Talha's DevOps Cheatbook

Docker

Mnemonic: "I Build Pretty Containers Daily" -> Image, Build, Push, Container, Deploy

Basic steps:

1. docker build -t app .

2. docker run -d -p 80:80 app

3. docker ps / docker logs / docker exec

Interview Tip: Explain Docker vs VM: Docker shares the host OS kernel, while VMs use a hypervisor.

Kubernetes (EKS)

C-P-N-A Model: Control Plane, Nodes, Networking, Add-ons

Mnemonic: "Coffee Nourishes Nerdy Adventurers" -> Control Plane, Nodes, Networking, Add-ons

Key objects: Pod, Deployment, Service, ConfigMap, Ingress

Interview Tip: K8s uses declarative YAML for desired state.

CI/CD Pipeline

Mnemonic: "Cool Bears Taste Doughnuts" -> Code, Build, Test, Deploy

Steps:

- Push code -> CI runs builds + tests -> CD auto-deploys

Interview Tip: CI catches bugs early; CD ensures safe delivery to production.

DevOps Infinity Loop

Plan -> Code -> Build -> Test -> Release -> Deploy -> Operate -> Monitor

Mnemonic: "Peter Can Bake Ten Red Delicious Orange Muffins"

Interview Tip: Describe the infinity loop and how each phase flows into the next.

Terraform

Mnemonic: "Iguanas Prefer Adding Dill" -> Init, Plan, Apply, Destroy

Commands:

- terraform init

- terraform plan

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- terraform apply

- terraform destroy

Interview Tip: Terraform manages infrastructure as code with state.

Monitoring & Logging

Mnemonic: "Michael's Aunt Loves Donuts" -> Metrics, Alerts, Logs, Dashboards

Tools: Prometheus, Grafana, Loki, ELK

Interview Tip: Monitoring = collecting metrics + setting alerts; Logging = centralized logs.

Ansible

Mnemonic: "YAML Runs Everything" -> YAML, Roles, Execution

Components: Inventory, Playbooks, Modules, Idempotency

Interview Tip: Ansible is agentless and uses SSH & YAML.

Jenkins

Mnemonic: "Pipelines Automate Work" -> Pipeline, Agent, Workspace

Flow: Jenkinsfile -> pipeline stages -> build/test/deploy

Interview Tip: Jenkins automates CI/CD with plugins and Groovy pipelines.

Git & GitHub

Mnemonic: "Fetch Add Commit Push" -> fetch, add, commit, push

Commands:

- git clone

- git add / commit

- git push / pull

Interview Tip: Git is distributed version control; GitHub hosts repos.

Security & Scanning

Tools: Trivy, SonarQube, Vault

Mnemonic: "Secure Systems Prevent Harm" -> Scan, Secure, Policies, HashiCorp

Interview Tip: Integrate scans in CI and manage secrets centrally.

Artifact Repositories

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Tools: Nexus, Artifactory, ECR

Mnemonic: "Always Carry Artifacts" -> Artifacts, Containers, Repositories

Interview Tip: Use artifact repos for versioned binaries and Docker images.

GitOps

Tools: ArgoCD, Flux

Mnemonic: "Git Operates Production Seamlessly" -> GitOps

Interview Tip: GitOps uses Git as source of truth for cluster state.

AWS Core Services

EC2, S3, VPC, IAM, EKS

Mnemonic: "Every Cloud Starts Simple" -> EC2, CloudFormation, S3, Security

Interview Tip: Mention region, AZs, and IAM roles.