

## Week 4 Assignment

### Allocate Static IPs to all VM's Creating a Network Security Group Creating Public IP Associating/De-associating Public IP with virtual machine Creation of Network Interface

Here's a step-by-step guide to perform each task:

#### 1. Allocate Static IPs to All VMs

To allocate a static private IP address to a VM's network interface, use the following Azure CLI command:

```
az network nic ip-config update \  
  --name <ip-config-name> \  
  --nic-name <nic-name> \  
  --resource-group <resource-group-name> \  
  --private-ip-address <static-ip-address>
```

#### 2. Creating a Network Security Group (NSG)

To create a Network Security Group, use the following command:

```
az network nsg create \  
  --resource-group <resource-group-name> \  
  --name <nsg-name>
```

To add a rule to the NSG:

```
az network nsg rule create \  
  --resource-group <resource-group-name> \  
  --nsg-name <nsg-name> \  
  --name <rule-name> \  
  --priority <priority> \  
  --source-address-prefixes <source-address-prefixes> \  
  --destination-address-prefixes <destination-address-prefixes>
```

```
--access <allow/deny> \  
--protocol <protocol> \  
--direction <inbound/outbound> \  
--source-port-ranges <source-port-ranges> \  
--destination-port-ranges <destination-port-ranges>
```

### 3.Creating a Public IP

To create a Public IP address:

```
az network public-ip create \  
--resource-group <resource-group-name> \  
--name <public-ip-name>
```

### 4.Associating/De-associating Public IP with a VM

To associate a Public IP with a VM's network interface:

```
az network nic ip-config update \  
--name <ip-config-name> \  
--nic-name <nic-name> \  
--resource-group <resource-group-name> \  
--public-ip-address <public-ip-name>
```

To de-associate a Public IP from a VM's network interface:

```
az network nic ip-config update \  
--name <ip-config-name> \  
--nic-name <nic-name> \  
--resource-group <resource-group-name> \  
--remove publicIpAddress
```

### 5.Creation of Network Interface

To create a network interface:

```
az network nic create \  
  --resource-group <resource-group-name> \  
  --name <nic-name> \  
  --vnet-name <vnet-name> \  
  --subnet <subnet-name> \  
  --network-security-group <nsg-name> \  
  --public-ip-address <public-ip-name>
```

Replace <resource-group-name>, <ip-config-name>, <nic-name>, <static-ip-address>, <nsg-name>, <rule-name>, <priority>, <source-address-prefixes>, <destination-address-prefixes>, <allow/deny>, <protocol>, <inbound/outbound>, <source-port-ranges>, <destination-port-ranges>, <public-ip-name>, <vnet-name>, and <subnet-name> with the appropriate values for your setup.