One-Click Kubernetes Deployment - Cheatsheet

1. Workflow Overview

- Trigger workflow manually via GitHub Actions (workflow_dispatch).

- Select environment (dev/test), Terraform action (apply/destroy/refresh), provider (google/openai).

- Optional: Run security scan.

- Terraform provisions/destroys infra (VPC, EKS, nodes, LB).

- Kubernetes deploys apps: Node.js, NGINX, k8sGPT.

- Apps accessible via LoadBalancer IPs.

2. Key Parameters

- environment: dev/test

- action: apply / destroy / refresh

- provider: google / openai

- run_security_scan: true/false

- run_terraform: true/false

- run_application_deployment: true/false

- dry_run (delete workflow): true/false

- confirm (delete workflow): true/false

3. Safety Features

- Dry run + confirm required for deletions.

- Secrets stored in GitHub Secrets, never in code.

- RBAC and least privilege in Kubernetes.

- Audit logs for infra + app changes.

4. Example Flows

- Scan Only: run_security_scan=true -> security checks only.

- Infra Only: run_terraform=true, action=apply -> provision infra only.

- Apps Only: run_application_deployment=true -> deploy apps onto existing cluster.

- Full Deploy: all flags true, action=apply -> full infra + apps deploy.

- Delete Apps: dry_run=false, confirm=true -> deletes listed apps safely.

5. Workflow Diagram

Start -> [Security Scan?] -> [Terraform Action?] -> [App Deployment?] -> End

Deletion Workflow:

Start -> [Dry Run?] -> [Confirm?] -> [Delete Apps] -> End