Flux CLI GitOps for Kubernetes

CONCEPTS

Flux pulls: a Source (Git, OCI, Helm repo, bucket) is fetched, then a Kustomization or HelmRelease applies it. The CLI mostly inspects and nudges; Git stays the source of truth.

Source GitRepository, OCI, HelmRepository
↓ artifact
Kustomization / HelmRelease what to apply, how often
↓ apply
Cluster live objects, drift corrected

Commands default to the flux-system namespace. Add -n <ns> or -A, or --ns-follows-kube-context to use the kubeconfig context's namespace.

INSTALL & BOOTSTRAP

flux check --pre
Check cluster meets prerequisites

flux bootstrap github --owner=*<org>* **--repository=***<repo>* **--path=***<dir>*
Install Flux and sync from GitHub

flux check
Verify controllers are healthy

INSPECT

flux get all
Everything in one namespace

flux get all -A
Everything in all namespaces

flux get kustomizations
List Kustomizations and readiness

flux get helmreleases -A
List Helm releases

flux get all -A --status-selector ready=false
Only the broken ones

RECONCILE & SUSPEND

flux reconcile kustomization *<name>*
Apply now, skip the interval

RECONCILE & SUSPEND (cont.)

flux reconcile kustomization *<name>* **--with-source**
Refetch source, then apply

flux reconcile helmrelease *<name>*
Re-run a Helm release

flux suspend kustomization *<name>*
Pause one Kustomization

flux resume kustomization *<name>*
Resume and reconcile

flux suspend helmrelease *<name>*
Pause a Helm release

CREATE RESOURCES

flux create source git *<name>* **--url=***<url>* **--branch=***<b>*
Define a Git source

flux create kustomization *<name>* **--source=***<src>* **--path=***<dir>* **--prune**
Apply a path from a source

flux create helmrelease *<name>* **--source=HelmRepository/***<repo>* **--chart=***<chart>*
Install a chart

flux create source git *<name>* **... --export > ***<file>***.yaml**
Write YAML instead of applying

DEBUG

flux logs -A
Controller logs, all namespaces

flux events --for Kustomization/*<name>*
Events for one object

flux trace *<kind>* *<name>* **-n** *<ns>*
Which source manages an object

BUILD & DIFF

flux diff kustomization *<name>* **--path** *<dir>*
Local changes vs the cluster

GLOBAL FLAGS

-n *<ns>* **/ -A**
Namespace or all namespaces