Add an Azure Spot node pool to an Azure Kubernetes Service (AKS) cluster

A spot node pool is a node pool backend by an Azure VMSS.

**With this spot VMs in your AKS cluster, you can take advantage of unutilized Azure Capacity with Cost savings**.

Azure Kubernetes Service (AKS) node pool snapshot

1. **Weekly Node Image Releases:** AKS releases a new node image on a weekly basis. So, the node pool should upgrade into a newer version, and This can be challenging to maintain a consistent environment.

To address this issue Azure come with Node Pool Snapshot

1. **Node Pool Snapshot:** it will take a snapshot of your node pool. This snapshot captures the configuration of the node pool including:

* Node image version
* Kubernetes version
* OS type
* OS SKU

1. **Use of Snapshots**: Once snapshot is created, it can be used to:

* Create new node pools
* Create new clusters
* Maintain the same configuration as the snapshot, ensuring consistency across environments.

Limitations:

1. **VM Restrictions:** A node pool cluster created from a snapshot must use a Virtual Machine as the snapshot of Original VM.

* Ex: a snapshot taken from a D-Series node pool cannot be used to create an N-Series node pool.

1. **Regional Constraints:** Snapshot must be created in the same region as the source node pool.

Take a node pool snapshot

To take a node pool snapshot, you must need node pool Resource ID, which you get from the following command:

|  |
| --- |
| **NODEPOOL\_ID=$(az aks nodepool show --name nodepool1 --cluster-name myAKSCluster --resource-group myResourceGroup --query id -o tsv)** |

Now, to take a snapshot from the previous node pool, you use the **‘az aks snapshot’** CLI command.

|  |
| --- |
| **az aks nodepool snapshot create --name MySnapshot --resource-group MyResourceGroup --nodepool-id $NODEPOOL\_ID --location eastus** |

Create a node pool from a snapshot

First, you need the resource ID from the snapshot that was previously created, which you can get from the following command:

|  |
| --- |
| **SNAPSHOT\_ID=$(az aks nodepool snapshot show --name MySnapshot --resource-group myResourceGroup --query id -o tsv)** |

Now, we can use the following command to add a new node pool based off of this snapshot.

|  |
| --- |
| **az aks nodepool add --name np2 --cluster-name myAKSCluster --resource-group myResourceGroup --snapshot-id $SNAPSHOT\_ID** |

Upgrading a node pool to a snapshot

So, once configured the new Node pool from snapshot using previous step. And then Upgrade the Node Pool to Kubernetes Version to reflect new Node image version.

|  |
| --- |
| **SNAPSHOT\_ID=$(az aks nodepool snapshot show --name MySnapshot --resource-group myResourceGroup --query id -o tsv)** |

\*\* get new node pool snapshot resource ID\*\*