




## **Module 7: Hands-On: Creating a Bastion Host and Connecting a VM**

## Step 1: Go to Azure Portal and search for virtual networks and fill in the basic details

 Microsoft Azure

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 \*

Azure Pass - Sponsorship (4362042a-1e87-43ca-83aa-3c7ebc545a78) ▼

Resource group \*

Az-104 ▼

[Create new](#)

#### Instance details

Virtual network name \*

AzureBastionSubnet

Region ⓘ \*

(US) East US ▼

[Deploy to an edge zone](#)

**Step 2:** Enter the basic details under IP Addresses, add a subnet by the name AzureBastionSubnet and a subnet range of up to /26 and click on Add. Also make sure the subnet template should be Azure Bastion and then click on Save

[Home](#) > [Virtual networks](#) >

## Create virtual network ...

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

Configure your virtual network address space with the IPv4 and IPv6 addresses and subnets you need. [Learn more](#)

Define the address space of your virtual network with one or more IPv4 or IPv6 address ranges. Create subnets to segment the virtual network address space into smaller ranges for use by your applications. When you deploy resources into a subnet, Azure assigns the resource an IP address from the subnet. [Learn more](#)


Add an IP address space

10.0.0.0/16

+ Add a subnet ...

10.0.0.0 - 10.0.255.255 (65536 addresses)

Subnets	IP address range	Size	NAT gateway
default	10.0.0.0 - 10.0.0.255	/24 (256 addresses)	-

 A NAT gateway is recommended for outbound internet access from subnets. Edit the subnet to add a NAT gateway. [Learn more](#)

## Edit subnet



Select an address space and configure your subnet. You can customize a default subnet or select from subnet templates if you plan to add select services later. [Learn more](#)

IP address space ⓘ

10.0.0.0/16

10.0.0.0 - 10.0.255.255 (65536 addresses)

### Subnet details

Subnet template ⓘ

Azure Bastion

Name \* ⓘ

AzureBastionSubnet

Starting address \* ⓘ

10.0.0.0

Subnet size ⓘ

/26 (64 addresses)

IP address space ⓘ

10.0.0.0 - 10.0.0.63 (64 addresses)

### Security

Simplify internet access for virtual machines by using a network address translation gateway. Filter subnet traffic using a network security group. [Learn more](#)

NAT gateway ⓘ

None

Create new

Network security group ⓘ

None

Create new

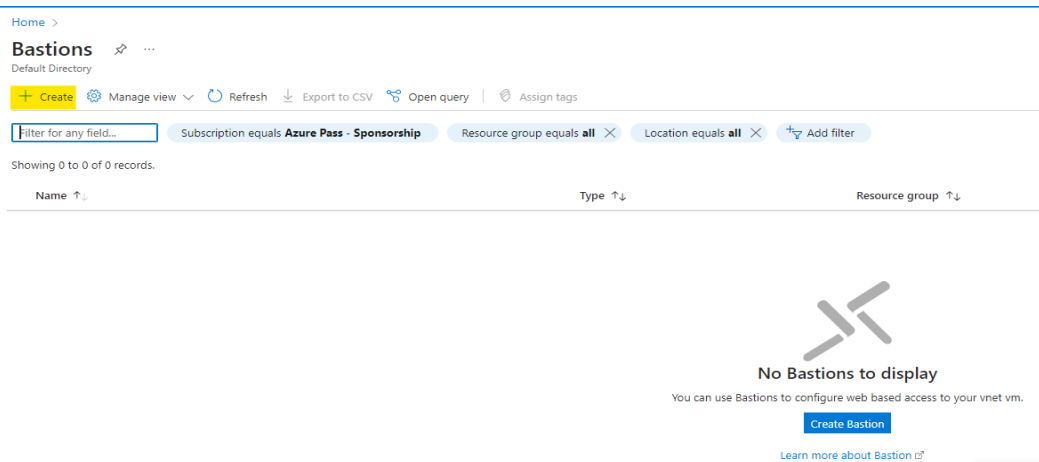
Route table

None

Save

Cancel

### Step 3: Go to the Azure Portal and search for Bastions, and then click on Create



### Step 4: Enter the details such as the name of the resource group, region, and virtual network. Select the subnet as AzureBastionSubnet, and then click on Review + create

Home > Bastions >

## Create a Bastion

Basics Tags Advanced Review + create

Bastion allows web based RDP access to your vnet VM. [Learn more](#)

**Project details**

Subscription \* Azure Pass - Sponsorship (4362042a-1e87-43ca-83aa-3c7ebc545a78)

Resource group \* Az-104  
[Create new](#)

**Instance details**

Name \* Bastion-demo ✓

Region \* East US

Tier \* Standard

Instance count \* 2

**Configure virtual networks**

Virtual network \* AzureBastionSubnet  
[Create new](#)

Subnet \* AzureBastionSubnet (10.0.0.0/26)  
[Manage subnet configuration](#)

**Public IP address**

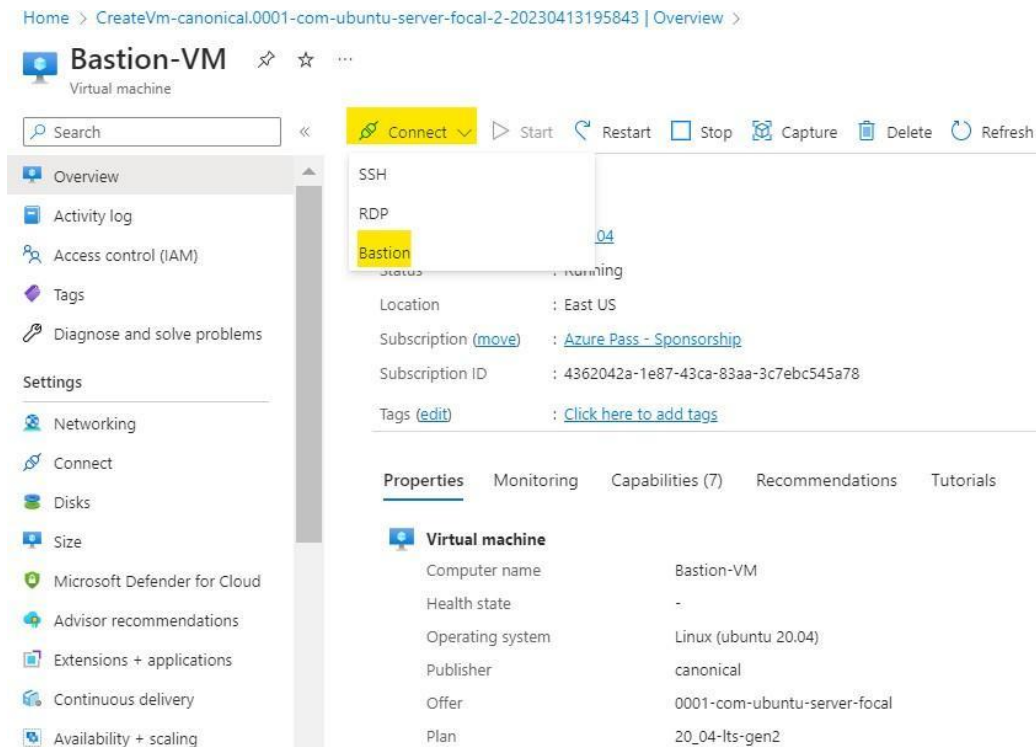
Public IP address \* ☒ Create new ☐ Use existing

Public IP address name \* AzureBastionSubnet-ip ✓

Public IP address SKU Standard

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

**Step 5:** To connect your virtual machine using Bastion, deploy a VM in the same virtual network, click on Connect and select Bastion



Home > CreateVm-canonical.0001-com-ubuntu-server-focal-2-20230413195843 | Overview >

### Bastion-VM

Virtual machine

Search

Connect Start Restart Stop Capture Delete Refresh

SSH  
RDP  
Bastion

Status: Running

Location: East US

Subscription (move): [Azure Pass - Sponsorship](#)

Subscription ID: 4362042a-1e87-43ca-83aa-3c7ebc545a78

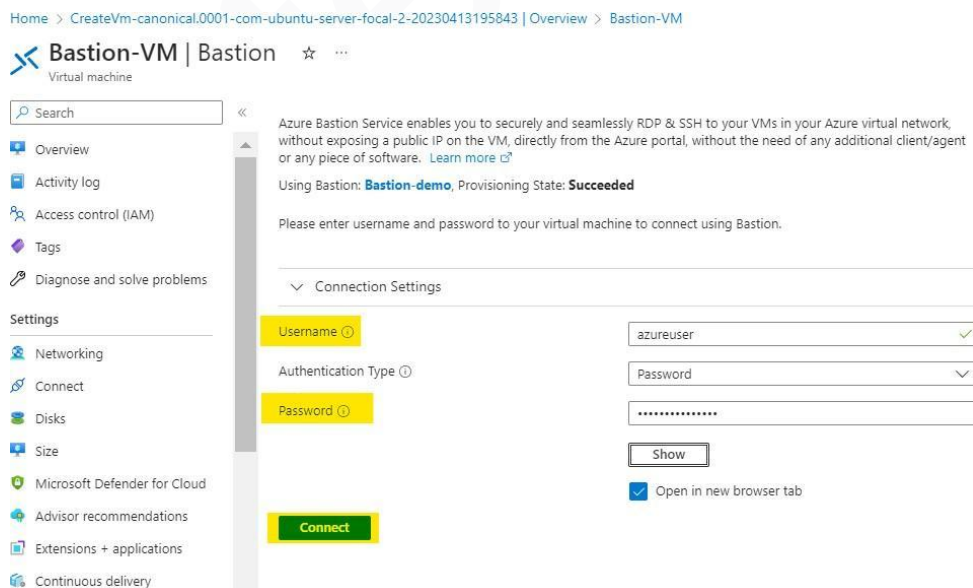
Tags (edit): [Click here to add tags](#)

Properties Monitoring Capabilities (7) Recommendations Tutorials

**Virtual machine**

Computer name	Bastion-VM
Health state	-
Operating system	Linux (ubuntu 20.04)
Publisher	canonical
Offer	0001-com-ubuntu-server-focal
Plan	20_04-lts-gen2

**Step 6:** Enter the username and password for the virtual machine and a new window will pop up for your virtual machine



Home > CreateVm-canonical.0001-com-ubuntu-server-focal-2-20230413195843 | Overview > Bastion-VM

### Bastion-VM | Bastion

Virtual machine

Search

Overview Activity log Access control (IAM) Tags Diagnose and solve problems

Settings

Networking Connect Disks Size Microsoft Defender for Cloud Advisor recommendations Extensions + applications Continuous delivery

Azure Bastion Service enables you to securely and seamlessly RDP & SSH to your VMs in your Azure virtual network, without exposing a public IP on the VM, directly from the Azure portal, without the need of any additional client/agent or any piece of software. [Learn more](#)

Using Bastion: **Bastion-demo**, Provisioning State: **Succeeded**

Please enter username and password to your virtual machine to connect using Bastion.

Connection Settings

Username: azureuser ✓

Authentication Type: Password

Password: [Masked]

Show

☒ Open in new browser tab

Connect

## Step 7: Here, your machine gets launched

```
<  →  ↻  bst-81fb0692-000f-4d38-bfe0-6eabef660672.bastion.azure.com/#/client/QmFzdGlvbi1WTQBjAGJpZnJvc3Q=?trustedAuthority=https:%2F...
* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:        https://ubuntu.com/advantage

System information as of Thu Apr 13 14:41:09 UTC 2023

System load:  0.02                Processes:            101
Usage of /:   5.3% of 28.89GB     Users logged in:     0
Memory usage: 29%                IPv4 address for eth0: 10.0.1.4
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update
New release '22.04.2 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Thu Apr 13 14:39:22 2023 from 10.0.0.4
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

azureuser@Bastion-VM:~$
```