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ubuntu@ip-172-31-0-205:~$ sudo su -

root@ip-172-31-0-205:~# sudo apt install nfs-kernel-server

Reading package lists... Done

Building dependency tree

Reading state information... Done

The following additional packages will be installed:

  keyutils libnfsidmap2 libtirpc1 nfs-common rpcbind

Suggested packages:

  watchdog

The following NEW packages will be installed:

  keyutils libnfsidmap2 libtirpc1 nfs-common nfs-kernel-server rpcbind

0 upgraded, 6 newly installed, 0 to remove and 9 not upgraded.

Need to get 492 kB of archives.

After this operation, 1709 kB of additional disk space will be used.

Do you want to continue? [Y/n] y

Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 keyutils amd64 1.5.9-9.2ubuntu2.1 [48.1 kB]

Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 libnfsidmap2 amd64 0.25-5.1 [27.2 kB]

Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libtirpc1 amd64 0.2.5-1.2ubuntu0.1 [75.7 kB]

Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 rpcbind amd64 0.2.3-0.6ubuntu0.18.04.4 [42.1 kB]

Get:5 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 nfs-common amd64 1:1.3.4-2.1ubuntu5.5 [206 kB]

Get:6 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 nfs-kernel-server amd64 1:1.3.4-2.1ubuntu5.5 [93.8 kB]

Fetched 492 kB in 0s (1186 kB/s)

Selecting previously unselected package keyutils.

(Reading database ... 58614 files and directories currently installed.)

Preparing to unpack .../0-keyutils_1.5.9-9.2ubuntu2.1_amd64.deb ...

Unpacking keyutils (1.5.9-9.2ubuntu2.1) ...

Selecting previously unselected package libnfsidmap2:amd64.

Preparing to unpack .../1-libnfsidmap2_0.25-5.1_amd64.deb ...

Unpacking libnfsidmap2:amd64 (0.25-5.1) ...

Selecting previously unselected package libtirpc1:amd64.

Preparing to unpack .../2-libtirpc1_0.2.5-1.2ubuntu0.1_amd64.deb ...

Unpacking libtirpc1:amd64 (0.2.5-1.2ubuntu0.1) ...

Selecting previously unselected package rpcbind.

Preparing to unpack .../3-rpcbind_0.2.3-0.6ubuntu0.18.04.4_amd64.deb ...

Unpacking rpcbind (0.2.3-0.6ubuntu0.18.04.4) ...

Selecting previously unselected package nfs-common.

Preparing to unpack .../4-nfs-common_1%3a1.3.4-2.1ubuntu5.5_amd64.deb ...

Unpacking nfs-common (1:1.3.4-2.1ubuntu5.5) ...

Selecting previously unselected package nfs-kernel-server.

Preparing to unpack .../5-nfs-kernel-server_1%3a1.3.4-2.1ubuntu5.5_amd64.deb ...

Unpacking nfs-kernel-server (1:1.3.4-2.1ubuntu5.5) ...

Setting up libnfsidmap2:amd64 (0.25-5.1) ...

Setting up keyutils (1.5.9-9.2ubuntu2.1) ...

Setting up libtirpc1:amd64 (0.2.5-1.2ubuntu0.1) ...

Setting up rpcbind (0.2.3-0.6ubuntu0.18.04.4) ...

Created symlink /etc/systemd/system/multi-user.target.wants/rpcbind.service →
/lib/systemd/system/rpcbind.service.

Created symlink /etc/systemd/system/sockets.target.wants/rpcbind.socket →
/lib/systemd/system/rpcbind.socket.

Setting up nfs-common (1:1.3.4-2.1ubuntu5.5) ...

Creating config file /etc/idmapd.conf with new version

Adding system user `statd' (UID 111) ...

Adding new user `statd' (UID 111) with group `nogroup' ...

Not creating home directory `/var/lib/nfs'.

Created symlink /etc/systemd/system/multi-user.target.wants/nfs-client.target →
/lib/systemd/system/nfs-client.target.

Created symlink /etc/systemd/system/remote-fs.target.wants/nfs-client.target →
/lib/systemd/system/nfs-client.target.

nfs-utils.service is a disabled or a static unit, not starting it.

Setting up nfs-kernel-server (1:1.3.4-2.1ubuntu5.5) ...

Created symlink /etc/systemd/system/multi-user.target.wants/nfs-server.service →
/lib/systemd/system/nfs-server.service.

Job for nfs-server.service canceled.

Creating config file /etc/exports with new version

Creating config file /etc/default/nfs-kernel-server with new version

Processing triggers for systemd (237-3ubuntu10.57) ...

Processing triggers for man-db (2.8.3-2ubuntu0.1) ...

Processing triggers for ureadahead (0.100.0-21) ...

Processing triggers for libc-bin (2.27-3ubuntu1.6) ...

root@ip-172-31-0-205:~#

root@ip-172-31-0-205:~# sudo mkdir -p /srv/nfs/kubedata

root@ip-172-31-0-205:~# sudo chown -R nobody:nogroup /srv/nfs/kubedata

root@ip-172-31-0-205:~# sudo chmod 777 /srv/nfs/kubedata

root@ip-172-31-0-205:~# sudo vim /etc/exports

root@ip-172-31-0-205:~# sudo exportfs -a

exportfs: No host name given with /srv/nfs/kubedata
(rw,sync,no_subtree_check,no_root_squash,no_all_squash,insecure), suggest
*(rw,sync,no_subtree_check,no_root_squash,no_all_squash,insecure) to avoid warning

root@ip-172-31-0-205:~# sudo systemctl restart nfs-kernel-server

 workers 0 & 1

----

root@ip-172-31-1-250:~# sudo apt install nfs-common

Reading package lists... Done

Building dependency tree

Reading state information... Done

nfs-common is already the newest version (1:1.3.4-2.1ubuntu5.5).

0 upgraded, 0 newly installed, 0 to remove and 9 not upgraded.

root@ip-172-31-1-250:~# sudo mkdir -p /mnt/nfs_clientshare

root@ip-172-31-1-250:~# mount 172.31.0.205:/srv/nfs/kubedata /mnt/nfs_clientshare

next create 3 files deploy.yaml pv.yaml and pvc.yaml

cat deploy.yaml

```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: redis-master
  labels:
    app: redis
spec:
  selector:
    matchLabels:
      app: redis
      role: master
      tier: backend
  replicas: 1
  template:
    metadata:
      labels:
        app: redis
        role: master
        tier: backend
```

```yaml
  spec:
    volumes:
    - name: data
      persistentVolumeClaim:
        claimName: redis-pvc
    containers:
    - name: master
      image: redis
      resources:
        requests:
          cpu: 100m
          memory: 100Mi
      volumeMounts:
      - name: data
        mountPath: /data
```

```yaml
apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: redis-pvc
spec:
  accessModes:
  - ReadWriteOnce
  volumeMode: Filesystem
  resources:
    requests:
      storage: 100Mi
```

storageClassName: slow

  selector:

    matchLabels:

      type: nfs

cat pv.yaml:

----

apiVersion: v1

kind: PersistentVolume

metadata:

  name: redis-pv

  labels:

    type: nfs

spec:

  capacity:

    storage: 100Mi

  volumeMode: Filesystem

  accessModes:

    - ReadWriteOnce

  persistentVolumeReclaimPolicy: Retain

  storageClassName: slow

  mountOptions:

    - hard

    - nfsvers=4.1

  nfs:

    path: /srv/nfs/kubedata

    server: 172.31.0.205

root@LAPTOP-H278KEF6:/mnt/c/Users/LENOVO/Desktop/kubernetes/k8sCluster_kubeadm_terraform/nfs# kubectl apply -f .

deployment.apps/redis-master created

persistentvolume/redis-pv unchanged

persistentvolumeclaim/redis-pvc unchanged

root@LAPTOP-H278KEF6:/mnt/c/Users/LENOVO/Desktop/kubernetes/k8sCluster_kubeadm_terraform/nfs# kgp

```
NAME                      READY  STATUS          RESTARTS  AGE
redis-master-64b49785bc-nxjjd  0/1    ContainerCreating  0       6s
```

root@LAPTOP-

root@LAPTOP-H278KEF6:/mnt/c/Users/LENOVO/Desktop/kubernetes/k8sCluster_kubeadm_terraform/nfs# kgp

```
NAME                      READY  STATUS   RESTARTS  AGE
redis-master-64b49785bc-nxjjd  1/1    Running  0       20s
```

root@LAPTOP-H278KEF6:/mnt/c/Users/LENOVO/Desktop/kubernetes/k8sCluster_kubeadm_terraform/nfs# k get pvc

```
NAME       STATUS  VOLUME    CAPACITY  ACCESS MODES  STORAGECLASS  AGE
redis-pvc  Bound   redis-pv  100Mi     RWO           slow          2m58s
```

root@LAPTOP-H278KEF6:/mnt/c/Users/LENOVO/Desktop/kubernetes/k8sCluster_kubeadm_terraform/nfs# k get pv

```
NAME      CAPACITY  ACCESS MODES  RECLAIM POLICY  STATUS  CLAIM            STORAGECLASS  REASON  AGE
redis-pv  100Mi     RWO           Retain          Bound   default/redis-pvc  slow                 3m2s
```