

Demo: Deploying Jenkins X to Kubernetes Cluster

Solution:

Step 1: Install prerequisites for jx.

Commands to run on cloud shell:

```
gcloud config set project <GCP project>
```

```
gcloud config set compute/zone <compute zone GCP>
```

gcloud container clusters list

```
gcloud container clusters get-credentials <name of cluster>
```

```
cat ~/.kube/config
```

```
module.jx.module.cluster.google.container.cluster.jx_cluster: Still creating... [50s elapsed]
module.jx.module.cluster.google.container.cluster.jx_cluster: Still creating... [1m0s elapsed]
module.jx.module.cluster.google.container.cluster.jx_cluster: Still creating... [1m10s elapsed]
module.jx.module.cluster.google.container.cluster.jx_cluster: Still creating... [1m20s elapsed]
module.jx.module.cluster.google.container.cluster.jx_cluster: Still creating... [1m30s elapsed]
module.jx.module.cluster.google.container.cluster.jx_cluster: Still creating... [1m40s elapsed]
module.jx.module.cluster.google.container.cluster.jx_cluster: Still creating... [1m50s elapsed]
module.jx.module.cluster.google.container.cluster.jx_cluster: Still creating... [2m0s elapsed]
module.jx.module.cluster.google.container.cluster.jx_cluster: Still creating... [2m10s elapsed]
module.jx.module.cluster.google.container.cluster.jx_cluster: Still creating... [2m20s elapsed]
module.jx.module.cluster.google.container.cluster.jx_cluster: Still creating... [2m30s elapsed]
module.jx.module.cluster.google.container.cluster.jx_cluster: Creation complete after 2m39s [id-projects:natural-bison-294112/locations/us-central1-a/clusters/hello-cluster]
abhihek@ghecloudshell: ~/jenkins-x-hello-cluster (natural-bison-294112) $ gcloud container clusters list
NAME LOCATION MASTER VERSION MASTER_IP MACHINE_TYPE NUM_NODES STATUS
abhihek@ghecloudshell: ~/jenkins-x-hello-cluster (natural-bison-294112) $ gcloud container clusters get-credentials hello-cluster
Fetching cluster endpoint and auth data.
kubeconfig entry generated for hello-cluster.
abhihek@ghecloudshell: ~/jenkins-x-hello-cluster (natural-bison-294112) $ echo $KUBE_CONFIG
abhihek@ghecloudshell: ~/jenkins-x-hello-cluster (natural-bison-294112) $ cat ~/.kube/config
apiVersion: v1
clusters:
- cluster:
    certificate-authority-data: LS0tLSRDUldITGJRWVZUStJ0OFURSB0LT0k1JSURLaXNkdWChLzI0ZS0tRjBUBzR01RUgcSK0YvR2lONTsrT2FSHRUWFltaFkQdmcrcWhraC0Sc2EzcGVFcGFKEFFKXXtYWNmd0t3BURWRUVFRERlMR2e16RTNA
    bES5AGcxwFfMk8sdRflUYZvaTFoTxPKak9EXskZamhtTVSR8dpmtACN0twPpD5gqRTVVNGvGU4TORRM1d0vYSNa13tmPFNE1Uz3BNRFZv2pbdk1Tmdd1LEVI FRFVSOTBNeKuzClPTRTzrTAFTFKRobEXUUXhARffFWVJNWlpwHNeKppTORJR
VPF322daAFUme23d3pU01IMORRRUJKOVVGQOEFUSYJGZ32dPFS0JVBUN5GZczu2ZWGM5j3kS5YU4WG95K9dqpDQSDTBNNWMLJqyBFVMnozmJnJcgo1QWHdLShXk132OhL0phrtkrkeovTVNRIGSGSchm2LNHJ3ZFJW
V2k3PNLVNVFCV2k3PVLVLMFoRPVRIV1ATIdFQSYJTDNAFmh0TQOYXRKUCydmoSE1SPndpLNKIXlySTk0LdA9k9k38qdFFFVOWMSKThJMy9shifFoP1FdVytWhMeLShXkYKEZNE2CBhCNUI21ahrWBNNkneOWE.Nk.S3NV
ctNNWVd21nvS0LHS1VF0wOKXPI31PRK122dgNm3MA-1UkworCB0BF3K11dAwgQYK1FASdvcmvrCMQ0AdJdzVQFVMSKThKzg5r3tlkvZGGLiyCaMKGS8HWmxr214SRNMGNWQdKAPRpaktAUtEUKRGdAWCWCRdQcl93UvvadID1
zIL1tkocGRUUDGQRUDU4WREZ1P0CmrPp4m8R44MG2MDAM1V3VNO14e44dVFPZFOcdmKhaAc0cdZBCQVZKFRFBMBUUVUWQW6dlIsW1LB01Yem1YwVKldpCPlQ19CZRN3BMFZVZvpCoPYALFzwF11
V01FC2NFvcchUyk1CTr31TCYM1G2d4rh82Q0kwxrkzWVLS04Q14DE2jaW03VWMm21Ey3litandPv58ArK3rZy14dW4c4d7PdWgmwOpvOHwH0d221d0512Y1OfCZNd2ddUr1114bh4NGZ023JV0V1h
dW9hM1NP1Km5LeY42XitCbahJYkhQotVn5k0WTVYVNCrd12nm5sW0tSePlImecyr1EvTz1L3Er1PM8zJOGGT-NPk4XSBBU3Rzzy2YUWQKYO20cUVYZGhRad0AKVYJOybSlVTRKVy9RNIY10zuuVIRG0UrVXV5w1BD0mNhW0Zuyt
VE9EPQLS0LgWORCBDRVJUSUZJ0FURN0SOt1S0tcv==
server: https://34.68.211.163
name: gke_natural-bison-294112_us-central1-a_hello-cluster
contexts:
- context:
    cluster: gke_natural-bison-294112_us-central1-a_hello-cluster
```

 $cd \sim$

```
helm version (will shows helm 3)
```

```
curl -L https://git.io/get_helm.sh | bash
```

helm version (now, it will show helm 2 which is required for this demo)

```
// install kubectl 1.16
```

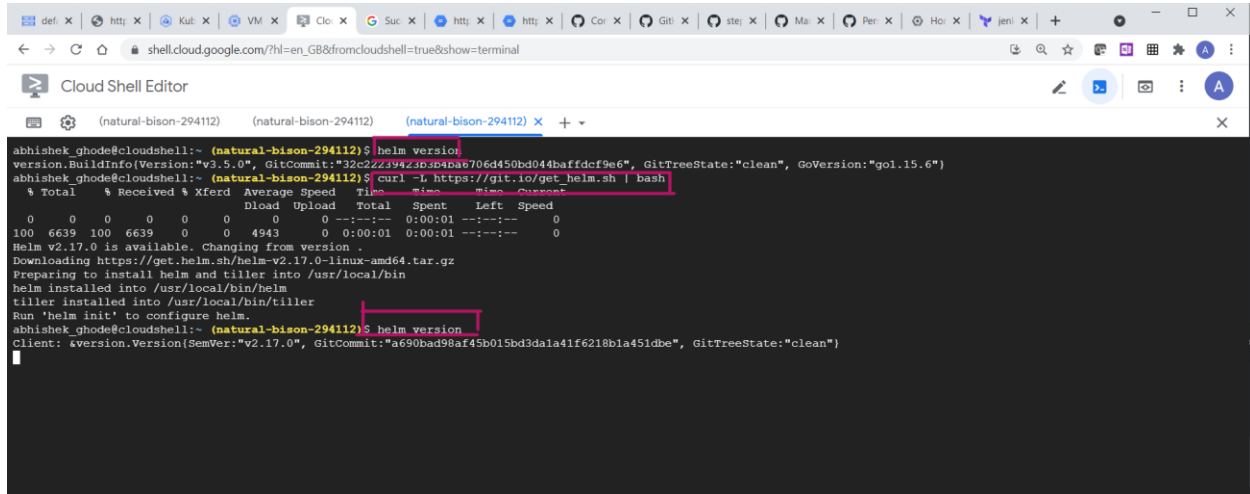
```
curl -LO https://storage.googleapis.com/kubernetes-release/release/v1.16.0/bin/linux/amd64/kubectl
```

CICD using Jenkins X – Par 1

`chmod +x ./kubectl`

`sudo mv ./kubectl /usr/local/bin/kubectl`

`kubectl version --client`



```
abhishek_ghode@cloudshell:~ (natural-bison-294112)$ helm version
version.BuildInfo{Version:"v3.5.0", GitCommit:"32c2239423b546706d450bd044baffdcf9e6", GitTreeState:"clean", GoVersion:"go1.15.6"}
abhishek_ghode@cloudshell:~ (natural-bison-294112)$ curl -L https://git.io/get_helm.sh | bash
% Total % Received % Xferd Average Speed Time Time Time Current
 0 0 0 0 0 0 0 0 0:00:01 0:00:01 0:00:01 0
100 6639 100 6639 0 0 4943 0 0:00:01 0:00:01 0:00:01 0
Helm v2.17.0 is available. Changing from version .
Downloading https://get.helm.sh/helm-v2.17.0-linux-amd64.tar.gz
Preparing to install helm and tiller into /usr/local/bin
helm installed into /usr/local/bin/helm
tiller installed into /usr/local/bin/tiller
Run 'helm init' to configure helm.
abhishek_ghode@cloudshell:~ (natural-bison-294112)$ helm version
Client: <version.Version{SemVer:"v2.17.0", GitCommit:"a690bad98af45b015bd3dala41f6218b1a451d8e", GitTreeState:"clean"}>
```

Step 2: install jx and check its version.

`curl -L https://github.com/jenkins-x/jx/releases/download/v2.1.50/jx-linux-amd64.tar.gz | tar xzv`

`sudo mv jx /usr/local/bin`

`ls`

`jx version`

`kubectl get ns`

`jx ns jx`

CICD using Jenkins X – Par 1

```
Cloud Shell Editor
(natural-bison-294112) (natural-bison-294112) x (natural-bison-294112) + -
abhishek_ghode@cloudshell:~/jenkins-x-hello-cluster (natural-bison-294112)$ jx version
WARNING: Failed to retrieve team settings: failed to setup the dev environment for namespace 'default': the server could not find the requested resource (post environments.jenkins.io) - falling back to default settings...
WARNING: Failed to find helm installs: running helm list --all --namespace default: failed to run 'helm list --all --namespace default' command in directory '', output: 'Error: could not find tiller'
NAME      VERSION
jx        2.1.50
Kubernetes cluster  v1.19.9-gke.1900
kubectl    v1.13.2
git        2.20.1
Operating System  Debian GNU/Linux 10 (buster)

verifying packages

WARNING: jx version 2.1.150 is available in the version stream. You are using 2.1.50. We highly recommend you upgrade to it.

? Would you like to upgrade to the jx version? No
abhishek_ghode@cloudshell:~/jenkins-x-hello-cluster (natural-bison-294112)$
```

```
Cloud Shell Editor
(natural-bison-294112) (natural-bison-294112) x (natural-bison-294112) + -
The connection to your Google Cloud Shell was lost. Close Reconnect
abhishek_ghode@cloudshell:~/jenkins-x-hello-cluster (natural-bison-294112)$ kubectl get ns
NAME      STATUS   AGE
default   Active   8m44s
jx        Active   7m35s
kube-node-lease   Active   8m46s
kube-public   Active   8m46s
kube-system   Active   8m46s
abhishek_ghode@cloudshell:~/jenkins-x-hello-cluster (natural-bison-294112)$ jx ns jx
Now using namespace 'jx' on server 'https://34.68.211.163'.
abhishek_ghode@cloudshell:~/jenkins-x-hello-cluster (natural-bison-294112)$
```