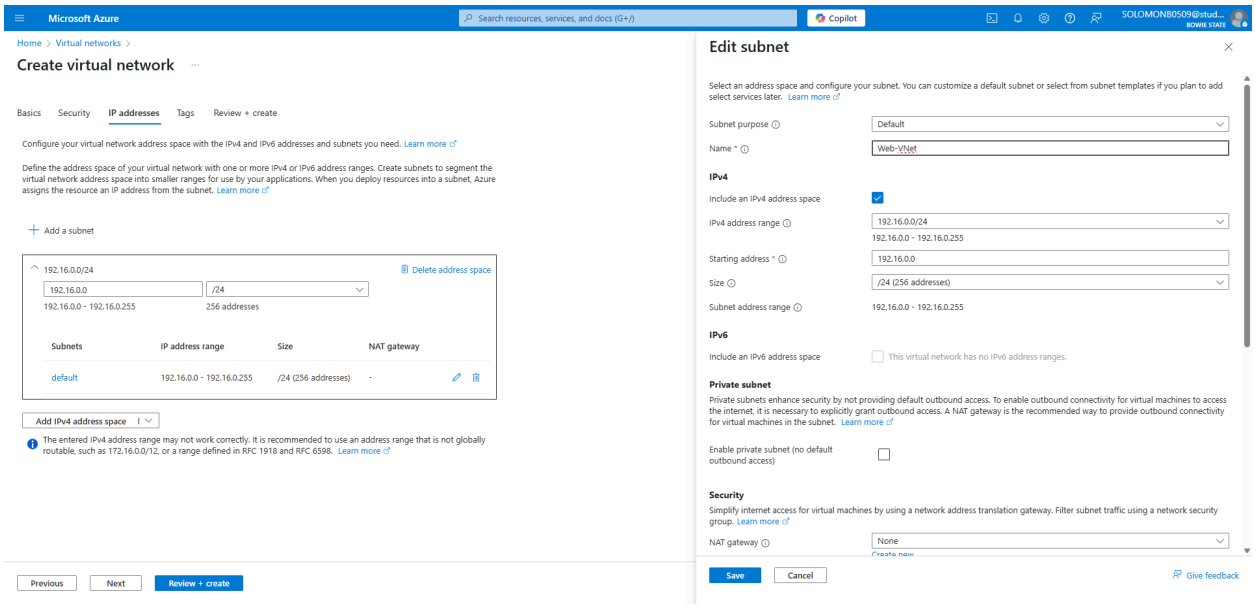
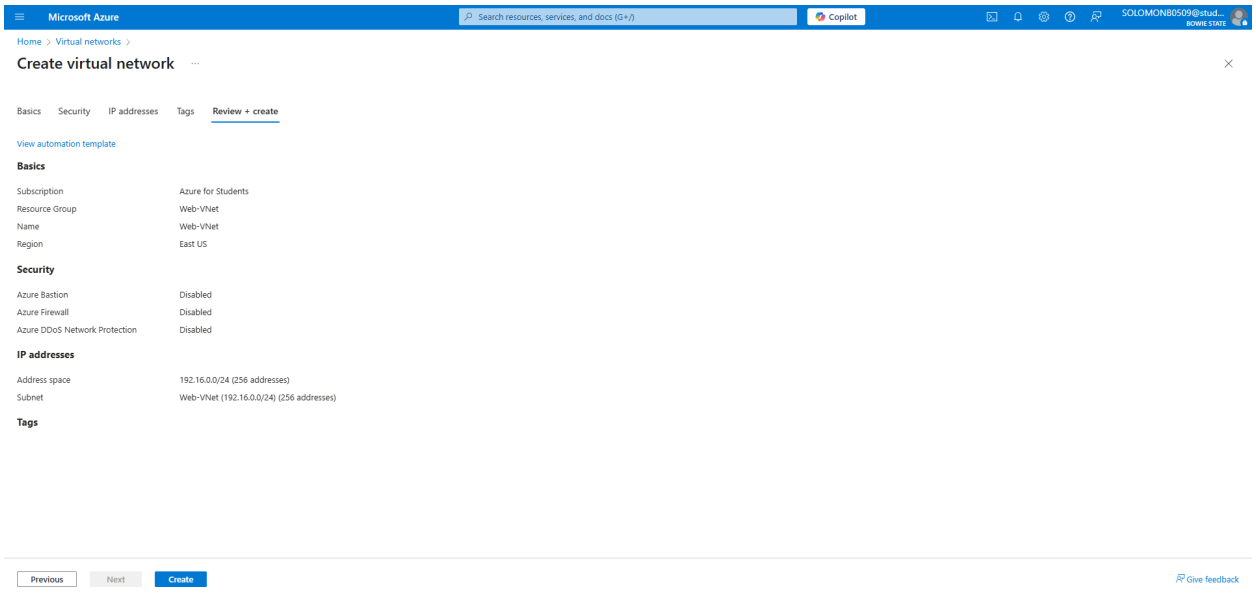
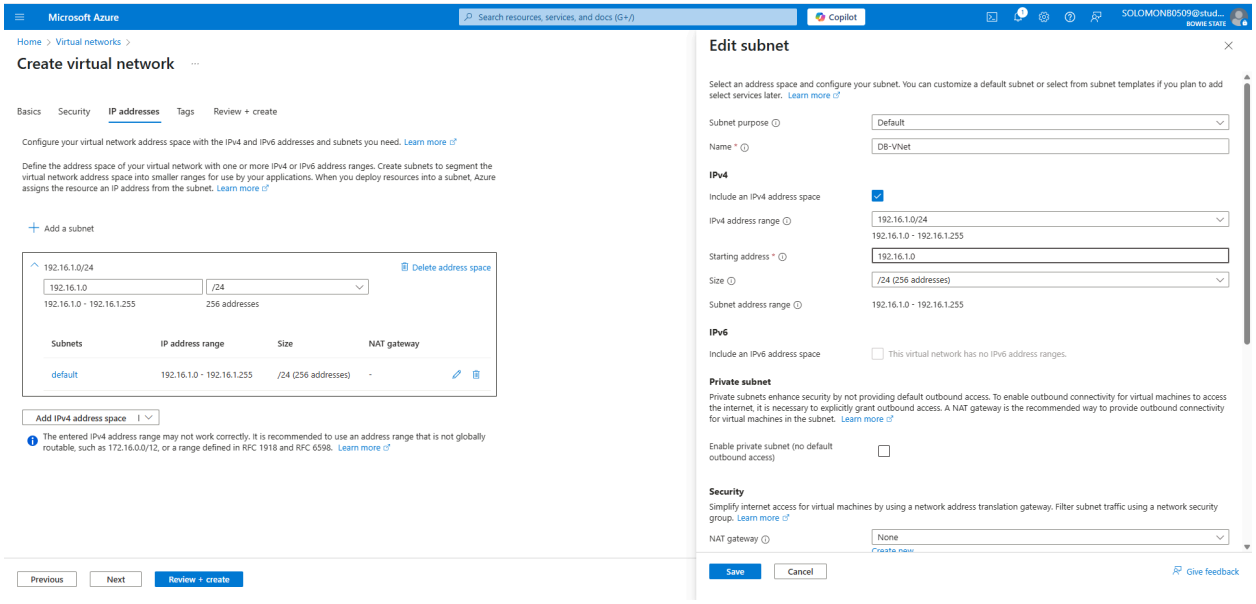
Branden Solomon
5/7/25
Professor Francis
CTEC 475

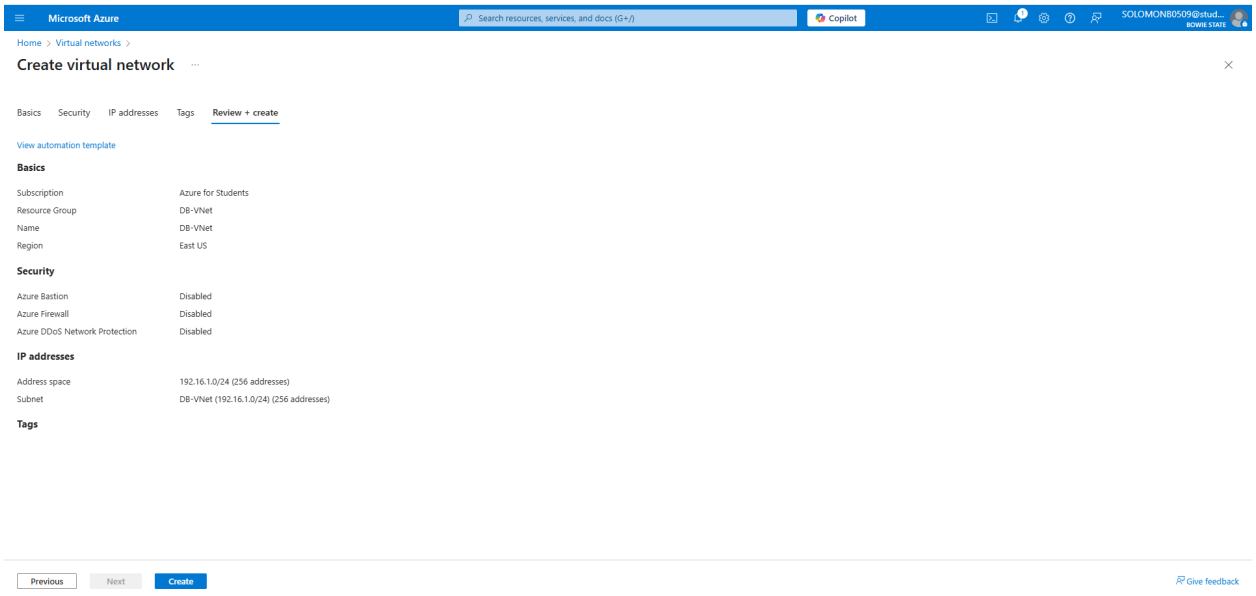
Capstone Module 6

1. Create two VPCs with one subnet each, either in the same cloud platform or in two different cloud platforms. (Your instructor might require that you use the same cloud platform for this project or two cloud platforms—check with your instructor for specific requirements.) Make sure both subnets have access to the Internet. For example, in AWS, you' ll need to add an Internet gateway to each subnet and add an Internet route to each subnet's route table.

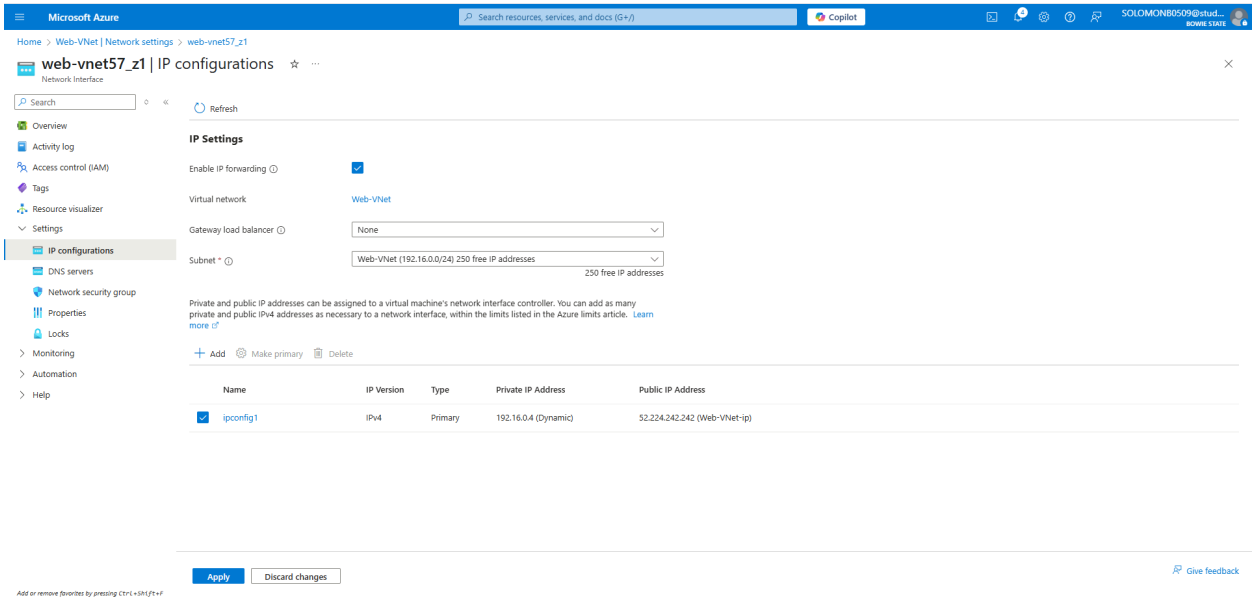


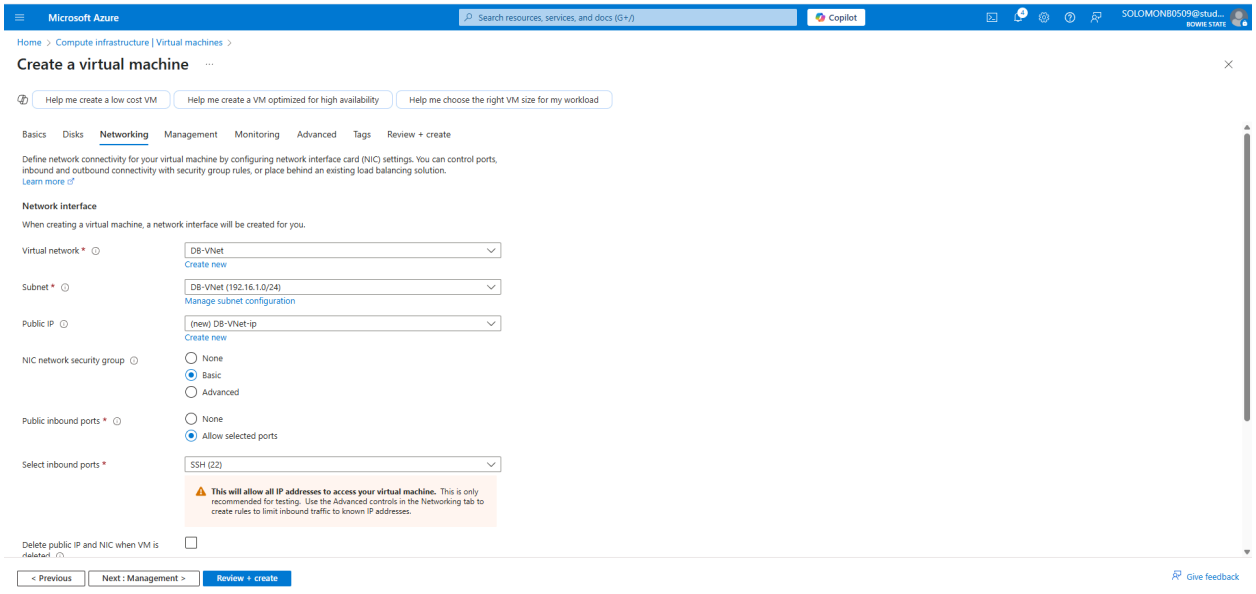


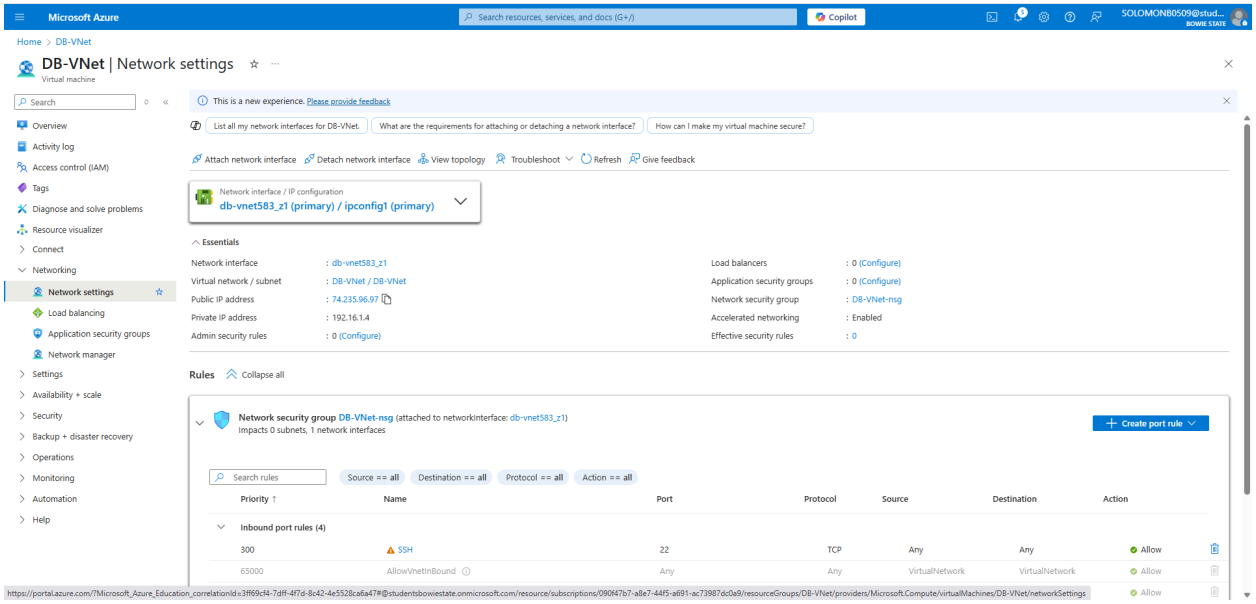




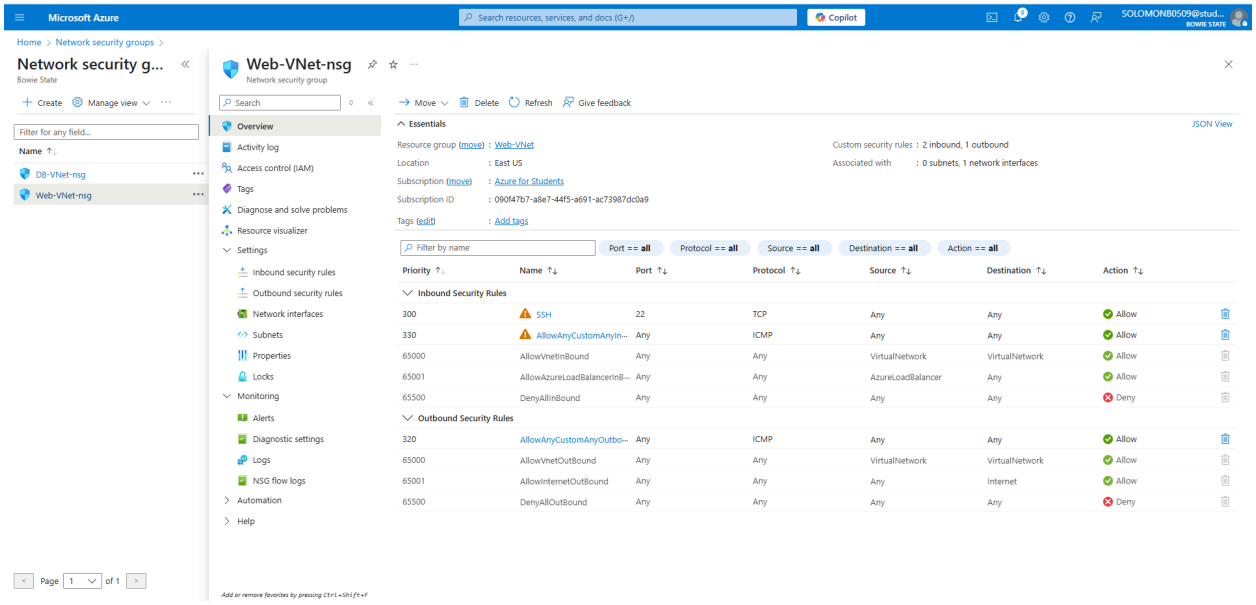
2. Create a VM instance in each subnet. Make sure each VM receives a public IP address. What public IP address is assigned to your VMs?


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
SOLOMONB0509@stud...
BOWIE STATE
Home > Web-VNet | Network settings > web-vnet57_z1
web-vnet57_z1 | IP configurations
Network Interface
Search
Overview
Activity log
Access control (IAM)
Tags
Resource visualizer
Settings
IP configurations
DNS servers
Network security group
Properties
Locks
Monitoring
Automation
Help
Refresh
IP Settings
Enable IP forwarding
Virtual network
Web-VNet
Gateway load balancer
None
Subnet *
Web-VNet (192.16.0.0/24) 250 free IP addresses
250 free IP addresses
Private and public IP addresses can be assigned to a virtual machine's network interface controller. You can add as many private and public IPv4 addresses as necessary to a network interface, within the limits listed in the Azure limits article. Learn more
Add
Make primary
Delete
Name
IP Version
Type
Private IP Address
Public IP Address
ipconfig1
IPv4
Primary
192.16.0.4 (Dynamic)
52.224.242.242 (Web-VNet-ip)
Apply
Discard changes
Give feedback
Add or remove favorites by pressing Ctrl+Shift+F

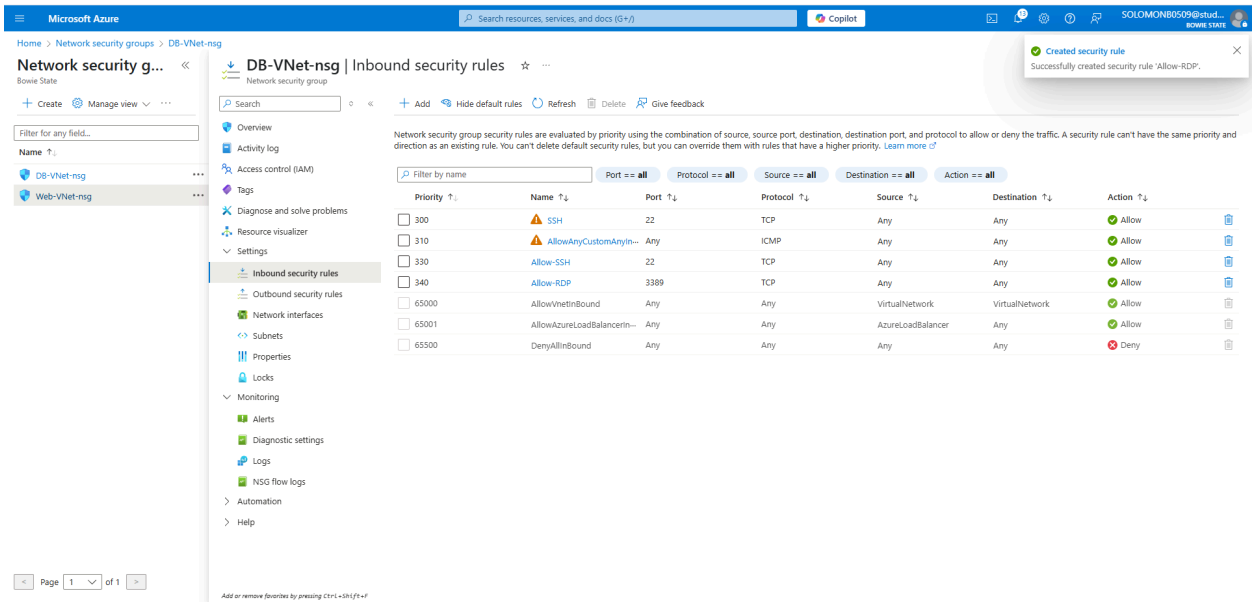

Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
SOLOMONB0509@stud...
BOWIE STATE
Home > Compute infrastructure | Virtual machines
Create a virtual machine
Help me create a low cost VM
Help me create a VM optimized for high availability
Help me choose the right VM size for my workload
Basics
Disks
Networking
Management
Monitoring
Advanced
Tags
Review + create
Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution.
Learn more
Network interface
When creating a virtual machine, a network interface will be created for you.
Virtual network *
DB-VNet
Create new
Subnet *
DB-VNet (192.16.1.0/24)
Manage subnet configuration
Public IP
(new) DB-VNet-ip
Create new
NIC network security group
None
Basic
Advanced
Public inbound ports *
None
Allow selected ports
Select inbound ports *
SSH (22)
This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.
Delete public IP and NIC when VM is deleted
< Previous
Next : Management >
Review + create
Give feedback

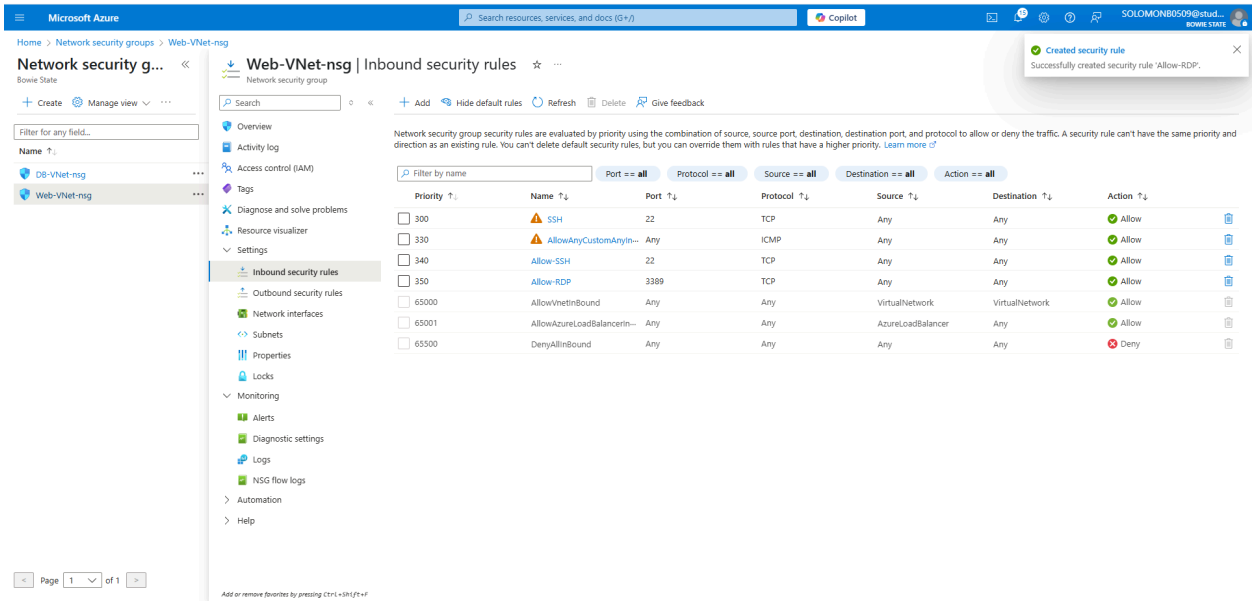


3. Configure security rules that allow ICMP traffic from any source to your target VM so you can confirm the target VM will respond successfully to pings. Get a working ping from your local computer to your target VM before proceeding.

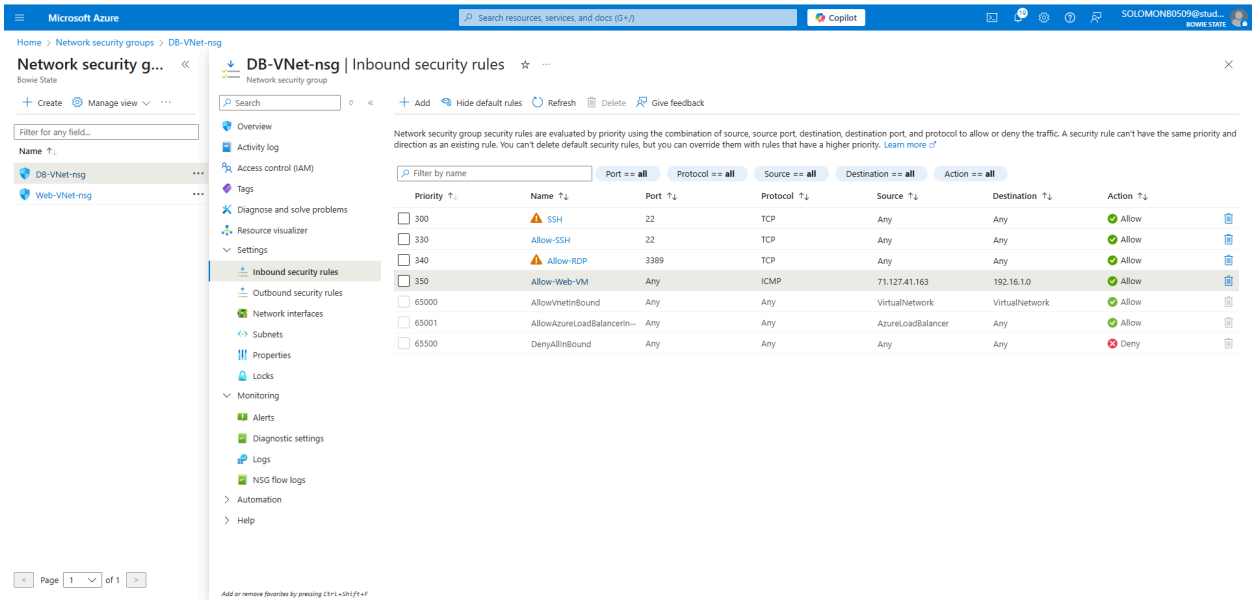


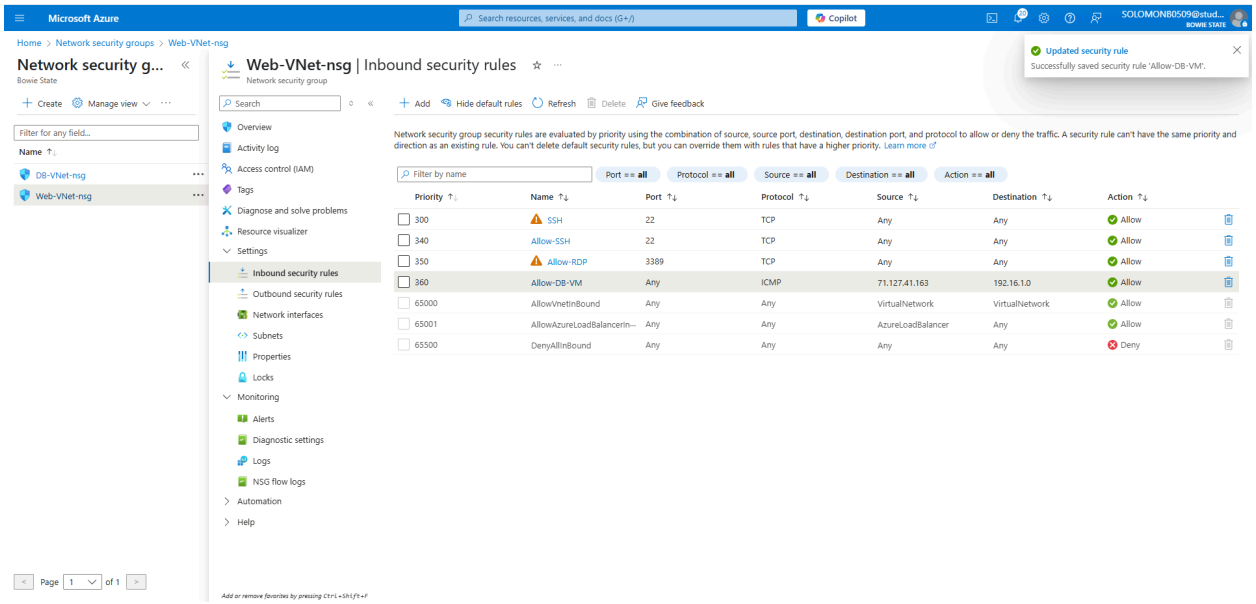
4. Configure security rules that allow SSH or RDP connections to your source VM. Remote into the source VM.



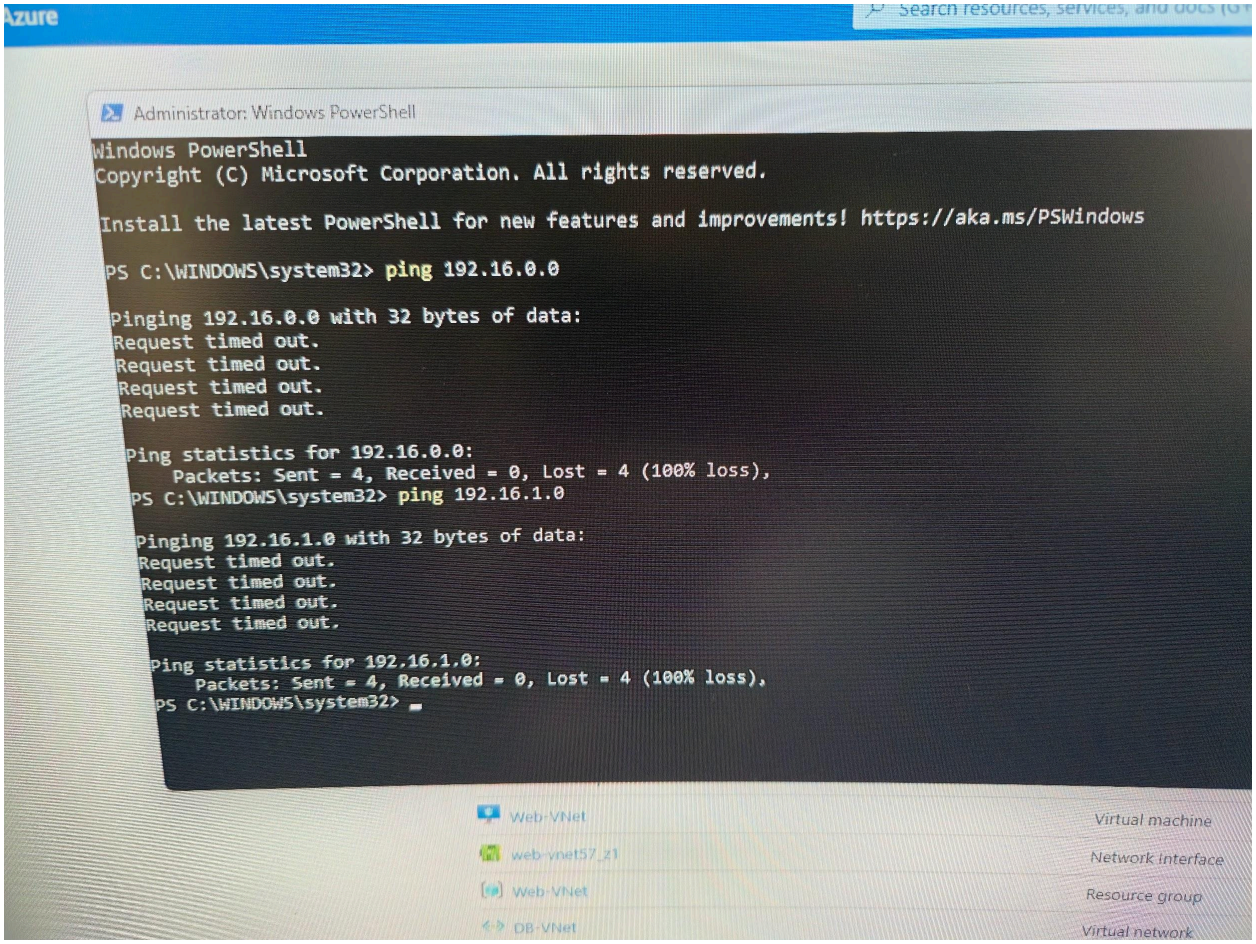


5. Configure security rules that only allow ICMP traffic from your source VM to your target VM. What rules did you add? What effect do you expect each rule to have on traffic to and from each VM?

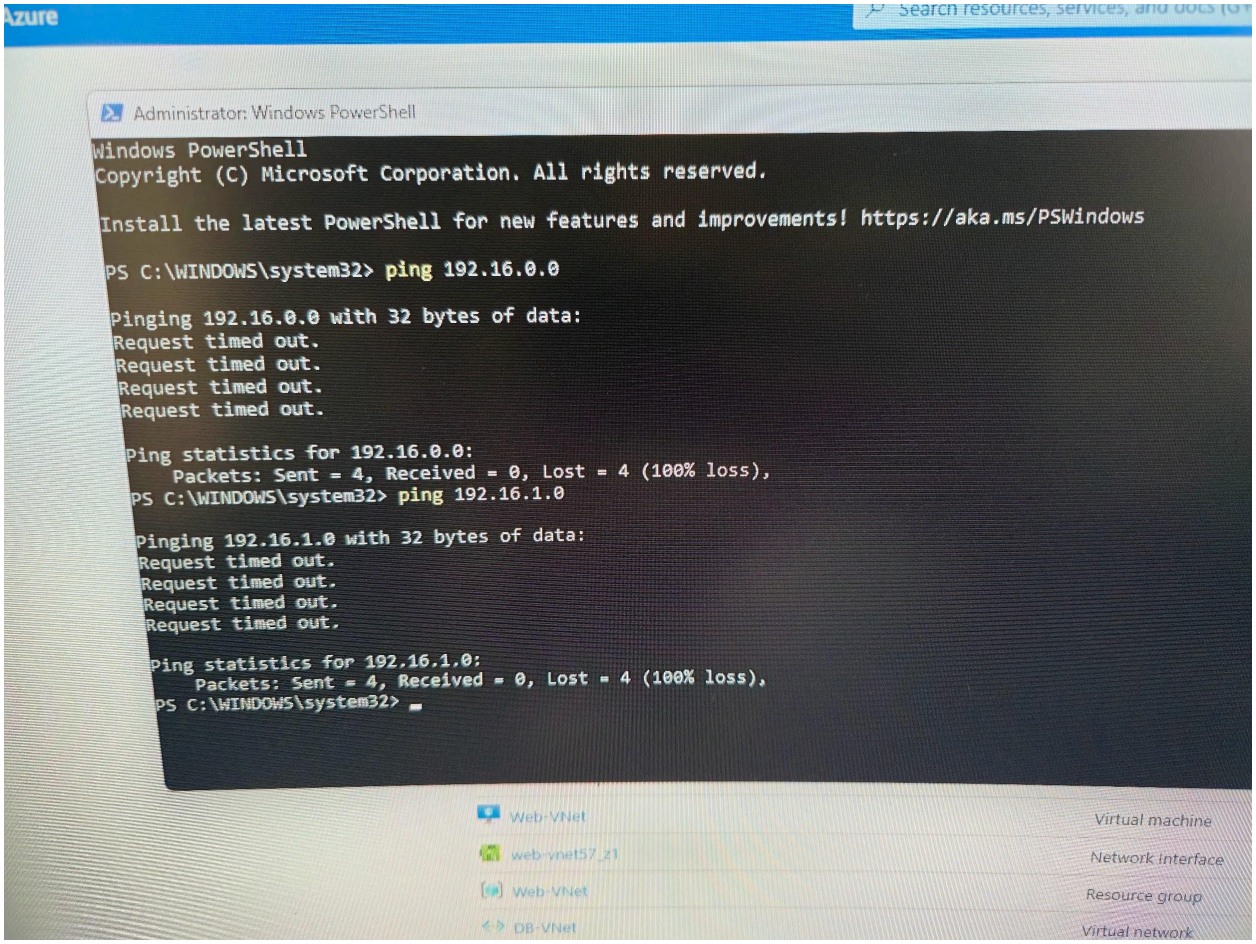




6. Run a ping from the source VM to the target VM that shows ICMP traffic is reaching the target VM. Take a screenshot showing the output; include this visual with your answers to this project's questions.



7. Run a ping from your local computer to your target VM that shows ICMP traffic from other sources cannot reach the target VM. Take a screenshot showing the output; include this visual with your answers to this project's questions.



8. Delete all resources created in this Capstone project. Check through your account to confirm that all related resources have been deleted.