GROUP 6

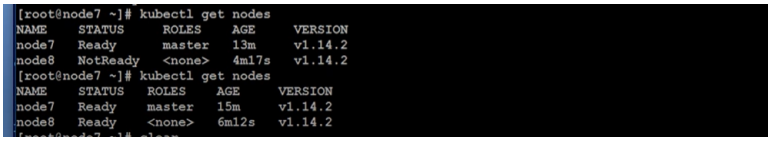
ASSIGNMENT 1

ANKITHA S MADANBHAVI (18BCS008)
ANUJ C SHIRAGAVE (18BCS009)

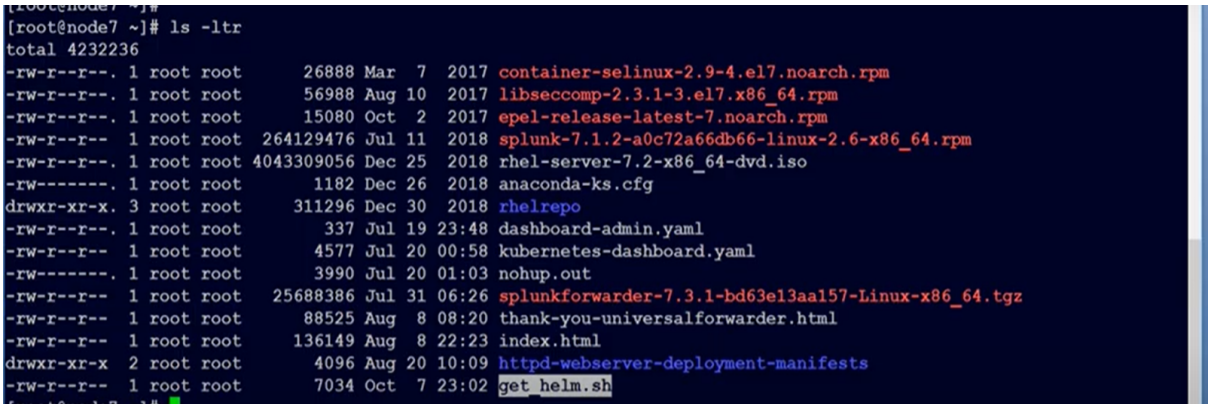
USE KUBERNETES HALM PACKAGE INSTALLER AND PERFORM INSTALLATION , CONFIGURATION AND REVISION OF SOFTWARE PACKAGE .

1. Created kubernetes cluster on aws ec2 instance (red hat linux 8):

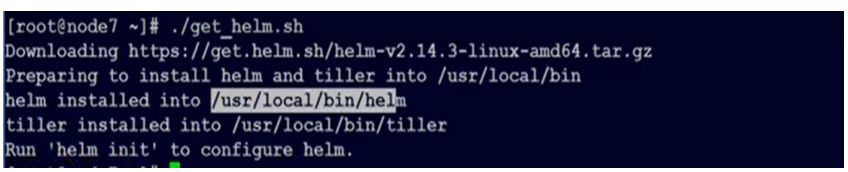
   Master node - node 7
   Worker node - node 8



2. Downloading Helm Script:



3. Run the script:



4. Creating Tiller Service Account:

```
[root@node7 ~]# kubectl -n kube-system create serviceaccount tiller
serviceaccount/tiller created
[root@node7 ~]#
```

5. Bind the Tiller Service Account to Cluster Admin Role:

```
[root@node7 ~]# kubectl create clusterrolebinding tiller --clusterrole cluster-admin --serviceaccount=kube-system:t
iller
clusterrolebinding.rbac.authorization.k8s.io/tiller created
[root@node7 ~]#
```

6. Initialising Helm:

```
[root@node7 ~]# helm init --service-account tiller
Creating /root/.helm
Creating /root/.helm/repository
Creating /root/.helm/repository/cache
Creating /root/.helm/repository/local
Creating /root/.helm/plugins
Creating /root/.helm/starters
Creating /root/.helm/cache/archive
Creating /root/.helm/repository/repositories.yaml
Adding stable repo with URL: https://kubernetes-charts.storage.googleapis.com
Adding local repo with URL: http://127.0.0.1:8879/charts
$HELM_HOME has been configured at /root/.helm.

Tiller (the Helm server-side component) has been installed into your Kubernetes Cluster.

Please note: by default, Tiller is deployed with an insecure 'allow unauthenticated users' policy.
To prevent this, run `helm init` with the --tiller-tls-verify flag.
For more information on securing your installation see: https://docs.helm.sh/using_helm/#securing-your-helm-install
ation
```

7. To Verify Tiller is Running:

```
[root@node7 ~]# kubectl get pods --namespace kube-system
NAME                                   READY   STATUS    RESTARTS   AGE
coredns-5c98db65d4-fns8q               1/1     Running   17         81d
coredns-5c98db65d4-t8jwd               1/1     Running   18         81d
etcd-node7                             1/1     Running   18         81d
kube-apiserver-node7                   1/1     Running   18         81d
kube-controller-manager-node7          1/1     Running   33         81d
kube-flannel-ds-amd64-5mnvg            1/1     Running   18         81d
kube-flannel-ds-amd64-w2tr6            1/1     Running   7          81d
kube-proxy-p4lbm                       1/1     Running   7          81d
kube-proxy-v7htp                       1/1     Running   18         81d
kube-scheduler-node7                   1/1     Running   32         81d
kubernetes-dashboard-7ddbdf6949-r8x76  1/1     Running   14         60d
tiller-deploy-8557598fbc-xgzvm         1/1     Running   0          18s
```

8. Deploying a Nginx Ingress Application using Helm:

```
node8   Ready    <none>   81d   v1.15.0
[root@node7 ~]# helm install stable/nginx-ingress --name nginx-ingress
```

```
[root@node7 ~]# helm ls
NAME            REVISION        UPDATED                         STATUS          CHART                   APP VERSI
ON      NAMESPACE
nginx-ingress   1               Mon Oct  7 23:34:43 2019        DEPLOYED        nginx-ingress-1.24.0    0.26.1
        default
```

9. Deploying Sample App:

10. Deleting the Nginx Ingress Deployment :