

# Devops Guide 2025

## Step1 : Linux Fundamentals

- CLI (**BASH**)
- Process & Permissions : ps, kill, chmod
- package management : apt, yum
- Text editors : vim

## Step2 : Networking & Security concepts

→ **Wireshark**

- OSI, TCP/IP models
- Different protocols : http, https, ssh etc.
- IP addresses, subnetting, DNS
- Network issues
- firewalls, proxy servers

Going forward : load balancers & caching servers.

## Step3 : Scripting (Programming language)

popular options : **Python, Ruby, Golang**

- Syntax & fundamentals
- Useful libraries
- File handling
- Writing automation scripts

## Step4 : Version Control (**git**)

- imp. Git commands : init, clone, add, commit, push, pull, merge, rebase etc.
- concept of branching
- merging & merge conflict resolution
- working with remote repositories

## Step5 : Cloud

popular options : **AWS, Azure, GCP**

- configure & manage servers & data (EC2, S3, RDS)
- manage users, groups & roles (IAM)
- setup & manage isolated networks (VPC)

## Step6 : Microservices & Containers

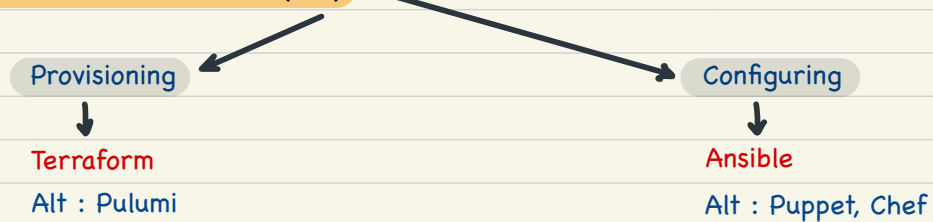
popular option : **Docker**

- overview of virtualization & containerization
- docker images & managing containers
- docker commands : run, ps, build etc.
- writing docker files
- using docker compose

## Step7 : CI/CD

popular options : **Jenkins**, Github Actions CI/CD, Gitlab CI, Circle CI, Travis CI

## Step8 : Infrastructure as Code (IaC)



## Step9 : Orchestration & Management

popular option : **Kubernetes**

- creating & managing k8s clusters
- deployment of applications on k8s
- k8s commands : apply, build, delete etc.

## Step10 : Monitoring & Logging

popular option : **Prometheus, Grafana**

Alt : ELK, Fluentd, AWS CloudWatch