure Shell Server (SSH)
2. Teletype Network Server (Telnet)
3. File Transfer Protocol Server (FTP)
4. Network File System Server (NFS)
5. Samba server cirs/SMB
6. Domain Name server UNS & Clients
7. Dynamic Host Configuration Protocol Server (DHCP)
8. Network Time Protocol Server {NTP (Chrony)} & Clients
9. MySQL Server
10. MariaDB Server
11. Puppet Server & Clients
12. Ansible Server & Nodes
13. Lightweight Directory Access Protocol (LDAP) Server & Clients
14. Network Information Service (NIS) Server & Clients
15. iSCSI Target & Initiator
16. Jenkins Server
17. Web Servers (HTTP/HTTPS)
18. Nginx Server & Clients
19. Zabbix Server & Clients
20. Nagios Server & Clients
21. YUM Servers & Clients
22. Postfix & Sendmail Server
23. Squid Proxy Server & Clients
24. Rsyslog Server & Clients
25. FreeIPA Server

Bits & Bytes Learnings Time: 10PM IST

+91 6384932879 (fee : 7.5k inr)

- 26. Prometheus/Grafana
- 27. Hadoop cluster
- 28. Varnish Cache Server & Clients
- 29. High Availability (HA) PCS Cluster
- 30. Kickstart Server
- 31. Raid levels.

BITS AND BYTES LEARNINGS