Project 4-4: Configure a VNet and Subnets in Azure

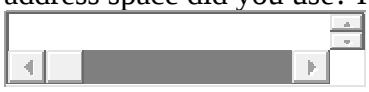
Est. completion time: 45 minutes

Note

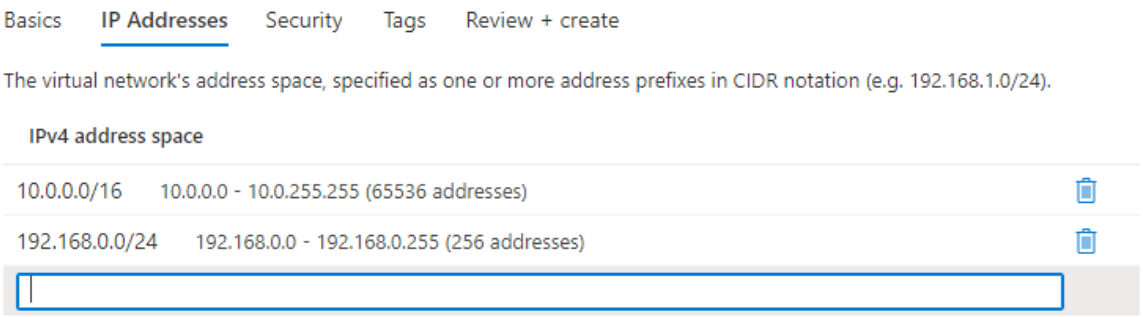
Public cloud platforms and related account options change frequently. While the instructions given here were accurate at the time of writing, you might need to adjust the steps or options according to later changes.

Recall that in Project 1-4, you surveyed available Azure subscription options and had the opportunity to create an Azure subscription. In this project, you'll create two VNets and two subnets, and practice managing VM interfaces. Complete the following steps:

1. In your Azure portal, go to the Virtual networks dashboard (see Figure 4-25). Click **Create virtual network**. Give the network a name, such as MyVnet1. Assign an address space, such as 192.168.0.0/24. What address space did you use? How many addresses are included in the VNet's CIDR block? **private -65536 address**

   Public -256 address

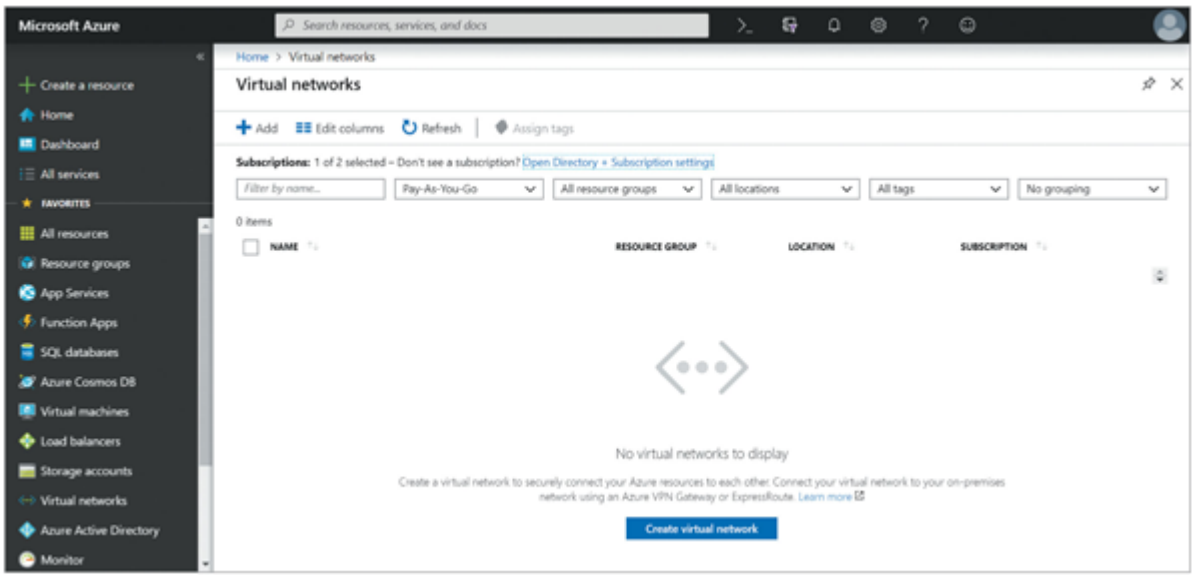
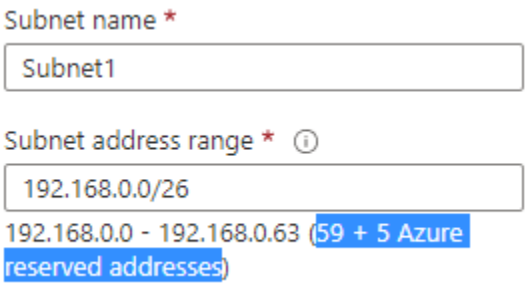


Figure 4-25 The Azure Virtual networks dashboard

Source: Used with permission from Microsoft

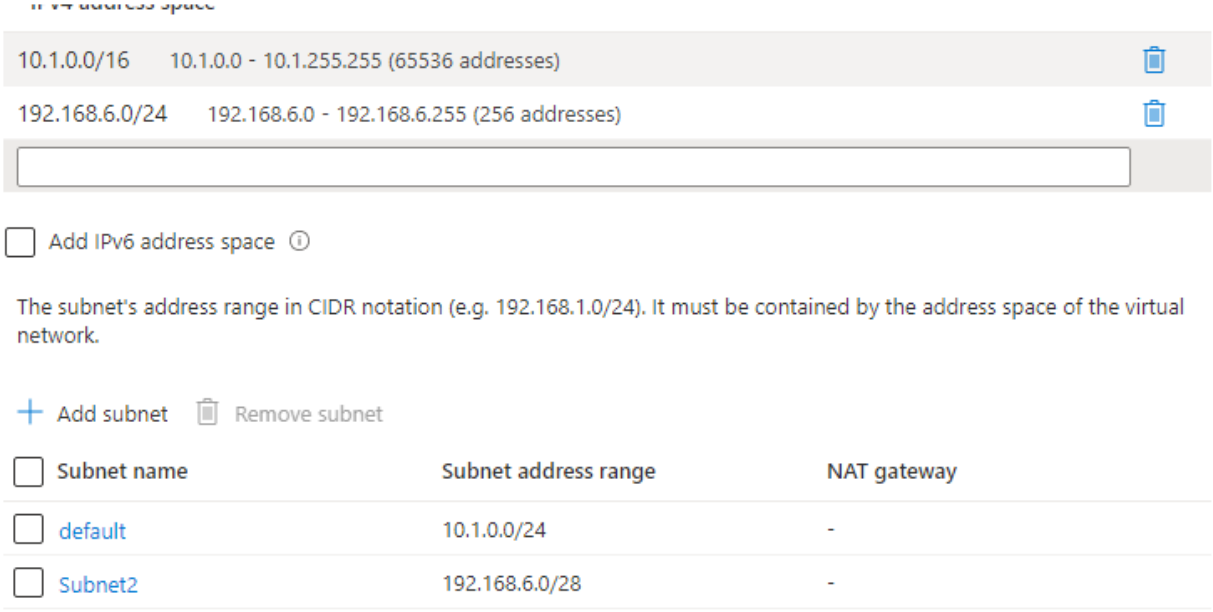
2. Create a new resource group and name it something like MyRG1. In Azure, you create a new subnet at the same time you create a new VNet. Give the subnet a name, such as Subnet1, and an address range within the VNet's CIDR range, such as 192.168.0.0/26. How many addresses are included in the subnet's CIDR block? Keep the remaining default settings, and click **Create**. **59 + 5 Azure reserved addresses**



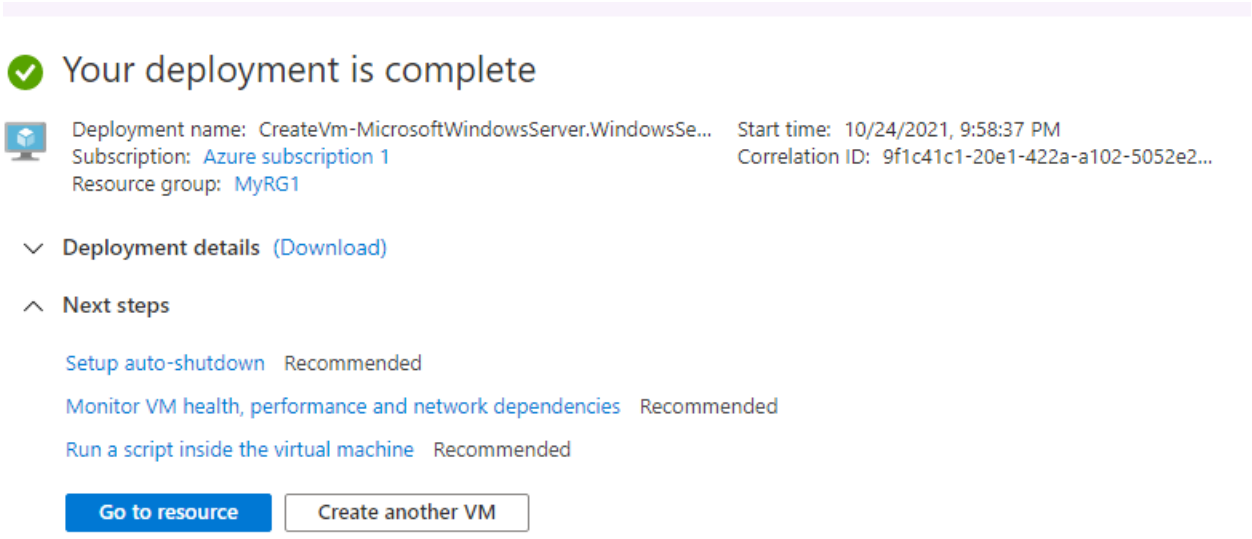
3. Create a second VNet with a separate IP address space, a new resource group, and a new subnet. What address space did you assign to the VNet and the subnet?

Vnet-192.168.6.0/24

Subnet-192.168.6.0/28



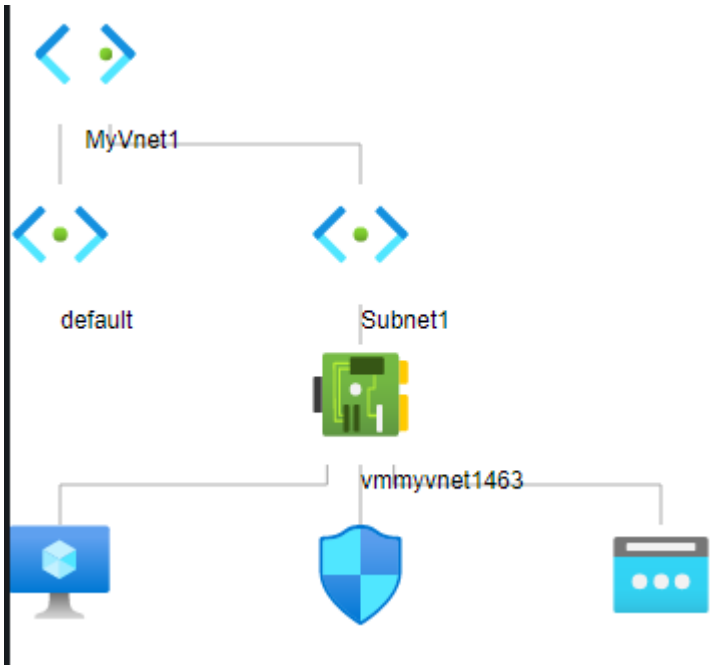
4. Create a new VM in the first VNet using that VNet's resource group. On the Networking page, be sure to select the first VNet you created and its subnet. Then create the VM.



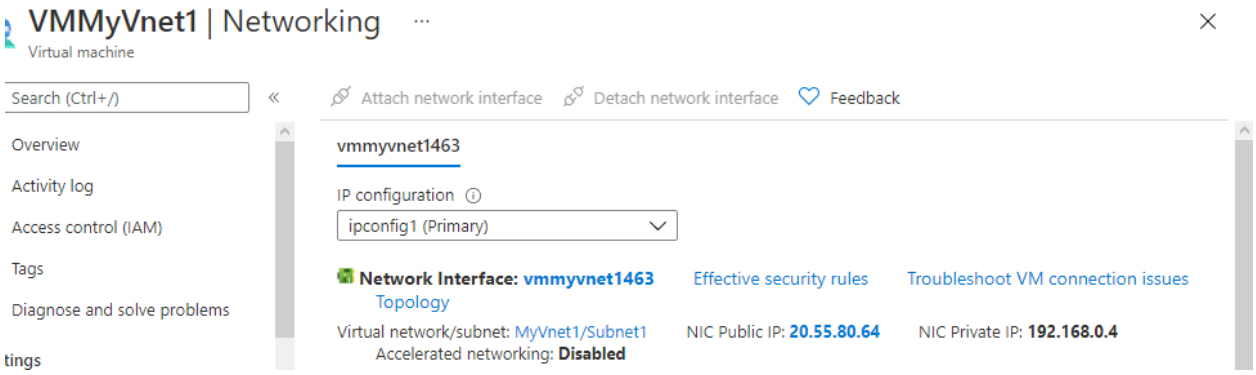
5. After the VM is deployed, click the VM, and then click **Networking** in the left pane. What is the VM's private IP address? What is the name of this network interface? Click **Topology** and describe the information given in this diagram.

private IP 192.168.0.4

vmmyvnet1463

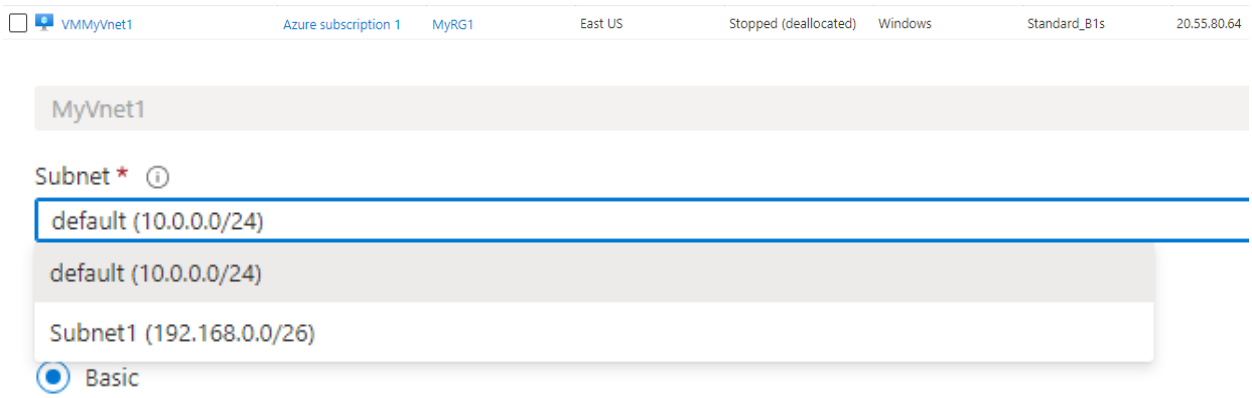


The topology show the gateway MyVnet1 why two internet are connected, default and Subnet1. The MyVnet1 is connected to Subnet1 which it is connected to vmmyvnet and is connected to other three components.

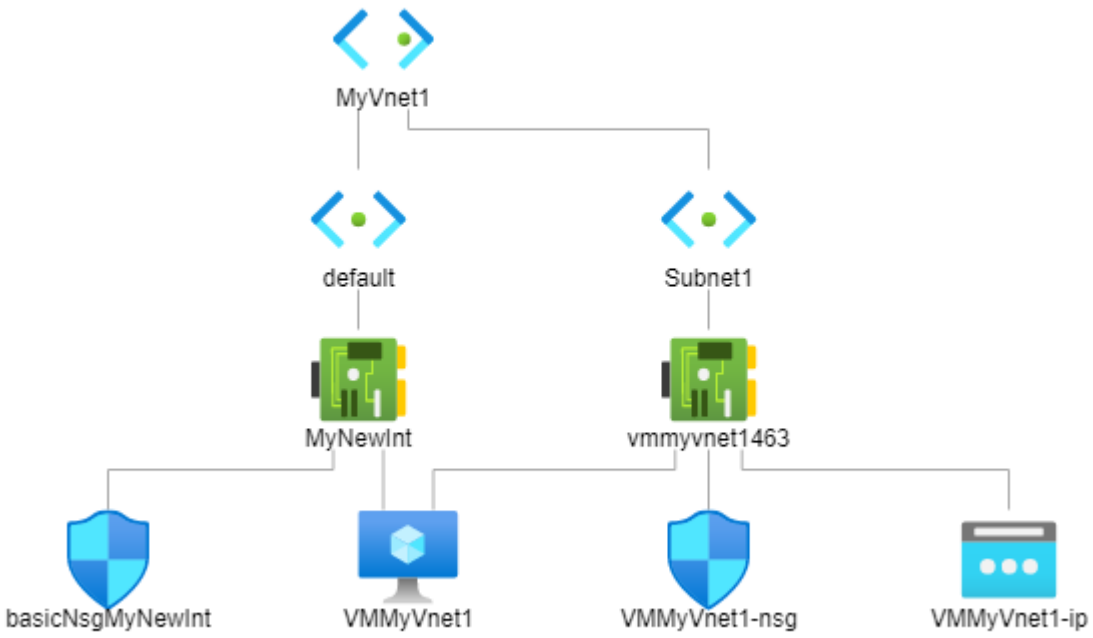


6. Now you're ready to add a second network interface to this VM. First power down the machine (but don't delete it). Make sure the VM is completely deallocated; then return to the VM's Networking page and click **Attach network interface**. Click **Create network interface**. Give the network interface a name, such as MyNewInt. What options do you have for selecting a VNet? Why do you think this is? Leave the default settings in place, and click **Create**. On the Attach network interface pane, click **OK**.

Have two 10.0.0.0/24 and 192.168.0.0/26 this are subnets



7. The VM's Networking page should now show two interfaces, as in Figure 4-26. Click the second interface's tab. What IP address is assigned to this interface? Click **Topology** and describe the information given in this diagram. **private ip 10.0.0.4**



The topology show the gateway MyVnet1 why two internet are connected, default and Subnet1. The MyVnet1 is connected to Subnet1 which it is connected to vmmyvnet and is connected to other three components. The default interface connected to the

MyNewInt NIC two nodes. One of the node is shared between default and subnet1 which is VMMyVnet1.

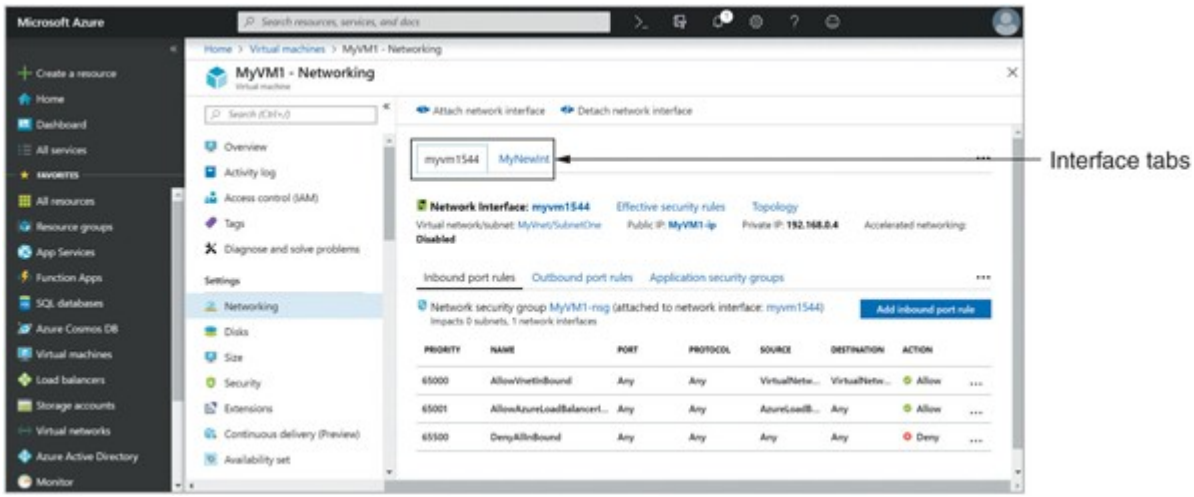
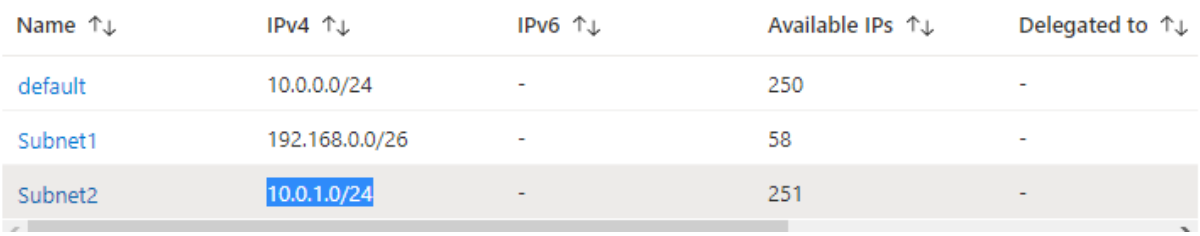


Figure 4-26 The VM has two network interfaces

Source: Used with permission from Microsoft

8. Both interfaces are included in the same subnet, and you were not able to add the new interface to a different VNet than the first interface was already attached to. Can you place the second interface in a different subnet from the first interface? To determine the answer to this question, first create a second subnet in the first VNet. Go to the VNet's page and click **Subnets**; then click **+Subnet**. Give the subnet a name and an address space within the first VNet's CIDR block. What address space did you use? Click **OK**.



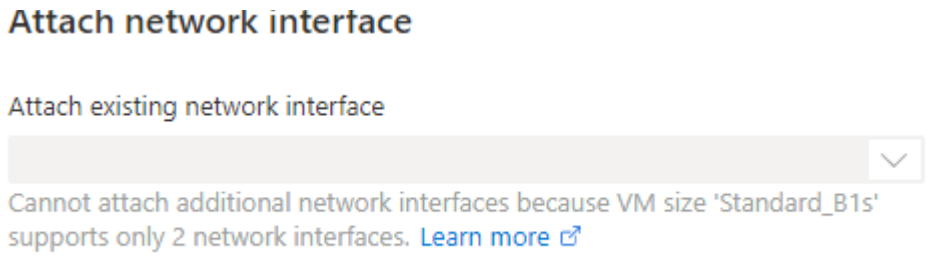
9. After the subnet is created, return to the VM's Networking page. Create a third network interface. Can you assign it to the subnet you just created? Try to attach the interface to

the VM. What happens? How can you solve this problem?

There is a problem and cannot attach additional network interface because VM size 'Standard _B1s" supports just two network interface.

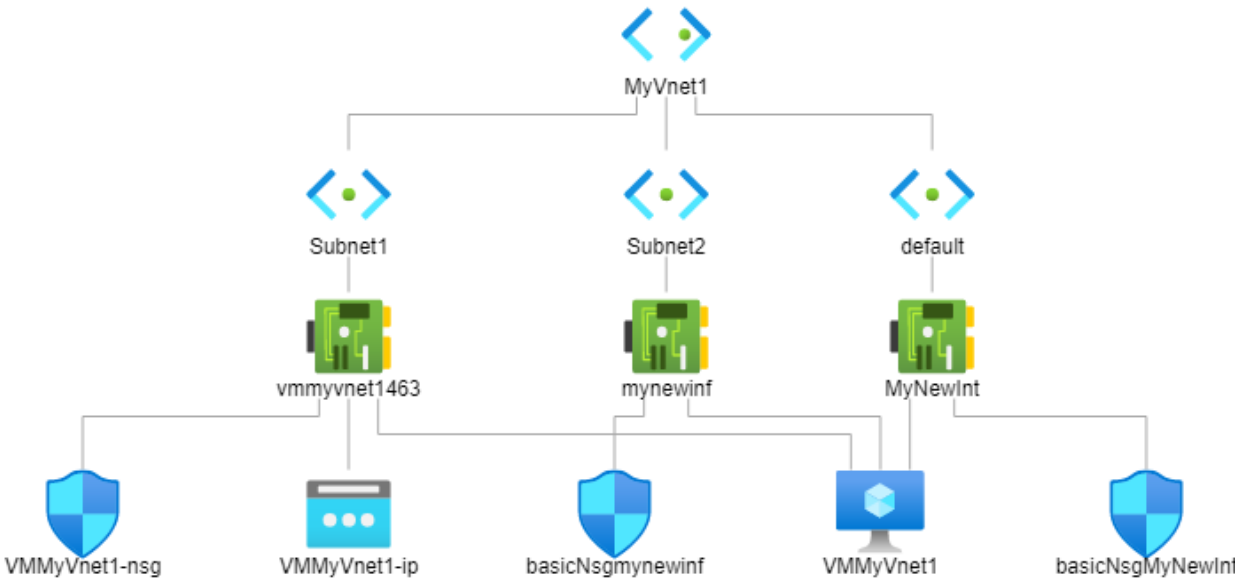
To add a virtual NIC to an existing VM, you deallocate the VM, add the virtual NIC, then start the VM. Different VM sizes support a varying number of NICs, so size your VM accordingly. If needed, you can resize a VM.

By select Size. Pick a new size from the list of available sizes and then select Resize.



10. Solve the problem and attach the newest network interface. What is the IP address of this

interface? What does the topology diagram look like?
10.0.1.4



11. Delete all the resources you created in this project, including the VM instance, both VPCs, both subnets, all new interfaces, and both resource groups. In what order did you delete these resources? What error messages did you encounter? How did you handle

these problems? Check through your account to confirm that all related resources have

been deleted.

The VM instance, VPCs, subnets, all new interfaces, and resource groups.

No issue encountered