

# DevOps Interview Preparation Guide

## Ansible Interview Questions

### ***Q: What is Ansible?***

A: An open-source automation tool for configuration management, app deployment, and orchestration.

### ***Q: What is idempotency in Ansible?***

A: Running a playbook multiple times doesn't make unintended changes. Example: installing a package with state=present.

### ***Q: Difference between copy and template?***

A: Copy: transfers static files. Template: uses Jinja2 templates and variables.

### ***Q: How to run playbook with extra vars?***

A: `ansible-playbook site.yml -e "var=value"`

### ***Q: What are handlers?***

A: Special tasks triggered when notified (e.g., restart service).

### ***Q: How to manage secrets?***

A: Using Ansible Vault to encrypt sensitive data.

### ***Q: What is the difference between Playbooks and Roles?***

A: Playbooks define tasks, Roles organize playbooks into reusable structures.

### ***Q: How to use register and when?***

A: Register stores output of tasks, used in conditions for later tasks.

### ***Q: How do you structure large projects?***

A: Use site.yml with roles for modular, scalable design.

### ***Q: How to use Ansible with AWS?***

A: Use dynamic inventory plugin `amazon.aws.aws_ec2`.

# Terraform Interview Questions

***Q: What is Terraform?***

A: Open-source IaC tool by HashiCorp for provisioning and managing infra with HCL.

***Q: What is Terraform state?***

A: A file that tracks real infra and maps it to config.

***Q: What are providers?***

A: Plugins that allow Terraform to interact with services (AWS, GCP, etc.).

***Q: What is remote state?***

A: Storing state in shared storage (S3, GCS, Terraform Cloud) with locking.

***Q: What are modules?***

A: Reusable components grouping resources together.

***Q: How to handle multiple environments?***

A: Using workspaces, separate var files, or directories.

***Q: Difference between count and for\_each?***

A: Count = index-based identical resources. For\_each = named resources from map/set.

***Q: What is lifecycle block?***

A: Controls resource behavior: prevent\_destroy, create\_before\_destroy.

***Q: How to import resources?***

A: terraform import maps existing infra to config.

***Q: How to integrate Terraform in CI/CD?***

A: Run fmt → validate → plan → apply with approvals in pipelines.