

Infrastructure as Code Best Practices

Terraform-oriented patterns that keep IaC codebases maintainable at enterprise scale.

Repository Structure

- One module = one concern
- Environments as thin composition, not copy-paste
- Remote state with locking (S3+DynamoDB, Azure Storage, or Terraform Cloud)
- Pin providers and modules to explicit versions

Change Management

- Every change reviewed via PR
- terraform plan posted to PR by CI
- Apply gated on approval; no local applies
- tflint, tfsec, and checkov run on every PR

Secrets & State

- Never commit secrets — use Vault or cloud-native stores
- State encrypted at rest with restricted access
- Sensitive outputs marked and rotated

Reliability

- Modules covered by terratest or opentofu integration tests
- Drift detection scheduled nightly
- Blast radius contained by workspace / stack boundaries

Team Enablement

- Golden modules published in an internal registry
- Naming, tagging, and cost-allocation conventions documented
- Developer self-service via workflows, not tickets