

Everyone Tells You to

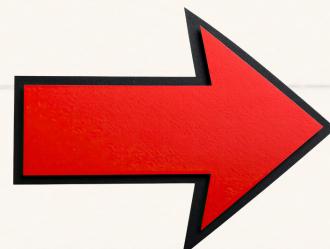
Learn Linux for DevOps

But No One Tells You

WHAT to Actually Learn

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Here's exactly what to focus on →



Devops With Akhilesh Mishra

Living Devops

0. Text Editors : Learn at least one:

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vim - Most powerful, nano - Easiest

emacs - Feature-rich

You'll edit files in terminal. No GUI in prod

1. Process Management

ps - Check running processes

top/htop - CPU & memory usage

kill - Stop processes

pstree - Process hierarchy

2. Networking Commands

ifconfig, ip - Network interfaces

iptables, ufw - Firewall config

netstat, ss - Used ports

ping, traceroute - Connectivity

dig, nslookup - DNS queries

curl, wget - HTTP requests

3. Critical Network Files

/etc/hosts – Hostname to IP mapping

/etc/resolv.conf – DNS config

/etc/hostname – System hostname

/etc/nsswitch.conf – Name resolution

/etc/network/interfaces – Network setup

4. File Operations

mkdir – Create directories

cp, mv – Copy/move files

cd, pwd – Navigate directories

rm, rmdir, rm -rf

ls, tree – List contents

Absolute vs relative paths.

Linux filesystem and tree structure

5. File Permissions

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chmod - Change permissions, chown - Change owner

chgrp - Change group

SUID, SGID, sticky bits

Permission Values: (755 vs u+x notation)

r (read) = 4, w (write) = 2 , x (execute) = 1

755 = rwxr-xr-x

644 = rw-r--r--

777 = rwxrwxrwx

6. Disk & Storage

df - Disk free space

du - Disk usage by directory

lsblk - List block devices

mount/umount - Mount file systems

Monitor storage before it fills up.

7. Search & Filter

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find, locate - Find files

grep - Search patterns in files

sed, awk - Text processing

cut, sort, uniq - Filter data

head, tail, wc - View/count data

Production debugging needs these.

8. Package Management

apt (Debian/Ubuntu)

yum, dnf (RedHat/CentOS)

zypper (SUSE)

Install/remove packages.

troubleshoot dependencies, broken packages

Manage repositories.

You'll install tools daily.

9. User Configuration Files

- `.bashrc` – User shell settings
- `.bash_profile` – Login shell config
- `.profile` – User environment
- `/etc/profile` – System-wide settings
- `.bash_history` – Command history
- `.ssh/config` – SSH client settings

10. System Files

- `/etc/fstab` – File system mounts
- `/etc/passwd` – User accounts
- `/etc/group` – Group info
- `/etc/shadow` – Encrypted passwords
- `/etc/sudoers` – Sudo permissions
- `/etc/crontab` – Scheduled tasks

11. Log Files

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Location: /var/log/

syslog - System logs

auth.log - Authentication

kern.log - Kernel messages

journalctl - Systemd logs

12. System Monitoring

uptime, w - System load

free - Memory usage

vmstat, sar, iostat - Performance

swapon --show - Swap usage

13. Service Management

systemctl start/stop/restart

systemctl status

systemctl enable/disable

Legacy: service command

14. SSH Setup

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Generate keys, Configure ssh key:

~/.ssh/id_rsa , ~/.ssh/authorized_keys

/etc/ssh/sshd_config, ~/.ssh/config

SSH, SCP, RSYNC

Secure remote access. No passwords in production.

15. Shell Scripting Basics

Variables, Functions,

Loops (for, while), Conditionals (if/else)

Command line arguments, Exit codes

Debugging with set -x

16. Environment Variables

Set and export variables

Local vs exported

Understanding PATH

export VAR=value, echo \$PATH

17. System Information: Know your system specs.

uname - Kernel info

dmidecode - Hardware info

hostnamectl - Hostname details

lscpu - CPU details , lsmem - Memory info

18. User Management

useradd - Create user

usermod - Modify user

userdel - Delete user

groupadd - Create group

19. Archiving & Compression

tar - Create/extract archives

gzip, bzip2 - Compression

zip/unzip - Zip files

tar -czf backup.tar.gz /data

tar -xzf backup.tar.gz

You'll always pick up more Linux skills while working.
The key is building a strong foundation first.

Don't try to learn everything at once. Focus on
fundamentals.

Save this post.

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