Module-9: Container Orchestration using Kubernetes Part - II

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DEMO-5: Setting up Helm and deploying a Helm Chart

HELM - The Package Manager for Kubernetes

Helm installation

a. Install Helm package

```
curl https://raw.githubusercontent.com/helm/helm/master/scripts/get | bash

root@ip-172-31-33-248:~# which helm
/usr/local/bin/helm

root@ip-172-31-33-248:~# which tiller
/usr/local/bin/tiller
```

b. Configure Tiller

Helm installs the tiller service on your cluster to manage charts.

Since RBAC is our official mode of securing access, we will create RBAC policies for tiller to manage deployments

```
kubectl -n kube-system create serviceaccount tiller

kubectl create clusterrolebinding tiller \
 --clusterrole=cluster-admin \
 --serviceaccount=kube-system:tiller

helm init --service-account tiller

root@ip-172-31-33-248:~# kubectl get pods -n kube-system | grep -i tiller
tiller-deploy-689d79895f-75swz                          1/1     Running   0
15s
```


Helm Charts

Structure of Helm Chart -

```
mychart/
   Chart.yaml
   values.yaml
   charts/
   templates/
```

1. The templates/ directory is for template files.

   When Tiller evaluates a chart, it will send all of the files in the templates/ directory through the template rendering engine.

   Tiller then collects the results of those templates and sends them on to Kubernetes.

2. The values.yaml file is also important to templates.

This file contains the default values for a chart.

These values may be overridden by users during helm install or helm upgrade

3. The Chart.yaml file contains a description of the chart.

4. The charts/ directory may contain other charts or subcharts.

Installing a Helm Chart

Istalling the Kubernetes Dashboard using Helm

```
helm install stable/kubernetes-dashboard --name dashboard-demo
Output
NAME:   dashboard-demo
LAST DEPLOYED: Wed Aug  8 20:11:07 2018
NAMESPACE: default
STATUS: DEPLOYED
```

. . .

For a list of releases on this cluster, enter the following:

helm list