# What's GlusterFS

\* GlusterFS is a scalable network filesystem in userspace.

\* GlusterFS is free and open-source software.

\* GlusterFS is managed and orchestrated like any other app in Kubernetes.

\* It is used for storage for large scale files.

\* it advantages is any applications thats need access a file quickly and delivered it to user or our application.

and its faster than our relative file systems like NFS.

# Prerequisites

Glusrer1 server

Gluster2 server

Gluster client server

# GlusterFS install on Ubuntu20 VMs

# On all hosts

All gluster nodes to your host file

Like so:

Sudo vi /etc/hosts

gluster1 IP gluster1

gluster2 IP gluster2

glusterclient IP glusterclient

# Setting up software sources on each machine.

sudo apt install software-properties-common

sudo add-apt-repository ppa:gluster/gluster-7

sudo apt update

# Install server package

sudo apt install -y glusterfs-server

sudo apt install -y glusterfs-server-client ------🡪 for client server

sudo systemctl start glusterd.service

sudo systemctl enable glusterd.service

sudo systemctl status glusterd.service

# Creating Truster Storage pool

Then now we make sure need to group them single storage pool

gluster peer probe gluster2 -----🡪 for gluster1 server

gluster peer probe gluster1 -----🡪 for gluster2 server

gluster peer status.

# Create Replicated volume

Make directory in gluster1 and gluster2

Mkdir /gluster

Create a volume any gluster, (gluster1 or gluster2)

gluster volume create volume1 replica 2 gluster1:/gluster/brick1 gluster2:/gluster/brick

gluster volume start volume1

gluster volume status.

gluster volume list.

gluster volume info

# Volume Mount:

Create a directory for mount a volume in client machine.

mkdir /mnt/volume1

mount -t glusterfs gluster1:volume1 /mnt/volume1

mount | grep volume

cd /mnt/volume1/

touch file1

# Sample-PV Manifest file:

\* Create a manifest file for PV

\* vi glusterfs-pv.yaml

apiVersion: v1

kind: PersistentVolume

metadata:

name: task-pv-volume

labels:

type: local

spec:

storageClassName: glusterfs

capacity:

storage: 10Gi

accessModes:

- ReadWriteOnce

hostPath:

path: "/mnt/volume1"

kubectl apply glusterfs-pv.yaml

kubectl get pv

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# Sample-PVC Manifestfile:

Create a manifest file for PVC

vi glusterfs-pvc.yaml

apiVersion: v1

kind: PersistentVolumeClaim

metadata:

name: task-pv-claim

spec:

storageClassName: glusterfs

accessModes:

- ReadWriteOnce

resources:

requests:

storage: 3Gi

\*kubectl apply glusterfs-pvc.yaml

\*kubectl get pvc

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# NGINX pod that uses the GlusterFS on PVC:

\*Create a manifest file for pod with attach PVC

vi glusterfs-pod.yaml

apiVersion: v1

kind: Pod

metadata:

name: nginx-pod1

labels:

name: nginx-pod1

spec:

containers:

- name: nginx-pod1

image: gcr.io/google\_containers/nginx-slim:0.8

ports:

- name: web

containerPort: 80

volumeMounts:

- name: gluster-vol1

mountPath: /mnt/volume1

volumes:

- name: gluster-vol1

persistentVolumeClaim:

claimName: gluster1 <1>

kubectl apply glusterfs-pod.yaml

kubectl get pods -o wide