


# **REPORT ON MICROSOFT AZURE FUNDAMENTALS**

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# 1)Sandbox:

## Create a Linux virtual machine and install Nginx

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## Exercise - Create an Azure virtual machine

10 minutes

Sandbox activated! Time remaining: 55 min

You have used 1 of 10 sandboxes for today. More sandboxes will be available tomorrow.

In this exercise, you create an Azure virtual machine (VM) and install Nginx, a popular web server.

You could use the Azure portal, the Azure CLI, Azure PowerShell, or an Azure

Azure Cloud Shell


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```
"instanceView": null,
"location": "westus",
"name": "customScript",
"protectedSettings": null,
"protectedSettingsFromKeyVault": null,
"provisionAfterExtensions": null,
"provisioningState": "Succeeded",
"publisher": "Microsoft.Azure.Extensions",
"resourceGroup": "learn-49254d58-4b50-414a-b7b1-833b6d4b318c",
"settings": {
  "fileUri": [
    "https://raw.githubusercontent.com/MicrosoftDocs/mslearn-welcome-to-azure/master/configure-nginx.sh"
  ]
},
"suppressFailures": null,
"tags": null,
"type": "Microsoft.Compute/virtualMachines/extensions",
"typeHandlerVersion": "2.1",
"typePropertiesType": "customScript"
}

kirthi2970 [ ~ ]$
```

Activate Windows  
Go to Settings to activate Windows.

## Access your web server

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100 XP

## Exercise - Configure network access

10 minutes

Sandbox activated! Time remaining: 37 min

You have used 2 of 10 sandboxes for today. More sandboxes will be available tomorrow.

In this exercise, you configure the access to the virtual machine (VM) you created earlier in this module.

Azure Cloud Shell

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```
Requesting a Cloud Shell.Succeeded.
Connecting terminal...

Welcome to Azure Cloud Shell

Type "az" to use Azure CLI
Type "help" to learn about Cloud Shell

kirthi2970 [ ~ ]$ az vm list
[]
kirthi2970 [ ~ ]$ IPADDRESS=$(az vm list-ip-addresses --resource-group "learn-53c
bf80-53cb-493e-9af0-9e601328b28d" --name my-vm --query "[].virtualMachine.network
.publicIpAddresses[*].ipAddress" --output tsv)
kirthi2970 [ ~ ]$ curl --connect-timeout 5 http://$IPADDRESS
curl: (3) URL rejected: No host part in the URL
kirthi2970 [ ~ ]$ echo $IPADDRESS

kirthi2970 [ ~ ]$
```

Activate Windows  
Go to Settings to activate Windows.

2

## List the current network security group rules

Exercise - Configure network x Virtual machines - Microsoft x Inbox (3,435) - sanjay.savitha x internet speed test - Google x +

learn.microsoft.com/en-us/training/modules/describe-azure-compute-networking-services/9-exercise-configure-netwo... All Bookmarks

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d. Keep this browser tab open for later.

### Task 2: List the current network security group rules

Your web server wasn't accessible. To find out why, let's examine your current NSG rules.

- Run the following `az network nsg list` command to list the network security groups that are associated with your VM:

```
Azure CLI
az network nsg list \
  --resource-group "learn-7fd8bb72-53fe-4738-a98f-d6cf81a9fe45" \
  --query '[] .name' \
  --output tsv
```

You see this output:

```
Azure Cloud Shell
sourceGroups/learn-7fd8bb72-53fe-4738-a98f-d6cf81a9fe45/providers/Microsoft.Network/networkSecurityGroups/my-vmNSG/securityRules/default-allow-ssh",
  "name": "default-allow-ssh",
  "priority": 1000,
  "protocol": "Tcp",
  "provisioningState": "Succeeded",
  "resourceGroup": "learn-7fd8bb72-53fe-4738-a98f-d6cf81a9fe45"
},
{
  "sourceAddressPrefix": "*",
  "sourceAddressPrefixes": [],
  "sourcePortRange": "*",
  "sourcePortRanges": [],
  "type": "Microsoft.Network/networkSecurityGroups/securityRule
sanjay_savitha05 [ ~ ]$ az network nsg rule list --resource-group "learn-7fd8bb72-53fe-4738-a98f-d6cf81a9fe45" --nsg-name my-vmNSG --query '[] .{Name:name, Priority:priority, Port:destinationPortRange, Access:access}' --output table
Name                Priority  Port  Access
-----
default-allow-ssh   1000    22    Allow
sanjay_savitha05 [ ~ ]$
```

## Create the network security rule

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also allow inbound connections on port 80, which allows access over HTTP.

### Task 3: Create the network security rule

Here, you create a network security rule that allows inbound access on port 80 (HTTP).

- Run the following `az network nsg rule create` command to create a rule called `allow-http` that allows inbound access on port 80:

```
Azure CLI
az network nsg rule create \
  --resource-group "learn-7fd8bb72-53fe-4738-a98f-d6cf81a9fe45" \
  --nsg-name my-vmNSG \
  --name allow-http \
  --protocol tcp \
  --priority 100 \
```

```
Azure Cloud Shell
"etag": "W/\"59c42625-674a-440c-bc3b-e7839d22354a\"",
  "id": "/subscriptions/f26515d9-3bc6-4a50-8192-cb816a833f54/resourceGroups/learn-7fd8bb72-53fe-4738-a98f-d6cf81a9fe45/providers/Microsoft.Network/networkSecurityGroups/my-vmNSG/securityRules/allow-http",
  "name": "allow-http",
  "priority": 100,
  "protocol": "Tcp",
  "provisioningState": "Succeeded",
  "resourceGroup": "learn-7fd8bb72-53fe-4738-a98f-d6cf81a9fe45",
  "sourceAddressPrefix": "*",
  "sourceAddressPrefixes": [],
  "sourcePortRange": "*",
  "sourcePortRanges": [],
  "type": "Microsoft.Network/networkSecurityGroups/securityRules"
}
sanjay_savitha05 [ ~ ]$ az network nsg rule list --resource-group "learn-7fd8bb72-53fe-4738-a98f-d6cf81a9fe45" --nsg-name my-vmNSG --query '[] .{Name:name, Priority:priority, Port:destinationPortRange, Access:access}' --output table
Name                Priority  Port  Access
-----
default-allow-ssh   1000    22    Allow
allow-http          100     80    Allow
sanjay_savitha05 [ ~ ]$
```

## Access your web server again

**Task 4: Access your web server again**

Now that you configured network access to port 80, let's try to access the web server a second time.

**Note**

After you update the NSG, it may take a few moments before the updated rules propagate. Retry the next step, with pauses between attempts, until you get the desired results.

1. Run the same `curl` command that you ran earlier:

```
Bash
curl --connect-timeout 5 http://$IPADDRESS
```

**Azure Cloud Shell**

```
ow-http",
  "name": "allow-http",
  "priority": 100,
  "protocol": "Tcp",
  "provisioningState": "Succeeded",
  "resourceGroup": "learn-7fd8bb72-53fe-4738-a98f-d6cf81a9fe45",
  "sourceAddressPrefix": "*",
  "sourceAddressPrefixes": [],
  "sourcePortRange": "*",
  "sourcePortRanges": [],
  "type": "Microsoft.Network/networkSecurityGroups/securityRules"
}
sanjay_savitha05 [ ~ ]$ az network nsg rule list --resource-group
"learn-7fd8bb72-53fe-4738-a98f-d6cf81a9fe45" --nsg-name my-vmNSG
--query '[].{Name:name, Priority:priority, Port:destinationPortR
ange, Access:access}' --output table
Name                Priority  Port  Access
-----
default-allow-ssh    1000     22    Allow
allow-http           100       80    Allow
sanjay_savitha05 [ ~ ]$ curl --connect-timeout 5 http://$IPADDRESS
<html><body><h2>Welcome to Azure! My name is my-vm.</h2></body></
html>
sanjay_savitha05 [ ~ ]$
```

## Final output:

40.86.175.142

Not Secure 40.86.175.142

Welcome to Azure! My name is my-vm.

## 2) Azure Academic Services: Azure for Students

### Microsoft Academic Verification Process

**Take advantage of your academic status**

For academic status verification 'school' is defined to include 'schools, universities, colleges, technical/STEM schools, and other academic schools' throughout the verification process.

**Congratulations!**

Your academic status has been successfully verified.

[Continue](#)

### Creation of resource groups

**Resource groups**

Showing 1 to 1 of 1 records.

Name	Subscription	Location
rg	Azure for Students	Central India

### Creation of Virtual Machine

**Virtual machines**

Showing 1 to 1 of 1 records.

Name	Subscription	Resource group	Location	Status	Operating system	Size	Public IP address
kirthivarshan	Azure for Students	rg	Central India	Running	Linux	Standard_E2s_v3	20.197.41.157



# Hosting my portfolio using Azure Cloud Services

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HI , I AM

KIRTHIVARSHAN .

AI ENGINEER AND WEB DEVELOPER

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## Pricing calculator

Microsoft Azure Estimate						
Your Estimate						
Service category	Service type	Custom name	Region	Description	Estimated monthly cost	Estimated upfront cost
Compute	Virtual Machines		West US	2 D2 v3 (2 vCPUs, 8 GB RAM) x 730 Hours (Pay as you go), Windows (License included), OS Only; 0 managed disks – S4; Inter Region transfer type, 5 GB outbound data transfer from West US to East Asia	₹25,552.04	₹0.00
Databases	Azure SQL Database		West US	Single Database, vCore, General Purpose, Provisioned, Standard-series (Gen 5), Primary or Geo replica Disaster Recovery, Locally Redundant, 1 - 8 vCore Database(s) x 730 Hours, 32 GB Storage, SQL License (Pay as you go), RA-GRS Backup Storage Redundancy, 0 GB Point-In-Time Restore, 0 x 5 GB Long Term Retention	₹1,31,250.94	₹0.00
Networking	Application Gateway		East US	Web Application Firewall tier, Medium Instance size: 2 Gateway hours instance(s) x 730 Hours, 1 TB Data processed unit(s), 5 GB Zone unit(s)	₹15,404.58	₹0.00
Support			Support		₹0.00	₹0.00
			Licensing Program	Microsoft Customer Agreement (MCA)		
			Billing Account			
			Billing Profile			
			Total		₹1,72,207.57	₹0.00
Disclaimer						
All prices shown are in India – Rupee (₹) INR. This is a summary estimate, not a quote. For up to date pricing information please visit <a href="https://azure.microsoft.com/pricing/calculator/">https://azure.microsoft.com/pricing/calculator/</a> . This estimate was created at 8/9/2024 4:16:18 AM UTC.						

## Total Cost of Ownership (TCO) Calculator

Total Cost of Ownership (TCO) Calculator

Estimate the cost savings you can realize by migrating your workloads to Azure

My saved reports

Kirthivarshan S

kirthi2970@gmail.com

Over 3 year(s) with Microsoft Azure, your estimated cost savings

could be as much as ₹17,61,69,499

# Creation of container

Microsoft Azure

Search resources, services, and docs (G+)

kirthi2970@gmail.com  
DEFAULT DIRECTORY

Home > Storage accounts > postey

postey Containers

Storage account

Container

Change access level

Restore containers

Refresh

Delete

Give feedback

Search containers by prefix

Show deleted containers

Name	Last modified	Anonymous access level	Lease state	
<input type="checkbox"/> Slogs	8/9/2024, 9:10:11 AM	Private	Available	...
<input type="checkbox"/> fro	8/9/2024, 9:12:30 AM	Blob	Available	...

Microsoft Azure

Search resources, services, and docs (G+)

kirthi2970@gmail.com  
DEFAULT DIRECTORY

Home > Storage accounts > postey | Containers >

fro

Container

Upload

Change access level

Refresh

Delete

Change tier

Acquire lease

Break lease

View snapshots

Create snapshot

Give feedback

Authentication method: Access key (Switch to Microsoft Entra user account)

Location: fro

Search blobs by prefix (case-sensitive)

Show deleted blobs

Add filter

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state	
<input type="checkbox"/> R.jpg	8/9/2024, 9:11:09 AM	Hot (Inferred)		Block blob	485.94 KiB	Available	...

Microsoft Azure

Search resources, services, and docs (G+)

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DEFAULT DIRECTORY

Home > Storage accounts > postey | Containers > fro >

R.jpg

Blob

Save

Discard

Download

Refresh

Delete

Change tier

Acquire lease

Break lease

Give feedback

Overview Versions Snapshots Edit Generate SAS

Properties

URL

LAST MODIFIED

CREATION TIME

VERSION ID

TYPE

SIZE

ACCESS TIER

ACCESS TIER LAST MODIFIED

ARCHIVE STATUS

REHYDRATE PRIORITY

https://postey.blob.core...

8/9/2024, 9:11:09 AM

8/9/2024, 9:11:09 AM

-

Block blob

485.94 KiB

Hot (Inferred)

N/A

-

-