Cilium CLI Kubernetes networking CLI

cilium CLI install and manage → deploys → **Agent + operator** per node, eBPF → flows to → **Hubble Relay** cluster-wide → queried by → **hubble CLI / UI** observe flows

CONCEPTS

The cilium CLI talks to the cluster in your kubeconfig and manages the install; hubble is a separate binary for reading flows.

Every command takes --context to target another cluster in your kubeconfig.

INSTALL

cilium install
Install Cilium with detected defaults

cilium install --version *<ver>*
Install a specific release

cilium install --set *<key>=<value>*
Pass a Helm value

cilium install --dry-run
Show resources without applying

cilium install --dry-run-helm-values
Show non-default Helm values

cilium install --encryption=ipsec
Enable IPsec encryption

INSTALL (cont.)

cilium upgrade --version *<ver>*
Upgrade to a release

cilium upgrade --reuse-values --set *<key>=<value>*
Change one value on upgrade

cilium upgrade --dry-run | kubectl diff -f -
Preview an upgrade

cilium uninstall
Remove Cilium

STATUS AND CONFIG

cilium status
Show component health

cilium status --wait
Block until Cilium is ready

cilium context
Show the cluster being targeted

cilium config view
Print the agent configuration

cilium sysdump
Collect a debug archive

cilium sysdump --node-list *<nodes>*
Dump only chosen nodes

CONNECTIVITY

cilium connectivity test
Run the end-to-end test suite

cilium connectivity test --single-node
Test on a one-node cluster

cilium connectivity test --context *<a>* **--multi-cluster** *<b>*
Test across a cluster mesh

The test deploys into the cilium-test namespace; give it a few minutes and a cluster with outbound access.

HUBBLE

cilium hubble enable
Deploy Hubble and Relay

cilium hubble port-forward
Forward Relay to localhost:4245

hubble status
Check Relay and flow counts

hubble observe
Stream recent flows

hubble observe -P
Auto port-forward Relay first

HUBBLE (cont.)

hubble observe --pod *<name>*
Flows for one pod

hubble observe --verdict DROPPED
Only dropped traffic

hubble observe --protocol http
Only L7 HTTP flows

cilium hubble ui
Open the Hubble UI

hubble help observe
List every filter flag

CLUSTER MESH

cilium install --set cluster.name=*<name>* **--set cluster.id=***<n>*
Give each cluster a unique name and ID

cilium clustermesh enable --context *<ctx>*
Deploy the mesh API server

cilium clustermesh status --wait
Wait for the mesh to be ready

cilium clustermesh connect --destination-context *<ctx>*
Connect two clusters

CLUSTER MESH (cont.)

Cluster names and IDs must be unique, and pod CIDRs must not overlap.

RECIPES

Fresh cluster, verified

```
cilium install --version <ver>
cilium status --wait
cilium connectivity test
```

Find why traffic is dropped

```
cilium hubble enable
cilium hubble port-forward &
hubble observe --pod <name> --verdict DROPPED
```

Join two clusters

```
cilium clustermesh enable --context $C1
cilium clustermesh enable --context $C2
cilium clustermesh connect --context $C1 --destination-context $C2
cilium clustermesh status --context $C1 --wait
```

Safe upgrade

```
cilium upgrade --version <ver> --dry-run | kubectl diff -f -
cilium upgrade --version <ver>
cilium status --wait
```