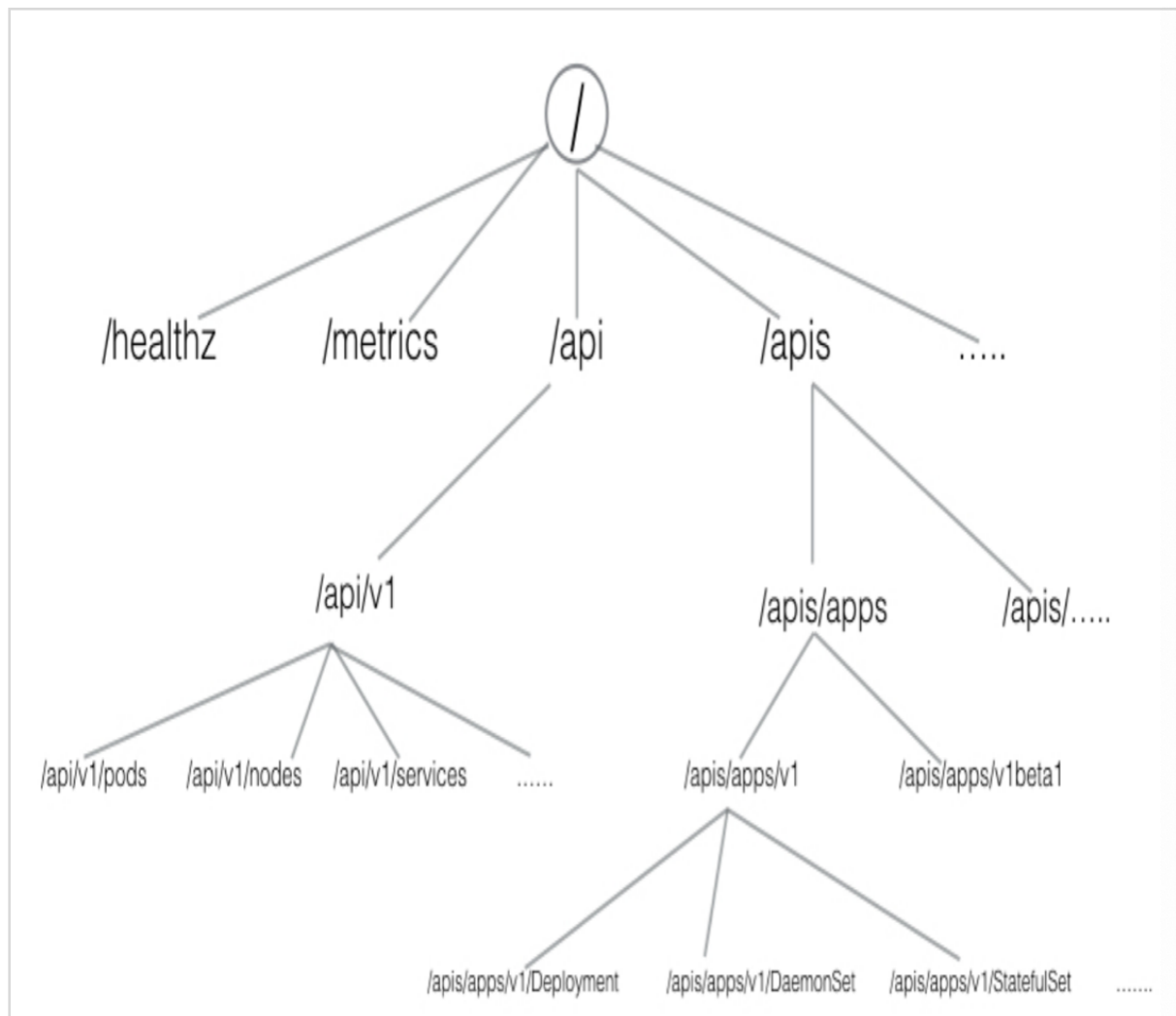


## Chapter 7 Accessing Minikube

- `kubectl` Kubernetes CLI client
  - manage cluster resources and applications
  - deploy apps, manage/configure K8s resources
- Kubernetes Dashboard - Web UI
  - interact with a K8s cluster to manage resources and containerized apps
- API server
  - On master node
  - CLI and Web UI connects to it



http API Space of Kubernetes

- Core Group (/api/v1)
  - pods, services, nodes, namespaces, configmaps, secrets, etc.
- Named Group (/apis/\$NAME/\$VERSION)
  - version imply different levels of stability/support
  - Alpha level (/apis/batch/v2alpha1)
    - It may be dropped at any point

- Beta level (/apis/certificates/v1beta1)
  - Well-tested, but subject to change
- Stable level (/apis/networks/v1)
  - released software
- System-wide
  - `/healthz` `/logs` `/metrics` `/ui`
- Installing kubectl on macOS
  - `brew install kubernetes-cli`
- Kubectl Configuration File
  - `~/.kube/config`
  - `kubectl config view`
  - `kubectl cluster-info`
- Kubernetes Dashboard
  - `minikube dashboard`
  - `kubectl proxy`
    - authenticates with the API server on the master node
    - Makes the dashboard available on a different URL
    - proxy port 8001
- Bearer Token
  - access token for client to connect to k8s API to access resources
  - token:
 

```
$ TOKEN=$(kubectl describe secret -n kube-system $(kubectl get secrets -n kube-system | grep default | cut -f1 -d ' ') | grep -E '^token' | cut -f2 -d ':' | tr -d '\t' | tr -d " ")
```
  - api server endpoint:
 

```
APISERVER=$(kubectl config view | grep https | cut -f 2- -d ":" | tr -d " ")
```
  - access API server
 

```
curl $APISERVER --header "Authorization: Bearer $TOKEN" --insecure
```