

## ■ DevOps Interview Prep Roadmap (6 Weeks Plan)

### Week 1: Foundations (Networking + Linux)

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#### Networking Basics:

- OSI vs TCP/IP model
- IP addressing (IPv4/IPv6, subnetting, CIDR)
- DNS (records: A, CNAME, MX, TXT)
- HTTP/HTTPS, TLS/SSL, certificates
- Firewalls & NAT basics

#### Linux Fundamentals:

- Users & permissions (chmod, chown, sudoers)
- Processes (ps, top, systemctl, journalctl)
- Storage (df, du, mount, fstab, LVM basics)
- Networking tools (netstat, ss, nc, tcpdump, curl, wget)
- Security (iptables, firewallld, SELinux/AppArmor)

Resources: Cisco Networking Basics, FreeCodeCamp Networking, Linux Foundation courses

### Week 2: Git, CI/CD & Containers

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#### Git & CI/CD:

- Git basics → branching, merging, rebasing
- Jenkins/GitHub Actions → pipelines, jobs, runners

#### Containers & Orchestration:

- Docker → images, containers, volumes, networking
- Kubernetes basics → pods, deployments, services, configmaps, secrets

Resources: Atlassian Git Tutorials, Jenkins docs, Docker Docs, KodeKloud Kubernetes

### Week 3: Kubernetes Deep Dive + Helm

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- Kubernetes: namespaces, ingress, secrets, RBAC
- Helm basics → charts, templates, releases
- Practice: Deploy a simple app with Helm

Resources: KodeKloud Kubernetes & Helm, Play with Kubernetes

### Week 4: IaC + Cloud (AWS focus)

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#### Infrastructure as Code:

- Terraform basics → providers, resources, variables, outputs
- Ansible basics → playbooks, roles, inventory, variables

#### Cloud (AWS):

- IAM (roles, policies, users, groups)
- VPC, subnets, SG vs NACL, route tables, NAT
- EC2, S3, RDS basics

Resources: Terraform Up & Running, Ansible docs, AWS Free Tier + Tutorials Dojo

### Week 5: Security + DevSecOps

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#### Security:

- IAM principles, least privilege
- SSL/TLS, HTTPS, Cert Manager in K8s
- Secret management (K8s secrets, HashiCorp Vault, AWS Secrets Manager)
- Linux hardening (fail2ban, auditd, password policies)

#### DevSecOps:

- SAST, DAST, dependency scanning (SonarQube, Trivy, Snyk)
- OWASP Top 10

Resources: OWASP Top 10, KodeKloud DevSecOps labs, The DevSecOps Handbook

#### Week 6: Observability + Interview Prep

##### ----- Observability:

- Monitoring: Prometheus, Grafana
- Logging: ELK/EFK basics
- Tracing: Jaeger overview

##### Interview Prep:

- Daily Mock Questions: GitOps vs DevOps, secure Kubernetes cluster, troubleshoot pod networking
- Behavioral Qs (STAR method)
- Mini Project: Docker → K8s → Helm → GitHub Actions → Terraform infra → Monitoring with Prometheus/Grafana

Resources: Prometheus & Grafana docs, Elastic tutorials, mock interview practice

■ After 6 weeks you will be ready to handle DevOps interviews confidently.