

STORAGE CLASSES

IPV and PVCs

pv-definition.yaml

```
apiVersion: v1
kind: PersistentVolume
metadata:
  name: pv-vol1
spec:
  accessModes:
    - ReadWriteOnce
  capacity:
    storage: 500Mi
  gcePersistentDisk:
    pdName: pd-disk
    fsType: ext4
```

pvc-definition.yaml

```
apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: myclaim
spec:
  accessModes:
    - ReadWriteOnce
  resources:
    requests:
      storage: 500Mi
```

pod-definition.yaml

```
apiVersion: v1
kind: Pod
metadata:
  name: random-number-generator
spec:
  containers:
    - image: alpine
      name: alpine
      command: ["/bin/sh", "-c"]
      args: ["shuf -i 0-100 -n 1 >> /opt/number.out;"]
      volumeMounts:
        - mountPath: /opt
          name: data-volume
  volumes:
    - name: data-volume
      persistentVolumeClaim:
        claimName: myclaim
```

PV

PVC



Static Provisioning

```
gcloud beta compute disks create \
  --size 1GB
  --region us-east1
  pd-disk
```

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spec:
  accessModes:
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  capacity:
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  gcePersistentDisk:
    pdName: pd-disk
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```

PV

Dynamic Provisioning

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```
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kind: PersistentVolume
metadata:
  name: pv-vol1
spec:
  accessModes:
    - ReadWriteOnce
  capacity:
    storage: 500Mi
  gcePersistentDisk:
    pdName: pd-disk
    fsType: ext4
```

PV

sc-definition.yaml

```
apiVersion: storage.k8s.io/v1
kind: StorageClass
metadata:
  name: google-storage
provisioner: kubernetes.io/gce-pd
```

SC

Dynamic Provisioning

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metadata:
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SC

pvc-definition.yaml

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  resources:
    requests:
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    - image: alpine
      name: alpine
      command: ["/bin/sh", "-c"]
      args: ["shuf -i 0-100 -n 1 >> /opt/"]
      volumeMounts:
        - mountPath: /opt
          name: data-volume
  volumes:
    - name: data-volume
      persistentVolumeClaim:
        claimName: myclaim
```

Dynamic Provisioning

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sc-definition.yaml
apiVersion: storage.k8s.io/v1
kind: StorageClass
metadata:
  name: google-storage
provisioner: kubernetes.io/gce-pd
```

SC

```
pvc-definition.yaml
apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: myclaim
spec:
  accessModes:
    - ReadWriteOnce
  storageClassName: google-storage
  resources:
    requests:
      storage: 500Mi
```

PVC

```
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apiVersion: v1
kind: Pod
metadata:
  name: random-number-generator
spec:
  containers:
    - image: alpine
      name: alpine
      command: ["/bin/sh", "-c"]
      args: ["shuf -i 0-100 -n 1 >> /opt/"]
      volumeMounts:
        - mountPath: /opt
          name: data-volume
  volumes:
    - name: data-volume
      persistentVolumeClaim:
        claimName: myclaim
```

Dynamic Provisioning



```
sc-definition.yaml
apiVersion: storage.k8s.io/v1
kind: StorageClass
metadata:
  name: google-storage
provisioner: kubernetes.io/gce-pd
```

SC

PV

```
pvc-definition.yaml
apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: myclaim
spec:
  accessModes:
    - ReadWriteOnce
  storageClassName: google-storage
  resources:
    requests:
      storage: 500Mi
```

PVC

```
pod-definition.yaml
apiVersion: v1
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metadata:
  name: random-number-generator
spec:
  containers:
    - image: alpine
      name: alpine
      command: ["/bin/sh", "-c"]
      args: ["shuf -i 0-100 -n 1 >> /opt/"]
      volumeMounts:
        - mountPath: /opt
          name: data-volume
  volumes:
    - name: data-volume
      persistentVolumeClaim:
        claimName: myclaim
```



Storage Class

sc-definition.yaml

```
apiVersion: storage.k8s.io/v1
kind: StorageClass
metadata:
  name: google-storage
provisioner: kubernetes.io/gce-pd
parameters:
  type: pd-standard
  replication-type: none
```

Volume Plugin

AWSElasticBlockStore
AzureFile
AzureDisk
CephFS
Cinder
FC
FlexVolume
Flocker
GCEPersistentDisk
Glusterfs
iSCSI
Quobyte
NFS
RBD
VsphereVolume
PortworxVolume
ScaleIO
StorageOS
Local

Storage Class

sc-definition.yaml

```
apiVersion: storage.k8s.io/v1
kind: StorageClass
metadata:
  name: google-storage
provisioner: kubernetes.io/gce-pd
parameters:
  type: pd-standard [ pd-standard | pd-ssd ]
  replication-type: none [ none | regional-pd ]
```

Storage Class

sc-definition.yaml

```
apiVersion: storage.k8s.io/v1
kind: StorageClass
metadata:
  name: silver
provisioner: kubernetes.io/gce-pd
parameters:
  type: pd-standard
  replication-type: none
```

Silver
SC

sc-gold-definition.yaml

```
apiVersion: storage.k8s.io/v1
kind: StorageClass
metadata:
  name: gold
provisioner: kubernetes.io/gce-pd
parameters:
  type: pd-ssd
  replication-type: none
```

Gold
SC

sc-platinum-definition.yaml

```
apiVersion: storage.k8s.io/v1
kind: StorageClass
metadata:
  name: platinum
provisioner: kubernetes.io/gce-pd
parameters:
  type: pd-ssd
  replication-type: regional-pd
```

Platinum
SC