



# MICROSOFT AZURE FINAL PROJECT

# WHAT IS MICROSOFT AZURE?

Microsoft Azure is a cloud computing platform provided by Microsoft. It offers a wide range of services, such as computing power, storage, networking, and databases, that users can access over the internet. With Azure, businesses can build, manage, and deploy applications using various tools and technologies. It supports multiple programming languages and operating systems, making it flexible for different needs. Azure also includes features like virtual machines, AI, and IoT, allowing organizations to scale their operations, innovate, and maintain security.



PROJECT BY:

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**GROUP: 2-AZURE MASTERS-2024**

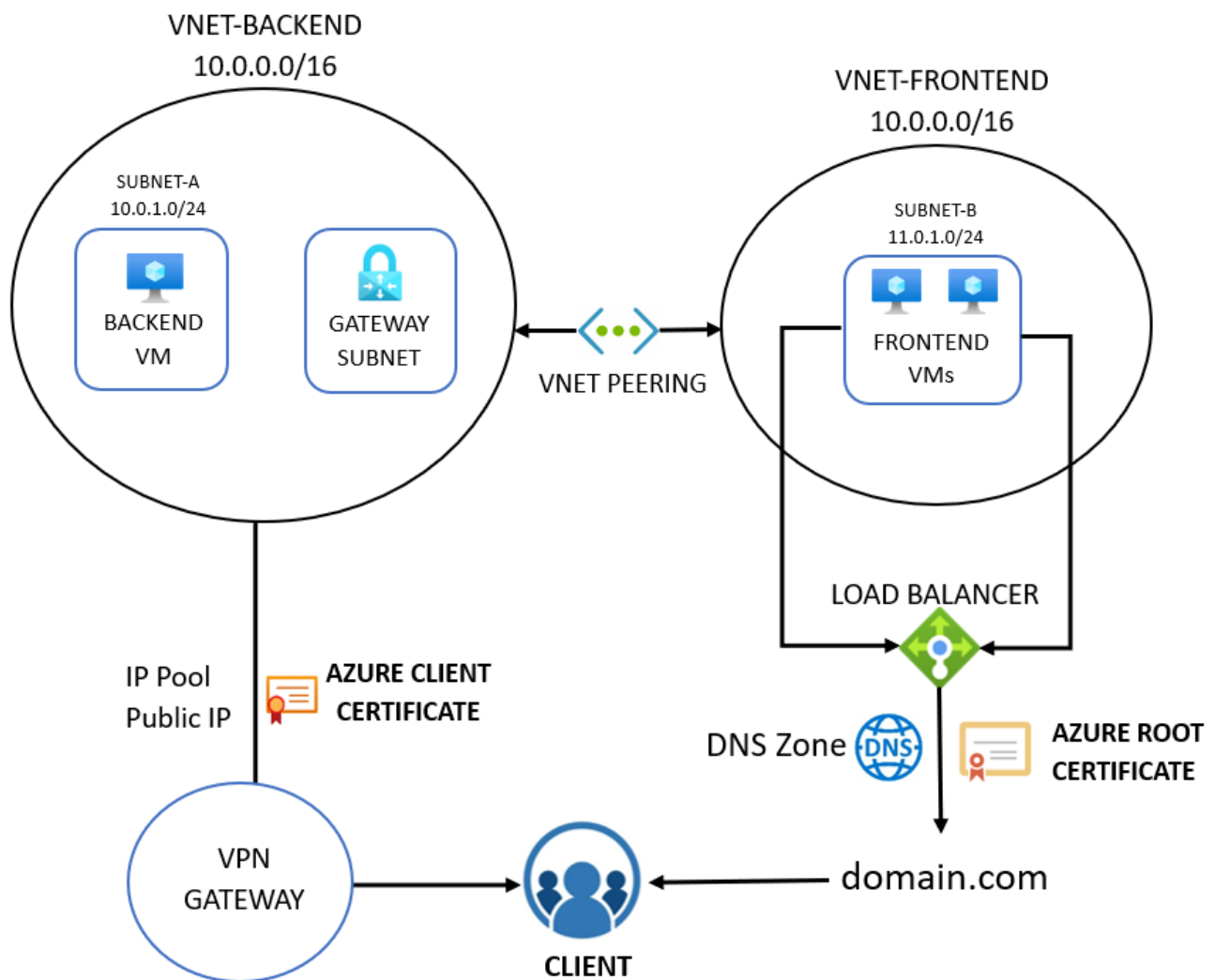
**COURSE: AZURE MASTERS AND  
INTRODUCTION TO GENERATIVE AI**

**INSTRUCTOR: SUMIT SIR**

# ARCHITECTURE OF THE PROJECT:

Subscription: Azure For Students

Resource Group: RG-1



# EXPLANATION OF THE ARCHITECTURE:

The architecture designed for this project incorporates several **Azure services** to ensure a **scalable, secure, and efficient deployment**. The infrastructure is divided into two primary virtual networks (VNETs): the frontend and the backend. The frontend VNet contains a subnet hosting multiple instances of frontend virtual machines (VMs), which are managed by an Azure Load Balancer. This Load Balancer distributes incoming traffic evenly across the frontend VMs, ensuring high **availability** and **reliability**.

To handle varying levels of traffic, autoscaling is enabled for the frontend VMs, automatically adjusting the number of instances based on CPU usage and other metrics. This ensures that the application can efficiently manage increased load without manual intervention.

The **backend VNet** hosts the **backend VM** in a dedicated subnet, isolated from the **frontend VNet** to enhance security. Data communication between the frontend and backend is secured and controlled, ensuring that only necessary traffic flows between these networks.

A **jump server** is placed in a management subnet, providing a secure access point for administrators to manage both frontend and backend VMs. Access to the jump server is controlled through a VPN Gateway, which establishes a secure connection for administrative tasks.

**Azure DNS** is used to map the public IP of the **Load Balancer** to a user-friendly domain name, making it easier for end-users to access the application.

Additionally, an SSL certificate is configured to encrypt data transmitted between the user's browser and the Load Balancer, ensuring that sensitive information is protected during transit.

This architecture follows industry best practices by segmenting the network, using a jump server for **secure access**, enabling autoscaling for **resource efficiency**, and applying SSL for data security. The use of Azure services such as VNETs, Load Balancer, VM Scale Sets, VPN Gateway, Azure DNS, and Key Vault ensures a robust, scalable, and secure infrastructure for the application.

# SOME IMPORTANT SERVICES PROVIDED ON AZURE CLOUD:

## ❑ Create Virtual Networks:

- A Virtual Network (VNet) is a representation of your network in the cloud. It is a logical isolation of the Azure cloud dedicated to your subscription.

## ❑ Deploy Virtual Machines:

- An Azure Virtual Machine (VM) is one of several types of on-demand, scalable computing resources that Azure offers. Typically, you choose a VM when you need more control over the computing environment.

## ❑ Apply Load Balancer:

- An Azure Load Balancer is a Layer-4 (TCP, UDP) load balancer that distributes incoming network traffic across multiple backend resources or services.

## ❑ Private Path Setup through Jump Servers:

- A VPN Gateway is a specific type of virtual network gateway that sends encrypted traffic between an Azure virtual network and an on-premises location over the public Internet. A Jump Server (or Bastion Host) is a special-purpose server on a network used to manage devices in a separate security zone.

## ❑ Deploy with Azure Hosting Service:

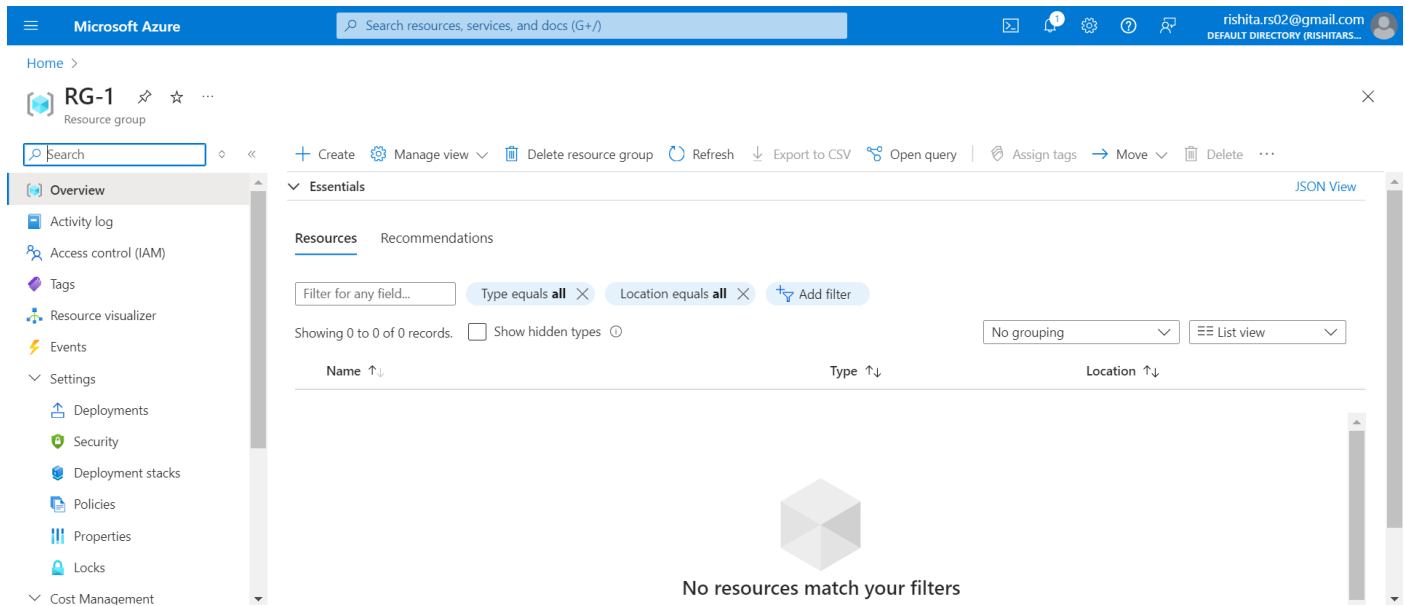
- Azure DNS is a hosting service for DNS domains, providing name resolution using Microsoft Azure infrastructure.

## ❑ Apply SSL Certificate:

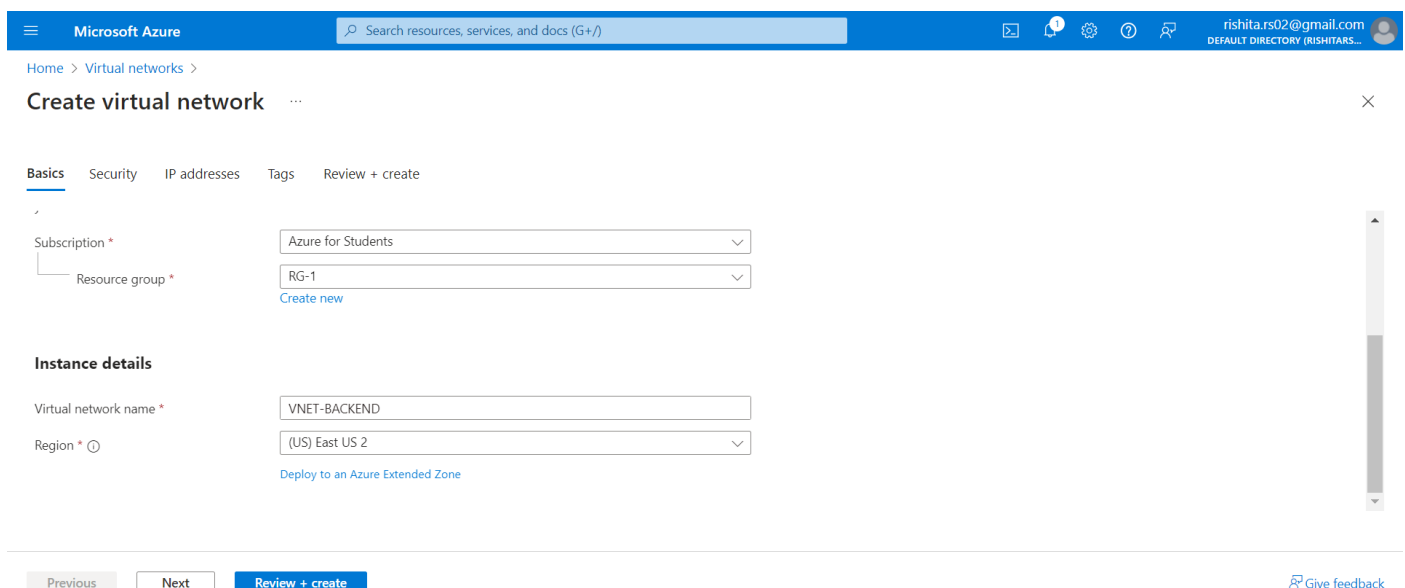
- Azure Key Vault helps safeguard cryptographic keys and secrets used by cloud applications and services. An SSL certificate secures the data transferred between a user's browser and the website by encrypting it.

# DETAILED PROCEDURE WITH SCREENSHOTS:

## I. First a resource group was created namely 'RG-1'



## II. Then two Virtual Networks (VNETs) were created. The VNET-BACKEND contained Subnet-A and the VNET-FRONTEND contained Subnet-B.



Microsoft Azure

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DEFAULT DIRECTORY (RISHITARS...

Home > Virtual networks >

## Create virtual network

Basics

Security

IP addresses

Tags

Review + create

Add IPv4 address space

10.0.0.0/16

10.0.0.0

/16

10.0.0.0 - 10.0.255.255 65,536 addresses

+ Add a subnet

Delete address space

Subnets	IP address range	Size	NAT gateway
Subnet-A	10.0.1.0 - 10.0.1.255	/24 (256 addresses)	-

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## Create virtual network

Basics

Security

IP addresses

Tags

Review + create

Subscription \*

Azure for Students

Resource group \*

RG-1

Create new

### Instance details

Virtual network name \*

VNET-FRONTEND

Region \* ⓘ

(US) East US 2

Deploy to an Azure Extended Zone

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## Create virtual network

Basics

Security

IP addresses

Tags

Review + create

11.0.0.0/16

11.0.0.0

/16

11.0.0.0 - 11.0.255.255 65,536 addresses

+ Add a subnet

Delete address space

Subnets	IP address range	Size	NAT gateway
Subnet-B	11.0.1.0 - 11.0.1.255	/24 (256 addresses)	-

The entered IPv4 address range may not work correctly. It is recommended to use an address range that is not globally routable, such as 172.16.0.0/12, or a range defined in RFC 1918 and RFC 6598. [Learn more](#)

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Home > VNET-FRONTEND-1723380335208 | Overview >

VNET-FRONTEND

Virtual network

Search

Move

Delete

Refresh

Give feedback

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Address space

Connected devices

Subnets

Bastion

DDoS protection

Firewall

Microsoft Defender for Cloud

Essentials

Resource group (move)

Location (move)

Subscription (move)

Subscription ID

Address space

DNS servers

Flow timeout

BGP community string

Virtual network ID

Tags (edit)

Add tags

Topology

Properties

Capabilities (5)

Recommendations

Tutorials

DDoS protection

Configure additional protection from distributed denial of service attacks.

Not configured

Azure Firewall

Protect your network with a stateful L3-L7 firewall.

Not configured






Peerings

Seamlessly connect two or more virtual networks.

Not configured

Microsoft Azure

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Home > VNET-BACKEND

VNET-BACKEND | Subnets

Virtual network

Search

+ Subnet

+ Gateway subnet

Refresh

Manage users

Delete

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Address space

Connected devices

Subnets

Bastion

DDoS protection

Firewall

Microsoft Defender for Cloud

Search subnets

Name ↑↓	IPv4 ↑↓	IPv6 ↑↓	Available IPs ↑↓	Delegated to ↑↓	Security group ↑↓	Route table ↑↓	
Subnet-A	10.0.1.0/24	-	251	-	-	-	...
GatewaySubnet	10.0.3.0/24	-	availability dependent o...	-	-	-	...





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🔔

⚙️

❓

🗨️

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DEFAULT DIRECTORY (RISHITARS...

Home

>

Virtual machines

>

Create a virtual machine

Instance details

Virtual machine name \* ①

BACKEND-VM

Region \* ①

(US) East US 2

Availability options ①

No infrastructure redundancy required

Security type ①

Trusted launch virtual machines

Configure security features

Image \* ①

Ubuntu Server 20.04 LTS - x64 Gen2

See all images | Configure VM generation

VM architecture ①

Arm64

x64

Run with Azure Spot discount ①

☐

Size \* ①

Standard\_D2s\_v3 - 2 vcpus, 8 GiB memory (₹5,830.28/month)

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Next: Disks >

Review + create

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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 \* ①

VNET-BACKEND

Create new

Subnet \* ①

Subnet-A (10.0.1.0/24)

Manage subnet configuration

Public IP ①

None

Create new

NIC network security group ①

None

Basic

< Previous

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CreateVm-canonical.0001-com-ubuntu-server-focal-2-20240811182348 | Overview

>

BACKEND-VM

Virtual machine

🔍 Search

◊

<<

🔗 Connect

▶ Start

↺ Restart

⏹ Stop

⌚ Hibernate

📷 Capture

🗑 Delete

🔄 Refresh

📱 Open in mobile

🗨️ Feedback

📄 CLI / PS

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Connect

Connect

Bastion

Networking

Network settings

Load balancing

Application security groups

Network manager

⚠️ BACKEND-VM virtual machine agent status is not ready. Troubleshoot the issue →

Essentials

Resource group (move) : RG-1

Status : Running

Location : East US 2

Subscription (move) : Azure for Students

Subscription ID : 6b19a714-a669-4b27-9c56-81d616b30bf0

Operating system : Linux

Size : Standard D2s v3 (2 vcpus, 8 GiB memory)

Public IP address : -

Virtual network/subnet : VNET-BACKEND/Subnet-A

DNS name : -

Health state : -

Time created : 8/11/2024, 12:56 PM UTC

Tags (edit) : Add tags

JSON View

Properties

Monitoring

Capabilities (7)

Recommendations

Tutorials

Virtual machine

Networking

## IV. Added peering to the VNets:

Microsoft Azure

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DEFAULT DIRECTORY (RISHITARS...

Home > VNET-BACKEND | Peerings >

Add peering

...

VNET-BACKEND

Virtual network peering enables you to seamlessly connect two or more virtual networks in Azure. This will allow resources in either virtual network to directly connect and communicate with resources in the peered virtual network.

Remote virtual network summary

Peering link name \*

FRONTEND-TO-BACKEND

Virtual network deployment model ⓘ

☒ Resource manager
 ☐ Classic

I know my resource ID ⓘ

☐

Subscription \*

Azure for Students

Virtual network \*

VNET-FRONTEND (RG-1)

Peering virtual network peering settings

Add

Cancel

Give feedback

Microsoft Azure

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Home > VNET-BACKEND

VNET-BACKEND | Peerings

☆

...

Virtual network

Search

Tags

Diagnose and solve problems

Settings

Address space

Connected devices

Subnets

Bastion

DDoS protection

Firewall

Microsoft Defender for Cloud

Network manager

DNS servers

Peerings

+ Add

Refresh

Export to CSV

Delete

Sync

Virtual network peering enables you to seamlessly connect two or more virtual networks in Azure. The virtual networks appear as one for connectivity purposes. [Learn more](#) ⓘ

Filter by name...

Name ⓘ	Peering sync status ⓘ	Peering state ⓘ	Remo... ⓘ	Virtu... ⓘ
FRONTEND-TO-BACKEND	Fully Synchronized	Connected	VNET-FR...	Disabled

Give feedback

```

172.200.250.132
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help
Quick connect...
/home/azureuser/
Name
.cache
.ssh
.bash_logout
.bashrc
.profile
.Xauthority
Remote monitoring
Follow terminal folder

azureuser@FRONTEND-VM:~$ sudo su
root@FRONTEND-VM:~/home/azureuser# cd
root@FRONTEND-VM:~# ping google
ping: google: Temporary failure in name resolution
root@FRONTEND-VM:~# ping 172.200.250.132
PING 172.200.250.132 (172.200.250.132) 56(84) bytes of data.
^C
--- 172.200.250.132 ping statistics ---
54 packets transmitted, 0 received, 100% packet loss, time 54262ms

root@FRONTEND-VM:~# ping 10.0.1.6
PING 10.0.1.6 (10.0.1.6) 56(84) bytes of data.
64 bytes from 10.0.1.6: icmp_seq=1 ttl=64 time=2.02 ms
64 bytes from 10.0.1.6: icmp_seq=2 ttl=64 time=0.940 ms
64 bytes from 10.0.1.6: icmp_seq=3 ttl=64 time=0.918 ms
64 bytes from 10.0.1.6: icmp_seq=4 ttl=64 time=0.925 ms
64 bytes from 10.0.1.6: icmp_seq=5 ttl=64 time=1.14 ms
64 bytes from 10.0.1.6: icmp_seq=6 ttl=64 time=6.04 ms
64 bytes from 10.0.1.6: icmp_seq=7 ttl=64 time=0.706 ms
64 bytes from 10.0.1.6: icmp_seq=8 ttl=64 time=1.15 ms
64 bytes from 10.0.1.6: icmp_seq=9 ttl=64 time=1.00 ms
64 bytes from 10.0.1.6: icmp_seq=10 ttl=64 time=1.17 ms
64 bytes from 10.0.1.6: icmp_seq=11 ttl=64 time=1.18 ms
64 bytes from 10.0.1.6: icmp_seq=12 ttl=64 time=1.47 ms
64 bytes from 10.0.1.6: icmp_seq=13 ttl=64 time=1.14 ms
64 bytes from 10.0.1.6: icmp_seq=14 ttl=64 time=0.996 ms
64 bytes from 10.0.1.6: icmp_seq=15 ttl=64 time=1.14 ms
64 bytes from 10.0.1.6: icmp_seq=16 ttl=64 time=0.992 ms
64 bytes from 10.0.1.6: icmp_seq=17 ttl=64 time=0.954 ms
64 bytes from 10.0.1.6: icmp_seq=18 ttl=64 time=1.23 ms
64 bytes from 10.0.1.6: icmp_seq=19 ttl=64 time=1.16 ms
64 bytes from 10.0.1.6: icmp_seq=20 ttl=64 time=1.10 ms
64 bytes from 10.0.1.6: icmp_seq=21 ttl=64 time=1.07 ms
  
```

## V. A Load Balancer was applied to FRONTEND servers and a public IP was added to it.

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Home > Load balancing | Load Balancer >

### Create load balancer

Basics

Frontend IP configuration

Backend pools

Inbound rules

Outbound rules

Tags

Review + create

Azure load balancer is a layer 4 load balancer that distributes incoming traffic among healthy virtual machine instances. Load balancers uses a hash-based distribution algorithm. By default, it uses a 5-tuple (source IP, source port, destination IP, destination port, protocol type) hash to map traffic to available servers. Load balancers can either be internet-facing where it is accessible via public IP addresses, or internal where it is only accessible from a virtual network. Azure load balancers also support Network Address Translation (NAT) to route traffic between public and private IP addresses. [Learn more.](#)

**Project details**

Subscription \* Azure for Students

Resource group \* RG-1  
[Create new](#)

**Instance details**

Name \* LB-1

Region \* East US 2

SKU \* Standard (Recommended)

Review + create

< Previous

Next : Frontend IP configuration >

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Home > Load balancing | Load Balancer >

### Create load balancer

Basics

Frontend IP configuration

Backend pools

Inbound rules

Outbound rules

Tags

Review + create

A frontend IP configuration is an IP address used for inbound and/or outbound communication as defined within load balancing, inbound NAT, and outbound rules.

+ Add a frontend IP configuration

Name ↑↓	IP address ↑↓	Virtual network ↑↓	Subnet ↑↓
FRONTEND-POOL	Dynamic	VNET-FRONTEND	Subnet-B

Review + create

< Previous

Next : Backend pools >

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Microsoft Azure

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Home > Load balancing | Load Balancer > Create load balancer >

### Add backend pool

Name \* BACKEND-POOL

Virtual network VNET-FRONTEND

Backend Pool Configuration

☒ NIC

☐ IP address

**IP configurations**

IP configurations associated to virtual machines and virtual machine scale sets must be in same location as the load balancer and be in the same virtual network.

+ Add | X Remove

Resource Name	Resource group	Type	IP configuration	IP Address	Availabili...
FRONTEND-VM	RG-1	Virtual machine	ipconfig1	11.0.1.4	-

Save

Cancel

[Give feedback](#)

Microsoft Azure

Search resources, services, and docs (G+)

Home > Microsoft.LoadBalancer-20240811184034 | Overview >

**LB-1** Load balancer

Search

Move Delete Refresh Give feedback

**Overview**

- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Settings
  - Frontend IP configuration
  - Backend pools
  - Health probes
  - Load balancing rules
  - Inbound NAT rules
  - Properties
  - Locks

**Essentials**

Resource group (move) : [RG-1](#)

Location : East US 2

Subscription (move) : [Azure for Students](#)

Subscription ID : 6b19a714-a669-4b27-9c56-81d616b30bf0

SKU : Standard

Tags (edit) : [Add tags](#)

[See more](#)

Backend pool : BACKEND-POOL (1 virtual machine)

Load balancing rule : -

Health probe : -

NAT rules : 0 inbound

Tier : Regional

[JSON View](#)

Configure high availability and scalability for your applications

Create highly-available and scalable applications in minutes by using built-in load balancing for cloud services and virtual machines. Azure Load Balancer supports TCP/UDP-based protocols and protocols used for real-time voice and video messaging applications. [Learn more](#)

Balance IP and IP6 addresses

Secure your network

## VI. A Virtual Network Gateway was used to connect the VMs through a private path setup using Jump servers (Using VPN)

Microsoft Azure

Search resources, services, and docs (G+)

Home > Virtual network gateways >

**Create virtual network gateway**

Subscription \* : Azure for Students

Resource group : RG-1 (derived from virtual network's resource group)

**Instance details**

Name \* : VIRTUAL-GATEWAY-1

Region \* : East US 2

Gateway type \* : ☒ VPN ☐ ExpressRoute

SKU \* : VpnGw2AZ

Generation : Generation2

Virtual network \* : VNET-BACKEND

Subnet : GatewaySubnet (10.0.3.0/24)

[Review + create](#) [Previous](#) [Next : Tags >](#) [Download a template for automation](#)

Microsoft Azure

Search resources, services, and docs (G+)

Home > Microsoft.VirtualNetworkGateway-20240811184633 | Overview >

**VIRTUAL-GATEWAY-1** Virtual network gateway

Search

Refresh Move Delete

**Overview**

- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Settings
  - Configuration
  - Connections
  - Point-to-site configuration
  - NAT Rules
  - Maintenance
  - Properties
  - Locks

**Essentials**

Resource group (move) : [RG-1](#)

Location : East US 2

Subscription (move) : [Azure for Students](#)

Subscription ID : 6b19a714-a669-4b27-9c56-81d616b30bf0

Tags (edit) : [Add tags](#)

SKU : VpnGw2AZ

Gateway type : VPN

VPN type : Route-based

Virtual network : [VNET-BACKEND](#)

First public IP address : [4.152.32.121 \(my\\_ip\)](#)

[Go to Resource health](#)

[Go to Advisor](#)

[View documentation](#)

Show data for last : ☒ 1 hour ☐ 6 hours ☐ 12 hours ☐ 1 day ☐ 7 days ☐ 30 days

Total tunnel ingress

Total tunnel egress

## VII. Created the AZURE CLIENT CERTIFICATE and the AZURE ROOT CERTIFICATE.

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\rishi> $params = @{
>> Type = 'Custom'
>> Subject = 'CN=P2SRootCert'
>> KeySpec = 'Signature'
>> KeyExportPolicy = 'Exportable'
>> KeyUsage = 'CertSign'
>> KeyUsageProperty = 'Sign'
>> KeyLength = 2048
>> HashAlgorithm = 'sha256'
>> NotAfter = (Get-Date).AddMonths(24)
>> CertStoreLocation = 'Cert:\CurrentUser\My'
>> }
PS C:\Users\rishi> $cert = New-SelfSignedCertificate @params
PS C:\Users\rishi>
```

The image shows a screenshot of the Windows Certificate Manager application. The title bar reads "certmgr - [Certificates - Current User\Personal\Certificates]". The menu bar includes "File", "Action", "View", and "Help". Below the menu is a toolbar with icons for navigation and actions. The left pane shows a tree view of certificate stores under "Certificates - Current User", with "Personal" expanded and "Certificates" selected. The right pane displays a table of certificates in the Personal store. The table has columns for "Issued To", "Issued By", and "Expiration Date". One certificate, "P2SRootCert", is highlighted in blue. The status bar at the bottom indicates "Personal store contains 4 certificates."

```

Windows PowerShell
>> KeyUsage = 'CertSign'
>> KeyUsageProperty = 'Sign'
>> KeyLength = 2048
>> HashAlgorithm = 'sha256'
>> NotAfter = (Get-Date).AddMonths(24)
>> CertStoreLocation = 'Cert:\CurrentUser\My'
>> }
PS C:\Users\rishi> $cert = New-SelfSignedCertificate @params
PS C:\Users\rishi> $params = @{
>> Type = 'Custom'
>> Subject = 'CN=P2SChildCert'
>> DnsName = 'P2SChildCert'
>> KeySpec = 'Signature'
>> KeyExportPolicy = 'Exportable'
>> KeyLength = 2048
>> HashAlgorithm = 'sha256'
>> NotAfter = (Get-Date).AddMonths(18)
>> CertStoreLocation = 'Cert:\CurrentUser\My'
>> Signer = $cert
>> TextExtension = @(
>> '2.5.29.37={text}1.3.6.1.5.5.7.3.2')
>> }
PS C:\Users\rishi> New-SelfSignedCertificate @params

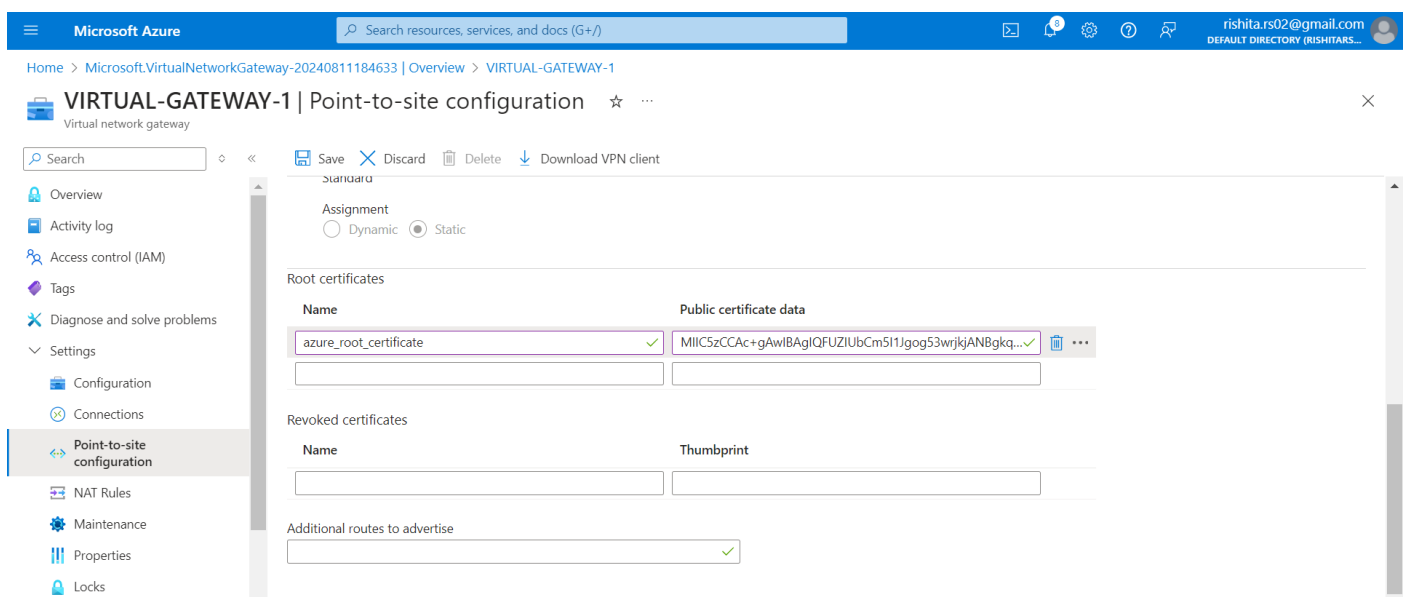
PSParentPath: Microsoft.PowerShell.Security\Certificate::CurrentUser\My

Thumbprint                               Subject
-----
F28DF9B7687EB461431269B6E14C7711ECFE29CF CN=P2SChildCert

PS C:\Users\rishi>

```

## VIII. Added the Root Certificate to the Virtual Network Gateway using Point-to-site configuration.



Microsoft Azure

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Home > Microsoft.VirtualNetworkGateway-20240811184633 | Overview > VIRTUAL-GATEWAY-1

**VIRTUAL-GATEWAY-1 | Point-to-site configuration**

Virtual network gateway

Save Discard Delete Download VPN client

Standard

Assignment

☐ Dynamic ☒ Static

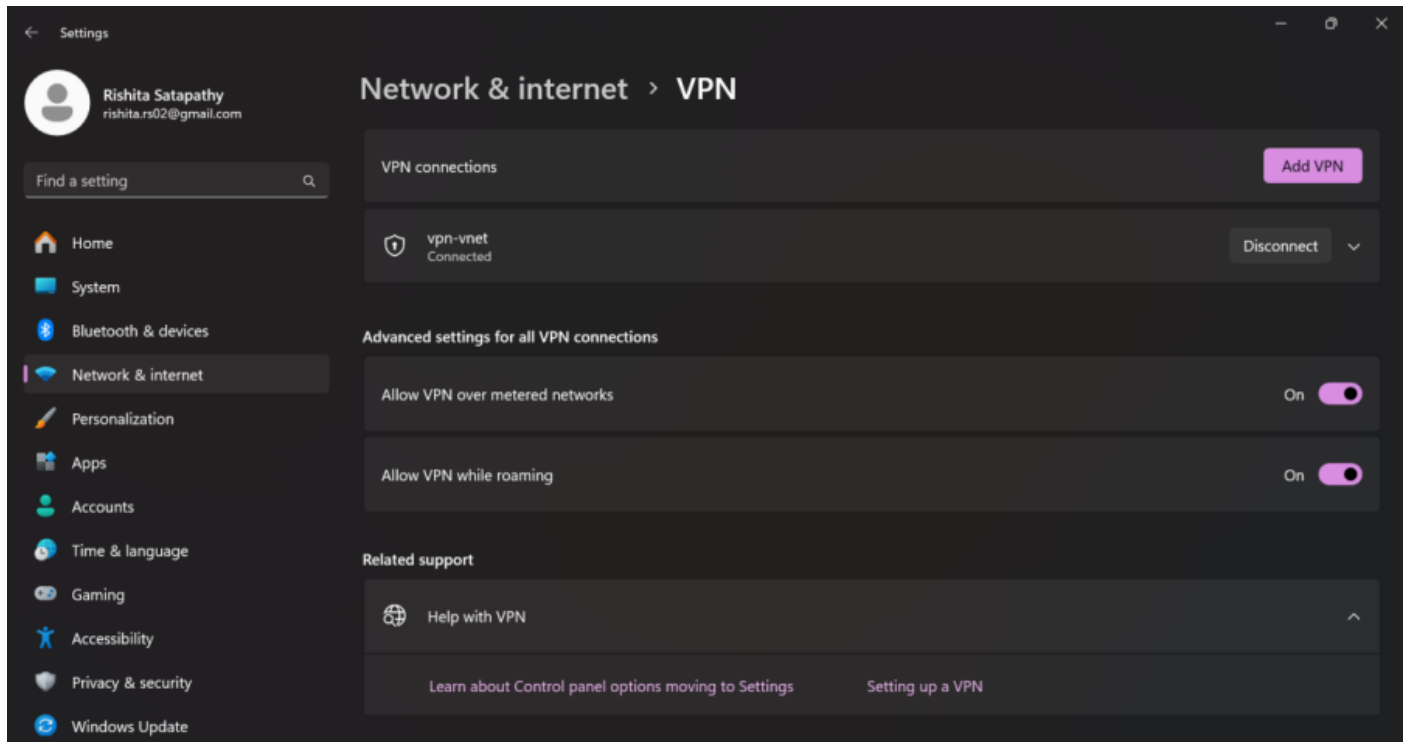
Root certificates

Name	Public certificate data
azure_root_certificate	MIIC5zCCAc+gAwIBAgIQFUZlUbCm5I1Jgog53wrjkANBgkq...

Revoked certificates

Name	Thumbprint

Additional routes to advertise



## IX. Deployed it using DNS zones and mapped the Public IP of the Load Balancer to the domain name.

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Home > DNS zones >

### Create a DNS Zone

Basics
DNS Zone Editor
Tags
Review + Create

Subscription \* ⓘ Azure for Students
Resource group \* ⓘ RG-1  
[Create new](#)

#### Instance details

☐ This zone is a child of an existing zone already hosted in Azure DNS ⓘ

Name \* rishitadns.in
Resource group location \* ⓘ (US) East US 2

Review + create
< Previous
Next : DNS Zone Editor >



Microsoft Azure

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rishita.rs02@gmail.com  
DEFAULT DIRECTORY (RISHITARS...)

Home > rishitadns.in\_1723388547626 | Overview >

**rishitadns.in**
★
...

DNS zone

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DNS Management

Monitoring

Automation

Help

Essentials

Resource group (move) : RG-1

Location : Global

Subscription (move) : Azure for Students

Subscription ID : 6b19a714-a669-4b27-9c56-81d616b30bf0

Recordsets : 2

Tags (edit) : Add tags

Max number of recor... : 10000

Name server 1 : ns1-04.azure-dns.com.

Name server 2 : ns2-04.azure-dns.net.

Name server 3 : ns3-04.azure-dns.org.

Name server 4 : ns4-04.azure-dns.info.

Get Started

Tutorials

Tools + SDK

Azure DNS is a hosting service for DNS domains that provides name resolution by using Microsoft Azure infrastructure. By hosting your domains in Azure, you can manage your DNS records by using the same credentials, APIs, tools, and billing as your other Azure services.

Microsoft Azure

Search resources, services, and docs (G+)

rishita.rs02@gmail.com  
DEFAULT DIRECTORY (RISHITARS...)

Home > rishitadns.in\_1723388547626 | Overview > rishitadns.in

**rishitadns.in | Recordsets**
★
...

DNS zone

Search

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

DNS Management

Recordsets

Monitoring

Automation

Help

A record set is a collection of records in a zone that have the same name and are the same type. You can search for record sets that have been loaded on this page. If you don't see what you're looking for, you can try scrolling to allow more record sets to load. [Learn more](#)

Search

Fetches 2 record set(s).

Name	Type	TTL	Value	Alias resource type	Alias target
@	NS	172800	ns1-04.azure-dns.com. ns2-04.azure-dns.net. ns3-04.azure-dns.org. ns4-04.azure-dns.info.		
@	SOA	3600	Email: azuredns-hostmaster.microsoft.com Host: ns1-04.azure-dns.com. Refresh: 3600 Retry: 300 Expire: 2419200 Minimum TTL: 300 Serial number: 1		

HOSTINGER

Refer & Earn 400 USD

Main menu

Domain Overview

DNS / Nameservers

Domain Ownership

Select Nameservers

Use Hostinger nameservers (recommended)

Change nameservers

ns1-04.azure-dns.com

ns2-04.azure-dns.net

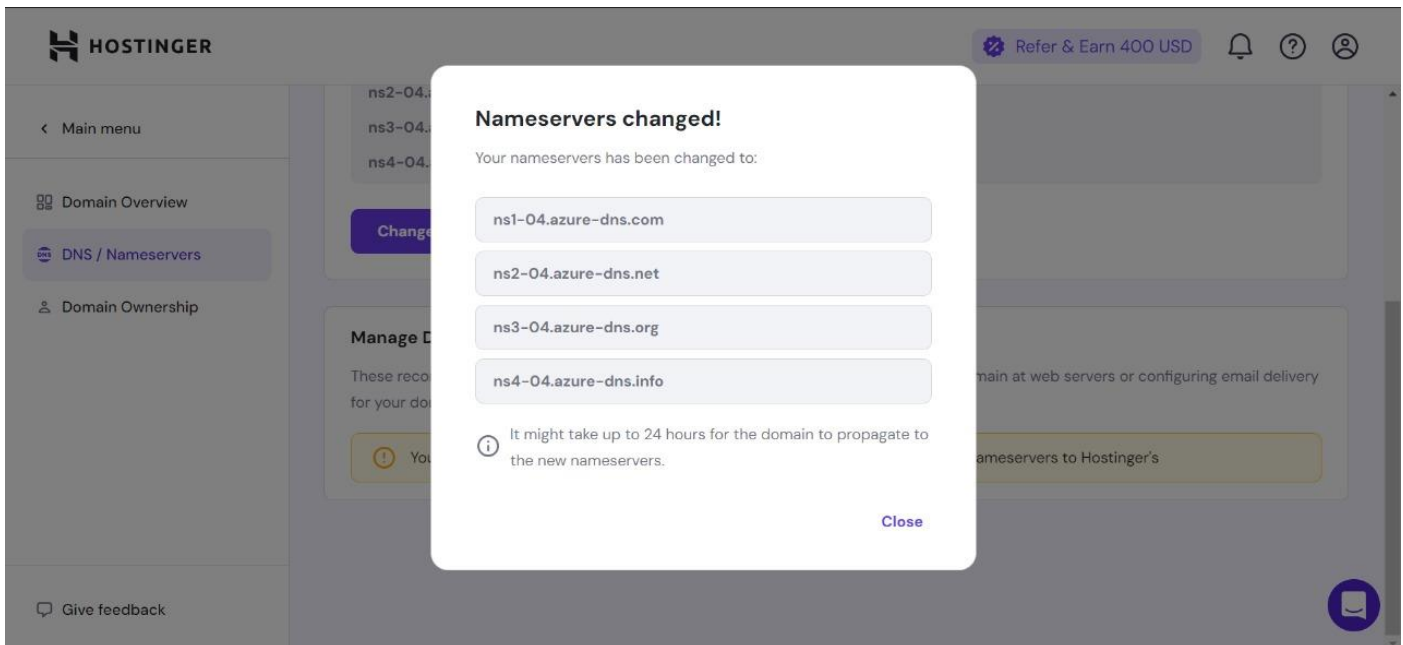
ns3-04.azure-dns.org

ns4-04.azure-dns.info

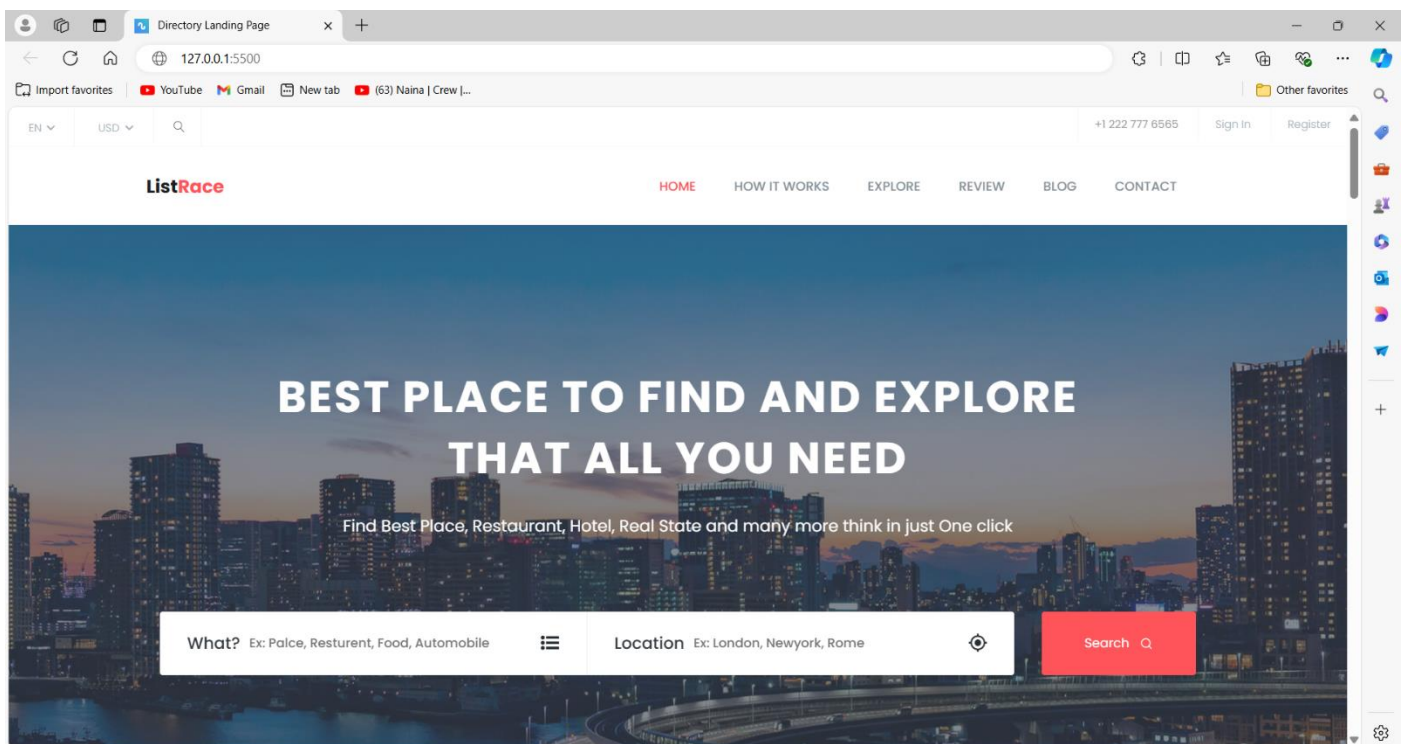
Save

Cancel

Manage DNS records



X. Applied SSL to the domain while it was hosted.



# INDUSTRY PRACTICES:

- **Security:** Implement the least privilege principle, use a jump server to secure VM access, and encrypt data both in transit (using SSL) and at rest.
- **Scalability:** Use autoscaling to adjust VM instances based on demand, ensuring the application can handle varying traffic loads efficiently.
- **High Availability:** Deploy load balancers across multiple availability zones, ensuring continuous service even if one zone fails.
- **Cost Management:** Optimize resource allocation through autoscaling and monitor usage to avoid over-provisioning, reducing unnecessary costs.

