

# VIRTUAL NETWORK IN AZURE

LMS

What is Azure Virtual Network

Claude

ChatGPT

Virtual networks - Microsoft

portal.azure.com/#browse/Microsoft.Network%2FvirtualNetworks

Apps

todo

any good link

courses

devops

temp

Strivers A2Z DSA...

Learner Dashboar...

All Bookmarks

Microsoft Azure

Upgrade

Search resources, services, and docs (G+)

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vaibhavgupta.avy1013...  
DEFAULT DIRECTORY (VAIBHAV...

Home >

Virtual networks

Default Directory (vaibhavguptaavy1013gmail.onmicrosoft.com)

Create

Manage view

Refresh

Export to CSV

Open query

Assign tags

Filter for any field...

Subscription equals all

Resource group equals all

Location equals all

Add filter

Showing 0 to 0 of 0 records.

No grouping

List view

| Name ↑↓ | Resource group ↑↓ | Location ↑↓ | Subscription ↑↓ |
|---------|-------------------|-------------|-----------------|
|---------|-------------------|-------------|-----------------|

₹16,669.26 credit remaining

Subscription 'Free Trial' has a remaining credit of ₹16,669.26.

Upgrade to a Pay-As-You-Go subscription.

## No virtual networks to display

Create a virtual network to securely connect your Azure resources to each other. Connect your virtual network to your on-premises network using an Azure VPN Gateway or ExpressRoute.

[Create virtual network](#)

[Learn more](#)

# Create a virtual machine

[Give feedback](#)

Home > Virtual networks >

## Create virtual network

Basics Security IP addresses Tags Review + create

Azure Virtual Network (VNet) is the fundamental building block for your private network in Azure. VNet enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the internet, and on-premises 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 \* Free Trial

Resource group \* celebal-internship-vaibhav\_group

[Create new](#)

### Instance details

Virtual network name \* my-vnet

Region \* (US) East US

Add name of vnet

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Review + create

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portal.azure.com/#create/Microsoft.VirtualNetwork-ARM

Microsoft Azure Upgrade

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vaibhavgupta.avy1013...  
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Create virtual network ...

Deploying...

Basics Security IP addresses Tags Review + create

[View automation template](#)

**Basics**

|                |                                  |
|----------------|----------------------------------|
| Subscription   | Free Trial                       |
| Resource Group | celebal-internship-vaibhav_group |
| Name           | my-vnet                          |
| Region         | East US                          |

**Security**

|                               |          |
|-------------------------------|----------|
| Azure Bastion                 | Disabled |
| Azure Firewall                | Disabled |
| Azure DDoS Network Protection | Disabled |

**IP addresses**

|               |   |
|---------------|---|
| Address space | 10.0.0.0/16 (65,536 addresses)                |
| Subnet        | for_vm_machines (10.0.0.0/24) (256 addresses) |
| Subnet        | sql_database (10.0.1.0/24) (256 addresses)    |

**Tags**

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Create

Initializing deployment...

Initializing template deployment to resource group 'celebal-internship-vaibhav\_group'.

- After adding a subnet
- Create it

Give feedback



All services >

## Create a virtual machine

⚠ Changing Basic options may reset selections you have made. Review all options prior to creating the virtual machine.

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 \* ⓘ Free Trial

Resource group \* ⓘ celebal-internship-vaibhav\_group

[Create new](#)

### Instance details

Virtual machine name \* ⓘ vnet-linux-vm ✓

Region \* ⓘ (Asia Pacific) South India

Availability options ⓘ No infrastructure redundancy required

Security type ⓘ Trusted launch virtual machines

[Configure security features](#)

Image \* ⓘ Ubuntu Server 20.04 LTS - x64 Gen2 (free services eligible)

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

VM architecture ⓘ ☐ Arm64

Create it in the same region

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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 \*

my-vnet

Create new

Subnet \*

default (10.0.0.0/24)

Manage subnet configuration

Public IP

(new) vnet-linux-vm-ip

Create new

NIC network security group

☐ None

☒ Basic

☐ Advanced

Public inbound ports \*

☐ None

☒ Allow selected ports

Select inbound ports \*

SSH (22)

Home > CreateVm-canonical.0001-com-ubuntu-server-focal-2-20240630054237 | Overview >

## 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 \* ?  ▼  
[Create new](#)

Subnet \* ?  ▼  
[Manage subnet configuration](#)

Public IP ?  ▼  
[Create new](#)

NIC network security group ? ☐ None ☒ Basic ☐ Advanced

Public inbound ports \* ? ☐ None ☒ Allow selected ports

Select inbound ports \*  ▼

**⚠ This will allow all IP addresses to access your virtual machine. This is only**

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Review + create

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Do same for windows...



All services > Virtual networks > my-vnet1

## my-vnet1 | Connected devices

Virtual network

Search



Refresh



Export To CSV



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

Network manager

DNS servers

Peerings

Service endpoints

Private endpoints

Properties

Links

Search connected devices



Type : all



Subnet : all

No grouping



Device ↑↓

Type ↑↓

IP Address ↑↓

Subnet ↑↓



jk1732\_z1

Network interface

10.0.0.4

default



window-vm205\_z1

Network interface

10.0.0.5

default

Two vm in one subnet

## Create a sql server

[Home](#) > [SQL databases](#) >

# Create SQL Database

Microsoft



## Database details

Enter required settings for this database, including picking a logical server and configuring the compute and storage resources

Database name \*

Avy's sql db



Server \* ⓘ

(new) avy-server (North Europe)

[Create new](#)

Want to use SQL elastic pool? ⓘ

☐ Yes ☒ No

Workload environment

☒ Development☐ Production

Default settings provided for Development workloads. Configurations can be modified as needed.

Compute + storage \* ⓘ

### General Purpose - Serverless

Standard-series (Gen5), 1 vCore, 2 GB storage, zone redundant disabled

[Configure database](#)

## Backup storage redundancy

Choose how your PITR and LTR backups are replicated. Geo restore or ability to recover from regional outage is only available when geo-redundant storage is selected.

[Review + create](#)[Next : Networking >](#)

# Create a sql db

General Purpose - Serverless  
Standard-series Gen5, 1 vCore, 2 GB storage, zone redundant disabled  
Configure database

portal.azure.com/?quickstart=true#create/Microsoft.SQLDatabase

Microsoft Azure

Upgrade

Search resources, services, and docs (G+)

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vaibhavgupta.avy1013...

DEFAULT DIRECTORY (VAIBHAV...

Home > SQL databases >

Create SQL Database

Microsoft

Basics

Networking

Security

Additional settings

Tags

Review + create

Product details

SQL database

by Microsoft

Terms of use | Privacy policy

Estimated cost

Storage cost 27.36 INR / month + Compute cost 0.012299 INR / vCore second

Terms

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. For additional details see [Azure Marketplace Terms](#).

Basics

Subscription

Free Trial

Resource group

celebal-internship-vaibhav\_group

Region

North Europe

Database name

Avy's sql db

Server

(new) avy-server

Authentication method

SQL authentication

Server admin login

avy

Compute + storage

General Purpose - Serverless: Standard-series (Gen5), 1 vCore, 2 GB storage,

SQL

Cost summary

General Purpose (GP\_S\_Gen5\_1)

Cost per GB (in INR)

10.52

Max storage selected (in GB)

x 2.6

ESTIMATED STORAGE COST / MONTH

27.36 INR

COMPUTE COST / VCORE SECOND <sup>1</sup>

0.012299 INR

NOTES

<sup>1</sup> Serverless databases are billed in vCore seconds based on a combination of CPU and memory utilization. [Learn more about serverless billing](#)

Initializing deployment...

Initializing template deployment to resource group 'celebal-internship-vaibhav\_group'.

Validating...

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[Download a template for automation](#)

Final setup

```
# Configure a Virtual Network Rule for the SQL Server
az sql server vnet-rule create \
  --resource-group $resourcegroup \
  --server $sqlServerName \
  --name MyVnetRule \
  --vnet-name $vnetName \
  --subnet $subnet2Name \
  --output table
```

Edit the sql server for subnet 2  
And your done

- DID MANY THINGS HERE
- CREATED TWO VIRTUAL MACHINE
- CREATED A DB
- CONNECTED THE VMS TO SUBNET 1
- CONNECTED THE SQL SERVER TO SUBNET 2
- HOORAY !! END OF JOB

- ALSO IN GIT THERE IS THE CLI FILE FOR DOING IT IN A INSTANT