

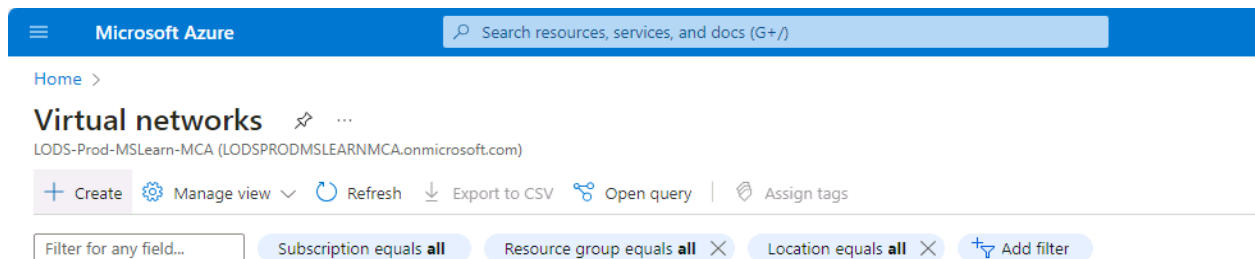
Lab 2: Network Security Groups and Application Security Groups

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.

Exercise 1: Create the virtual networking infrastructure

Step 1: Type Virtual networks and press the Enter key and click + Create.



Step 2: Fill in the details

[Basics](#) [Security](#) [IP addresses](#) [Tags](#) [Review + create](#)

networks. vnet is similar to a traditional network that you'd operate in your own data center, but brings with it additional benefits of Azure's infrastructure such as scale, availability, and isolation.

[Learn more.](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription *	<input type="text" value="MOC Subscription--lod48933896"/>
Resource group *	<input type="text" value="AZ500LAB07"/>

[Create new](#)

Instance details

Virtual network name *	<input type="text" value="myVirtualNetworks"/>
Region * ⓘ	<input type="text" value="(US) East US"/>

[Deploy to an edge zone](#)

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[Review + create](#)

On the IP addresses tab of the Create virtual network blade, set the IPv4 address space to 10.0.0.0/16.

Exercise 2: Create application security groups

Step 3: Type Application Security Groups and press the Enter key and click + Create and fill the following form to create an ASG.

Microsoft Azure

Search resources, services, and docs (G+I)

[Home](#) > [Application security groups](#) >

Create an application security group ...

Basics

Tags

Review + create

Project details

Subscription *

MOC Subscription--lod48933896

Resource group *

AZ500LAB07

Create new

Instance details

Name *

myAsgWebServers

Region *

East US

Review + create

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Next : Tags >

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Do the same process to create a management server.

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

Step 4: Type Network Security Groups and press the Enter key and click + Create and fill the following form to create a NSG.

Microsoft Azure

Search resources, services, and docs (G+I)

[Home](#) >

Network security groups ...

LODS-Prod-MSLearn-MCA (LODSPRODMSLEARNMCA.onmicrosoft.com)

+ Create

Manage view

Refresh

Export to CSV

Open query

Assign tags

Subscription equals all

Resource group equals all

Location equals all

Add filter

Home > Network security groups >

Create network security group ...

Basics Tags Review + create

Project details

Subscription * MOC Subscription--lod48933896

Resource group * AZ500LAB07

[Create new](#)

Instance details

Name * myNsg

Region * East US

Review + create

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Step 5: Associate the NSG with the Virtual network created in Step 1. On the myNsg blade, in the Settings section, click Subnets and then click + Associate.

Microsoft Azure Search resources, services, and docs (G+/)

Home > Network security groups > myNsg

Network security g...

LODS-Prod-MSLearn-MCA (LODSPRODMSLEARN...

+ Create Manage view ...

Filter for any field...

Name ↑↓

myNsg

myNsg | Subnets

Network security group

Search

+ Associate

Inbound security rules

Outbound security rules

Network interfaces

Subnets

Name Address r

No results.

Select the network and click OK.

The screenshot shows the Microsoft Azure portal interface. On the left, the 'Network security groups' blade is open, showing a list of NSGs with 'myNsg' selected. The main pane displays the 'myNsg | Subnets' view. On the right, the 'Associate subnet' dialog is open, showing the 'Virtual network' dropdown set to 'myVirtualNetworks (AZ500LAB07)' and the 'Subnet' dropdown set to 'default'. The 'OK' button is visible at the bottom of the dialog.

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

The screenshot shows the Microsoft Azure portal interface. On the left, the 'Network security groups' blade is open, showing a list of NSGs with 'myNsg' selected. The main pane displays the 'myNsg | Inbound security rules' view. On the right, the 'Add inbound security rule' dialog is open. The 'Source' is set to 'Any', 'Source port ranges' is set to '*', 'Destination' is set to 'Application security group', and 'Destination application security groups' is set to 'myAsgWebServers'. The 'Service' is set to 'Custom', and 'Destination port ranges' is set to '80,443'. The 'Protocol' is set to 'TCP'. The 'Add' button is visible at the bottom of the dialog.

Follow the same steps to create RDP connection for management servers.

Create a VM and connect it to the virtual network

Microsoft Azure

Search resources, services, and docs (G+)

Home > Virtual machines >

Create a virtual machine

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 *

Do the same for other servers.
Connect VM to the ASG.

Microsoft Azure

Search resources, services, and docs (G+)

Home > Virtual machines > myVMMgmt

Virtual machines

LODS-Prod-MSLearn-MCA (LODSPRODMSLEARN...)

+ Create Switch to classic

Filter for any field...

Name ↑

- myVMMgmt
- myVmWeb

myVMMgmt | Application security groups

Virtual machine

Search

This is a new experience. [Please provide feedback](#)

+ Add application security groups

Network interface / IP configuration

myvmmgmt867_z1 (primary)

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Connect

Connect

Bastion

Windows Admin Center

Networking

Network settings

Load balancing

Application security groups

Network manager

Settings

Disks

Extensions + applications

Configuration

Add application security groups

Use application security groups (ASGs) to configure network security as natural extension of an application's structure, by arbitrarily grouping VMs and defining network security policies based on those groups.

Search ASGs

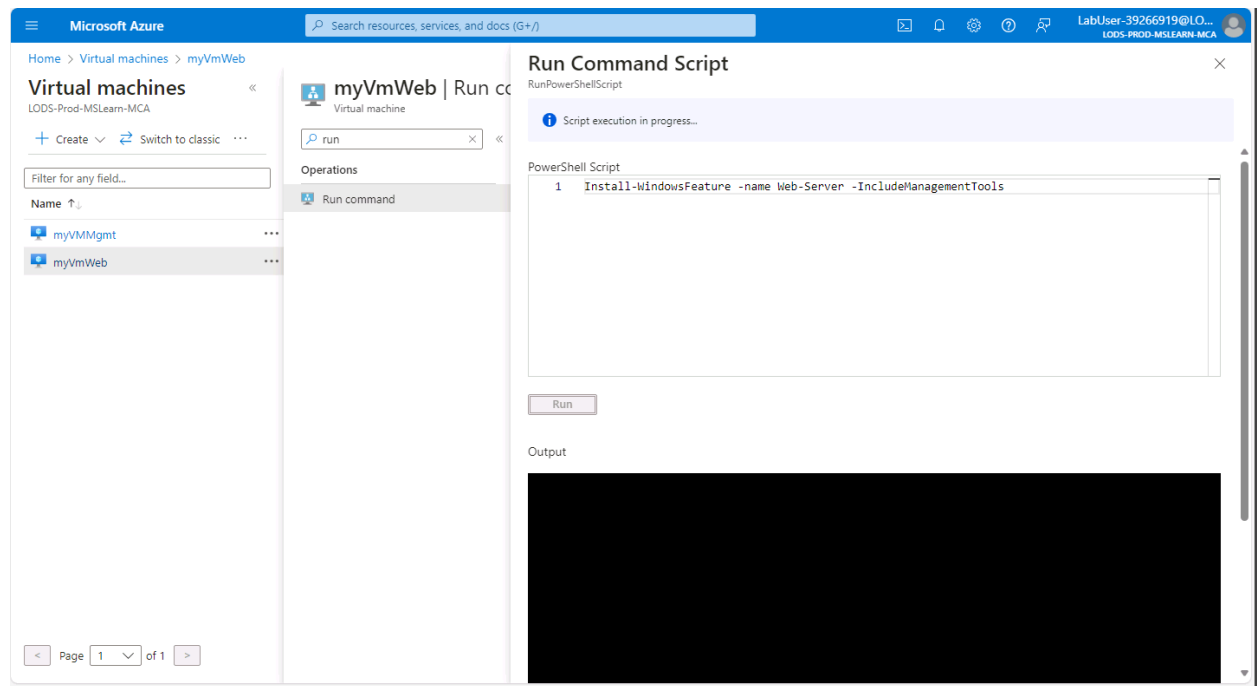
<input type="checkbox"/>	Name	Resource group
<input checked="" type="checkbox"/>	myAsgMgmtServers	AZ500LA807
<input type="checkbox"/>	myAsgWebServers	AZ500LA807

Add Cancel

Give feedback

Do the same for other servers.

Setup the web service



Copy the public IP address and run on the browser.

