**Helm Chart**

Helm Chart is a very useful tool for controlling Kubernetes resources in a production environment when there are many of them.

**Install Helm From Package Managers**

Linux amd64

wget -O helm.tar.gz <https://get.helm.sh/helm-v3.5.4-linux-amd64.tar.gz>

tar -zxvf helm.tar.gz

sudo mv linux-amd64/helm /usr/local/bin/helm

helm version

For Debian/Ubuntu,

curl https://baltocdn.com/helm/signing.asc | gpg --dearmor | sudo tee /usr/share/keyrings/helm.gpg > /dev/null sudo apt-get install apt-transport-https --yes echo "deb [arch=$(dpkg --print-architecture) signed-by=/usr/share/keyrings/helm.gpg] https://baltocdn.com/helm/stable/debian/ all main" | sudo tee /etc/apt/sources.list.d/helm-stable-debian.list sudo apt-get update sudo apt-get install helm

Windows

# For Scoop scoop install helm #For Chocolatey choco install kubernetes-helm

**Sample Yaml tested**

**root@test:~/charts# tree**

**.└── my-nginx**

**├── Chart.yaml**

**├── templates**

**│   ├── deployment.yaml**

**│   └── service.yaml**

**└── values.yaml**

helm create charts

cd charts

Create chart file .

vi chart

apiVersion: v1

name: my-nginx

version: 0.1.0

appVersion: 1.0

description: A Helm chart for Kubernetes Senthil

Save the file.

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Create templates folder

mkdir templates

Create file deployment.yaml & service.yaml

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vi deployment.yaml

apiVersion: apps/v1

kind: Deployment

metadata:

name: nginx-deployment

spec:

selector:

matchLabels:

app: nginx

replicas: {{ .Values.replicaCount }}

template:

metadata:

labels:

app: nginx

spec:

containers:

- name: nginx

image: nginx:1.14.2

ports:

- containerPort: 80

vi service.yaml

kind: Service

apiVersion: v1

metadata:

name: "nginx"

spec:

selector:

app: "nginx"

ports:

- protocol: "TCP"

port: 80

targetPort: 80

type: LoadBalancer

Create File value.

Vi values.yaml

replicaCount: 2

Save the FileS

**Basic Commands**

Add, remove, list, search and Update Repos

helm repo add [name] [url] # Add a repository from the internet

helm repo remove [name] # Remove a repository from your system

helm repo update # Update repositories

helm repo list # List chart repositories

helm repo index # Generate an index file containing charts found in the current directory

helm search [keyword] # Search charts for a keyword

helm search repo [keyword] # Search repositories for a keyword

helm search hub [keyword] # Search Helm Hub

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List available packages

To list charts (packages)

helm search hub wordpress # Search the Artifact Hub

helm search repo wordpress # Searches the repositories that you have added to your local helm client (with helm repo add)

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Install and Uninstall Apps

helm install [name] [chart] --namespace [namespace] # Install an app in a specific namespace

helm install [name] [chart] --values [yaml-file/url] # Override the default values with those specified in a file of your choice

helm install [name] --dry-run --debug # Run a test install to validate and verify the chart

helm install --upgrade [name] # Install or upgrade a release

helm uninstall [release name] # Uninstall a release

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Chart Management

helm create [name] # Create a directory containing (Chart.yaml, values.yaml,charts/ and templates/)

helm package [chart-path] # Package a chart into a chart archive

helm lint [chart] # Run tests to examine a chart and identify possible issues

helm show all [chart] # Inspect a chart and list its contents

helm show chart [chart] # Display the chart’s definition

helm show values [chart] # Display the chart's values

helm pull [chart] # Download a chart

helm pull [chart] --untar --untardir [directory] # Download a chart and extract the archive’s contents into a directory

helm dependency list [chart] # Display a list of a chart’s dependencies

helm install mychart-0.1.0.tgz --dry-run --debug # Test installation

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Helm Plugin Management

helm plugin list # View all installed plugins

helm plugin install <plugin URL> # Install plugins

helm plugin update [plugin1] [plugin2] # Update plugins

helm plugin uninstall [plugin1] # Uninstall a plugin

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Upgrading, Rollback and Listing releases

helm upgrade [release] [chart] # Upgrade a release

helm upgrade [release] [chart] --atomic # Upgrade and rollback on failure

helm upgrade [release] [chart] --install # Upgrade or install if it does not yet exist on the system

helm upgrade [release] [chart] --version [version-number] # Upgrade to a version other than the latest one

helm rollback [release] [revision] # Roll back a release

helm upgrade --wait <name> # Wait for pods to come up

helm ls # List releases in current namespace

helm ls -A # List all releases in all namespaces

helm ls -A -o json | jq -r '.[] | select(.status = "deployed") | .name' # Find releases in unexpected state

helm get values <release> # Print the values the release was installed with

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Download Release Information

helm get all [release] # Download all the release information

helm get hooks [release] # Download all hooks

helm get manifest [release] # Download the manifest

helm get notes [release] # Download the notes

helm get values [release] # Download the values file

helm history [release] # Fetch release history

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Get Help and Version info

helm --help # See the general help for Helm

helm [command] help # See help for a particular command

helm version # See the installed version of Helm

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Release Monitoring

helm list # List all the available releases in the current namespace

helm list --all-namespaces # List all the available releases across all namespaces

helm list --namespace [namespace] # List all the releases in a specific namespace

helm list --output [format] # List all the releases in a specific output format

helm list --filter ‘[expression]’ # Apply a filter to the list of releases using regular (Pearl compatible) expressions

helm status [release] # See the status of a release

helm history [release] # See the release history

helm env # See information about the Helm client environment