

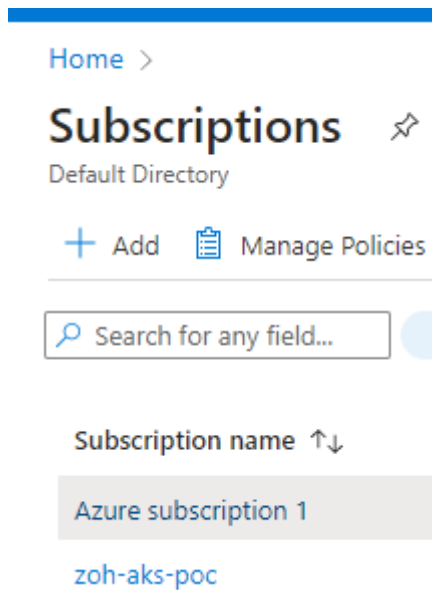
Use-Case:

Migrating PVC's from One Subscription to Another Subscription(In this POC/Demo, Tenant is same for both subscriptions)

Demo:

In this demo, I will show/describe how we can migrate PVC's within subscriptions

As shown below, I've two subscriptions:



In Azure subscription 1, zoh-aks-sub-A AKS Cluster. We have MongoDB pod running with PVC. I've added few text files, so that we can validate it after migrating it to another subscription AKS Cluster.

```
shaik [ ~ ]$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
zoh-aks-subscription-a-mongodb-6cb8756679-zsqb5  1/1     Running   0           4m36s
shaik [ ~ ]$ kubectl get pvc
NAME                                STATUS   VOLUME                                     CAPACITY   ACCESS MODES   STORAGECLASS   AGE
zoh-aks-subscription-a-mongodb      Bound   pvc-f0d19e9f-591b-47a0-9cc6-cdd2565b1fe6  8Gi        RWO            default        4m39s
shaik [ ~ ]$ kubectl exec -it zoh-aks-subscription-a-mongodb-6cb8756679-zsqb5 -- bash
I have no name!@zoh-aks-subscription-a-mongodb-6cb8756679-zsqb5:/$ cd bitnami/mongodb
I have no name!@zoh-aks-subscription-a-mongodb-6cb8756679-zsqb5:/bitnami/mongodb$ ls -ltr
total 20
drwxrws--- 2 root 1001 16384 May  1 13:18 lost+found
drwxr-sr-x 3 1001 1001  4096 May  1 13:18 data
-rw-r--r-- 1 1001 1001    0 May  1 13:22 zoh-testfile-1.txt
-rw-r--r-- 1 1001 1001    0 May  1 13:22 zoh-testfile-2.txt
-rw-r--r-- 1 1001 1001    0 May  1 13:22 zoh-testfile-3.txt
-rw-r--r-- 1 1001 1001    0 May  1 13:22 zoh-testfile-4.txt
-rw-r--r-- 1 1001 1001    0 May  1 13:22 zoh-testfile-5.txt
I have no name!@zoh-aks-subscription-a-mongodb-6cb8756679-zsqb5:/bitnami/mongodb$
```

Now let's create a snapshot of that PVC.

Create snapshot ...

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ

Resource group * ⓘ

[Create new](#)

Instance details

Name *

Region ⓘ

Snapshot type * ⓘ Full - make a complete read-only copy of the selected disk.
 Incremental - save on storage costs by making a partial copy of the disk based on the difference between the last snapshot.

Source type ⓘ

Source subscription ⓘ

Source disk ⓘ

Security type ⓘ

VM generation ⓘ Generation 1
 Generation 2

VM architecture ⓘ x64
 Arm64

Storage type * ⓘ

[Review + create](#)

[< Previous](#)

[Next : Encryption >](#)

Now let's move the snapshot to another subscription(i.e zoh-aks-poc)

Make sure to select destination subscription and the correct resource group.

Create snapshot

Select the subscription to manage deployed resources and create one resource group and folders to organize and manage all your resources.

Subscription *

Resource group *

[Create new](#)

Instance details

Name *

Region

Snapshot type Full - make a complete read-only copy of the selected disk.
 Incremental - save on storage costs by making a partial copy of the disk based on the difference between the last snapshot.

Source type

Source subscription

Source snapshot

Security type

VM generation Generation 1
 Generation 2

VM architecture x64
 Arm64

Storage type *

[Review + create](#)

[< Previous](#)

[Next : Encryption >](#)

Validate the snapshot in destination subscription, i.e zoh-aks-poc

Home > Snapshots

Default Directory

+ Create Manage view Refresh Export to CSV Open query Assign tags

Filter for any field... Subscription equals all Resource group equals all Location equals all Add filter

Showing 1 to 2 of 2 records

| Name | Source disk | Snapshot t... | Time created | Source... | Resource group | Location | Subscription |
|---------------|----------------------------|---------------|----------------------|-----------|-----------------------------------|-----------|----------------------|
| aks-sub-a-pvc | pvc-f0d19e9f-591b-47a0-... | Full | 5/1/2023, 5:27:07 PM | 8 | MC_zoh-argo_zoh-aks-sub-A_uenorth | UAE North | Azure subscription 1 |
| aks-sub-b-pvc | aks-sub-a-pvc | Full | 5/1/2023, 5:29:20 PM | 8 | MC_zoh-argo_zoh-aks-sub-B_uenorth | UAE North | zoh-aks-poc |

Now it's time to create a Disk from that snapshot.

Home > Microsoft.ManagedDisk-20230501173206 | Overview >

zoh-aks-subscription-b-mongo 🔍 ★ ⋮

Search + Create VM + Create VM image version + Create snapshot 🗑️ Delete 🔄 Refresh 🗨️ Give feedback

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Configuration

Size + performance

Encryption

Essentials

Resource group (move) : MC_zoh-argo_zoh-aks-sub-9_ujaoorth

Disk state : Unattached

Location : UAE North (Zone 2)

Subscription (move) : zoh-aks-000

Subscription ID : 880b9ee3-6676-47e3-be17-c86174ab1b93

Time created : 5/1/2023, 5:34:17 PM

Disk size : 8 GiB

Storage type : Premium SSD LRS

Managed by : ---

Operating system : ---

Completion percent : 100

Max shares : 0

Availability zone : 2

Performance tier : P2 - 120 IOPS, 25 MBps

Security type : Standard

Connect to destination cluster and create Storage Class, PV and PVC.

```
shaik [ ~ ]$ kubectl get pv,pvc
NAME                                     CAPACITY  ACCESS MODES  RECLAIM POLICY  STATUS  CLAIM                                STORAGECLASS  REASON  AGE
persistentvolume/zoh-aks-subscription-b-mongo  8Gi      RWO           Delete          Bound  default/zoh-aks-subscription-b-mongo  azuredisk-csi-premium-zrs
NAME                                     STATUS  VOLUME                                     CAPACITY  ACCESS MODES  STORAGECLASS  AGE
persistentvolumeclaim/zoh-aks-subscription-b-mongo  Bound  zoh-aks-subscription-b-mongo             8Gi      RWO           azuredisk-csi-premium-zrs  13s
```

Note:

1. Ensure disk and node hosting the pod are in the same zone (or)
2. Use zone-redundant storage (ZRS) disks

Now we have Storage Class, PV and PVC ready in destination AKS Cluster. Let's deploy and validate the data.

```
shaik [ ~ ]$ kubectl get pods
NAME                                     READY  STATUS   RESTARTS  AGE
zoh-aks-subscription-b-mongodb-5596ffdc98-g594x  1/1    Running  0          73s
shaik [ ~ ]$ kubectl exec -it zoh-aks-subscription-b-mongodb-5596ffdc98-g594x -- bash
I have no name!@zoh-aks-subscription-b-mongodb-5596ffdc98-g594x:/$ df -h
Filesystem      Size  Used Avail Use% Mounted on
overlay          124G   22G  102G   18% /
tmpfs            64M    0    64M    0% /dev
/dev/sdc         7.8G   301M   7.5G    4% /bitnami/mongodb
/dev/root       124G   22G  102G   18% /etc/hosts
shm             64M    0    64M    0% /dev/shm
tmpfs           4.5G   12K   4.5G    1% /run/secrets/kubernetes.io/serviceaccount
tmpfs           3.4G    0    3.4G    0% /proc/acpi
tmpfs           3.4G    0    3.4G    0% /proc/scsi
tmpfs           3.4G    0    3.4G    0% /sys/firmware
I have no name!@zoh-aks-subscription-b-mongodb-5596ffdc98-g594x:/$ cd /bitnami/mongodb/
I have no name!@zoh-aks-subscription-b-mongodb-5596ffdc98-g594x:/bitnami/mongodb$ ls -ltr
total 20
drwxrws--- 2 root 1001 16384 May  1 13:18 lost+found
drwxrwsr-x 3 1001 1001  4096 May  1 13:18 data
-rw-rw-r-- 1 1001 1001    0 May  1 13:22 zoh-testfile-1.txt
-rw-rw-r-- 1 1001 1001    0 May  1 13:22 zoh-testfile-2.txt
-rw-rw-r-- 1 1001 1001    0 May  1 13:22 zoh-testfile-3.txt
-rw-rw-r-- 1 1001 1001    0 May  1 13:22 zoh-testfile-4.txt
-rw-rw-r-- 1 1001 1001    0 May  1 13:22 zoh-testfile-5.txt
```

As you can see, whatever the files I've created in In Azure subscription 1, zoh-aks-sub-A AKS Cluster. The same data is available in another subscription, zoh-aks-sub-B AKS Cluster.

Recap:

1. Install MongoDB in Azure subscription 1 ---> AKS
2. Create a Snapshot from the Azure Disk in Azure subscription 1
3. Move Snapshot from Azure subscription 1 to zoh-aks-poc
4. Create a Disk from the Snapshot of zoh-aks-poc
5. While creating Disk, make sure to select zone. Otherwise it won't work. As the VM/PVC, should be on same Zone.
5. Create a PV and PVC in zoh-aks-poc---> AKS (Use ZRS Storage Class)
6. Install MongoDB in zoh-aks-poc---> AKS
7. Exec into the pod and validate the data is available or not.

Important Note: Kindly test this use-case in your sandbox/lower environment(Before deploying in Production). If it's working as expected, then promote it accordingly.