Microsoft ADC Cybersecurity Skilling Program

Week 6 Lab Assignment

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AZ-500

Lab 02: Network Security Groups and Application Security Groups

Lab scenario

You have been asked to implement your organization's virtual networking infrastructure and test to ensure it is working correctly. In particular:

- The organization has two groups of servers: Web Servers and Management Servers.
- Each group of servers should be in its own Application Security Group.
- You should be able to RDP into the Management Servers, but not the Web Servers.
- The Web Servers should display the IIS web page when accessed from the internet.
- Network security group rules should be used to control network access.

For all the resources in this lab, we are using the **East US** region. Verify with your instructor this is the region to use for class.

Lab objectives

In this lab, you will complete the following exercises:

- Exercise 1: Create the virtual networking infrastructure
- Exercise 2: Deploy virtual machines and test the network filters

Exercise 1: Create the virtual networking infrastructure

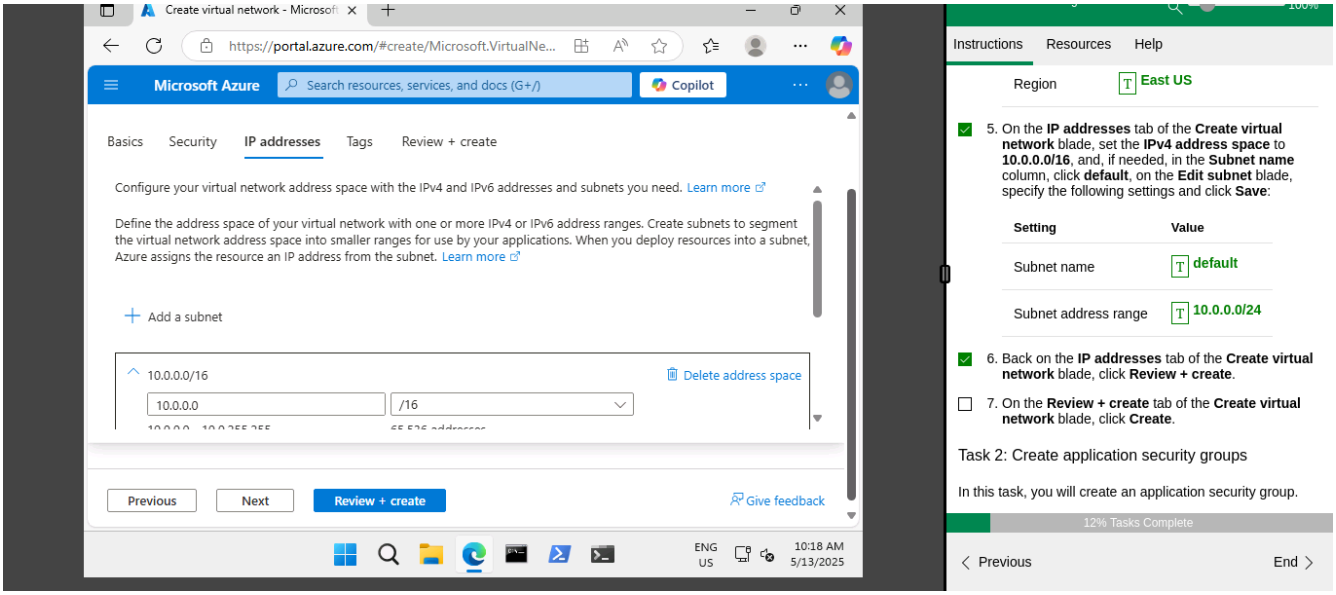
Estimated timing: 20 minutes

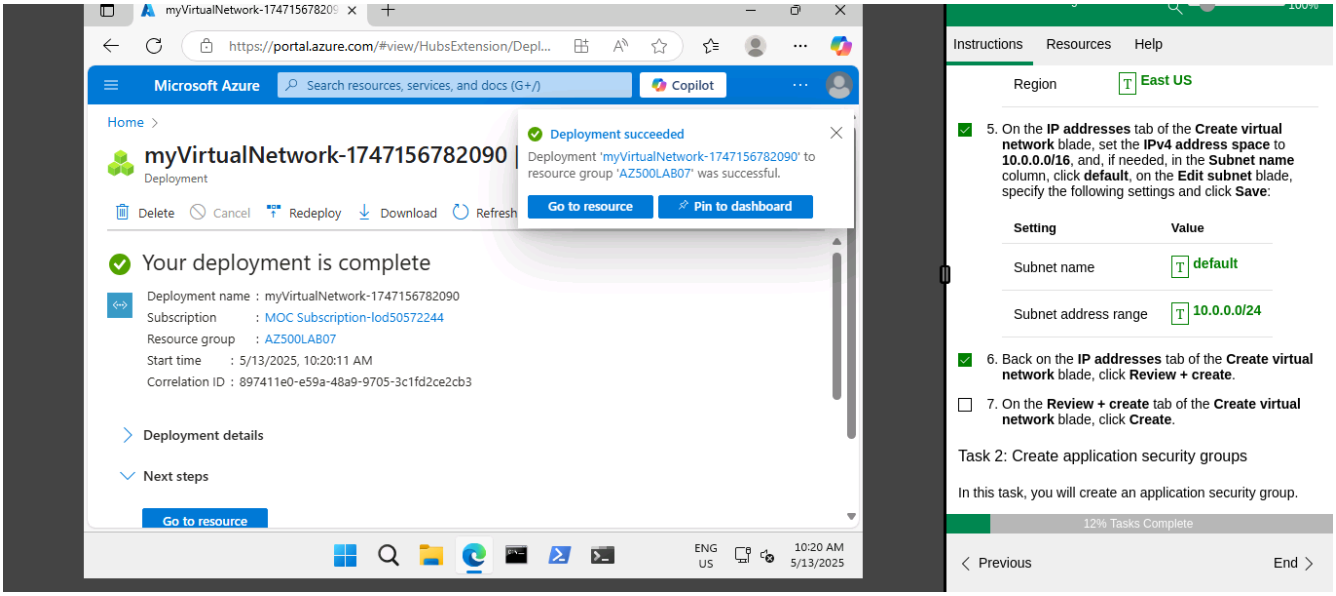
In this exercise, you will complete the following tasks:

- Task 1: Create a virtual network with one subnet.
- Task 2: Create two application security groups.
- Task 3: Create a network security group and associate it with the virtual network subnet.
- Task 4: Create inbound NSG security rules to all traffic to web servers and RDP to the management servers.

Task 1: Create a virtual network

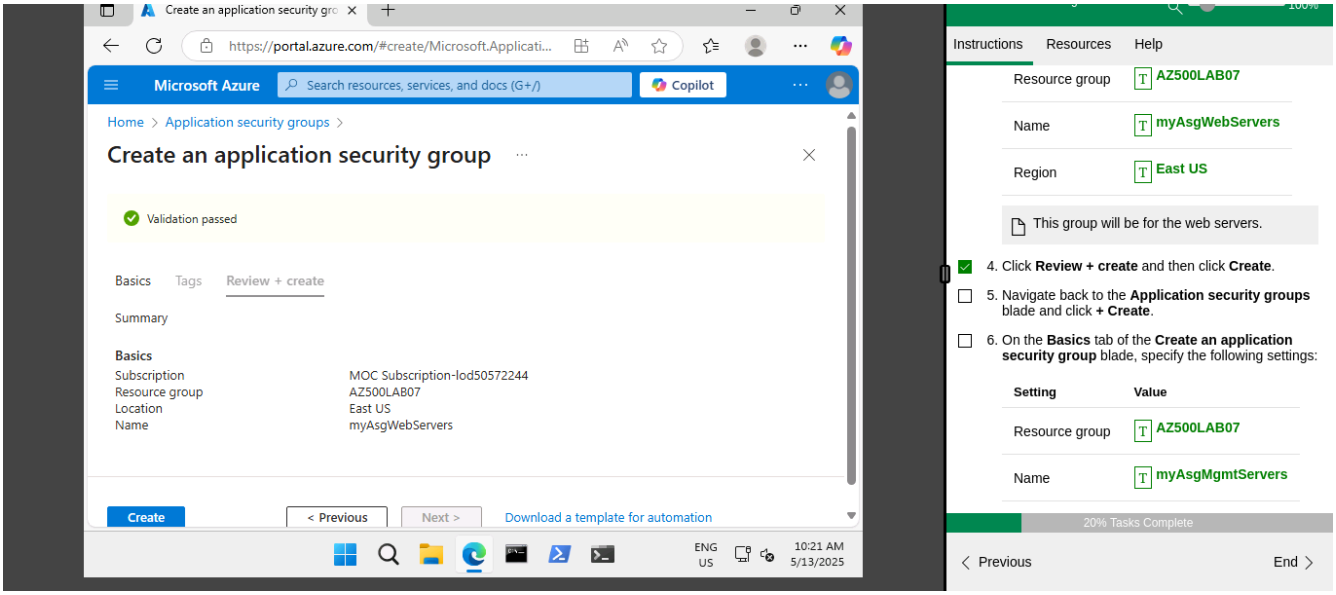
In this task, you will create a virtual network to use with the network and application security groups.

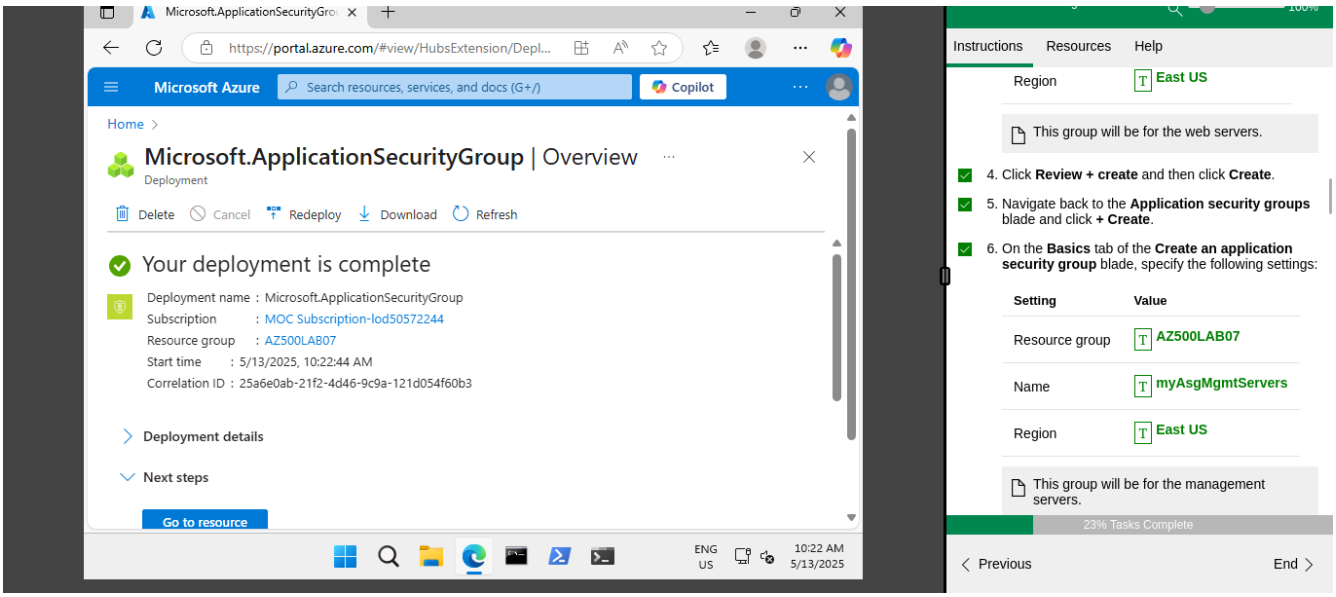




Task 2: Create application security groups

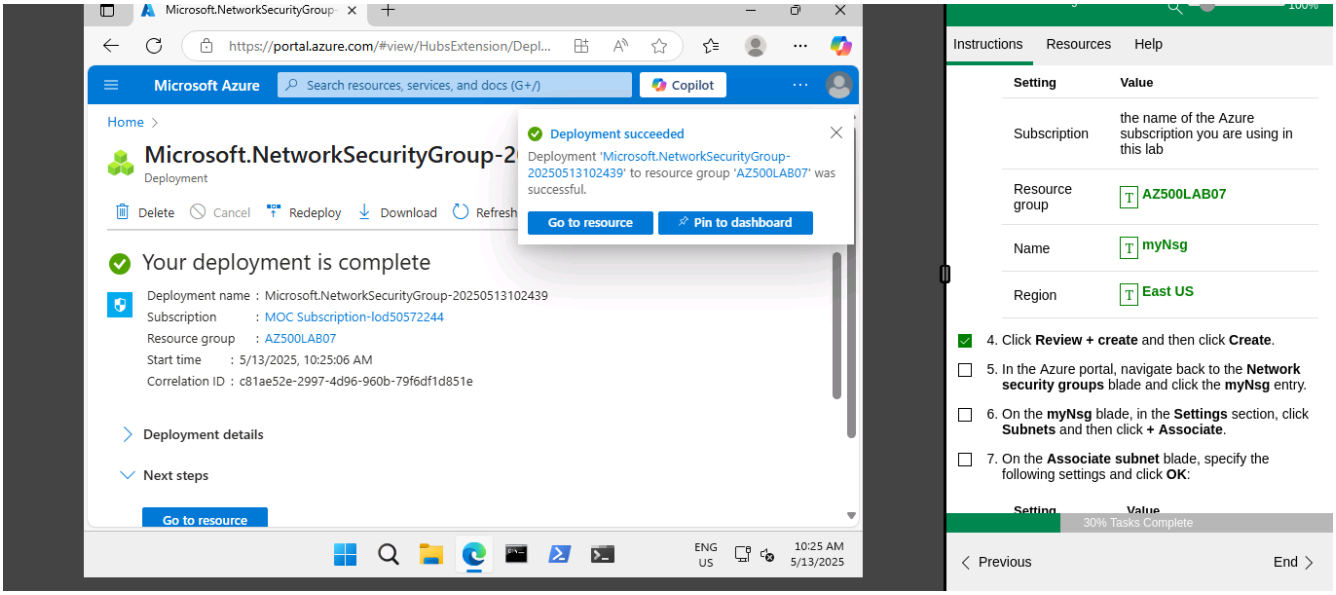
In this task, you will create an application security group.

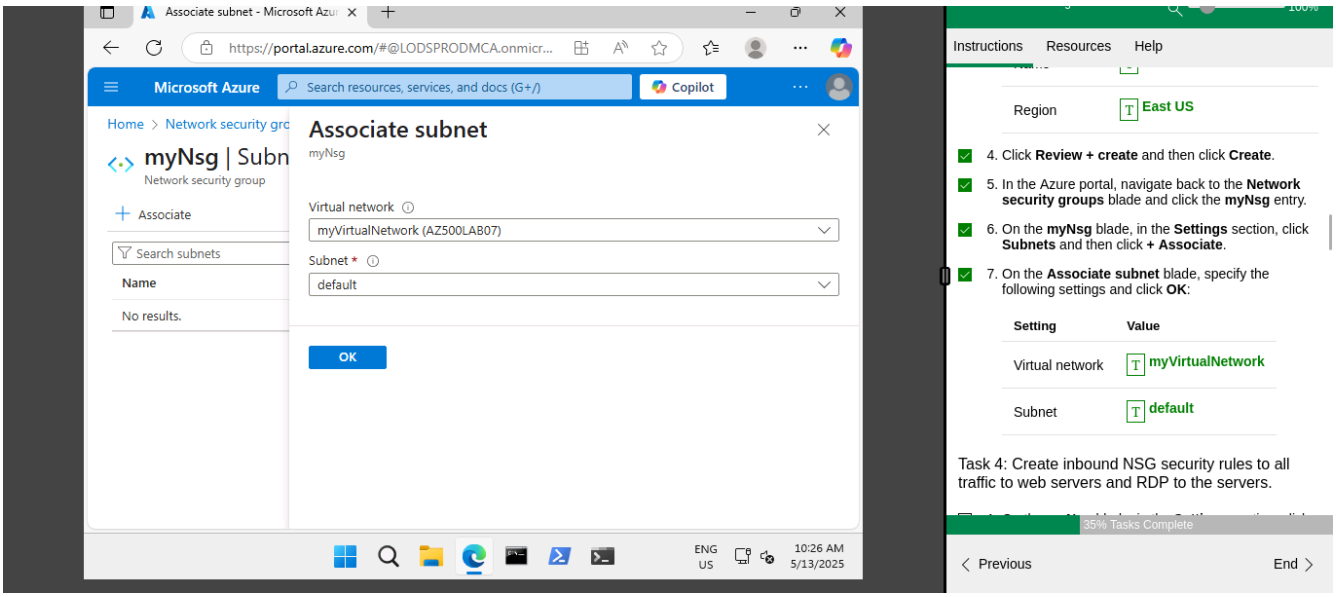




Task 3: Create a network security group and associate the NSG to the subnet

In this task, you will create a network security group.


Microsoft.NetworkSecurityGroup-
https://portal.azure.com/#view/HubsExtension/Depl...
Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home >
Microsoft.NetworkSecurityGroup-2
Deployment
Delete
Cancel
Redeploy
Download
Refresh
Deployment succeeded
Deployment 'Microsoft.NetworkSecurityGroup-20250513102439' to resource group 'AZ500LAB07' was successful.
Go to resource
Pin to dashboard
Your deployment is complete
Deployment name : Microsoft.NetworkSecurityGroup-20250513102439
Subscription : MOC Subscription-lod50572244
Resource group : AZ500LAB07
Start time : 5/13/2025, 10:25:06 AM
Correlation ID : c81ae52e-2997-4d96-960b-79f6df1d851e
Deployment details
Next steps
Go to resource
ENG
US
10:25 AM
5/13/2025
Instructions
Resources
Help
Setting
Value
Subscription
the name of the Azure subscription you are using in this lab
Resource group
AZ500LAB07
Name
myNsg
Region
East US
4. Click Review + create and then click Create.
5. In the Azure portal, navigate back to the Network security groups blade and click the myNsg entry.
6. On the myNsg blade, in the Settings section, click Subnets and then click + Associate.
7. On the Associate subnet blade, specify the following settings and click OK:
30% Tasks Complete
Previous
End


Associate subnet - Microsoft Azu
https://portal.azure.com/#@LODSPRODMCA.onmicr...
Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home > Network security gro
myNsg | Subn
Network security group
Associate
Search subnets
Name
No results.
Associate subnet
myNsg
Virtual network
myVirtualNetwork (AZ500LAB07)
Subnet *
default
OK
ENG
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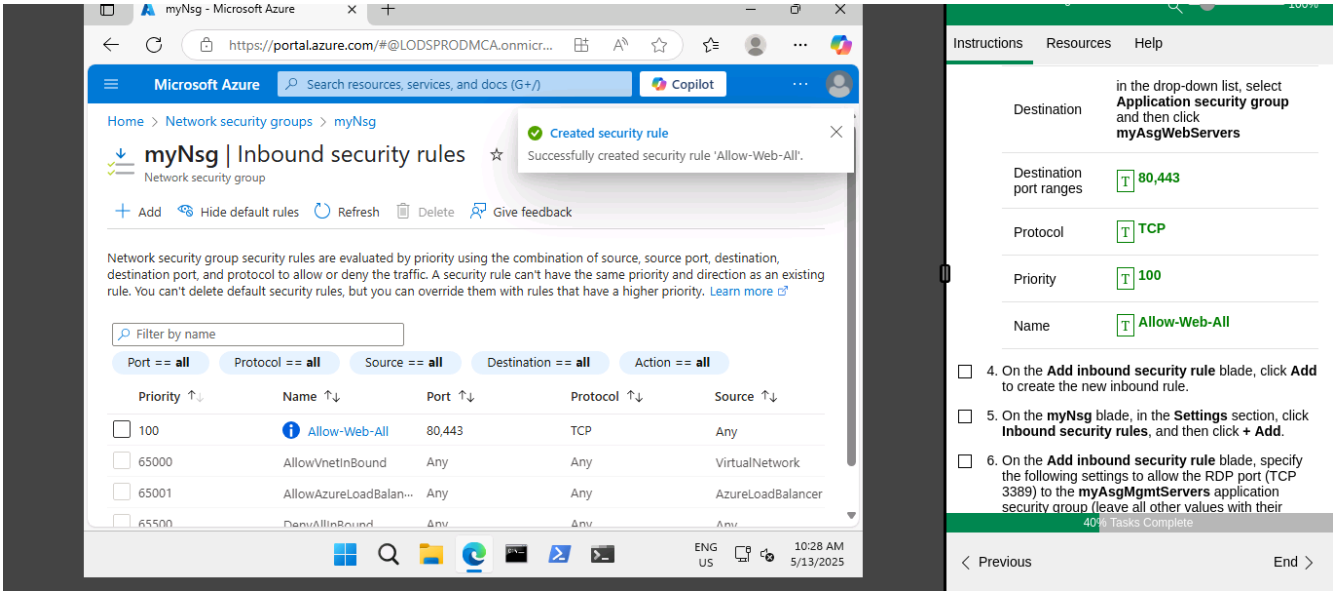
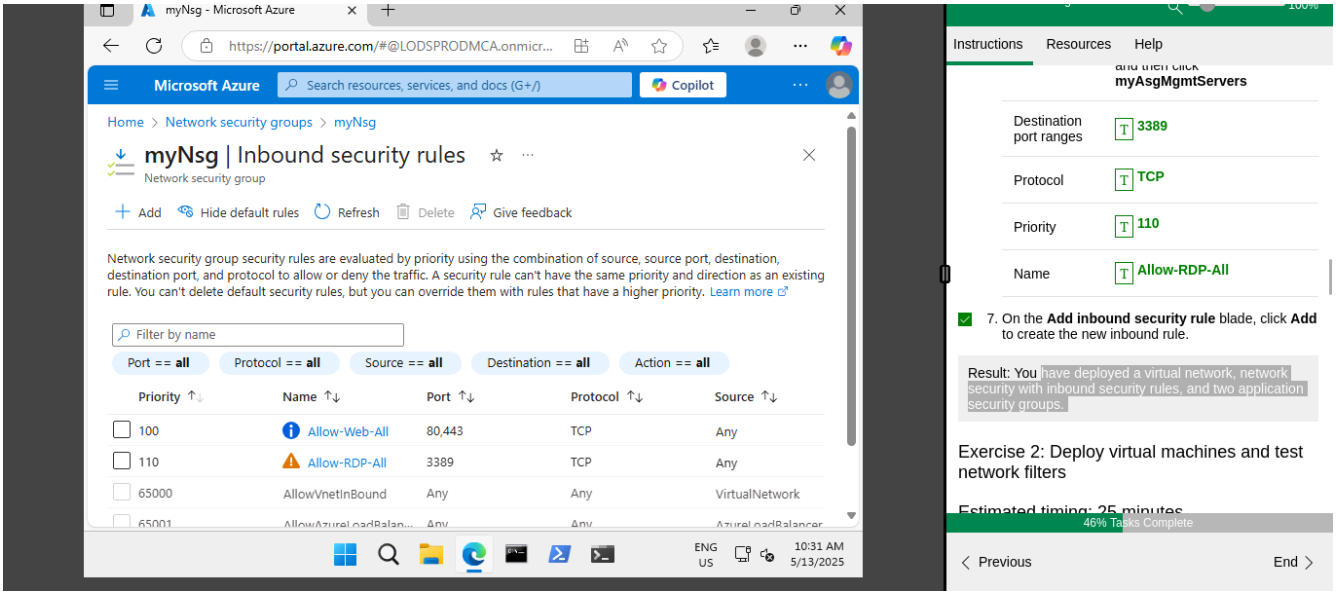
5/13/2025
Instructions
Resources
Help
Region
East US
4. Click Review + create and then click Create.
5. In the Azure portal, navigate back to the Network security groups blade and click the myNsg entry.
6. On the myNsg blade, in the Settings section, click Subnets and then click + Associate.
7. On the Associate subnet blade, specify the following settings and click OK:
Setting
Value
Virtual network
myVirtualNetwork
Subnet
default
Task 4: Create inbound NSG security rules to all traffic to web servers and RDP to the servers.
35% Tasks Complete
Previous
End

Task 4: Create inbound NSG security rules to all traffic to web servers and RDP to the servers.





have deployed a virtual network, network security with inbound security rules, and two application security groups.

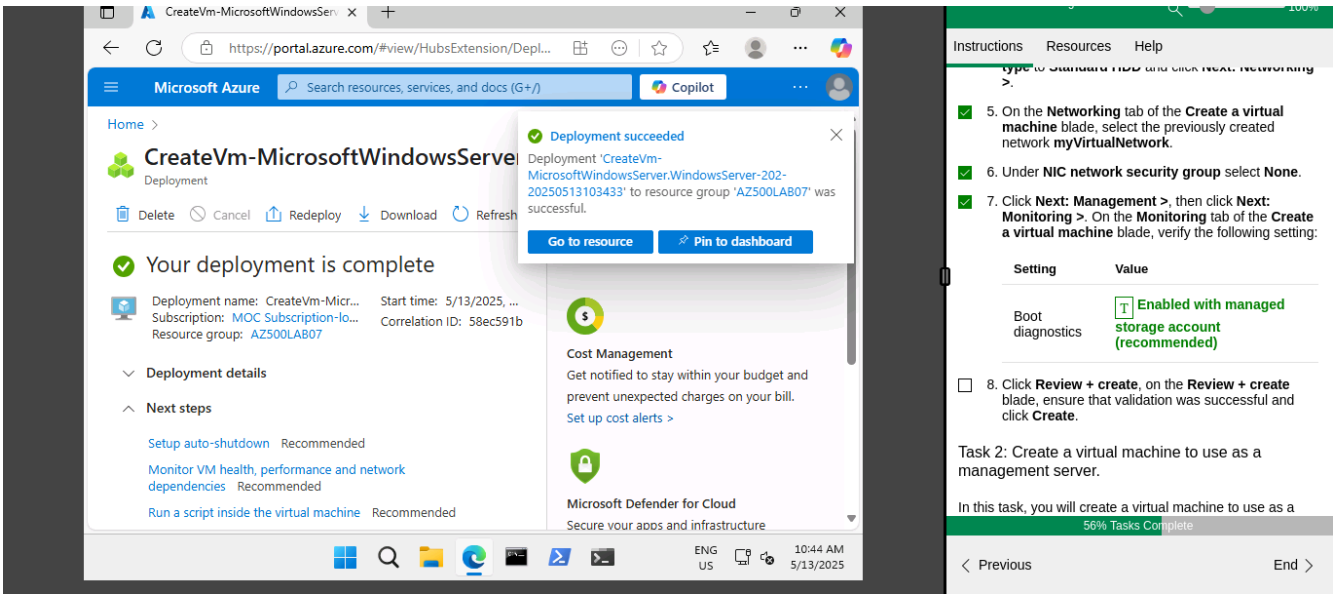
Exercise 2: Deploy virtual machines and test network filters

you will complete the following tasks:

- Task 1: Create a virtual machine to use as a web server.
- Task 2: Create a virtual machine to use as a management server.
- Task 3: Associate each virtual machines network interface to it's application security group.
- Task 4: Test the network traffic filtering.

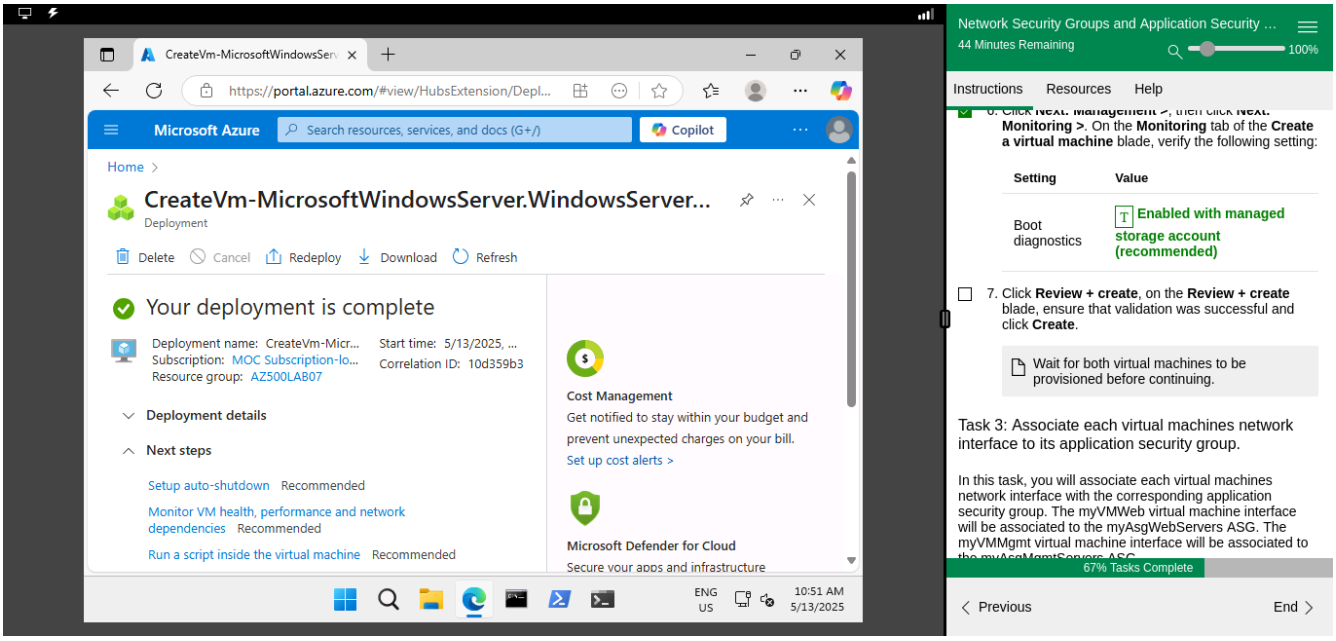
Task 1: Create a virtual machine to use as a web server.

In this task, you will create a virtual machine to use as a web server.



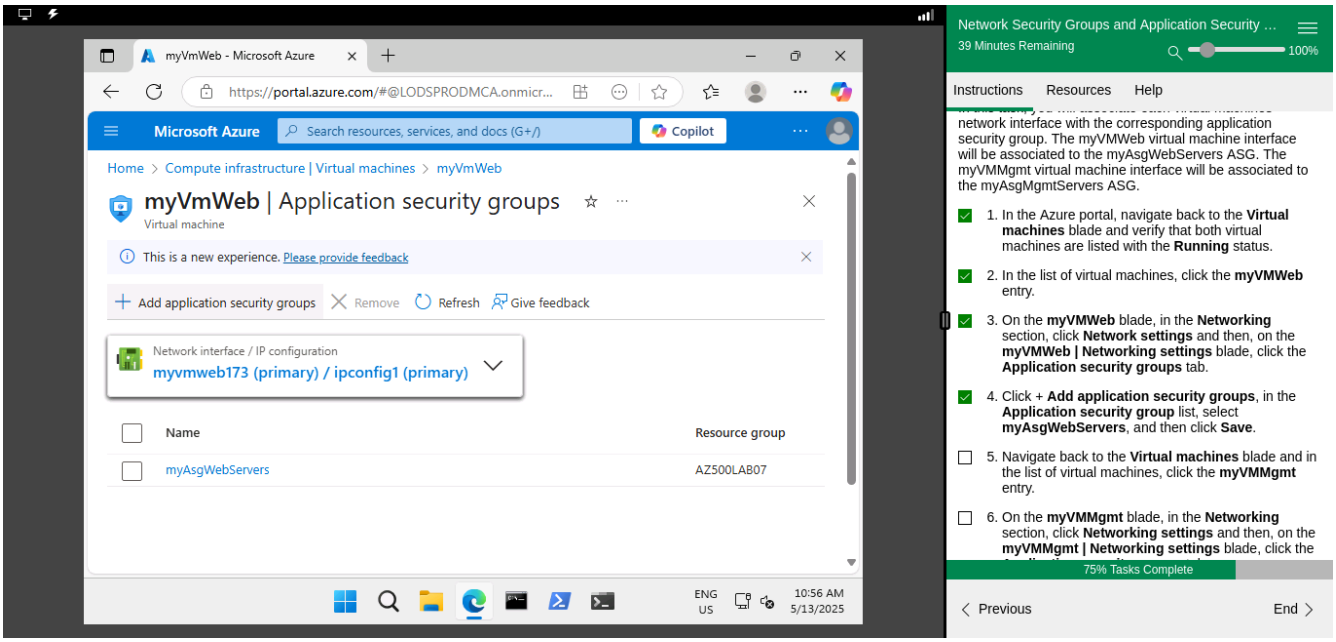
Task 2: Create a virtual machine to use as a management server.

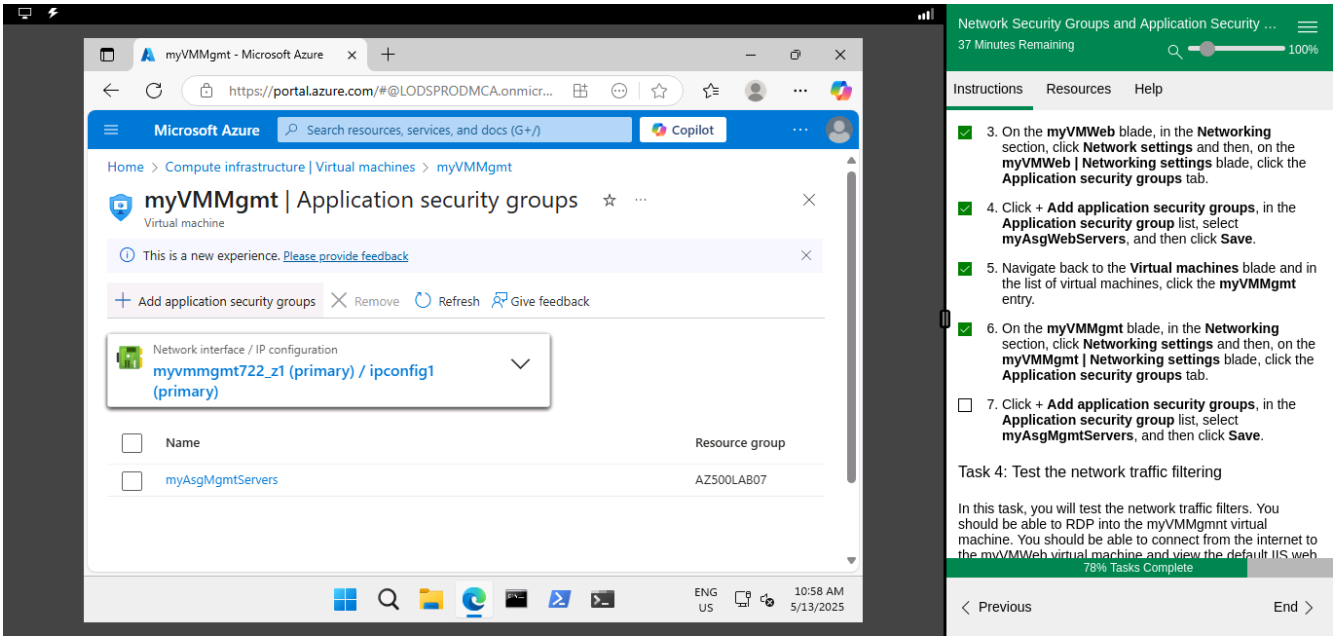
In this task, you will create a virtual machine to use as a management server



Task 3: Associate each virtual machines network interface to its application security group.

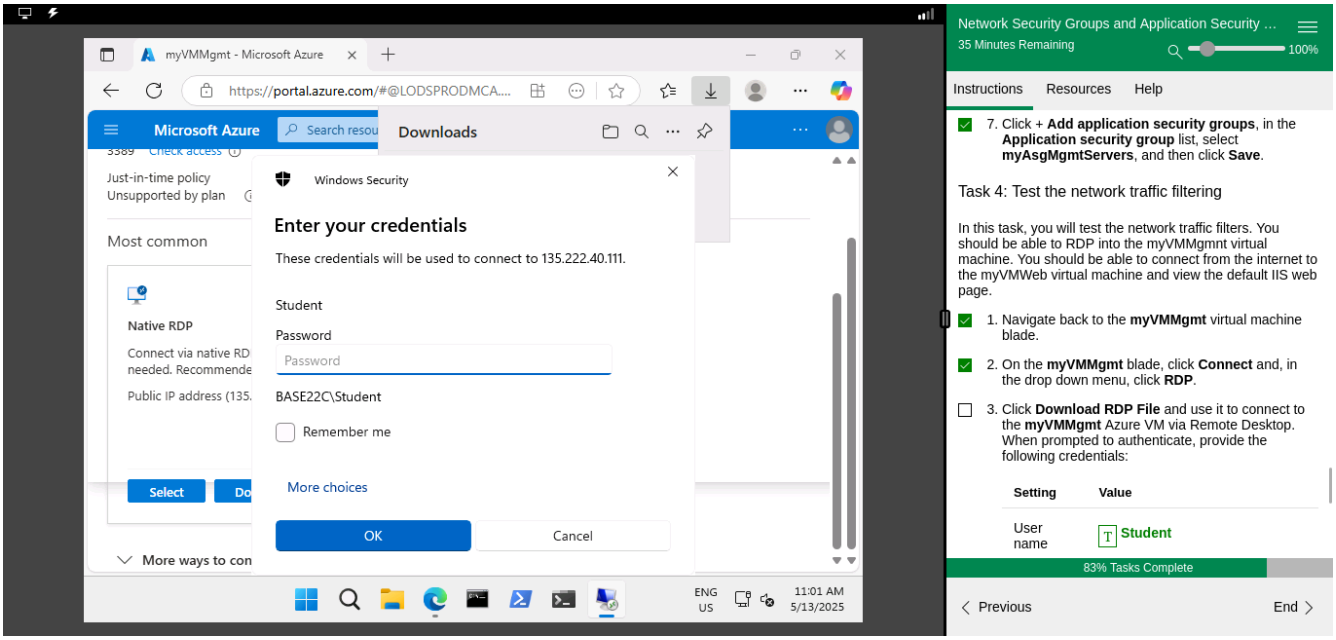
In this task, you will associate each virtual machines network interface with the corresponding application security group. The myVMWeb virtual machine interface will be associated to the myAsgWebServers ASG. The myVMMgmt virtual machine interface will be associated to the myAsgMgmtServers ASG.

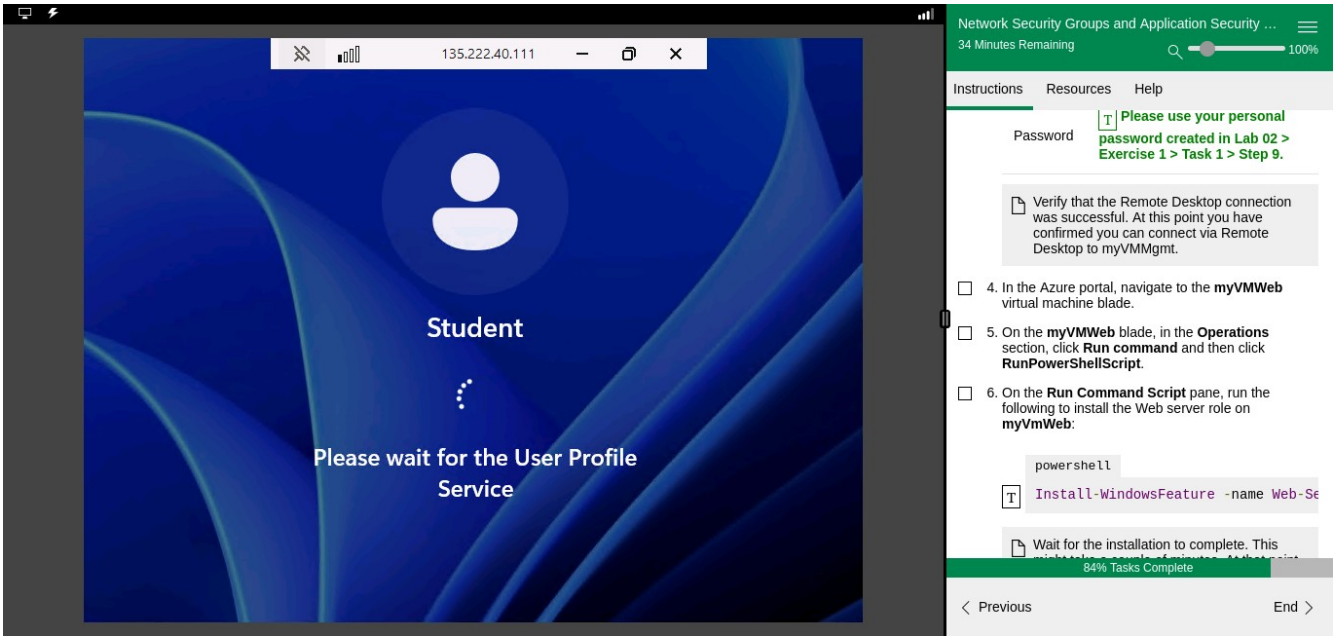


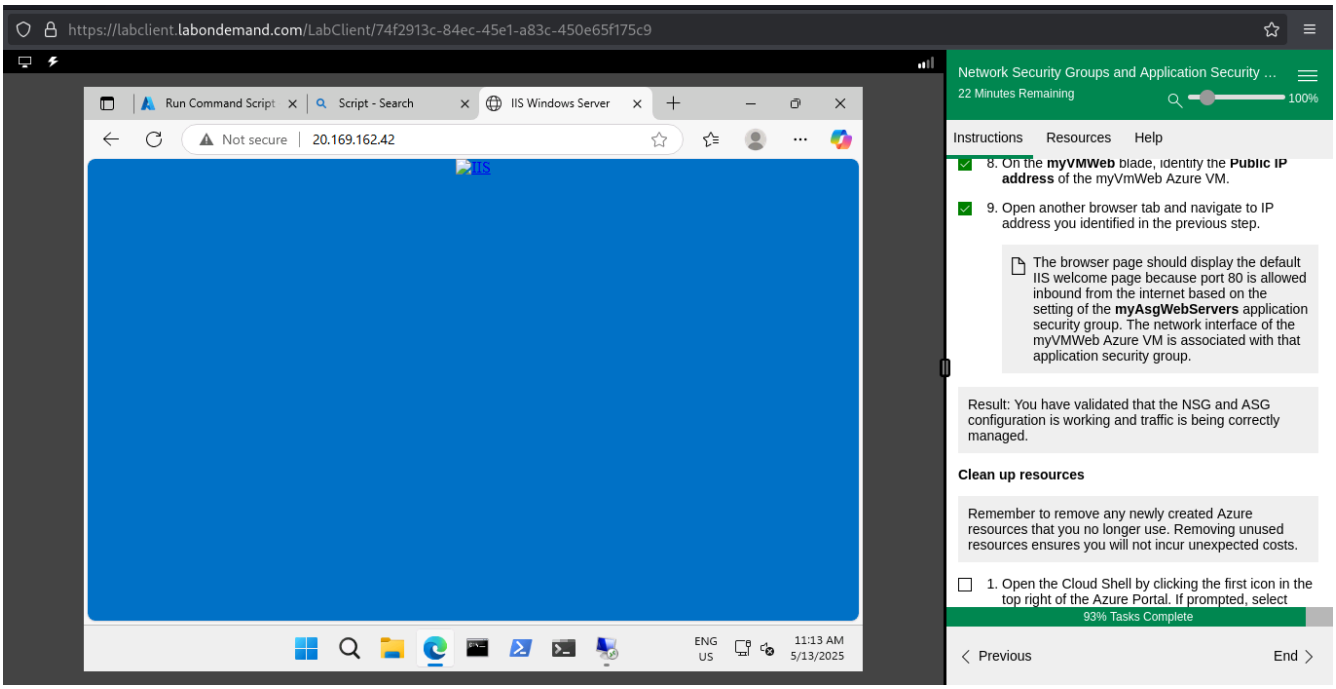


Task 4: Test the network traffic filtering

In this task, you will test the network traffic filters. You should be able to RDP into the myVMMgmnt virtual machine. You should be able to connect from the internet to the myVMWeb virtual machine and view the default IIS web page.







Result: You have validated that the NSG and ASG configuration is working and traffic is being correctly managed.

Summary

This week I went through the following :

- Create a virtual network with one subnet.
- Task 2: Create two application security groups.
- Task 3: Create a network security group and associate it with the virtual network subnet.
- Task 4: Create inbound NSG security rules to all traffic to web servers and RDP to the management servers.