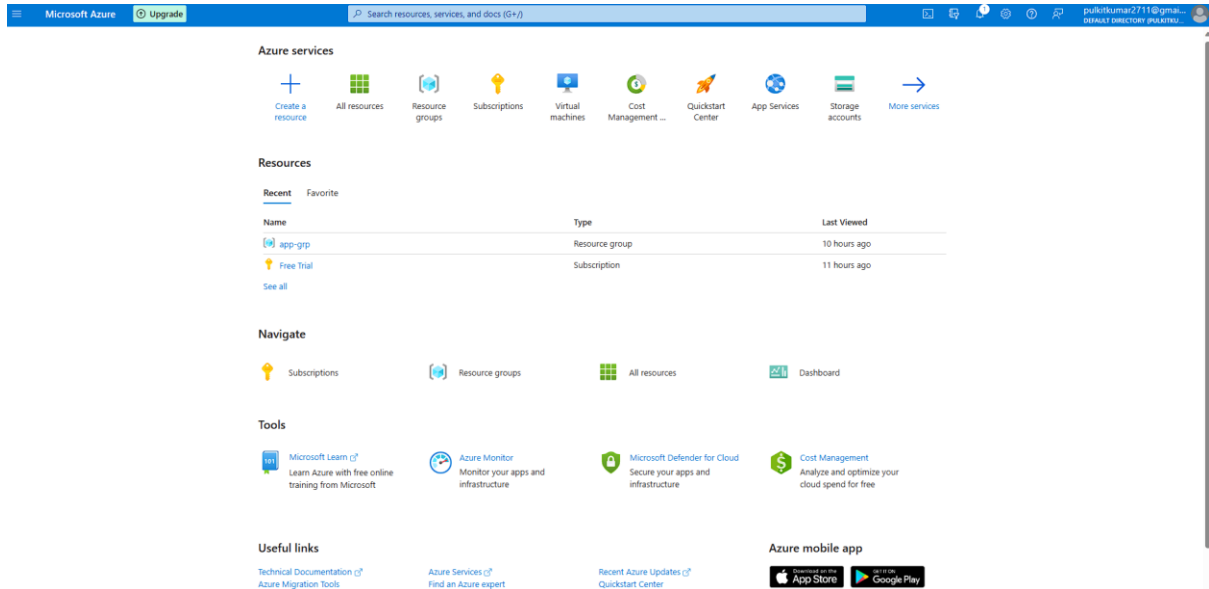


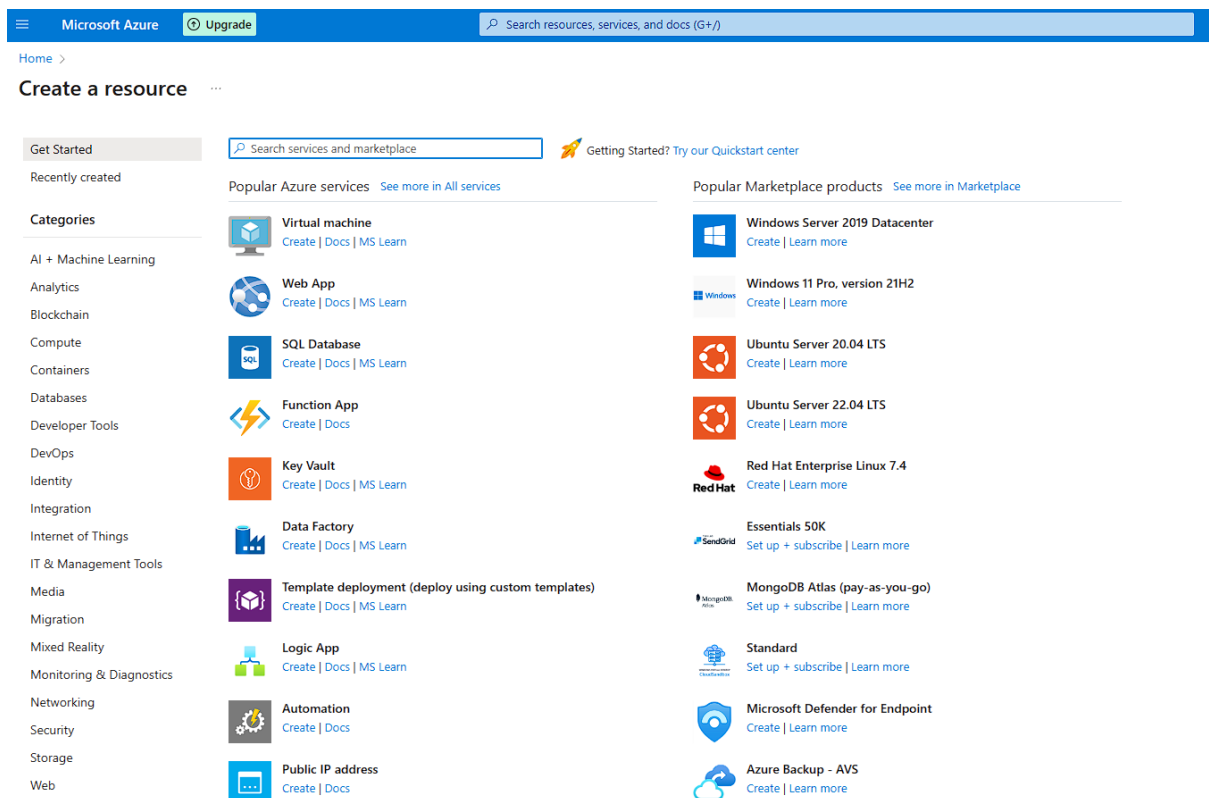
AZURE LAB 1 (Windows VM)

In this lab you will learn, how to create a windows virtual machine.

1. Log in to your Azure Portal. This is what its homepage looks like.



2. Now click on Create a resource. There you'll get this much of option to choose from, but you need to click on Virtual Machine.



3. This is how create virtual machine page looks like.

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

Home > Create a resource >

Create a virtual machine

Basics Disks Networking Management Monitoring Advanced Tags Review + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [Learn more](#)

i This subscription may not be eligible to deploy VMs of certain sizes in certain regions.

Project details

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

Subscription *

Resource group * [Create new](#)

Instance details

Virtual machine name *

Region *

Availability options

Availability zone *
 You can now select multiple zones. Selecting multiple zones will create one VM per zone. [Learn more](#)

Security type
 [Configure security features](#)

Image *

[Review + create](#) < Previous Next : Disks >

A resource group is a container that holds related resources for an Azure solution.


Name *

- Here you need to select your subscription, mine is Free trial, so it has been selected by default.


NOTE: If you are new to Microsoft Azure, creating a new account will benefit you a lot, because Azure gives you \$200 credit for the first month.

- On the resource group, create a new group, for that you just need to give it a name, and it will be created.
- In the instance details option. Give your virtual machine a name, select your region from where do you belong.
- In availability option, select No infrastructure redundancy required. Select Security type as Standard.

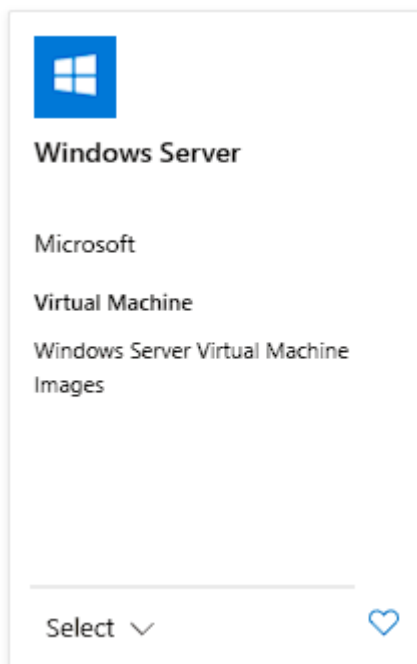
Instance details

Virtual machine name *	WindowsVm ✓
Region *	(Asia Pacific) Central India ▼
Availability options ⓘ	No infrastructure redundancy required ▼
Security type ⓘ	Standard ▼
Image *	 Windows Server 2022 Datacenter - x64 Gen2 (free services eligible) ▼

[See all images](#) | [Configure VM generation](#)

 This image is compatible with additional security features. [Click here to swap to the Trusted launch security type.](#)

8. For the image part click on See all image, you'll at marketplace (it is a place from where you can select multiple images of different OS) there you need to select Windows Server then click on Select, now you will see multiple options to select from, but you need to scroll down to the bottom and select the below mentioned server.



Windows Server 2022 Datacenter - x64 Gen 2

9. Now Scroll down, you'll see an option for sizes select this size because it is free tier eligible and it won't cost you much.

Size *	Standard_B1s - 1 vcpu, 1 GiB memory (₹871.42/month) (free services eligible) ▼
--------	--

[See all sizes](#)

10. Now in the Administrator option give a user name and password. This user name and password will be used when you will RDP into your windows server (Remote Desktop Protocol)

Administrator account

Username *	<input type="text" value="demouser"/>	✓
Password *	<input type="password" value="....."/>	✓
Confirm password *	<input type="password" value="....."/>	✓

11. Now you just need to keep everything to default for now and go to Review and create page. There just create you windows server.

12. Wait for it to get deployed.

The screenshot shows the Azure portal interface for a deployment named 'CreateVm-MicrosoftWindowsServer.WindowsServer-202-20231220023249'. The deployment is in progress. The left sidebar shows the navigation menu with 'Overview' selected. The main area displays the deployment details, including the subscription (Free Trial), resource group (app-grp), and a table of resources being deployed.

Resource	Type	Status	Operation details
WindowsVm-vnet	Microsoft.Network/virtualNetworks	Created	Operation details
WindowsVm-ip	Microsoft.Network/publicIPAddresses	Created	Operation details
WindowsVm-nsg	Microsoft.Network/networkSecurityGroups	Created	Operation details

13. Once it gets deployed, click on Go to resource option.

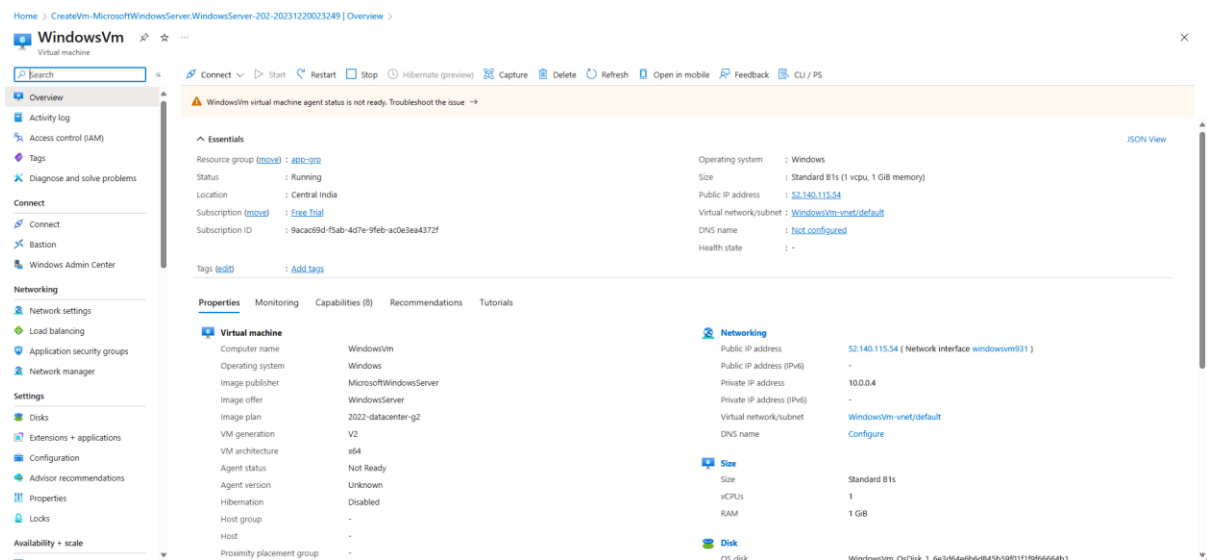
The screenshot shows the Azure portal interface after the deployment is complete. A green checkmark icon indicates success. The deployment details are shown, including the subscription (Free Trial), resource group (app-grp), and the correlation ID. The 'Next steps' section provides recommendations for setting up auto-shutdown, monitoring VM health, and running scripts. At the bottom, there are two buttons: 'Go to resource' and 'Create another VM'.

Next steps

- [Setup auto-shutdown](#) Recommended
- [Monitor VM health, performance and network dependencies](#) Recommended
- [Run a script inside the virtual machine](#) Recommended

[Go to resource](#) [Create another VM](#)

14. Here you can see every information regarding your windows server.



15. Now you need to click on Connect. From here download RDP file.

Refresh Troubleshoot More Options Feedback

Connecting using
Public IP address | 52.140.115.54

Admin username : demouser
 Port (change) : 3389 [Check access](#) ⓘ
 Just-in-time policy : Unsupported by plan ⓘ

Most common

Local machine

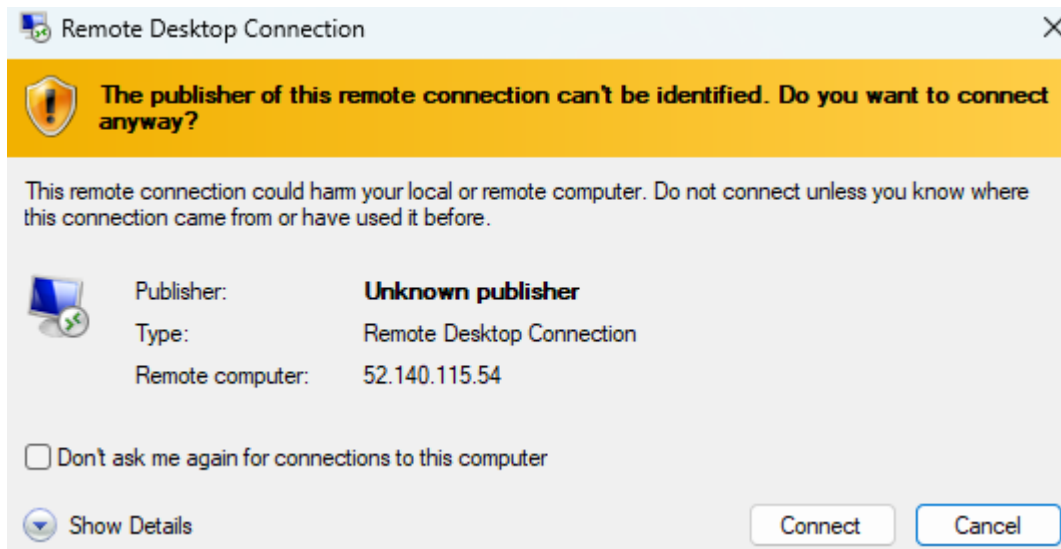
Native RDP

Connect via native RDP without any additional software needed. Recommended for testing only.

Public IP address (52.140.115.54)

Select Download RDP file

16. Once it gets downloaded click on open file, this kind of window will get open. Click on connect.



17. Now enter your password which you created while creating windows server. Then press OK.



Enter your credentials

These credentials will be used to connect to 52.140.115.54.

demouser

Password

☐ Remember me

[More choices](#)

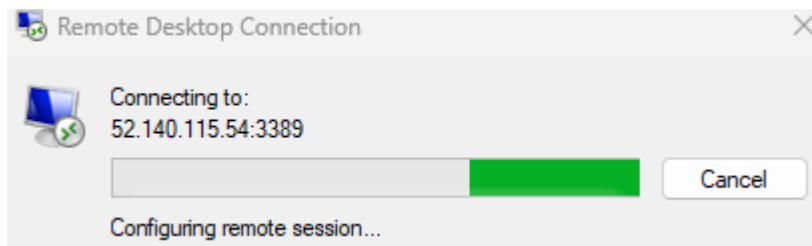
OK

Cancel

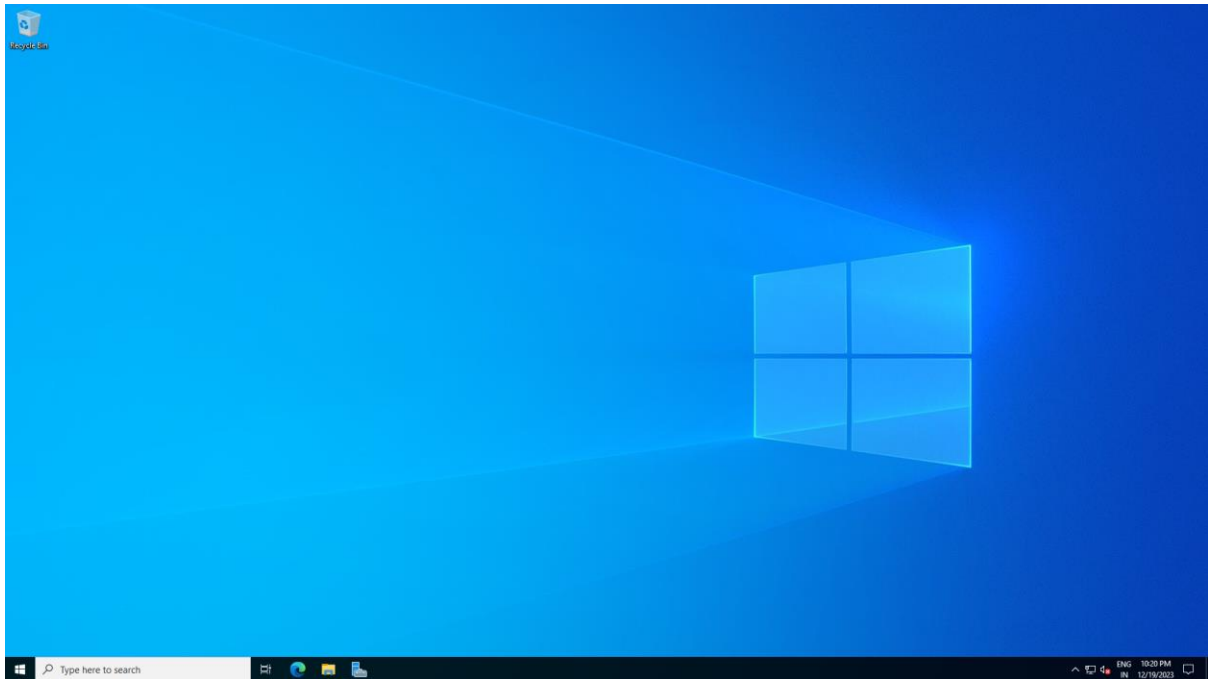
18. Now click on Yes.



19. This will start connecting to your windows server.



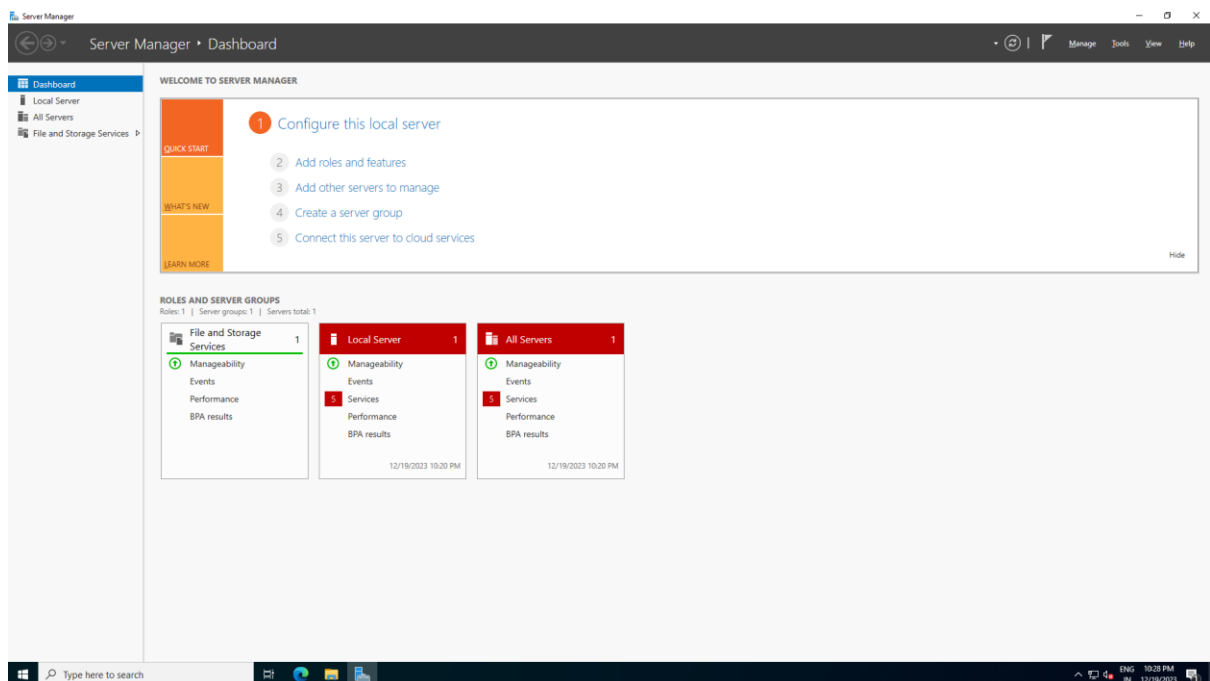
20. This is how your windows server would look like.



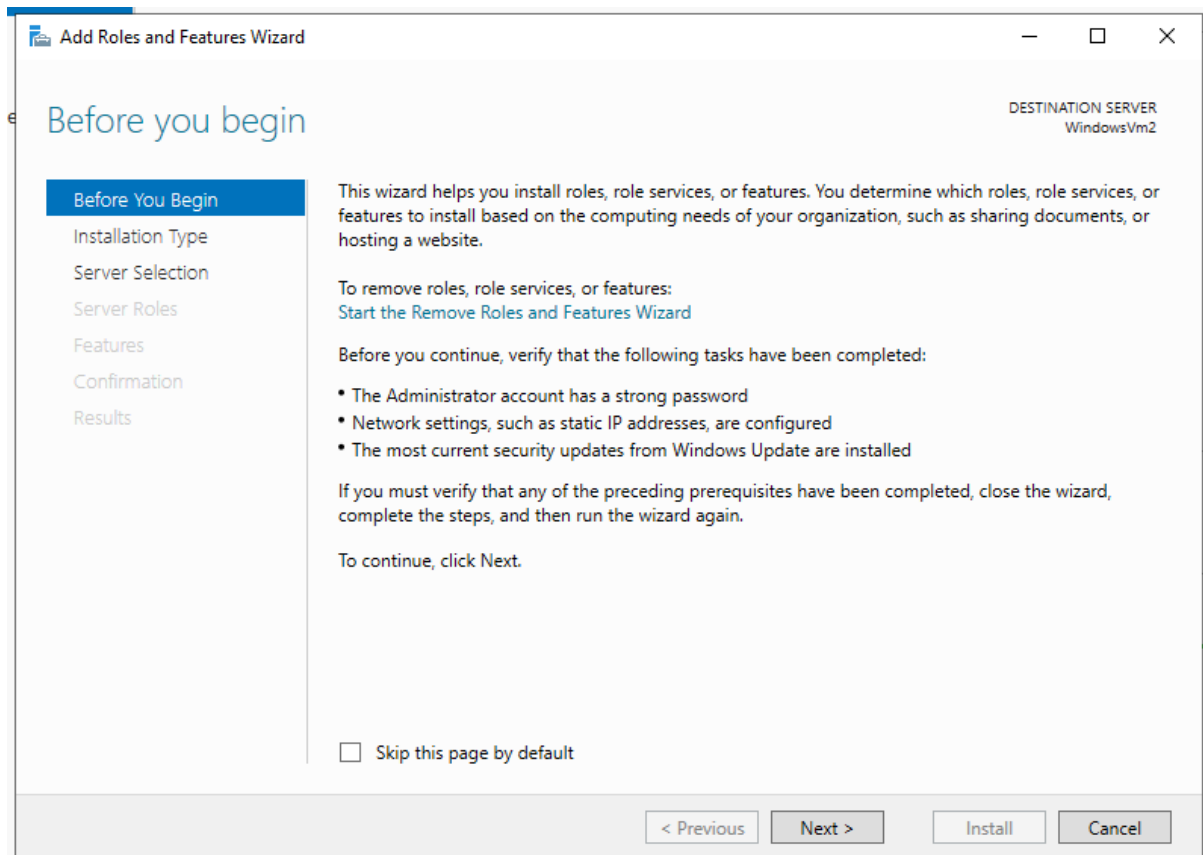
Hence, you have successfully started your windows server.

Installing Internet Information Services:

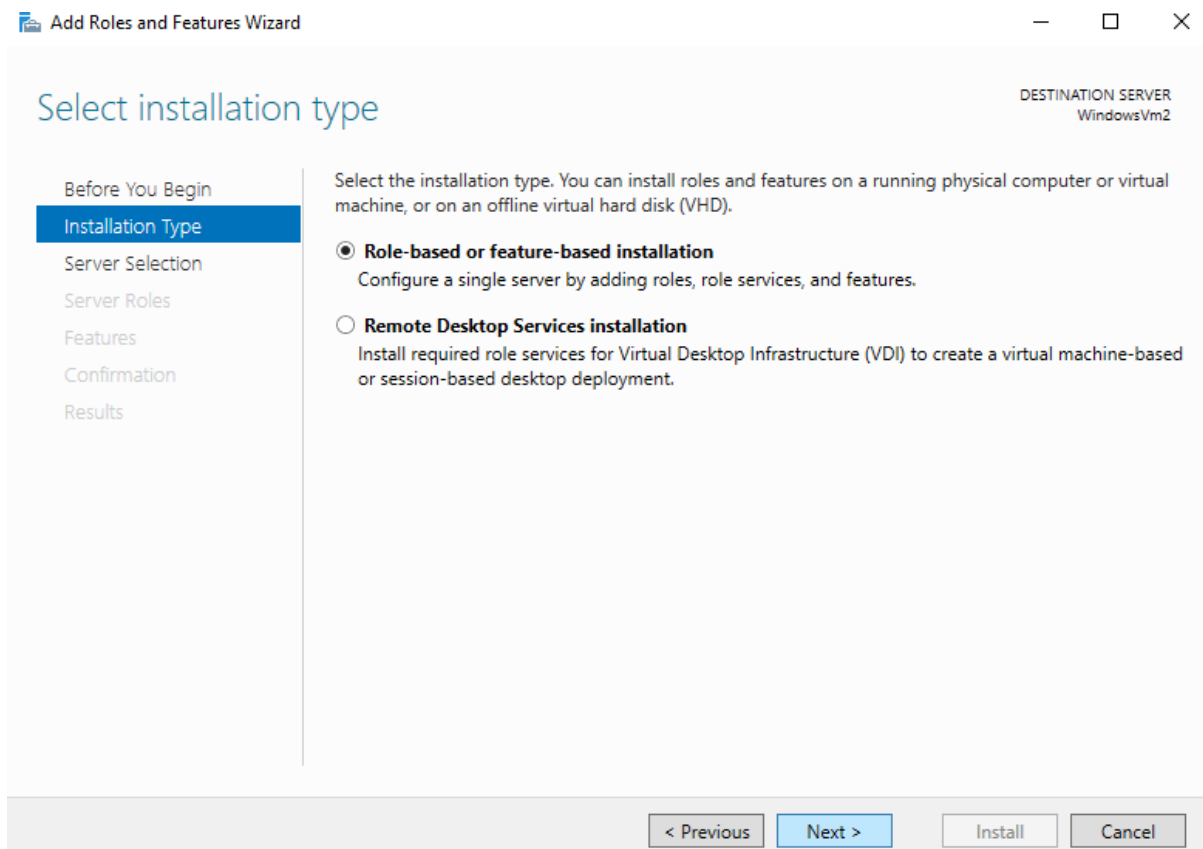
1. Now you need to set up a web server role on your machine.
2. For that in your windows server, you'll see that Server Manager is opened by default.



3. Here on the server manager, click on Add role and features. You'll be navigated to this page, now click on next here.



4. Now you need to select an Installation type.



5. Here you need to select your server. Then click next

Add Roles and Features Wizard

Select destination server

DESTINATION SERVER
WindowsVm2

Before You Begin
Installation Type
Server Selection
Server Roles
Features
Confirmation
Results

Select a server or a virtual hard disk on which to install roles and features.

☒ Select a server from the server pool
☐ Select a virtual hard disk

Server Pool

Filter:

Name	IP Address	Operating System
WindowsVm2	10.0.0.6	Microsoft Windows Server 2022 Datacenter

1 Computer(s) found

This page shows servers that are running Windows Server 2012 or a newer release of Windows Server, and that have been added by using the Add Servers command in Server Manager. Offline servers and newly-added servers from which data collection is still incomplete are not shown.

< Previous Next > Install Cancel

6. On this page you are required to select Server roles, so click on Windows server at the bottom and add this feature. Then click on next.

Add Roles and Features Wizard

Add features that are required for Web Server (IIS)?

The following tools are required to manage this feature, but do not have to be installed on the same server.

- Web Server (IIS)
 - Management Tools
 - [Tools] IIS Management Console

☒ Include management tools (if applicable)

Add Features Cancel

Select server roles

DESTINATION SERVER
WindowsVm2

Before You Begin

Installation Type

Server Selection

Server Roles

Features

Web Server Role (IIS)

Role Services

Confirmation

Results

Select one or more roles to install on the selected server.

Roles

- ☐ Active Directory Domain Services
- ☐ Active Directory Federation Services
- ☐ Active Directory Lightweight Directory Services
- ☐ Active Directory Rights Management Services
- ☐ Device Health Attestation
- ☐ DHCP Server
- ☐ DNS Server
- ☐ Fax Server
- ☒ File and Storage Services (1 of 12 installed)
- ☐ Host Guardian Service
- ☐ Hyper-V
- ☐ Network Controller
- ☐ Network Policy and Access Services
- ☐ Print and Document Services
- ☐ Remote Access
- ☐ Remote Desktop Services
- ☐ Volume Activation Services
- ☒ Web Server (IIS)
- ☐ Windows Deployment Services
- ☐ Windows Server Update Services

Description

Web Server (IIS) provides a reliable, manageable, and scalable Web application infrastructure.

< Previous

Next >

Install

Cancel

7. So, this is the last step, now just simply install it and wait for some time and let it get installed.

Confirm installation selections

DESTINATION SERVER
WindowsVm2

Before You Begin

Installation Type

Server Selection

Server Roles

Features

Web Server Role (IIS)

Role Services

Confirmation

Results

To install the following roles, role services, or features on selected server, click Install.

- ☐ Restart the destination server automatically if required

Optional features (such as administration tools) might be displayed on this page because they have been selected automatically. If you do not want to install these optional features, click Previous to clear their check boxes.

Web Server (IIS)

- Management Tools
 - IIS Management Console
- Web Server
 - Common HTTP Features
 - Default Document
 - Directory Browsing
 - HTTP Errors
 - Static Content
- Health and Diagnostics

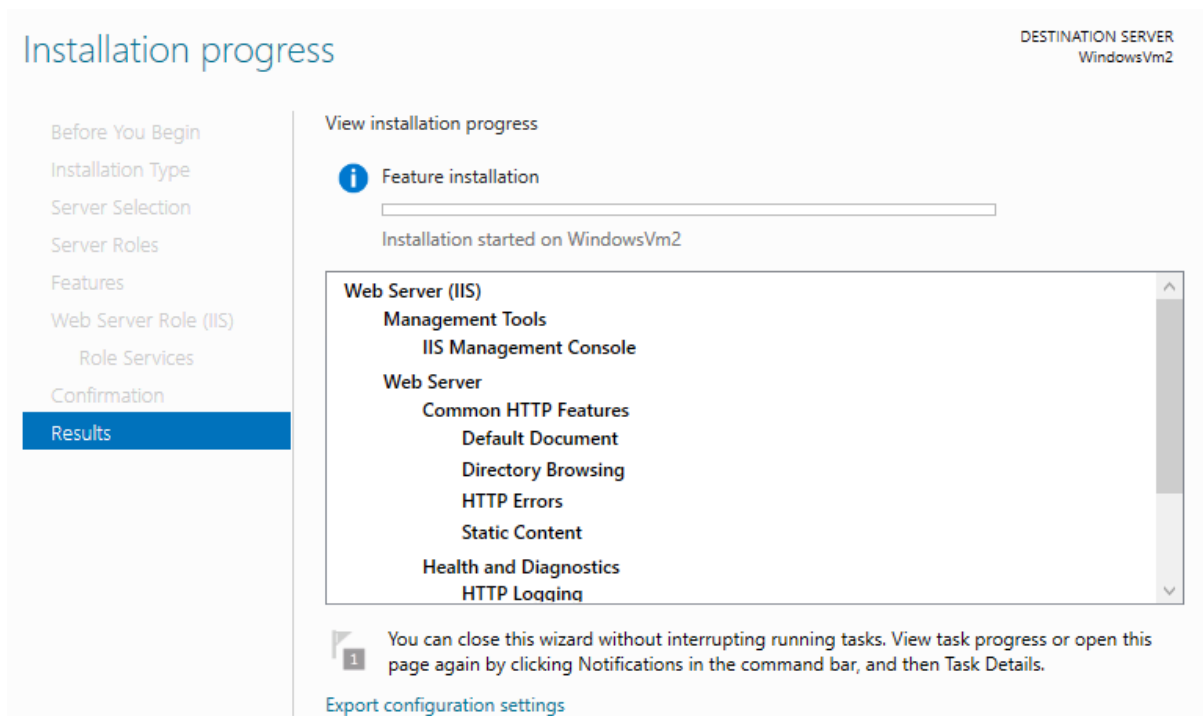
[Export configuration settings](#)
[Specify an alternate source path](#)

< Previous

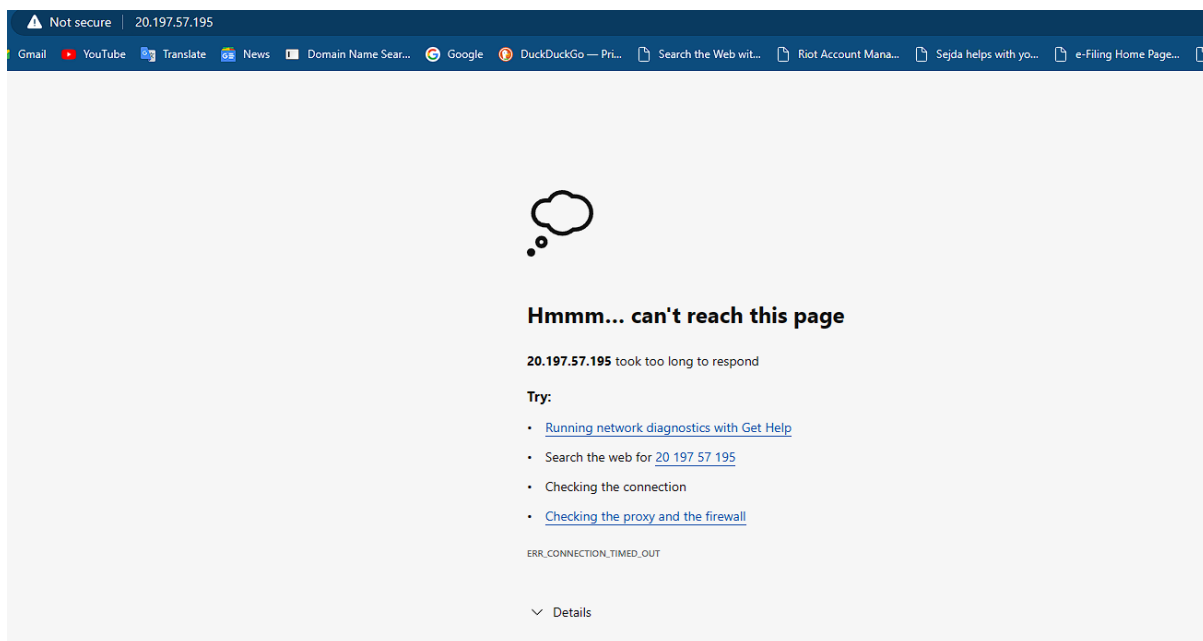
Next >

Install

Cancel





8. Once the installation is completed close it and navigate to your Azure Portal.
9. On the portal copy your public IP and paste it in a new tab.
10. After waiting for some time, you'll notice that it is giving you an error.





11. It is because your windows server is not open to Port 80, which is HTTP port.
12. So, to view your server on the internet you are needed to open your windows server to HTTP
13. For that go back to the Portal and in networking section click on Network Settings.

Networking

 Network settings

 Load balancing

 Application security groups

 Network manager













14. Here you need to click on Create port rule. Then select inbound rule.


Network security group **WindowsVm2nsg325** (attached to networkinterface: [windowsvm292](#))
Impacts 0 subnets, 1 network interfaces

[+ Create port rule](#)

Search rules

Source == all Destination == all Protocol == all Action == all

Priority ↑	Name	Port	Protocol	Source	Destination	Action
Inbound port rules (4)						
300	 RDP	3389	TCP	Any	Any	 Allow 
65000	AllowVnetInBound 	Any	Any	VirtualNetwork	VirtualNetwork	 Allow 
65001	AllowAzureLoadBalancerInBound 	Any	Any	AzureLoadBalancer	Any	 Allow 
65500	DenyAllInBound 	Any	Any	Any	Any	 Deny 
Outbound port rules (3)						

[+ Create port rule](#) 

Inbound port rule

Outbound port rule

15. Here you just need to select Service as HTTP and add this inbound rule.



Add inbound security rule



WindowsVm2nsg325

Source ⓘ

Any



Source port ranges * ⓘ

*

Destination ⓘ

Any



Service ⓘ

HTTP



Destination port ranges ⓘ

80

Protocol



Any



TCP



UDP



ICMP

Action



Allow



Deny

Priority * ⓘ

310



Name *

AllowAnyHTTPInbound



Description

Add

Cancel

Give feedback

16. Now you can see that HTTP is added to the ports.

Network security group **WindowsVm2nsg325** (attached to networkinterface: windowsvm292)
Impacts 0 subnets, 1 network interfaces

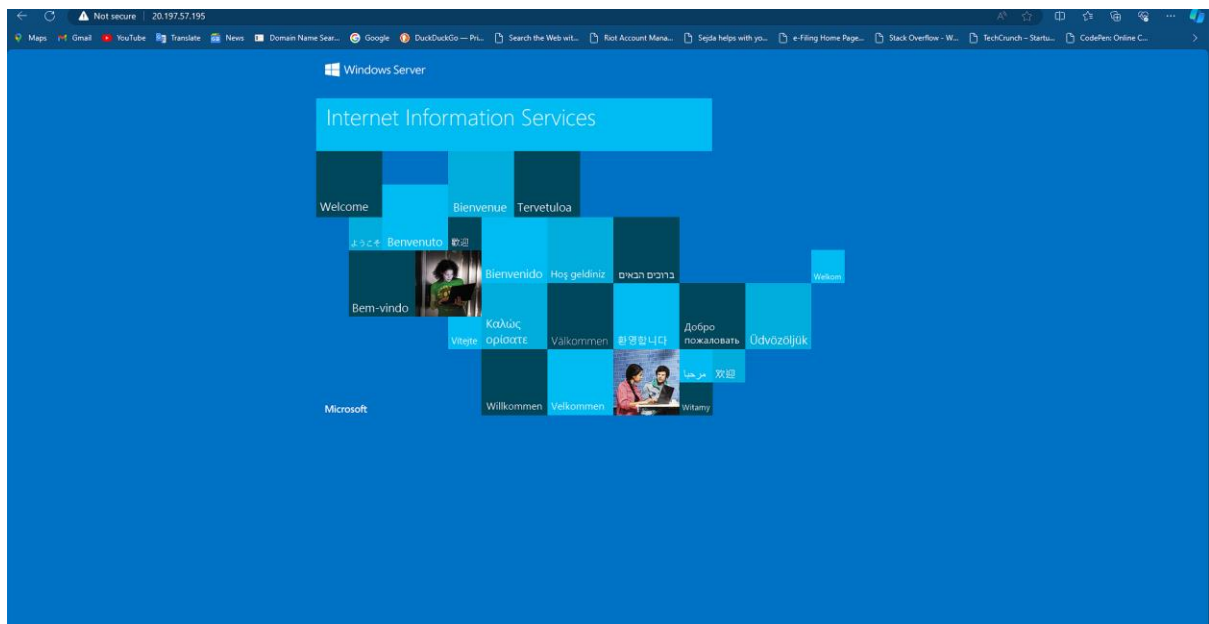
[+ Create port rule](#)

Search rules

Source == all Destination == all Protocol == all Action == all

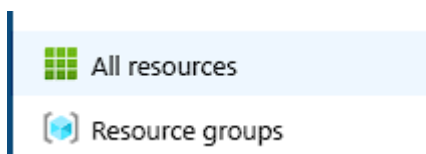
Priority	Name	Port	Protocol	Source	Destination	Action
Inbound port rules (5)						
300	RDP	3389	TCP	Any	Any	Allow
310	AllowAnyHTTPInbound	80	TCP	Any	Any	Allow

17. Now if you go back again to the tab where you copied your public IP address and refresh that page again then you'll see.



This is how you can set Web server role to your windows server.

NOTE: Once you have completed your lab now you need to delete your resources, for that go to Portal and click on hamburger icon the top left corner of the page. Then you have 2 options to delete all the things.



1. First one is to delete the resource group which you created it will delete everything within its power.
2. Second, you can just click on all resources option, then select all your resources and then click on delete.

All resources

Default Directory (publikuma2711@gmail.onmicrosoft.com)

+ Create Manage view Refresh Export to CSV Open query Assign tags Delete

Filter for any field... Subscription equals all Resource group equals all Type equals all Location equals all Add filter

0 Recommendations

12 Changed resources

0 Unsecure resources

No grouping List view

Name	Type	Resource group	Location	Subscription
WindowsVm-tp	Public IP address	app-grp	Central India	Free Trial
WindowsVm-rsrg	Network security group	app-grp	Central India	Free Trial
WindowsVm-vnet	Virtual network	app-grp	Central India	Free Trial
WindowsVm2	Virtual machine	app-grp	Central India	Free Trial
Windowsvm2-ip	Public IP address	app-grp	Central India	Free Trial
Windowsvm2-rsrg	Network security group	app-grp	Central India	Free Trial
windowsvm2906	Network interface	app-grp	Central India	Free Trial
windowsvm292	Network interface	app-grp	Central India	Free Trial
WindowsVm2_disk1_024aa3ef6ff49289ad6da2b630e2534	Disk	APP-GRP	Central India	Free Trial
WindowsVm2ip843	Public IP address	app-grp	Central India	Free Trial
WindowsVm2rsrg325	Network security group	app-grp	Central India	Free Trial
windowsvm931	Network interface	app-grp	Central India	Free Trial