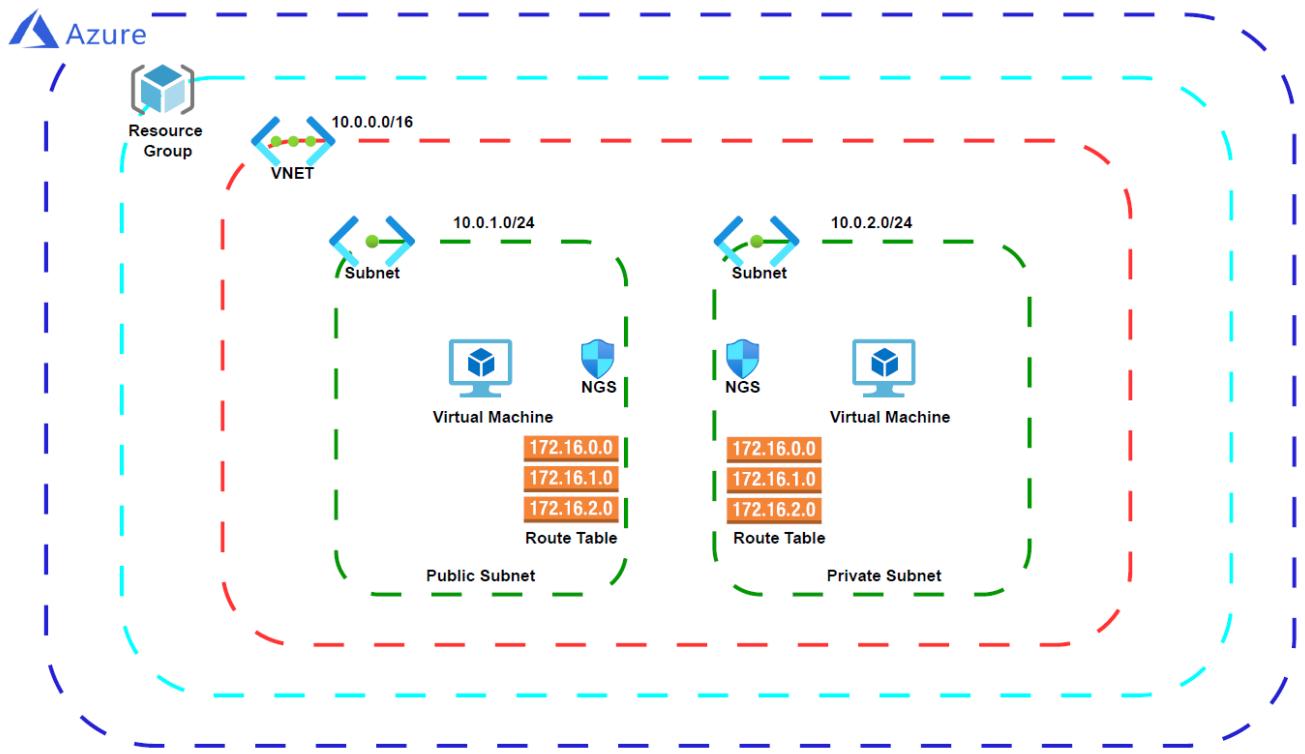


SECTION 13: AZURE NETWORKING

In this section, we are going to talk about the basic building blocks of Azure networking. Below is our targeted architectural diagram which we are going to implement for our Azure networking concept.



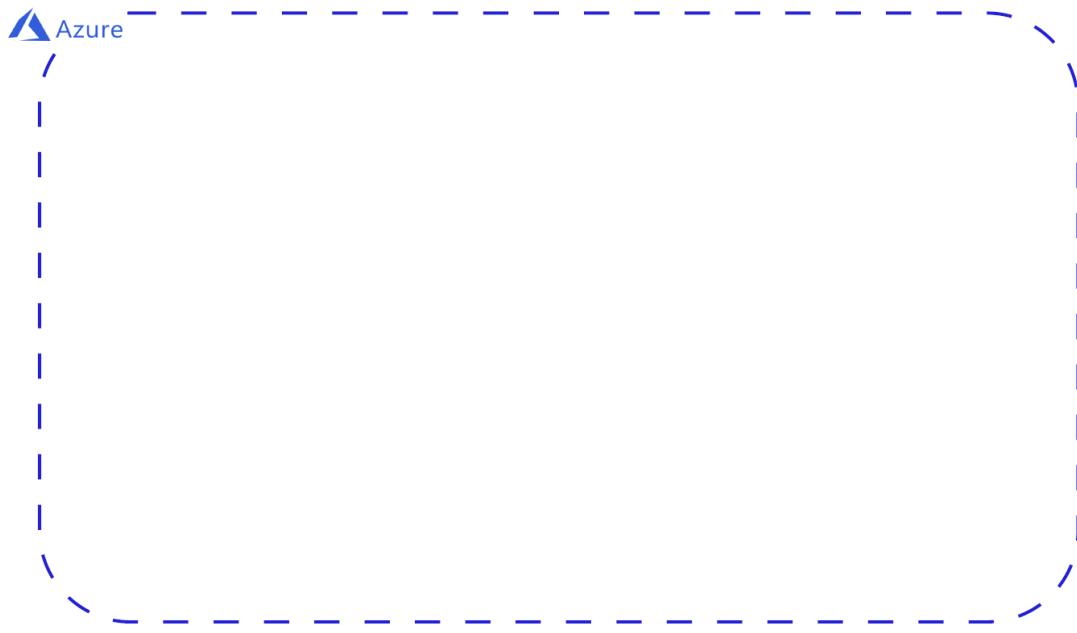
First, we are going to see how to create your resource group and how to attach the resource group with our billing subscription.

After that we are going to create our Virtual Network (VNet). In the VNet, we will be creating a public subnet and a private subnet. And in these subnets, we will be creating the network Security group along with the route table.

And at last, we are going to provision a virtual machine inside our public subnet as well as in our private subnet. And once these virtual machines are provisioned then we will try to access these virtual machines from our local laptop.

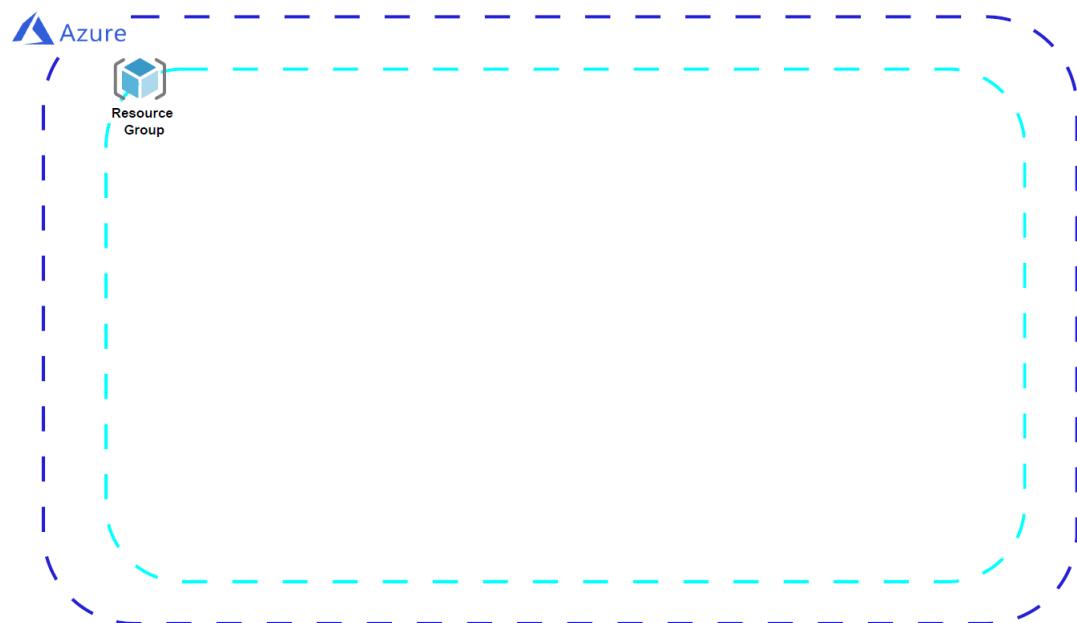
Part 1: Resource Group for Networking

Let us start from the scratch and wipe all the components from the above diagram.

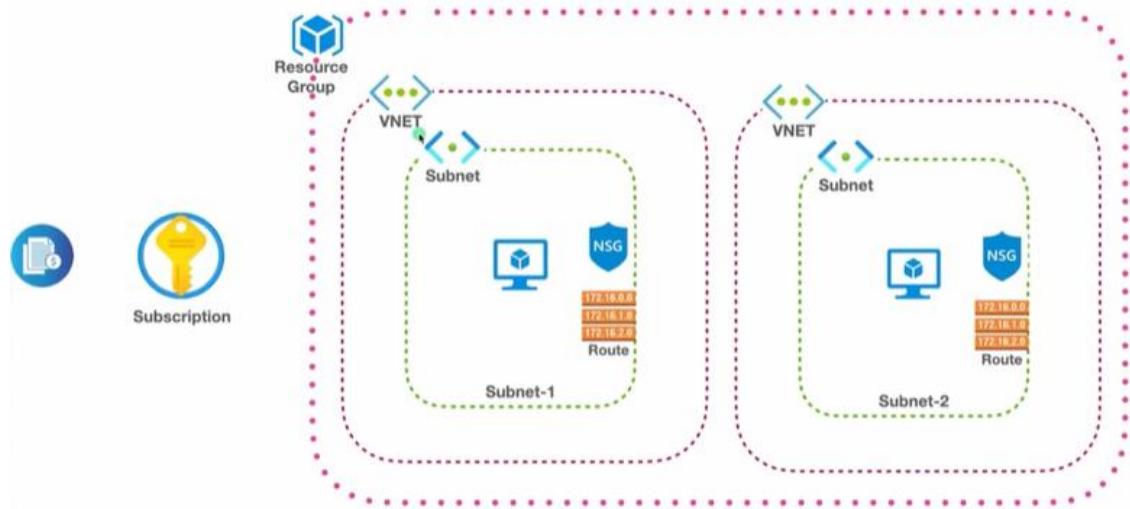


To start with our first component which is our Azure cloud. This is the block which represents Azure Cloud. This is our Azure account. So, I am assuming that you have already signed up for your Azure account.

Let's move ahead and see the next component.

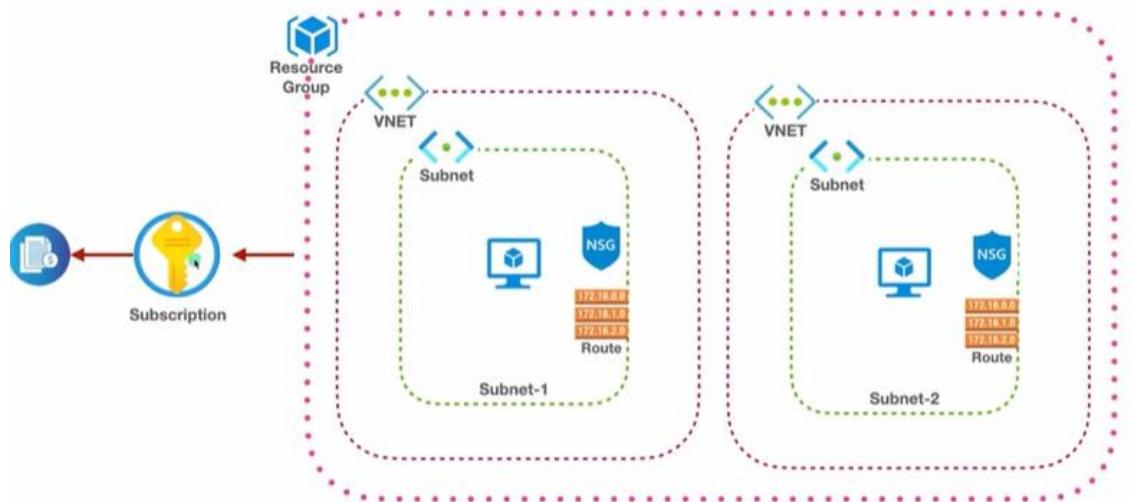


So here we are going to create a resource group. A resource group is just a logical unit where you can club the resources.



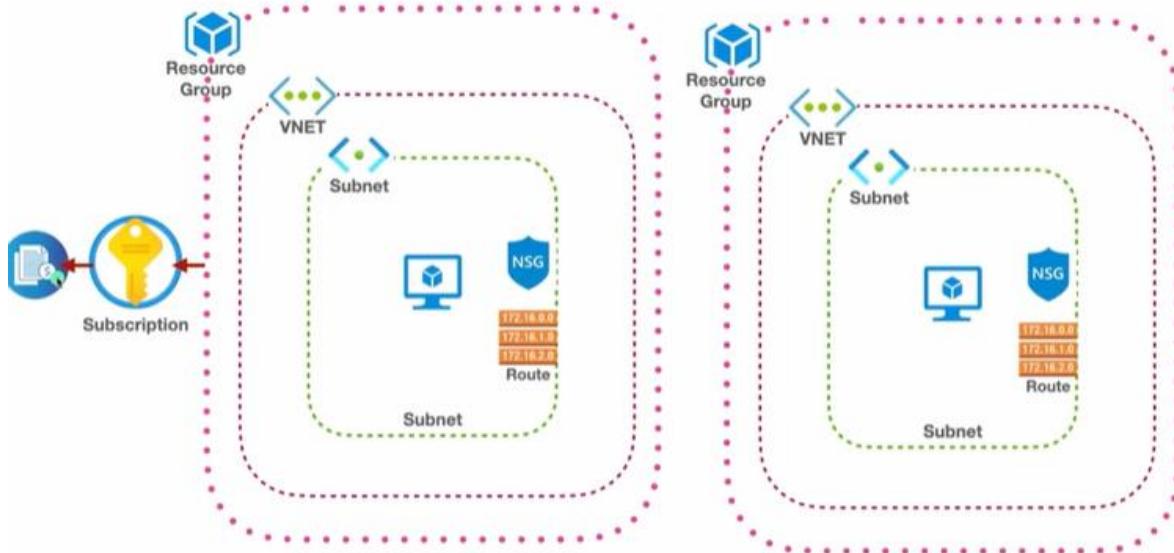
Here is an example to explain the logical grouping of our resource group. So here you can see I have created a resource group.

In that resource group you can create a multiple VNets. And in those Vnets you can create a multiple resource. So here is an example where I have created a two Vnets and in those Vnets we have a subnet, and in those subnets, you can create resources like a virtual machine or any other resources.



And that resource group is going to be mapped with your subscription. And that subscription is going to be mapped with your credit card, which you will be attaching with your Azure account.

Although on the diagram you can see a single resource group, but in reality, you can create a multiple resource group and all of those resource group will be attached to a particular subscription, which will eventually lead to your billing or credit card account, so that all of the resource group is attached to a single source from where it can be built and it can be invoiced. So, this is how this whole setup works.



This is one more example of resource group. So here you can see we have created two resource groups. And in those resource groups we have created a two separate VNets. And also, these resource group will be attached to a subscription and that will eventually lead to your single billing account.

So, this resource group totally depends upon you. What's your use case and how you want to segregate the resources for those particular resource group?

Let us not overcomplicate the thing. So, let us go ahead and create our own resource group onto our Azure portal.

Here is my Azure portal.

Welcome to Azure!

Don't have a subscription? Check out the following options.

Start with an Azure free trial
Get \$200 free credit toward Azure products and services, plus 12 months of popular free services.
[Start](#)

Manage Microsoft Entra ID
Manage access, set smart policies, and enhance security with Microsoft Entra ID.
[View](#) [Learn more](#)

Azure for Students
Get free software, Azure credit, or access Azure Dev Tools for Teaching after you verify your academic status.
[Start](#)

Azure services

Create a resource Quickstart Center Azure AI Foundry Kubernetes services Virtual machines App Services Storage accounts SQL databases Azure Cosmos DB More services

Resources

Recent Favorite

Name	Type	Last Viewed

And in the search box you can type “Resource Groups”.

The screenshot shows the Microsoft Azure portal interface. In the top navigation bar, there is a search bar containing the text "Resource Groups". Below the search bar, the "Services" section is expanded, showing a list of services. The "Resource groups" service is highlighted with a yellow background. To the right of the search results, there is a sidebar titled "Last Viewed" which lists several recent items with their last viewed times.

Click on the “Resource groups” under services.

The screenshot shows the "Resource Manager | Resource groups" page. On the left, there is a sidebar with navigation links including "Resource groups" (which is currently selected and highlighted in blue). At the top of the main content area, there is a toolbar with various buttons like "Create", "Manage view", "Refresh", and "Export to CSV". A red arrow points from the text above to the "Create" button. The main content area displays a table of existing resource groups, with two entries visible:

Name	Subscription	Location
rg-vm-demo-eus	Azure subscription 1	East US 2
soso	Azure subscription 1	East US 2

And here you can see there are a couple of resource groups which I have already created. But I am just going to create a new one. So, click on “create”.

Prepared by Sidney Smith Ebot

Microsoft Azure

Search resources, services, and docs (G+/)

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DEFAULT DIRECTORY (EBOTSIDN...)

Home > Resource Manager | Resource groups >

Create a resource group ...

Basics Tags Review + create

Resource group - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. [Learn more](#)

Subscription * ⓘ Azure subscription 1

Resource group name * ⓘ

Region * ⓘ (US) East US 2

Previous Next Review + create

Here you have selected the “**Subscription**”. For the “**resource group name**” you can enter the name; I will use the name “**demo-vnet-azure**”.

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Home > Resource Manager | Resource groups >

Create a resource group ...

Basics Tags Review + create

Resource group - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. [Learn more](#)

Subscription * ⓘ Azure subscription 1

Resource group name * ⓘ demo-vnet-azure

Region * ⓘ (US) East US 2

Previous Next Review + create

And here we need to select the region. So, I am just going to choose the nearest for me. So, I am just going to use “**East US 2**”.

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DEFAULT DIRECTORY (EBOTSIDNEY)

Home > Resource Manager | Resource groups >

Create a resource group

Basics Tags Review + create

Resource group - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. [Learn more](#)

Subscription * (Azure subscription 1)

Resource group name * (demo-vnet-azure)

Region * ((US) East US 2)

Previous Next Review + create

After that click on the “**Next**” tab.

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DEFAULT DIRECTORY (EBOTSIDNEY)

Home > Resource Manager | Resource groups >

Create a resource group

Basics Tags Review + create

Apply tags to your Azure resources to logically organize them by categories. A tag consists of a key (name) and a value. Tag names are case-insensitive and tag values are case-sensitive. [Learn more](#)

Name	Value	Resource
Resource group	Resource group	

Previous Next Review + create

Here we have the “**Tags**”, the “**tags**” is optional. If it's really needed then you can assign some meaningful tags for your resource group.

Then click on “**Review + Create**”.

Prepared by Sidney Smith Ebot

The screenshot shows the 'Create a resource group' wizard in the Microsoft Azure portal. The 'Review + create' tab is selected. The 'Automation Link' section is collapsed. The 'Basics' section shows the following details:

Subscription	Azure subscription 1
Resource group name	demo-vnet-azure
Region	East US 2

The 'Tags' section shows 'None'. At the bottom, there are 'Previous' and 'Next' buttons, and a prominent blue 'Create' button.

Here you have to review and created the “Resource Group”. Click on “Create”

The screenshot shows the 'Resource Manager | Resource groups' page in the Microsoft Azure portal. The 'Resource groups' section is selected in the sidebar. A success message 'Resource group created' is displayed on the right, stating: 'Creating resource group 'demo-vnet-azure' in subscription 'Azure subscription 1' succeeded.' Below the message are 'Go to resource gr...' and 'Pin to dashboard...' buttons. The main table lists three resource groups:

Name	Subscription	Location
rg-vm-demo-eus	Azure subscription 1	East US 2
soso	Azure subscription 1	East US 2

At the bottom, there is a note: 'Showing 1 - 2 of 2. Display count: auto' and a 'Give feedback' link.

And that will create our resource group. So here you can see our resource group has been created.

Refresh the page.

Prepared by Sidney Smith Ebot

Microsoft Azure

Resource Manager | Resource groups

You are viewing a new version of Browse experience. Click here to access the old experience.

Name	Subscription	Location
demo-vnet-azure	Azure subscription 1	East US 2
rg-vm-demo-eus	Azure subscription 1	East US 2
soso	Azure subscription 1	East US 2

Showing 1 - 3 of 3. Display count: auto

Give feedback

Click on this particular resource group.

Microsoft Azure

Resource Manager | Resource groups

You are viewing a new version of Browse experience. Click here to access the old experience.

Name
demo-vnet-azure
rg-vm-demo-eus
soso

demo-vnet-azure

Resource group

Overview

Essentials

Resources

Recommendations

No resources match your filters

Try changing or clearing your filters.

Create Clear filters Learn more

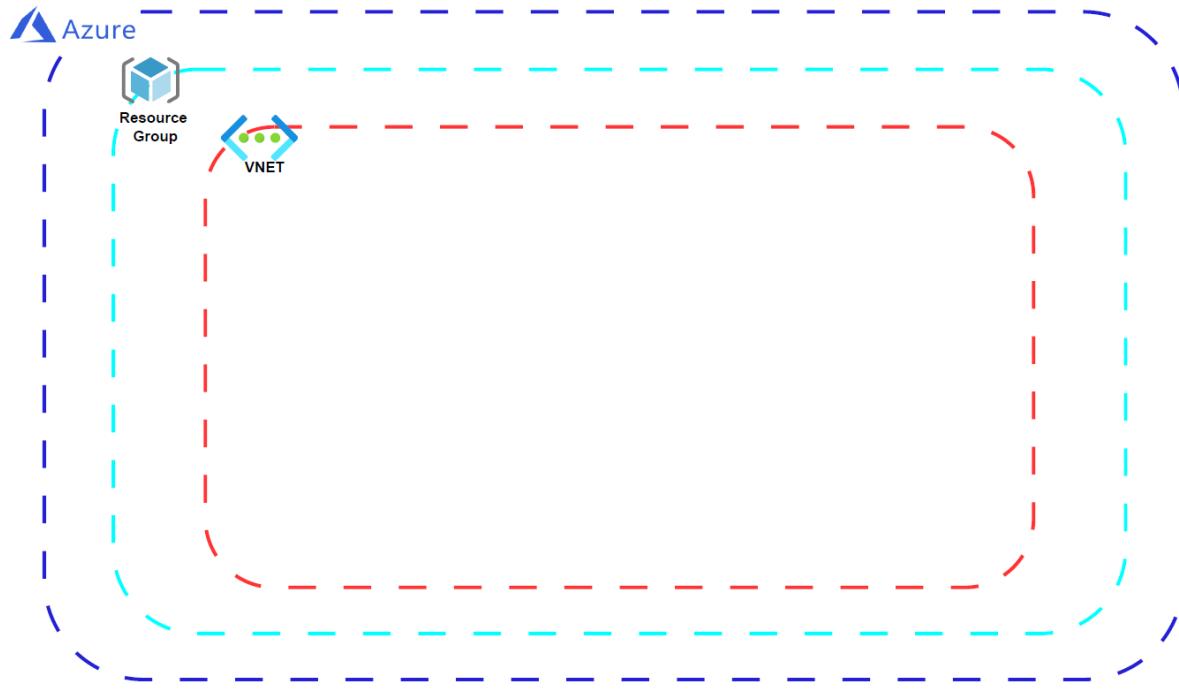
Showing 1 - 0 of 0. Display count: auto

Give feedback

And here these are the details associated with our resource group. And here you can see all of the resources list is completely empty. This is because we have not created any resource within that resource group that we are going to create pretty soon.

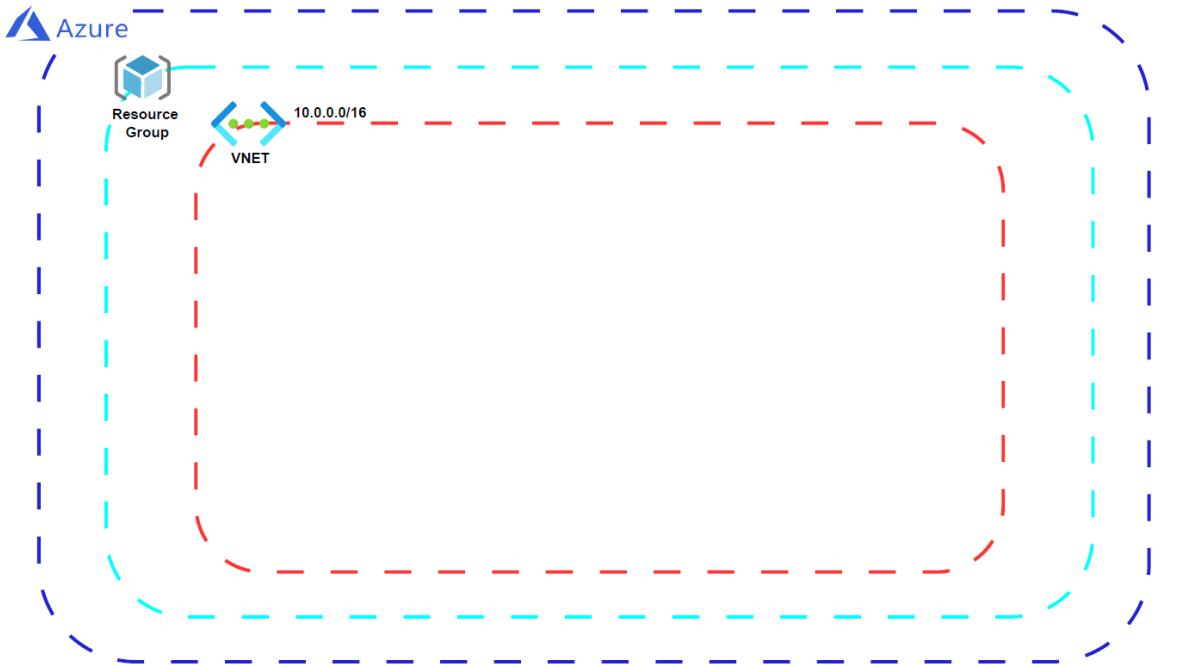
Part 2: Create the Virtual Network (VNET)

Let us move ahead and see what is the next component we need to create.



Here we need to create a VNet, the VNet is our Virtual Network. Whenever we create a virtual network then we need to define an IP range which we call it as a CIDR (Class Inter Domain Routing).

Here this is the IP range which we are going to assign which is **10.0.0.0/16**, which means this is the IP range which will be responsible for all the resources which we will be creating inside this virtual network.



So, here we need to create a VNet which is our virtual network. For that let us get back to our Azure portal.

The screenshot shows the Microsoft Azure portal interface. At the top, there's a search bar with the placeholder "Search resources, services, and docs (G+)" and a Copilot button. Below the search bar, the title "demo-vnet-azure" is displayed, along with a "Resource group" label. On the left, a sidebar lists various navigation options like Overview, Activity log, Access control (IAM), Tags, Resource visualizer, Events, Settings, Cost Management, Monitoring, Automation, and Help. The main content area shows a large gray cube icon and the message "No resources match your filters". Below this, there are buttons for "+ Create" and "Clear filters", and a link to "Learn more". At the bottom, it says "Showing 1 - 0 of 0. Display count: auto".

And here in the search box type “VNet”.

The screenshot shows the Microsoft Azure portal interface after searching for "VNet". A red arrow points from the search bar to the "Virtual networks" result in the search results pane. The search results pane also lists "Services" (57) and "Resources" (1). Under "Services", "Virtual networks" is selected. Under "Resources", there is one item: "demo-vnet" (Virtual network). Other listed items include "App Services", "Network connections", "Network foundations", "demo-vnet-azure" (Resource Group), "Microsoft Entra ID", "Microsoft Azure Vnet Verifier" (Service Principal), "Marketplace", "Flow log", "BB Storage and VNet Deployment", and "Azure for Basic Tokita environment: Azure Virtual Network for Azure Virtua...". The URL at the bottom of the page is "https://portal.azure.com/#view/HubsExtension/AssetMenuBlade/-/virtualnetworks/assetName/NetworkFoundation/extensionName/Microsoft_Azure_Network".

Then click on “Virtual Networks” over here.

Microsoft Azure

Search resources, services, and docs (G+)

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DEFAULT DIRECTORY (EBOTSID...)

Home > Network foundation

Network foundation | Virtual networks

Preview

Create Manage view Refresh Export to CSV Open query Assign tags Add to service group Group by none

You are viewing a new version of Browse experience. Click here to access the old experience.

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

Name	Resource Group	Location	Subscription
demo-vnet	rg-vm-demo-eus	East US 2	Azure subscription 1

Add or remove favorites by pressing **Ctrl+Shift+F**

Showing 1 - 1 of 1. Display count: auto

Give feedback

Here you need to click on “Create”.

Microsoft Azure

Search resources, services, and docs (G+)

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Home > Network foundation | 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 subscription 1

Resource group * demo-vnet-azure

[Create new](#)

Instance details

Virtual network name *

Region * (US) East US 2

[Deploy to an Azure Extended Zone](#)

Previous Next Review + create Give feedback

Here you need to select the “**subscription**” and then you need to select the “**resource group**”. So here I have already created the subscription. And also, I have created the resource group. So, I have selected both of it.

Prepared by Sidney Smith Ebot

The screenshot shows the 'Create virtual network' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. In the 'Project details' section, the 'Subscription' dropdown is set to 'Azure subscription 1' and the 'Resource group' dropdown is set to 'demo-vnet-azure'. In the 'Instance details' section, the 'Virtual network name' input field contains 'dev-demo-vnet-eus'. An orange arrow points from this input field to the 'Region' dropdown, which is set to '(US) East US 2'. At the bottom, there are 'Previous', 'Next', and 'Review + create' buttons, with 'Review + create' being the active button.

Then, we have to give the “Virtual Network” a name. We will call it “**dev-demo-vnet-eus**”

The screenshot shows the 'Create virtual network' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. In the 'Project details' section, the 'Subscription' dropdown is set to 'Azure subscription 1' and the 'Resource group' dropdown is set to 'demo-vnet-azure'. In the 'Instance details' section, the 'Virtual network name' input field contains 'dev-demo-vnet-eus'. An orange arrow points from the 'Virtual network name' input field to the 'Region' dropdown, which is set to '(US) East US 2'. At the bottom, there are 'Previous', 'Next', and 'Review + create' buttons, with 'Next' being the active button.

And then click on “**Next**” over here.

The screenshot shows the Microsoft Azure portal interface for creating a virtual network. The top navigation bar includes 'Microsoft Azure', a search bar, and various account and service icons. The main title is 'Create virtual network'. The 'Security' tab is active, indicated by a blue underline. Below the tabs, a note says: 'Enhance the security of your virtual network with these additional paid security services. [Learn more](#)'.

Virtual network encryption: A note states: 'Enable Virtual network encryption to encrypt traffic traveling within the virtual network. Virtual machines must have accelerated networking enabled. Traffic to public IP addresses is not encrypted. [Learn more](#)'. There is a checked checkbox labeled 'Virtual network encryption'.

Azure Bastion: A note states: 'Azure Bastion is a paid service that provides secure RDP/SSH connectivity to your virtual machines over TLS. When you connect via Azure Bastion, your virtual machines do not need a public IP address. [Learn more](#)'. There is an unchecked checkbox labeled 'Enable Azure Bastion'.

Azure Firewall: A note states: 'Azure Firewall is a managed cloud-based network security service that protects your Azure Virtual Network resources. [Learn more](#)'. There is an unchecked checkbox labeled 'Azure Firewall'.

At the bottom of the page are navigation buttons: 'Previous', 'Next', and a prominent blue 'Review + create' button. On the far right, there is a link 'Give feedback'.

And here we need to specify some of the checkbox. We will try to keep it minimal so that you understand the concept rather than focusing on the advanced concept.

So “**virtual network encryption**” we are just going to leave it. We are just not going to enable the encryption. But if you really want the security onto your virtual network then you can enable it.

Azure Bastion we will cover into the upcoming chapter. So just skip that one. Also, **Azure Firewall**, just skip that one.

Also, “**DDoS protection**”. We are also going to skip as of now because we are just focusing on the VNet subnet part of it.

Prepared by Sidney Smith Ebot

The screenshot shows the 'Create virtual network' wizard in the Microsoft Azure portal, specifically the 'Security' step. The page title is 'Create virtual network ...'. The 'Security' tab is selected, while 'Basics', 'IP addresses', and 'Review + create' are also visible. A red arrow points from the text 'Configure your virtual network address space with the IPv4 and IPv6 addresses and subnets you need.' down to the 'Next' button at the bottom of the page.

Enhance the security of your virtual network with these additional paid security services. [Learn more](#)

Virtual network encryption

Enable Virtual network encryption to encrypt traffic traveling within the virtual network. Virtual machines must have accelerated networking enabled. Traffic to public IP addresses is not encrypted. [Learn more](#)

Virtual network encryption

Azure Bastion

Azure Bastion is a paid service that provides secure RDP/SSH connectivity to your virtual machines over TLS. When you connect via Azure Bastion, your virtual machines do not need a public IP address. [Learn more](#)

Enable Azure Bastion

Azure Firewall

Azure Firewall is a managed cloud-based network security service that protects your Azure Virtual Network resources. [Learn more](#)

Previous Review + create

Then just click on “Next” over here.

The screenshot shows the 'Create virtual network' wizard in the Microsoft Azure portal, specifically the 'IP addresses' step. The page title is 'Create virtual network ...'. The 'IP addresses' tab is selected, while 'Basics', 'Security', and 'Review + create' are also visible. A red arrow points from the text 'Configure your virtual network address space with the IPv4 and IPv6 addresses and subnets you need.' down to the 'Next' button at the bottom of the page.

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](#)

Allocate using IP address pools. [Learn more](#)

+ Add a subnet

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

10.0.0.0/16
This address prefix overlaps with virtual network 'demo-vnet'. If you intend to peer these virtual networks, change the address space. [Learn more](#)

10.0.0.0 /16

10.0.0.0 - 10.0.255.255 65,536 addresses

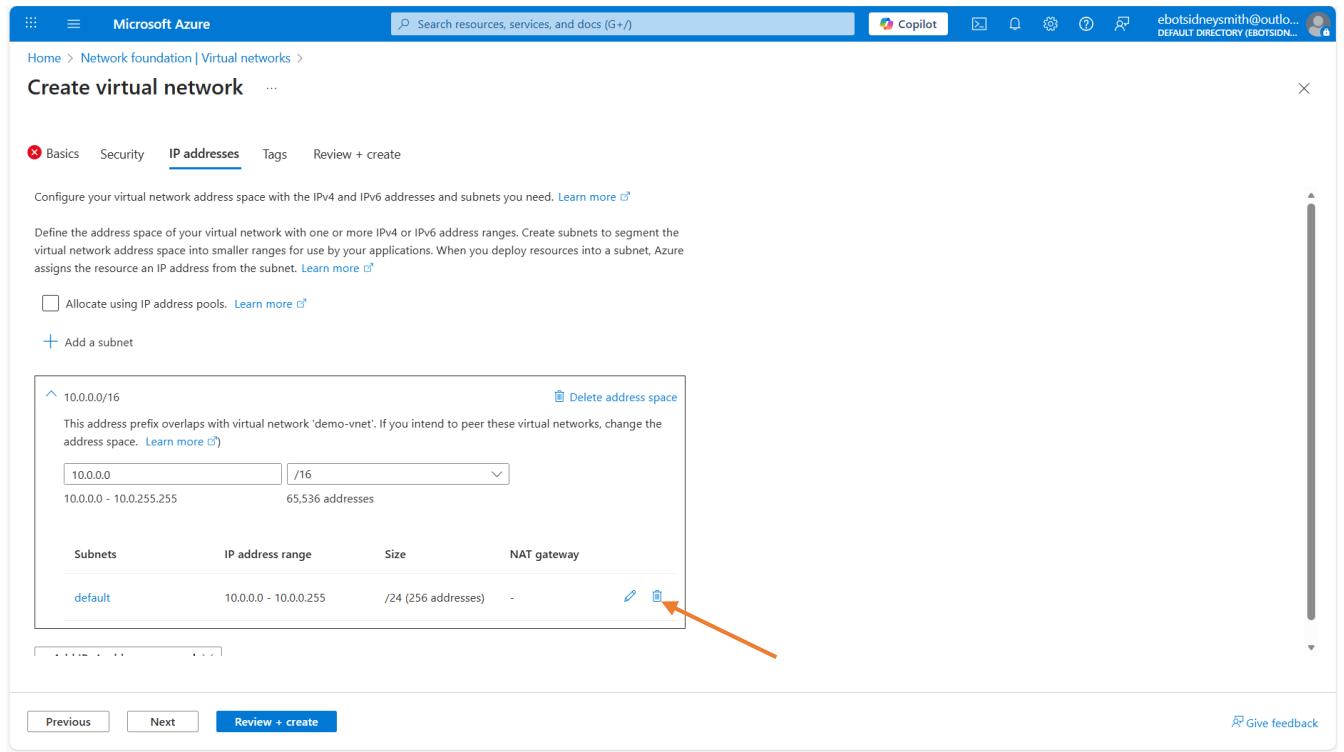
Subnets IP address range Size NAT gateway

default 10.0.0.0 - 10.0.0.255 /24 (256 addresses) -

Previous Review + create

Here is the CIDR range which I was talking about. So here is the IP range which is “**10.0.0.0/16**”. And here you can see it is allowing me to have 65,536 IP addresses.

Prepared by Sidney Smith Ebot



Microsoft Azure

Search resources, services, and docs (G+/)

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ebotsidneysmith@outlook.com DEFAULT DIRECTORY (EBOTSID...)

Home > Network foundation | 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](#)

Allocate using IP address pools. [Learn more](#)

+ Add a subnet

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

[Delete address space](#)

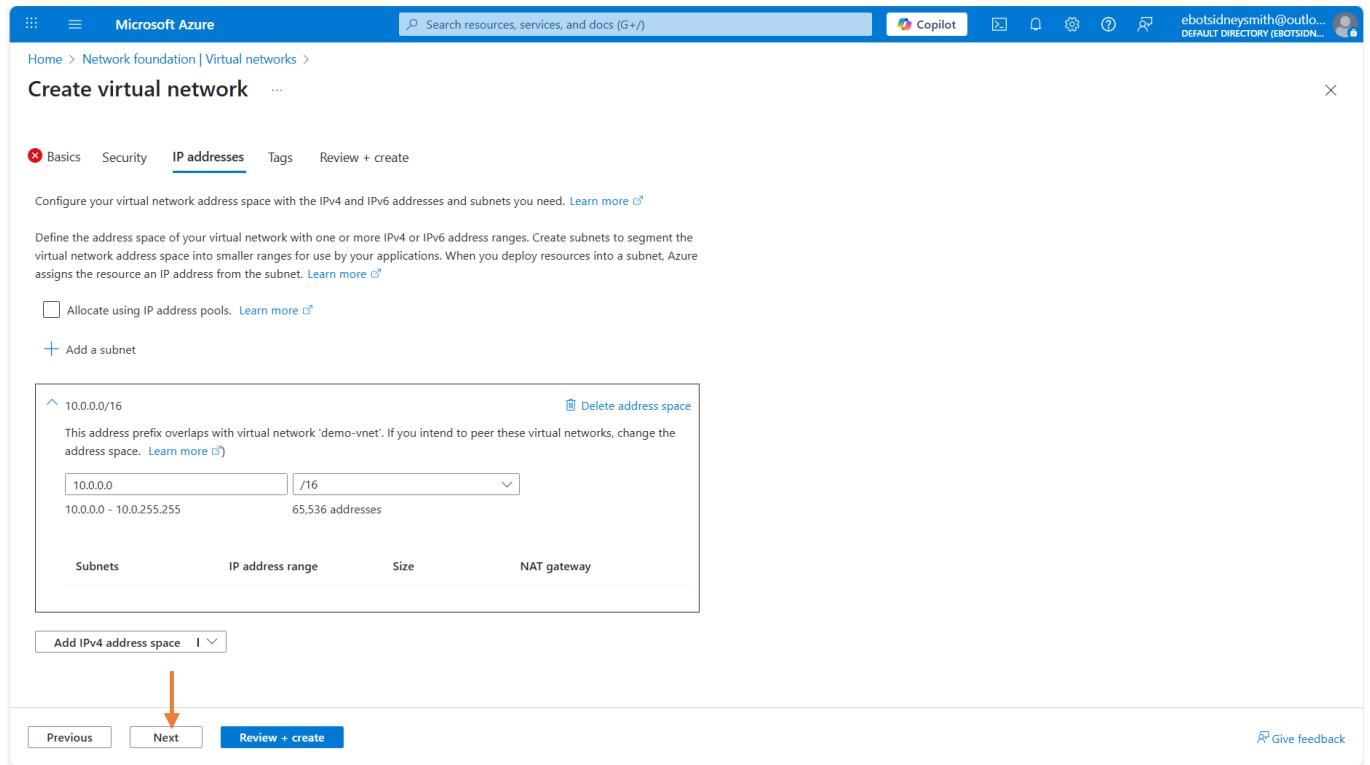
10.0.0.0/16
This address prefix overlaps with virtual network 'demo-vnet'. If you intend to peer these virtual networks, change the address space. [Learn more](#)
10.0.0.0 /16
10.0.0.0 - 10.0.255.255 65,536 addresses

Subnets IP address range Size NAT gateway

default 10.0.0.0 - 10.0.0.255 /24 (256 addresses) -

Previous Next Review + create Give feedback

But we are just starting everything from the scratch. We are going to create our own **subnet**. So, we are just going to **delete** this over here.



Microsoft Azure

Search resources, services, and docs (G+/)

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Home > Network foundation | 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](#)

Allocate using IP address pools. [Learn more](#)

+ Add a subnet

Subnets	IP address range	Size	NAT gateway
---------	------------------	------	-------------

[Delete address space](#)

10.0.0.0/16
This address prefix overlaps with virtual network 'demo-vnet'. If you intend to peer these virtual networks, change the address space. [Learn more](#)
10.0.0.0 /16
10.0.0.0 - 10.0.255.255 65,536 addresses

Subnets IP address range Size NAT gateway

Add IPv4 address space |

Previous Next Review + create Give feedback

Here we have defined the IP addresses range for our virtual network. Then click on “**Next**” over here.

Prepared by Sidney Smith Ebot

Screenshot of the Microsoft Azure 'Create virtual network' Tags page. The 'Tags' tab is selected. A table shows a single tag entry: Name is empty, Value is empty, and Resource is set to 'All resources selected'. Below the table are 'Previous', 'Next', and 'Review + create' buttons. An orange arrow points from the 'Tags' tab down to the 'Next' button.

Here “**Tags**” is optional. We will just skip it and then click on “**Next**”.

Screenshot of the Microsoft Azure 'Create virtual network' Basics page. A green banner at the top says 'Validation passed'. The 'Review + create' tab is selected. The 'Basics' section contains the following configuration:

Subscription	Azure subscription 1
Resource Group	demo-vnet-azure
Name	dev-demo-vnet-eus
Region	East US 2

The 'Security' and 'IP addresses' sections show that all features are disabled. The 'Tags' section is empty. At the bottom are 'Previous', 'Next', and 'Create' buttons, along with a link to download a template for automation.

Review and click on “**Create**”. And once the VNet is created, then you will be redirected to the home page of our VNet.

Microsoft Azure

Home > dev-demo-vnet-eus-1764526043910 | Overview

Deployment

Search

Delete Cancel Redeploy Download Refresh

Overview

Your deployment is complete

Deployment name : dev-demo-vnet-eus-1764526043910
Subscription : Azure subscription 1
Resource group : demo-vnet-azure

Start time : 11/30/2025, 1:07:27 PM
Correlation ID : 754c20ed-cf0-4b68-b027-b75780a31549

Deployment details

Next steps

Go to resource

Give feedback Tell us about your experience with deployment

Cost management
Get notified to stay within your budget and prevent unexpected charges on your bill.
[Set up cost alerts >](#)

Microsoft Defender for Cloud
Secure your apps and infrastructure
[Go to Microsoft Defender for Cloud >](#)

Free Microsoft tutorials
[Start learning today >](#)

Work with an expert
Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support.
[Find an Azure expert >](#)

The VNet has been created. Click on “Go to resource”

Microsoft Azure

Home > dev-demo-vnet-eus-1764526043910 | Overview

dev-demo-vnet-eus Virtual network

Search

Move Delete Refresh Give feedback

Overview

Essentials

Resource group (move) : demo-vnet-azure	Address space : 10.0.0.0/16
Location (move) : East US 2	Subnets : 0 subnets
Subscription (move) : Azure subscription 1	DNS servers : Azure provided DNS service
Subscription ID : dd5d4252-9ca5-4581-9dc7-b63c0788bde7	BGP community string : Configure
Tags (edit) : Add tags	Virtual network ID : 68561fb0-829b-4355-986b-0a221ce5d52e

Topology Properties Capabilities (5)

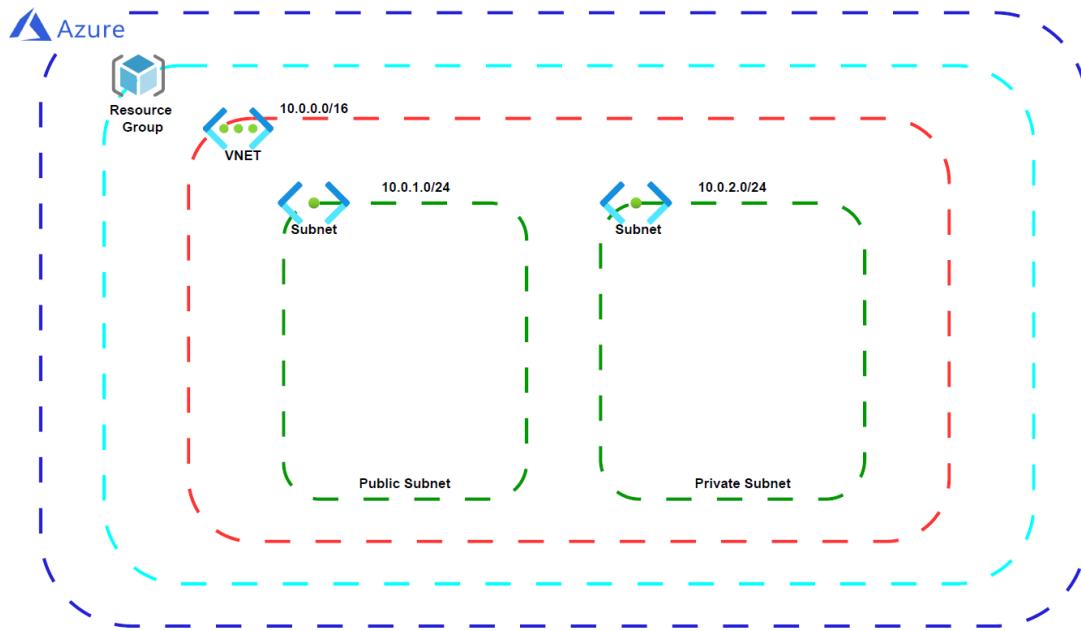
Capabilities (5)

- 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
- Peering**
 Seamlessly connect two or more virtual networks.
Not configured
- Private endpoints**
Privately access Azure services without sending traffic across internet.
Not configured
- Microsoft Defender for Cloud**
Strengthen the security posture of your environment.

Here you can see this is the name of my VNet.

Part 3: Create the Subnets

The next component we need to create is the “Subnets”. We will be creating one public subnet and one private subnet.



Let us go back to our Azure portal.

A screenshot of the Microsoft Azure portal homepage. At the top, there is a navigation bar with the 'Microsoft Azure' logo, a search bar containing 'Search resources, services, and docs (G+/-)', and several icons for Copilot, AI, settings, and user profile. Below the navigation bar is a section titled 'Azure services' with icons for 'Create a resource', 'Virtual networks', 'Resource groups', 'Subscriptions', 'Public IP addresses', 'NAT gateways', 'Network security groups', 'Virtual machines', 'SSH keys', and 'More services'. An orange arrow points from the search bar area down towards the 'Resources' section. The main content area is titled 'Resources' and shows a table of recent resources. The table has columns for 'Name', 'Type', and 'Last Viewed'. The resources listed are: 'dev-demo-vnet-eus' (Virtual network, 48 minutes ago), 'demo-vnet-azure' (Resource group, 2 hours ago), 'demo-vnet' (Virtual network, 4 days ago), 'rg-vm-demo-eus' (Resource group, 6 days ago), 'ssh-demo-key' (SSH key, 6 days ago), 'demoprojectwebfiles' (Storage account, 6 days ago), 'soso' (Resource group, 6 days ago), 'sosoebotprod' (Storage account, 2 weeks ago), 'sosoebotqa' (Storage account, 2 weeks ago), and 'sosoebottst' (Storage account, 2 weeks ago). At the bottom of the resources section is a link 'See all'. Below the resources is a 'Navigate' section with a map icon and a dropdown menu.

We need to go to VNet since we will be creating our subnets in the VNet. So, search for “VNet”.

The screenshot shows the Microsoft Azure portal interface. At the top, there is a search bar with the text "VNet". Below the search bar, under the heading "Services", the "Virtual networks" option is highlighted with an orange arrow. To the right, there is a sidebar titled "Last Viewed" listing various resources like "Virtual machines", "SSH keys", and "More services".

Select “VNet” under “Services”

The screenshot shows the "Network foundation | Virtual networks" page in the Microsoft Azure portal. On the left, there is a navigation menu with "Virtual network" selected. The main area displays a table of virtual networks:

	Name	Resource Group	Location	Subscription
<input type="checkbox"/>	demo-vnet	rg-vm-demo-eus	East US 2	Azure subscription 1
<input type="checkbox"/>	dev-demo-vnet-eus	demo-vnet-azure	East US 2	Azure subscription 1

An orange arrow points to the row for "dev-demo-vnet-eus".

You can see the subnet we created. Click on it.

The screenshot shows the Microsoft Azure portal interface. In the top navigation bar, the user is in the 'Network foundation | Virtual networks' section. Below the navigation bar, the main content area displays a 'Network found...' blade for a virtual network named 'dev-demo-vnet-eus'. The left sidebar contains a list of options: 'Name ↑', 'demo-vnet', and 'dev-demo-vnet-eus'. The 'Settings' option under 'Resource visualizer' is highlighted with an orange arrow. The right side of the screen shows the 'Overview' tab of the virtual network's settings, including details like Resource group (demo-vnet-azure), Location (East US 2), Subscription (Azure subscription 1), and Address space (10.0.0.0/16). The 'Capabilities (5)' tab is selected, showing sections for DDoS protection and Azure Firewall, both of which are currently 'Not configured'.

Click on “Settings”

This screenshot is similar to the previous one, showing the 'Network found...' blade for the same virtual network. The 'Settings' link in the left sidebar has been expanded, revealing a list of configuration options: Address space, Connected devices, Subnets, Bastion, DDoS protection, Firewall, Microsoft Defender for Cloud, Network manager, DNS, Peerings, Service endpoints, Private endpoints, and Peering. The 'Subnets' link is highlighted with an orange arrow. The rest of the interface and settings are identical to the first screenshot.

Click on “Subnets”

Microsoft Azure

Home > Network foundation | Virtual networks > dev-demo-vnet-eus

Network found...

dev-demo-vnet-eus | Subnets

+ Subnet

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.

Name ↑	IPv4	IPv6	Available IPs	Delegated to	Security group	Route table
No items found						

No subnets

Add or remove favorites by pressing **Ctrl+Shift+F**

Here you can see that no subnet has been created so far. Now, we are going to create our public and private subnet. Click on “**Subnet**”

Microsoft Azure

Home > Network foundation | Virtual networks > dev-demo-vnet-eus

Network found...

dev-demo-vnet-eus | Virtual network

Add a 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](#)

Subnet purpose	<input checked="" type="checkbox"/> Default
Name	<input type="text"/> default

IPv4

Include an IPv4 address space

IPv4 address range 10.0.0.0/16
10.0.0 - 10.0.255.255

Starting address * 10.0.0.0

Size /24 (256 addresses)

Subnet address range 10.0.0 - 10.0.0.255

IPv6

Include an IPv6 address space This virtual network has no IPv6 address ranges.

Private subnet

Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. [Learn more](#)

Enable private subnet (no default outbound access)

After March 31, 2026, private subnet will be the default selection for new virtual networks. [Learn more](#)

Add **Cancel**

Add or remove favorites by pressing **Ctrl+Shift+F**

Let's start with our public subnet. On “**Subnet Purpose**”, we are going to leave it as “**Default**”

Add a 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](#)

Subnet purpose Default

Name * default

IPv4

Include an IPv4 address space

IPv4 address range 10.0.0.0 - 10.0.255.255

Starting address *

Size 10.0.0.0 - 10.0.0.255

Subnet address range

IPv6

Include an IPv6 address space This virtual network has no IPv6 address ranges.

Private subnet

Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. [Learn more](#)

Enable private subnet (no default outbound access)

Info After March 31, 2026, private subnet will be the default selection for new virtual networks. [Learn more](#)

Add **Cancel** **Give feedback**

The next thing is to give the subnet a name, I will call it “**dev-demo-public-subnet-eus**”.

Add a 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](#)

Subnet purpose Default

Name * dev-demo-public-subnet-eus

IPv4

Include an IPv4 address space

IPv4 address range 10.0.0.0 - 10.0.255.255

Starting address *

Size 10.0.0.0 - 10.0.0.255

Subnet address range

IPv6

Include an IPv6 address space This virtual network has no IPv6 address ranges.

Private subnet

Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. [Learn more](#)

Enable private subnet (no default outbound access)

Info After March 31, 2026, private subnet will be the default selection for new virtual networks. [Learn more](#)

Add **Cancel** **Give feedback**

Here this is our VNet IP range which is “**10.0.0.0/16**” per the architecture’s requirement.

Add a 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](#)

Subnet purpose: Default

Name: dev-demo-public-subnet-eus

IPv4

Include an IPv4 address space:

IPv4 address range: 10.0.0.0/16
10.0.0 - 10.0.255.255

Starting address: 10.0.0.0

Size: /24 (256 addresses)

Subnet address range: 10.0.0.0 - 10.0.0.255

IPv6

Include an IPv6 address space: This virtual network has no IPv6 address ranges.

Private subnet

Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. [Learn more](#)

Enable private subnet (no default outbound access):

i After March 31, 2026, private subnet will be the default selection for new virtual networks. [Learn more](#)

Add **Cancel** **Give feedback**

This is where we are going to define our subnet IP Range. We are going to put “**10.0.1.0/24**”.

Add a 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](#)

Subnet purpose: Default

Name: dev-demo-public-subnet-eus

IPv4

Include an IPv4 address space:

IPv4 address range: 10.0.0.0/16
10.0.0 - 10.0.255.255

Starting address: 10.0.1.0

Size: /24 (256 addresses)

Subnet address range: 10.0.1.0 - 10.0.1.255

IPv6

Include an IPv6 address space: This virtual network has no IPv6 address ranges.

Private subnet

Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. [Learn more](#)

Enable private subnet (no default outbound access):

i After March 31, 2026, private subnet will be the default selection for new virtual networks. [Learn more](#)

Add **Cancel** **Give feedback**

Scroll down to “**IPv6**”

Add a subnet

Subnet address range: 10.0.1.0 - 10.0.1.255

IPv6

Include an IPv6 address space: This virtual network has no IPv6 address ranges.

Private subnet

Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. [Learn more](#)

Enable private subnet (no default outbound access):

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

Network security group: None

Route table: None

Service Endpoints

Create service endpoint policies to allow traffic to specific azure resources from your virtual network over service endpoints. [Learn more](#)

Add **Cancel** **Give feedback**

Leave it as default and scroll down to “Private Subnet”

Add a subnet

Subnet address range: 10.0.1.0 - 10.0.1.255

Private subnet

Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. [Learn more](#)

Enable private subnet (no default outbound access):

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

Network security group: None

Route table: None

Service Endpoints

Create service endpoint policies to allow traffic to specific azure resources from your virtual network over service endpoints. [Learn more](#)

Services **Remove service endpoint**

Select a service endpoint:

Add **Cancel** **Give feedback**

Since this is a public subnet, we are going to leave the box on “**Enable private subnet (no default outbound access)**” as unchecked.

Add a subnet

Private subnet
Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. [Learn more](#)

Enable private subnet (no default outbound access)

After March 31, 2026, private subnet will be the default selection for new virtual networks. [Learn more](#)

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

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

Network security group

Route table

Service Endpoints
Create service endpoint policies to allow traffic to specific azure resources from your virtual network over service endpoints. [Learn more](#)

Services **Remove service endpoint**

Add **Cancel** [Give feedback](#)

Scroll down to “Security”

Add a subnet

Private subnet
Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. [Learn more](#)

Enable private subnet (no default outbound access)

After March 31, 2026, private subnet will be the default selection for new virtual networks. [Learn more](#)

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

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

Network security group

Route table

Service Endpoints
Create service endpoint policies to allow traffic to specific azure resources from your virtual network over service endpoints. [Learn more](#)

Services **Remove service endpoint**

Subnet Delegation
Delegate subnet to a service

Network Policy for Private Endpoints
The network policy affects the types of network policies that control traffic going to the private endpoints in this subnet. [Learn more](#)

Private endpoint network policy

Add **Cancel** [Give feedback](#)

Here, we are not going to change anything since we are going to create everything from our own setting.
Then click on “Add”

The screenshot shows the Microsoft Azure portal interface. The left sidebar lists resources: Name ↑, demo-vnet, and dev-demo-vnet-eus. The main area shows the 'Subnets' section for 'dev-demo-vnet-eus'. A red arrow points to the '+ Subnet' button at the top left of the subnet list. The list table has columns: Name ↑, IPv4, IPv6, Available IPs, Delegated to, Security group, and Route table. One row is shown: dev-demo-... with IP 10.0.1.0/24 and 251 available IPs.

We have successfully added the public subnet. Let us create our private subnet as well.

Click on “Subnet”

The screenshot shows the Microsoft Azure portal interface with the 'Add a subnet' dialog open. The left sidebar is identical to the previous screenshot. The right side shows the 'Add a subnet' form. A red arrow points to the 'Default' dropdown under 'Subnet purpose'. Other fields include 'Name' (default), 'IPv4' settings (address range 10.0.0.0/16, starting address 10.0.0.0, size /24), and 'IPv6' settings (checkbox unchecked). The 'Private subnet' section is also visible.

Let's start with our public subnet. On “Subnet Purpose”, we are going to leave it as “Default”

The screenshot shows the Microsoft Azure portal interface. On the left, there's a sidebar with navigation links like 'Home', 'Create', 'Manage view', and a note about viewing a new version of the browser experience. The main area is titled 'dev-demo-vnet-eus' and shows a 'Subnets' section. On the right, a modal window titled 'Add a subnet' is open. It has sections for 'Subnet purpose' (set to 'Default'), 'IPv4' (IPV4 address range set to '10.0.0.0/16'), and 'IPv6' (checkbox unchecked). There's also a 'Private subnet' section with a checkbox for enabling private subnet outbound access. At the bottom of the modal are 'Add' and 'Cancel' buttons.

The next thing is to give the subnet a name, I will call it “**dev-demo-private-subnet-eus**”.

This screenshot is similar to the previous one but with a different value in the 'Name' field of the 'Add a subnet' dialog. The 'Name' field now contains 'dev-demo-private-subnet-eus', which is highlighted with an orange arrow. The rest of the dialog and the surrounding Azure interface remain the same.

Here this is our VNet IP range which is “**10.0.0.0/16**” per the architecture’s requirement.

Add a 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](#)

Subnet purpose Default

Name * dev-demo-private-subnet-eus

IPv4

Include an IPv4 address space

IPv4 address range 10.0.0.0 - 10.0.255.255

Starting address * 10.0.0

Size /24 (256 addresses)

Subnet address range 10.0.0.0 - 10.0.0.255

IPv6

Include an IPv6 address space This virtual network has no IPv6 address ranges.

Private subnet

Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. [Learn more](#)

Enable private subnet (no default outbound access)

After March 31, 2026, private subnet will be the default selection for new virtual networks. [Learn more](#)

Add **Cancel** **Give feedback**

This is where we are going to define our subnet IP Range. We are going to put “10.0.2.0/24”.

Add a 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](#)

Subnet purpose Default

Name * dev-demo-private-subnet-eus

IPv4

Include an IPv4 address space

IPv4 address range 10.0.0.0 - 10.0.255.255

Starting address * 10.0.2.0

Size /24 (256 addresses)

Subnet address range 10.0.2.0 - 10.0.2.255

IPv6

Include an IPv6 address space This virtual network has no IPv6 address ranges.

Private subnet

Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. [Learn more](#)

Enable private subnet (no default outbound access)

After March 31, 2026, private subnet will be the default selection for new virtual networks. [Learn more](#)

Add **Cancel** **Give feedback**

Scroll down to “IPv6”

The screenshot shows the Microsoft Azure portal interface. On the left, there's a sidebar with navigation links like 'Name ↑', 'demo-vnet', and 'dev-demo-vnet-eus'. The main area is titled 'Add a subnet' for the virtual network 'dev-demo-vnet-eus'. Under the 'Private subnet' heading, there's a note about private subnets enhancing security. A checkbox for 'Enable private subnet (no default outbound access)' is checked. Below this, a note states that after March 31, 2026, private subnet will be the default selection for new virtual networks. The 'Security' section includes fields for 'NAT gateway' (set to 'None'), 'Network security group' (set to 'None'), and 'Route table' (set to 'None'). The 'Service Endpoints' section has a 'Services' dropdown set to 'Select a service endpoint' and a 'Remove service endpoint' button. At the bottom right, there's a 'Give feedback' link.

Leave it as default and scroll down to “Private Subnet”

This screenshot is identical to the one above, showing the 'Add a subnet' dialog for the same virtual network. The 'Private subnet' section is highlighted. The 'Enable private subnet (no default outbound access)' checkbox is checked and is now highlighted with an orange arrow. The rest of the interface, including the security and service endpoint sections, remains the same.

Since this is a private subnet, we are going to check the box on “**Enable private subnet (no default outbound access)**”.

The screenshot shows the Microsoft Azure portal interface. On the left, there's a sidebar with navigation links like 'Name ↑', 'demo-vnet', and 'dev-demo-vnet-eus'. The main area is titled 'Add a subnet' for the virtual network 'dev-demo-vnet-eus'. It contains several configuration sections:

- Private subnet:** Describes private subnets and their security benefits.
- Security:** Settings for a NAT gateway (set to 'None'), Network security group (set to 'None'), and Route table (set to 'None').
- Service Endpoints:** A section for creating service endpoint policies.

At the bottom right of the dialog, there are 'Add' and 'Cancel' buttons.

Scroll down to “Security”

This screenshot is similar to the one above, showing the 'Add a subnet' dialog for the same virtual network. The 'Security' section is explicitly highlighted with an orange arrow. The 'Add' button at the bottom of the dialog is also highlighted with a red arrow, indicating where the user should click next.

Here, we are not going to change anything since we are going to create everything from our own setting. Then click on “Add”

The screenshot shows the Microsoft Azure portal interface for managing virtual networks. The user is in the 'Subnets' section of the 'dev-demo-vnet-eus' virtual network. A success message at the top right states 'Successfully added subnet' and 'Successfully added subnet 'dev-demo-private-subnet-eus' to virtual network 'dev-demo-vnet-eus''. An orange arrow points from this message to the table below.

Name	IPv4	IPv6	Available IPs	Delegated to	Security group	Route table
dev-demo-...	10.0.1.0/24	-	251	-	-	-
dev-demo-...	10.0.2.0/24	-	251	-	-	-

We have successfully added the public subnet.

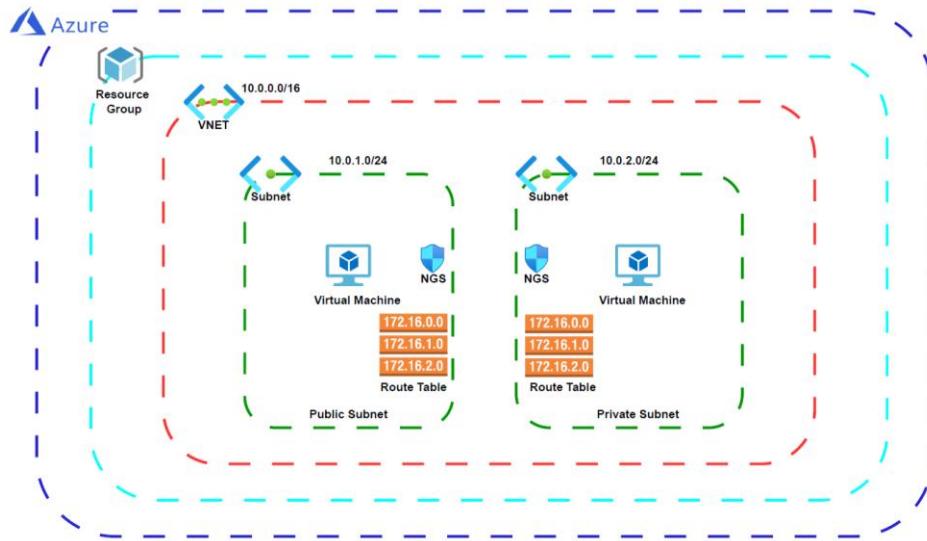
The screenshot shows the Microsoft Azure portal interface for managing virtual networks. The user is in the 'Subnets' section of the 'dev-demo-vnet-eus' virtual network. The table now lists two subnets: 'dev-demo-public-subnet-eus' and 'dev-demo-private-subnet-eus'. An orange arrow points from the table to the success message at the top right.

Name	IPv4	IPv6	Available IPs	Delegated to	Security group
dev-demo-public-subnet-eus	10.0.1.0/24	-	251	-	-
dev-demo-private-subnet-eus	10.0.2.0/24	-	251	-	-

You can see our two subnets.

Part 4: Route Table

Let us move ahead and see what is the next component which we need to create.



So, the next component which we need to create is our route tables. We will be creating two Route tables because we have two subnets. We will be creating one public route table with internet access. And another route table which is for private subnet which will not have any internet.

Let us create our route table and associate the table with our public subnet. And the public route table and private route table with our private subnet.

Head back to the Azure portal

The screenshot shows the Microsoft Azure portal homepage. At the top, there is a search bar labeled 'Search resources, services, and docs (G+/?)'. An orange arrow points from this search bar towards the center of the page. Below the search bar is a navigation bar with icons for 'Create a resource', 'Virtual networks', 'Resource groups', 'Subscriptions', 'Public IP addresses', 'NAT gateways', 'Network security groups', 'Virtual machines', 'SSH keys', and 'More services'. The main area is titled 'Azure services' and 'Resources'. It displays a 'Recent' list of resources, including 'dev-demo-vnet-eus', 'demo-vnet-azure', 'demo-vnet', 'rg-vm-demo-eus', 'ssh-demo-key', 'demoprojectwebfiles', 'soso', 'sosoebotprod', 'sosoebotqa', and 'sosoebottst'. Each item in the list shows its name, type, and last viewed time. At the bottom of the list, there is a link 'See all'.

Search for “Route Tables”

Microsoft Azure

Route Tables

Azure services

Create a resource Virtual networks

Resources

Recent Favorite

Name

- dev-demo-vnet-eus
- demo-vnet-azure
- demo-vnet
- rg-vm-demo-eus
- ssh-demo-key
- demoprojectwebfiles
- soso
- sosoebotprod
- sosoebotqa
- sosoebottst

See all

Services

All Services (9) Marketplace (1) More (4)

- Route tables
- Route filters
- ExpressRoute circuits
- ExpressRoute Direct

Marketplace

Route table

Documentation

- What is Azure Virtual Network?
- Azure Virtual WAN Overview
- Tutorial: Create site-to-site connections using Virtual WAN - Azure Virtual WAN
- Azure virtual network service endpoints

Continue searching in Microsoft Entra ID

Searching all subscriptions. Storage account Give feedback

Last Viewed

	Last Viewed
6 hours ago	
8 hours ago	
4 days ago	
6 days ago	
6 days ago	
6 days ago	
2 weeks ago	
2 weeks ago	
2 weeks ago	

Navigate

https://portal.azure.com/#view/HubsExtension/AssetMenuBlade/~/routetables/assetName/NetworkFoundation/extensionName/Microsoft_Azure_Network

Click on “Route Tables”

Microsoft Azure

Search resources, services, and docs (G+/)

Copilot

ebotsidneysmith@outlook.com DEFAULT DIRECTORY (EBOTSID...)

Home > Network foundation

Network foundation | Route tables

+ Create Manage view Refresh Export to CSV Open query Assign tags Add to service group Group by none

You are viewing a new version of Browse experience. Click here to access the old experience.

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

No route tables to display

Create a route table when you need to override Azure's default routing. For example, you can route traffic to a network virtual appliance or to your on-premises network for inspection. A route table contains routes and is associated to one or more subjects.

+ Create Learn more

Showing 1 - 0 of 0. Display count: auto

Add or remove favorites by pressing Ctrl+Shift+F

Give feedback

Click on “Create” to create the route table.

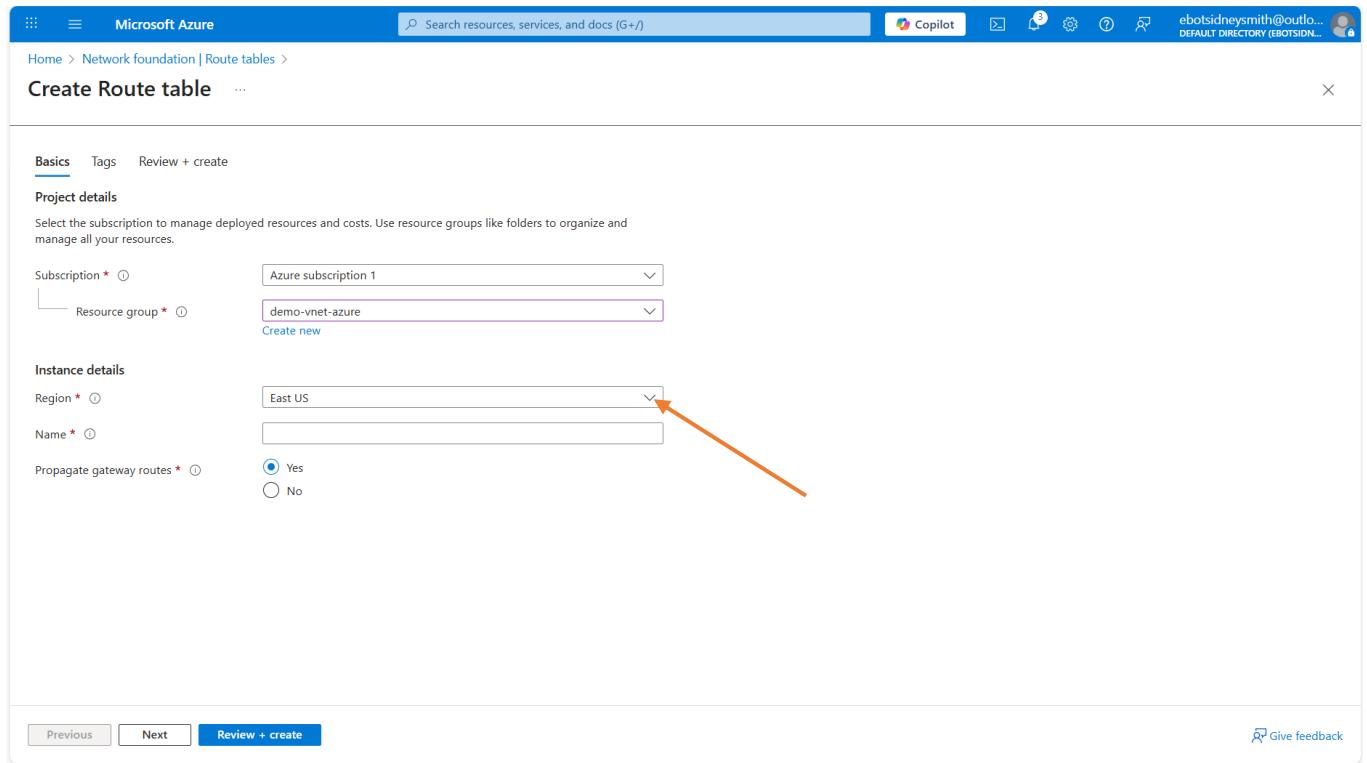
The screenshot shows the 'Create Route table' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. In the 'Project details' section, the 'Subscription' dropdown is set to 'Azure subscription 1'. The 'Resource group' dropdown has a red arrow pointing to the 'Create new' option. In the 'Instance details' section, the 'Region' is set to 'East US' and the 'Name' field is empty. The 'Propagate gateway routes' option is set to 'Yes'. At the bottom, there are 'Previous' and 'Next' buttons, and a 'Review + create' button.

The “**Subscription**” has been selected. Let us now select the “**Resource Group**”. Click on the drop down on “**Resource Group**”.

The screenshot shows the 'Create Route table' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. In the 'Project details' section, the 'Subscription' dropdown is set to 'Azure subscription 1'. The 'Resource group' dropdown has a red arrow pointing to the 'Select existing...' option. A dropdown menu is open, showing several resource groups: 'demo-vnet-azure' (highlighted with a red arrow), 'NetworkWatcherRG', 'rg-vm-demo-eus', and 'soso'. In the 'Instance details' section, the 'Region' is set to 'East US' and the 'Name' field is empty. The 'Propagate gateway routes' option is set to 'No'. At the bottom, there are 'Previous' and 'Next' buttons, and a 'Review + create' button.

Select “**demo-vnet-azure**”

Prepared by Sidney Smith Ebot



Screenshot of the Microsoft Azure 'Create Route table' Basics step. The 'Region' dropdown menu is open, showing 'East US' as the selected option. A red arrow points from the text 'Then select the "Region", we will select the region we are working in, that is "East US 2"' to this dropdown.

Microsoft Azure

Search resources, services, and docs (G+/J)

Copilot

ebotsidneysmith@outlook.com DEFAULT DIRECTORY (EBOTSID...)

Home > Network foundation | Route tables >

Create Route table

Basics Tags Review + create

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

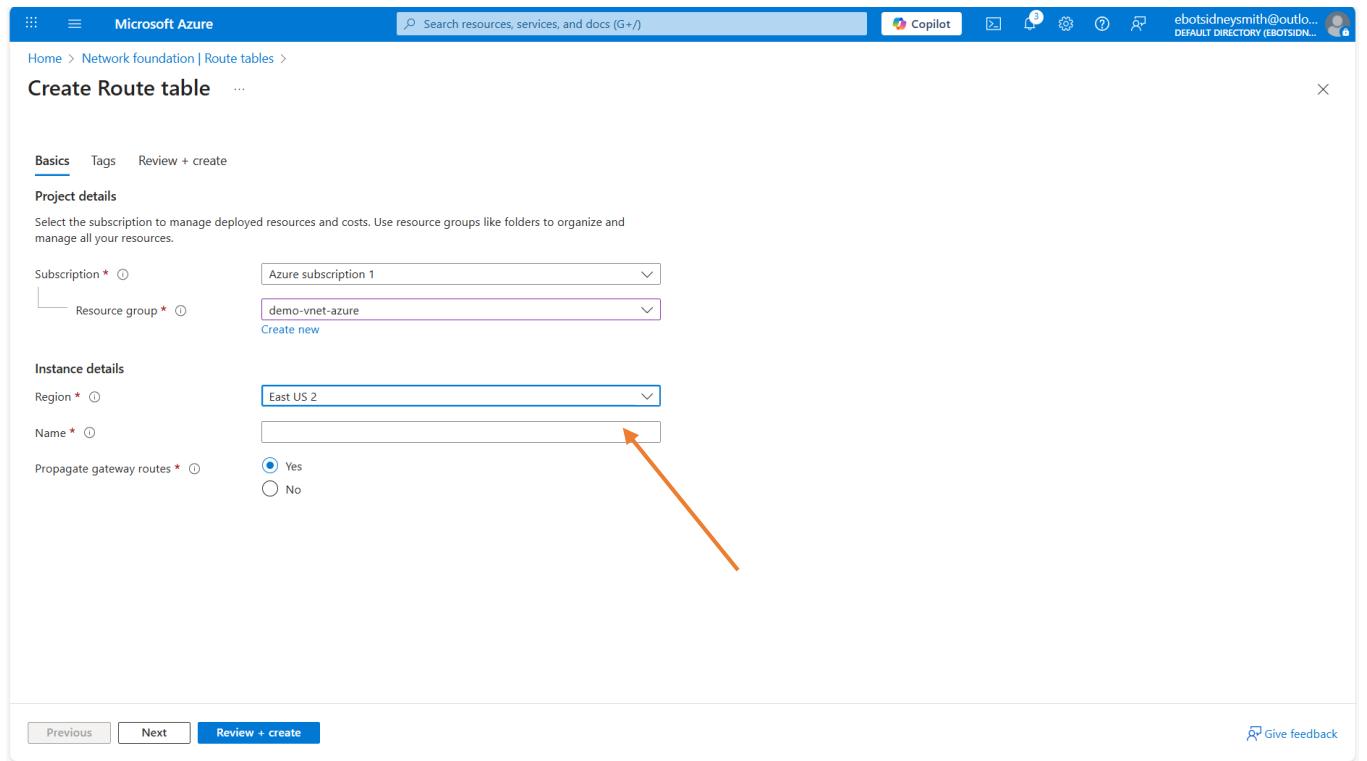
Region * ▼

Name *

Propagate gateway routes * Yes No

Previous Next Review + create Give feedback

Then select the “Region”, we will select the region we are working in, that is “**East US 2**”



Screenshot of the Microsoft Azure 'Create Route table' Basics step. The 'Name' input field is empty, indicated by a red arrow pointing to it. The 'Region' dropdown menu is set to 'East US 2'. A red arrow points from the text 'Then we have to give the "Route Table" a name, we will call it "dev-demo-public-rt-eus"' to this empty name field.

Microsoft Azure

Search resources, services, and docs (G+/J)

Copilot

ebotsidneysmith@outlook.com DEFAULT DIRECTORY (EBOTSID...)

Home > Network foundation | Route tables >

Create Route table

Basics Tags Review + create

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

Region * ▼

Name *

Propagate gateway routes * Yes No

Previous Next Review + create Give feedback

Then we have to give the “**Route Table**” a name, we will call it “**dev-demo-public-rt-eus**”

Microsoft Azure

Search resources, services, and docs (G+/)

Copilot

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DEFAULT DIRECTORY (EBOTSIDN...)

Home > Network foundation | Route tables >

Create Route table

Basics Tags Review + create

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

Region * Name *

Propagate gateway routes * Yes No

Previous Next Review + create Give feedback

For “Propagate Gateway Routes”, we will keep it as “Yes”. This will be covered in advanced topics.

Microsoft Azure

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Create Route table

Basics Tags Review + create

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

Region * Name *

Propagate gateway routes * Yes No

Previous Next Review + create Give feedback

Click on “Next”

Prepared by Sidney Smith Ebot

This screenshot shows the 'Tags' step in the Azure portal for creating a route table. At the top, there are tabs for 'Basics', 'Tags' (which is selected), and 'Review + create'. Below the tabs, a note explains that tags are name/value pairs for categorizing resources. A specific tag 'Route table' is shown with a value 'Route table'. At the bottom of the screen, there are 'Previous' and 'Next' buttons, and a 'Review + create' button.

Over here is the “**Tags**”, we will skip it. Click on “**Next**”

This screenshot shows the 'Basics' step in the Azure portal for creating a route table. At the top, there are tabs for 'Basics' (selected) and 'Review + create'. Below the tabs, there is a note about viewing an automation template. The 'Basics' section displays configuration details:

Subscription	Azure subscription 1
Resource group	demo-vnet-azure
Region	East US 2
Name	dev-demo-public-rt-eus
Propagate gateway routes	Yes

At the bottom of the screen, there are 'Previous' and 'Next' buttons, and a large blue 'Create' button. A red arrow points down to the 'Create' button.

The validation has been completed. Click on “**Create**”

The screenshot shows the Microsoft Azure Deployment Overview page for a deployment named "Microsoft.RouteTable-20251130212404". The status is "Your deployment is complete". Deployment details include a start time of 11/30/2025, 9:40:14 PM, and a Correlation ID of 12ce4153-e85a-4836-a32f-98edc8598aa4. The resource group is "demo-vnet-azure". On the right side, there are links for Cost management, Microsoft Defender for Cloud, Free Microsoft tutorials, and Work with an expert.

Go to resource

The deployment is complete. Click on “Go to Resource”

The screenshot shows the Microsoft Azure Resource Group Overview page for "demo-vnet-azure". The "Resources" tab is selected, displaying two resources: "dev-demo-public-rt-eus" (Route table) and "dev-demo-vnet-eus" (Virtual network). A red arrow points to the notifications icon in the top right corner of the browser window.

Name	Type	Location
dev-demo-public-rt-eus	Route table	East US 2
dev-demo-vnet-eus	Virtual network	East US 2

You can see the Public Route Table we just created. You can click on the “Notifications”

Prepared by Sidney Smith Ebot

The screenshot shows the Microsoft Azure Resource Group Overview for 'demo-vnet-azure'. On the left, there's a sidebar with various navigation options like Overview, Activity log, Access control (IAM), Tags, Resource visualizer, Events, Settings, Cost Management, Monitoring, Automation, and Help. The main area displays a table of resources under the 'Resources' tab. The table has columns for Name, Type, and ... (More). It lists two items: 'dev-demo-public-rt-eus' (Route table) and 'dev-demo-vnet-eus' (Virtual network). A filter bar at the top of the table allows filtering by field, type, location, and adding filters. Below the table, there are buttons for 'Group by none' and 'JSON View'. At the bottom, there's a message about favorite keys and a feedback link. To the right, a 'Notifications' panel is open, showing deployment logs. The first log entry is 'Deployment succeeded' for a Microsoft.RouteTable deployment. The second is 'Successfully added subnet' for a virtual network. The third is another 'Successfully added subnet' for a different virtual network. The fourth is 'Deployment succeeded' for a deployment to the resource group. Buttons for 'Pin to dashboard' and 'Go to resource' are available for each notification.

You can see the status of the different deployments. Search for “Route Table”

The screenshot shows the Microsoft Azure Network foundation Route tables page. The left sidebar includes options like Overview, Virtual network (selected), Route tables (selected), Route servers, Private Link, DNS, and Monitoring and management. The main area shows a table of route tables. A red arrow points from the text "Now, let us go ahead and create our private route table. Click on ‘Create’" to the 'Create' button in the top navigation bar. The table has columns for Name, Resource Group, Location, and Subscription. One item is listed: 'dev-demo-public-rt-eus' (Resource Group: demo-vnet-azure, Location: East US 2, Subscription: Azure subscript...). A note at the top says "You are viewing a new version of Browse experience. Click here to access the old experience." Below the table, there are buttons for Diagnose connectivity issues using route tables, Analyze routing issues across route tables, and Check route conflicts in all route tables. A message at the bottom says "Showing 1 - 1 of 1. Display count: auto".

You can see our public route table

Now, let us go ahead and create our private route table. Click on “Create”

Microsoft Azure

Search resources, services, and docs (G+)

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Home > Network foundation | Route tables >

Create Route table

Basics Tags Review + create

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 * (arrow pointing to this field)

Instance details

Region *

Name *

Propagate gateway routes * Yes No

Review + create

The “**subscription**” has been selected already. Now let us select our “**Resource Group**”. Click on the drop down on “**Resource Group**”

Microsoft Azure

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Home > Network foundation | Route tables >

Create Route table

Basics Tags Review + create

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 * (arrow pointing to this field)

demo-vnet-azure (arrow pointing to this option)

Instance details

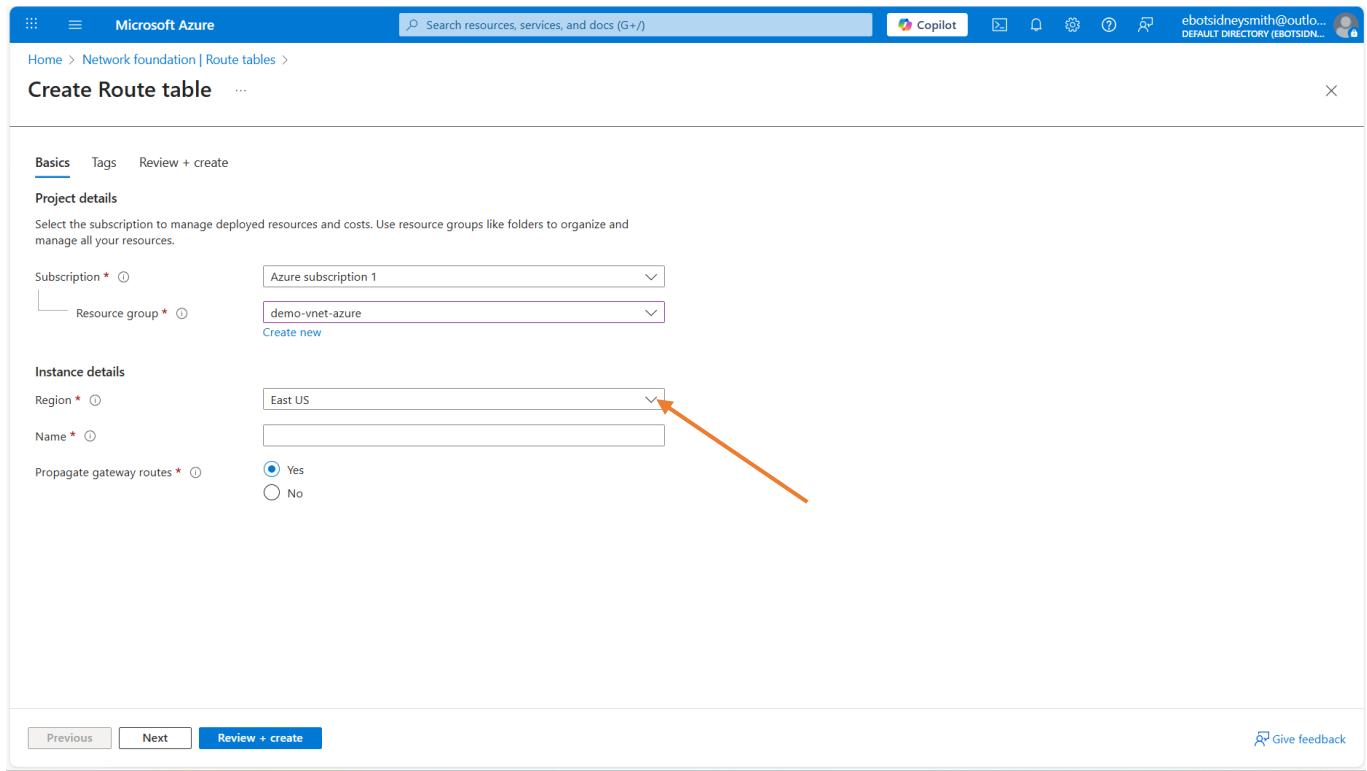
Region *

Name *

Propagate gateway routes * No

Review + create

Select “**demo-vnet-azure**”



Microsoft Azure

Search resources, services, and docs (G+)

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Home > Network foundation | Route tables >

Create Route table

Basics Tags Review + create

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

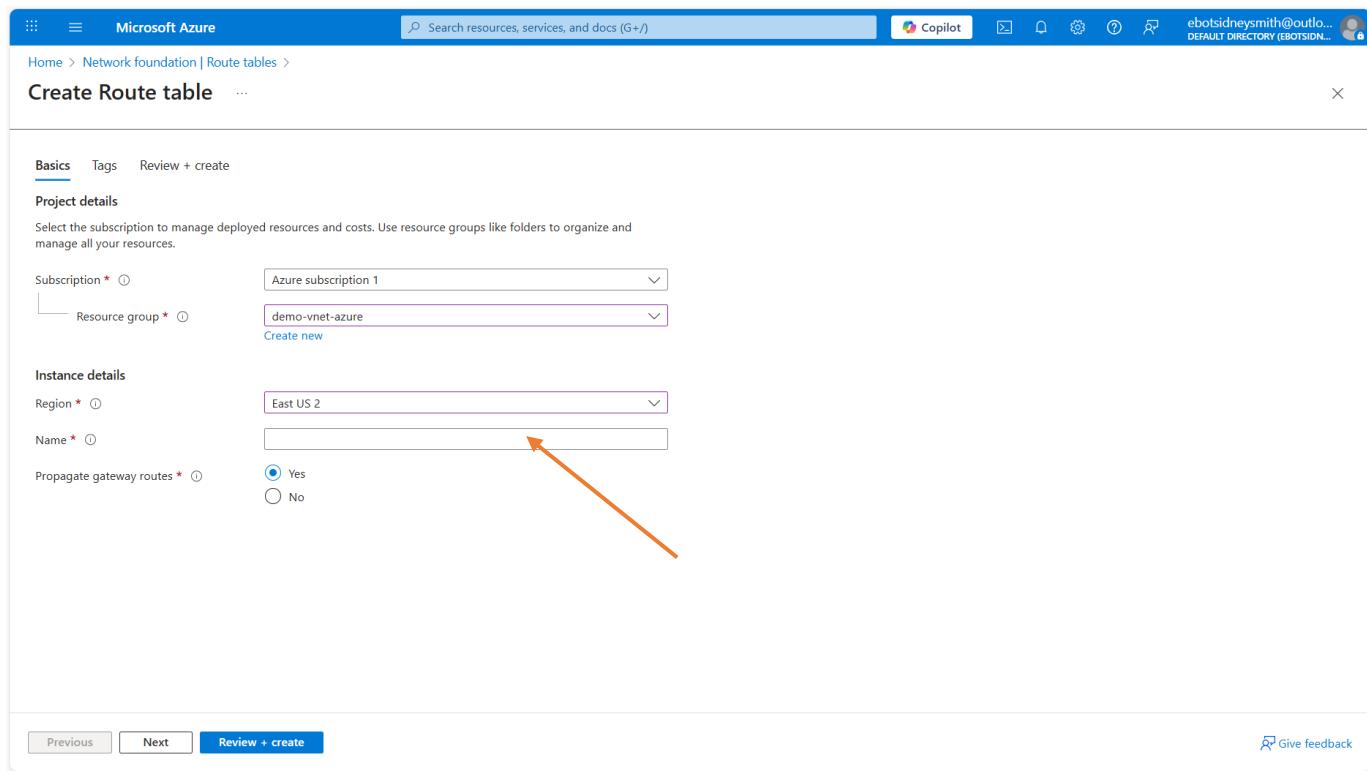
Region * (arrow pointing to this field)

Name *

Propagate gateway routes * Yes No

Previous Next Review + create Give feedback

Let us select the “Region” we are working in. We are working in “**East US 2**”



Microsoft Azure

Search resources, services, and docs (G+)

Copilot

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DEFAULT DIRECTORY (EBOTSIDN...)

Home > Network foundation | Route tables >

Create Route table

Basics Tags Review + create

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

Region * (arrow pointing to this field)

Name * (arrow pointing to this field)

Propagate gateway routes * Yes No

Previous Next Review + create Give feedback

Then, we have to give the Route table a name. We will call it “**dev-demo-private-rt-eus**”

Prepared by Sidney Smith Ebot

Microsoft Azure

Search resources, services, and docs (G+/)

Copilot

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Home > Network foundation | Route tables >

Create Route table

Basics Tags Review + create

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

Region *

Name *

Propagate gateway routes * Yes No

Previous Next Review + create Give feedback

Then, we will leave “**Propagate gateway routes**” as “**Yes**”

Microsoft Azure

Search resources, services, and docs (G+/)

Copilot

ebotsidneysmith@outlook.com DEFAULT DIRECTORY (EBOTSIDN...)

Home > Network foundation | Route tables >

Create Route table

Basics Tags Review + create

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

Region *

Name *

Propagate gateway routes * Yes No

Previous Next Review + create Give feedback

Then, click on “**Next**”

Prepared by Sidney Smith Ebot

The screenshot shows the 'Create Route table' wizard in the Microsoft Azure portal. The current step is 'Tags'. A red arrow points down from the 'Tags' section to the 'Next' button at the bottom.

Microsoft Azure

Search resources, services, and docs (G+/)

Copilot

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DEFAULT DIRECTORY (EBOTSIDN...)

Home > Network foundation | Route tables >

Create Route table ...

Basics Tags Review + create

Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. [Learn more about tags](#)

Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.

Name ⓘ Value ⓘ Resource

Route table

Previous Next Review + create Give feedback

Here is the “Tags”, we will skip it. So, click on “Next”

The screenshot shows the 'Create Route table' wizard in the Microsoft Azure portal. The current step is 'Review + create'. A red arrow points down from the 'Review + create' section to the 'Create' button at the bottom.

Microsoft Azure

Search resources, services, and docs (G+/)

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DEFAULT DIRECTORY (EBOTSIDN...)

Home > Network foundation | Route tables >

Create Route table ...

Basics Tags Review + create

[View automation template](#)

Basics

Subscription	Azure subscription 1
Resource group	demo-vnet-azure
Region	East US 2
Name	dev-demo-private-rt-eus
Propagate gateway routes	Yes

Previous Next Create Give feedback

Then, click on “Create”

The screenshot shows the Microsoft Azure Deployment Overview page for a deployment named "Microsoft.RouteTable-20251130215235". The status is "Your deployment is complete". Deployment details include a start time of 11/30/2025, 10:04:38 PM, and a correlation ID of c3e8ad93-aa33-4ab4-b857-ff9408e700e4. The resource group is "demo-vnet-azure". A large orange arrow points from the "Go to resource" button in the "Next steps" section to the "Resources" table on the right.

Deployment details:

- Deployment name: Microsoft.RouteTable-20251130215235
- Subscription: Azure subscription 1
- Resource group: demo-vnet-azure

Next steps:

- Give feedback
- Tell us about your experience with deployment
- Go to resource (highlighted with an orange arrow)

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Work with an expert: Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support. Find an Azure expert >

The deployment is complete. Click on “Go to Resource”

The screenshot shows the Microsoft Azure Resource Group Overview page for "demo-vnet-azure". The "Resources" tab is selected, displaying three resources:

Name	Type	Location
dev-demo-private-rt-eus	Route table	East US 2
dev-demo-public-rt-eus	Route table	East US 2
dev-demo-vnet-eus	Virtual network	East US 2

Showing 1 - 3 of 3. Display count: auto

Give feedback

The private route table has been created. The two route tables have been created but they have not yet been associated or attached to our subnet.

The next thing we need to do is to attach the route tables to our subnets. To do this we have to go to the Route table dash board.

So, head back to the Azure portal

The screenshot shows the Microsoft Azure portal homepage. At the top, there's a search bar and a Copilot button. Below the header, there's a section titled "Azure services" with various icons and links. One of the icons is for "Route tables". Underneath this, there's a "Resources" section with tabs for "Recent" and "Favorite". A table lists various resources with their names, types, and last viewed times. The "Recent" tab is selected, showing items like "demo-vnet-azure" (Resource group), "dev-demo-private-rt-eus" (Route table), and "dev-demo-public-rt-eus" (Route table).

Name	Type	Last Viewed
demo-vnet-azure	Resource group	4 minutes ago
dev-demo-private-rt-eus	Route table	5 minutes ago
dev-demo-public-rt-eus	Route table	30 minutes ago
dev-demo-vnet-eus	Virtual network	7 hours ago
demo-vnet	Virtual network	5 days ago
rg-vm-demo-eus	Resource group	6 days ago
ssh-demo-key	SSH key	6 days ago
demoprojectwebfiles	Storage account	6 days ago
soso	Resource group	6 days ago
sosobotprod	Storage account	2 weeks ago
sosobotqa	Storage account	2 weeks ago
sosobottst	Storage account	2 weeks ago

Search for “Route Tables”

The screenshot shows the Microsoft Azure portal search results for "Route Tables". The search bar at the top contains the query "Route Tables". Below the search bar, there's a "Services" section with a list of items. An orange arrow points to the "Route tables" item in this list. Other items listed include "Route filters", "ExpressRoute circuits", and "ExpressRoute Direct". To the right of the search results, there's a "Last Viewed" section showing recent documents like "What is Azure Virtual Network?", "Azure Virtual WAN Overview", and "Tutorial: Create site-to-site connections using Virtual WAN - Azure Virtual WAN".

https://portal.azure.com/#view/HubsExtension/AssetMenuBlade/~/routetables/assetName/NetworkFoundation/extensionName/Microsoft_Azure_Network

Select “Route Tables”

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

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Home > Network foundation

Network foundation | Route tables

Preview

Overview

Virtual network

- Virtual Network overview
- Virtual networks
- NAT gateways
- Public IP addresses
- Network interfaces
- Network security groups
- Application security groups
- Bastions
- Route tables** (selected)
- Route servers
- Private Link
- DNS
- Monitoring and management

You are viewing a new version of Browse experience. Click here to access the old experience.

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

Name ↑	Resource Group	Location	Subscription
dev-demo-private-rt-eus	demo-vnet-azure	East US 2	Azure subscription 1
dev-demo-public-rt-eus	demo-vnet-azure	East US 2	Azure subscription 1

Show 1 - 2 of 2. Display count: auto

Give feedback

We will start with the public route table. So, click on the public route table

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

ebotsidneysmith@outlook.com DEFAULT DIRECTORY (EBOTSIDN...)

Home > Network foundation | Route tables >

dev-demo-public-rt-eus Route table

Preview

+ Create Manage view ...

You are viewing a new version of Browse experience. Click here to access the old experience.

Search Move Delete Refresh Give feedback

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Resource visualizer

Settings (selected)

Monitoring

Automation

Help

Essentials

Resource group (move) demo-vnet-azure

Location East US 2

Subscription (move) Azure subscription 1

Subscription ID ddd5d4252-9ca5-4581-9dc7-b63c0788bde7

Tags (edit) Add tags

Routes

Search routes

No results.

Subnets

Search subnets

Routes

Name ↑	Address prefix ↑	Next hop type ↑	Next hop IP address ↑
No results.			

Show 1 - 2 of 2. Display count: auto

Add or remove favorites by pressing Ctrl+Shift+F

Click on “Settings”

The screenshot shows the Microsoft Azure portal interface for managing route tables. The main title is "dev-demo-public-rt-eus" under the "Route table" category. On the left, there's a navigation pane with "Network found..." and a message about viewing a new version of the experience. Below that are filter options for "Name" and three items: "dev-demo-private-rt-eus" and "dev-demo-public-rt-eus". The "dev-demo-public-rt-eus" item is selected. The main content area has tabs for "Overview", "Essentials", and "Routes". Under "Essentials", resource details like "Resource group (move)" (demo-vnet-azure), "Location" (East US 2), and "Subscription (move)" (Azure subscription 1) are shown. There are also sections for "Associations" (0 subnet associations) and "Tags". The "Subnets" tab is highlighted with an orange arrow. The "Routes" tab is also visible. At the bottom, there's a search bar and a "Give feedback" link.

Click on “Subnets”

This screenshot shows the "Subnets" page for the "dev-demo-public-rt-eus" route table. The title is "dev-demo-public-rt-eus | Subnets". The left sidebar includes the "Subnets" tab, which is highlighted with an orange arrow. Above the subnet list, there's a blue button labeled "+ Associate". The main content area displays a table for subnet management with columns for Name, Address range, Virtual network, and Security group. A search bar is at the top of the table. The bottom of the page includes a "Give feedback" link.

Click on “Associate”

Microsoft Azure

Home > Network foundation | Route tables > dev-demo-public-rt-eus

Network found...

dev-demo-public-rt-eus | Subnets

Associate subnet

Virtual network: dev-demo-vnet-eus (demo-vnet-azure)

Subnet: dev-demo-public-subnet-eus

OK

Give feedback

Here, you will select the Virtual Network and the subnet. Our subnet has been selected. If it is not selected, just click on the drop down and select it.

Microsoft Azure

Home > Network foundation | Route tables > dev-demo-public-rt-eus

Network found...

dev-demo-public-rt-eus | Subnets

Associate subnet

Virtual network: dev-demo-vnet-eus (demo-vnet-azure)

Subnet: dev-demo-public-subnet-eus

OK

Give feedback

Then, select the subnet. We are on the public route table, select the public subnet by clicking on the drop down on “subnet”

The screenshot shows the Microsoft Azure portal interface. The main window displays a list of route tables under the heading "Network found...". One route table, "dev-demo-public-rt-eus", is selected. On the right, a modal dialog titled "Associate subnet" is open. In the "Virtual network" dropdown, "dev-demo-vnet-eus (demo-vnet-azure)" is selected. In the "Subnet" dropdown, "dev-demo-public-subnet-eus" is selected. At the bottom of the dialog is a blue "OK" button.

Select the public subnet “**dev-demo-public-subnet-eus**”

This screenshot is identical to the one above, but it includes a large orange arrow pointing from the text "Select the public subnet ‘dev-demo-public-subnet-eus’” to the blue "OK" button at the bottom of the "Associate subnet" dialog.

Then, click on “OK”

The screenshot shows the Microsoft Azure Route Tables dashboard for the route table "dev-demo-public-rt-eus". The left sidebar lists resources: "Name ↑", "dev-demo-private-rt-eus" (selected), and "dev-demo-public-rt-eus". The main pane displays the "Subnets" section with one entry: "dev-demo-public-subnet-eus" (10.0.1.0/24) associated with "dev-demo-vnet-eus". A success message in the top right corner states: "Saved route table for subnet" and "Successfully saved route table for subnet 'dev-demo-public-subnet-eus'".

The route table has been saved for the subnet.

Similarly, we will do same for the private route table. So, head back to the route table dashboard. Click on the private route table.

The screenshot shows the Microsoft Azure Route Tables dashboard for the route table "dev-demo-private-rt-eus". The left sidebar lists resources: "Name ↑", "dev-demo-private-rt-eus" (selected), and "dev-demo-public-rt-eus". The main pane displays the "Subnets" section with a search bar and a message: "No results.". An orange arrow points to the "+ Associate" button in the top right corner of the subnet list area.

Click on “Associate”

The screenshot shows the Microsoft Azure portal interface. On the left, there's a sidebar with 'Network found...' and a list of resources: 'dev-demo-private-rt-eus' (selected), 'dev-demo-public-rt-eus', and another 'dev-demo-private-rt-eus'. The main area shows a 'Route table' named 'dev-demo-private-rt-eus' with a 'Subnets' tab selected. A modal window titled 'Associate subnet' is open, showing a dropdown for 'Virtual network' set to 'dev-demo-vnet-eus (demo-vnet-azure)' and a dropdown for 'Subnet' set to 'dev-demo-private-subnet-eus'. An orange arrow points to the 'Subnet' dropdown.

Our Virtual Network has already been selected.

This screenshot is identical to the one above, showing the 'Associate subnet' dialog. The 'Virtual network' dropdown is still set to 'dev-demo-vnet-eus (demo-vnet-azure)'. However, the 'Subnet' dropdown now has an orange arrow pointing to it, indicating the user should click to select the private subnet.

Now, click on the drop down on “**Subnet**” and select the private subnet

The screenshot shows the Microsoft Azure portal interface. The user is navigating through the Network foundation | Route tables section, specifically for the 'dev-demo-private-rt-eus' route table. On the left, there's a sidebar with a 'Network found...' section and a list of resources: 'dev-demo-private-rt-eus' (selected), 'dev-demo-public-rt-eus', and others. The main area shows the 'Subnets' tab of the route table configuration. A modal window titled 'Associate subnet' is open, prompting the user to associate a subnet with the virtual network. The 'Virtual network' dropdown is set to 'dev-demo-vnet-eus (demo-vnet-azure)'. The 'Subnet' dropdown is set to 'dev-demo-private-subnet-eus'. At the bottom right of the modal, there is an 'OK' button, which is highlighted with an orange arrow.

Click on “OK”

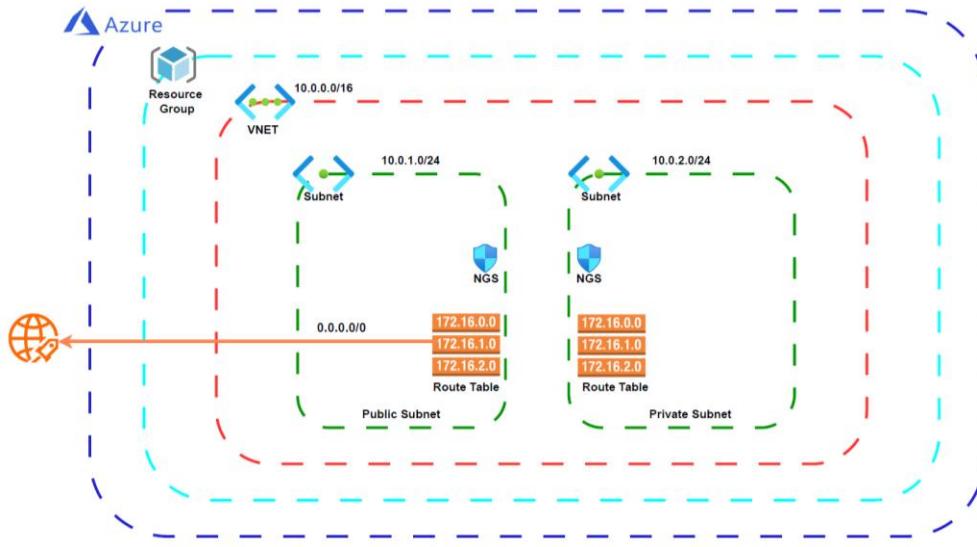
The screenshot shows the Microsoft Azure portal after the user has clicked the 'OK' button in the previous step. A success message 'Saved route table for subnet' is displayed in the top right corner, stating 'Successfully saved route table for subnet 'dev-demo-private-subnet-eus''. The main interface shows the 'Subnets' tab of the 'dev-demo-private-rt-eus' route table. The 'Search subnets' table now includes a row for 'dev-demo-private-subnet-eus' with the address range '10.0.2.0/24'. The rest of the interface remains consistent with the first screenshot, showing the sidebar and other route table settings.

The route table has been saved for the subnet

Part 5: Enable Internet

After associating our public route table with the public subnet and our private route table with the private route table. We need to enable internet access in the public subnet, which we have associated with our public route table.

Let us take a look on how we can associate internet with our public route table so that our public subnet can have access to internet.



In the public route table, we need to create a route which will have access to internet. And to create a route we need to assign the IP or a target destination IP address. That IP address is going to be **“0.0.0.0/0”**.

If you are using the IP address **“0.0.0.0/0”**, then it denotes that anyone, anywhere in the world can access that particular resource from our public subnet.

If that resource has a public IP and this route table will have an internet access. So, let us take a look on how we are going to fix the route in our public route table.

Let us head back to the Azure portal

Prepared by Sidney Smith Ebot

The screenshot shows the Microsoft Azure portal homepage. At the top, there's a search bar with placeholder text "Search resources, services, and docs (G+)" and a Copilot button. Below the search bar is a navigation bar with links for "Create a resource", "Route tables", "Virtual networks", "Resource groups", "Subscriptions", "Public IP addresses", "NAT gateways", "Network security groups", "Virtual machines", and "More services". A red arrow points from the search bar down to the "Subscriptions" link. The main area is titled "Azure services" and "Resources". The "Resources" section has tabs for "Recent" and "Favorite", and a table listing recent resources with columns for Name, Type, and Last Viewed. The "Recent" table includes entries like "dev-demo-private-rt-eus" (Route table), "dev-demo-public-rt-eus" (Route table), "demo-vnet-azure" (Resource group), "dev-demo-vnet-eus" (Virtual network), "demo-vnet" (Virtual network), "rg-vm-demo-eus" (Resource group), "ssh-demo-key" (SSH key), "demoprojectwebfiles" (Storage account), "soso" (Resource group), "sosoebotprod" (Storage account), "sosoebotqa" (Storage account), and "sosoebottst" (Storage account). A "See all" link is at the bottom of the table.

Search for “Route Tables”

The screenshot shows the Microsoft Azure portal search results for "route tables". The search bar at the top contains the query "route tables". Below the search bar is a navigation bar with "All" selected, followed by "Services (9)", "Marketplace (1)", and a "More (4)" dropdown. The main content area is titled "Services" and shows a list of items under "Services": "Route tables" (highlighted with a red arrow), "Route filters", "ExpressRoute circuits", and "ExpressRoute Direct". Below this is a "Marketplace" section with a single item: "Route table". To the right of the search results is a "Last Viewed" table listing recent items. The URL in the address bar is "https://portal.azure.com/#view/HubsExtension/AssetMenuBlade/~/routetables/assetName/NetworkFoundation/extensionName/Microsoft_Azure_Network".

Select “Route Tables”

Microsoft Azure

Search resources, services, and docs (G+)

ebotsidneysmith@outlook.com
DEFAULT DIRECTORY (EBOTSID...)

Home > Network foundation

Network foundation | Route tables

Preview

Search

Create Manage view Refresh Export to CSV Open query Assign tags Add to service group Group by none

Overview Virtual network

- Virtual Network overview
- Virtual networks
- NAT gateways
- Public IP addresses
- Network interfaces
- Network security groups
- Application security groups
- Bastions
- Route tables**
- Route servers

Private Link DNS Monitoring and management

Name Resource Group Location Subscription

<input type="checkbox"/> dev-demo-private-rt-eus	... demo-vnet-azure	East US 2	Azure subscription 1
<input type="checkbox"/> dev-demo-public-rt-eus	... demo-vnet-azure	East US 2	Azure subscription 1

Showing 1 - 2 of 2. Display count: auto

Add or remove favorites by pressing Ctrl+Shift+F Give feedback

Click on the public route table

Microsoft Azure

Search resources, services, and docs (G+)

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DEFAULT DIRECTORY (EBOTSID...)

Home > Network foundation | Route tables

Network foundation | Route tables

Preview

Search

Create Manage view ...

You are viewing a new version of Browse experience. Click here to access the old experience.

Overview

- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Resource visualizer
- Settings**
- Monitoring
- Automation
- Help

Route table

Search

Move Delete Refresh Give feedback

Essentials

Resource group (move) demo-vnet-azure Associations 1 subnet associations

Location East US 2

Subscription (move) Azure Subscription 1

Subscription ID dd5d4252-9ca5-4581-9dc7-b63c0788bde7

Tags (edit) Add tags

Routes

Search routes

Name	Address prefix	Next hop type	Next hop IP add...
No results.			

Subnets

Search subnets

Name	Address range	Virtual network	Security group
dev-demo-public-su...	10.0.1.0/24	dev-demo-vnet-eus	-

Showing 1 - 2 of 2. Display count: auto

Add or remove favorites by pressing Ctrl+Shift+F

Click on “Settings”

Prepared by Sidney Smith Ebot

This screenshot shows the Microsoft Azure portal interface. On the left, the navigation menu is open, showing various network services like Virtual network, Virtual networks, NAT gateways, etc., with 'Route tables' selected. The main content area displays the 'dev-demo-public-rt-eus' route table. A red arrow points from the 'Route tables' link in the sidebar to the 'Routes' link in the 'Configuration' section of the route table's settings. The 'Routes' section lists two routes: 'dev-demo-private-rt-eus' and 'dev-demo-public-rt-eus'. Below the routes, there are sections for Subnets, Properties, and Locks.

Click on “Routes”

This screenshot shows the same Microsoft Azure portal interface as the previous one, but with a red arrow pointing to the '+ Add' button located at the top right of the 'Routes' list in the 'dev-demo-public-rt-eus' route table. This button is used to create a new route entry.

Click on “Add”

The screenshot shows the Microsoft Azure portal interface. On the left, the navigation menu is open, showing 'Route tables' selected under 'Network foundation'. The main content area displays a 'dev-demo-public-rt-eus' route table with two entries: 'dev-demo-private-rt-eus' and 'dev-demo-public-rt-eus'. A modal window titled 'Add route' is open on the right, prompting for a 'Route name' (marked with a red arrow). The 'Route name' field contains 'dev-demo-public-rt-eus'. Below it are fields for 'Destination type', 'Next hop type', and 'Next hop address', each with a dropdown arrow.

Here we have to enter the “**Route Name**”, we will call it “**internet**”

This screenshot is identical to the previous one, but the 'Route name' field now contains the value 'internet' (highlighted with a green box). An orange arrow points from the text 'Click on the drop down on “Destination Type”' to the dropdown menu next to the 'Destination type' field.

Click on the drop down on “**Destination Type**”

The screenshot shows the Microsoft Azure portal interface. The left sidebar navigation bar includes 'Overview', 'Virtual network', 'Virtual networks', 'NAT gateways', 'Public IP Addresses', 'Network interfaces', 'Network security groups', 'Application security groups', 'Bastions', 'Route tables' (which is selected), 'Route servers', 'Private Link', 'DNS', and 'Monitoring and management'. The main content area displays a 'dev-demo-public-rt-eus' route table with two entries: 'dev-demo-private-rt-eus' and 'dev-demo-public-rt-eus'. A modal window titled 'Add route' is open on the right, prompting for route details. The 'Route name' field contains 'internet'. The 'Destination type' dropdown is set to 'IP Addresses'. An orange arrow points from the text 'Select destination address prefix type' to this dropdown. Below it, the 'IP Addresses' field is empty. The 'Next hop address' field is also empty.

Select “IP Addresses”

This screenshot is identical to the previous one, but the 'Destination type' dropdown has been changed to 'IP Addresses'. An orange arrow points from the text 'Select destination address prefix type' to this dropdown. The 'IP Addresses' field now contains '0.0.0.0/0'. The 'Next hop address' field remains empty.

So, we have to enter the IP address of our internet so that everyone can access it. We will enter **“0.0.0.0/0”**

The screenshot shows the Microsoft Azure portal interface. On the left, the navigation pane is open with 'Route tables' selected under 'Network foundation'. In the center, a list of route tables shows 'dev-demo-private-rt-eus' and 'dev-demo-public-rt-eus'. On the right, a detailed view of 'dev-demo-public-rt-eus' is shown, with the 'Routes' tab selected. A modal window titled 'Add route' is open, prompting for route details. The 'Route name' field contains 'internet'. The 'Destination type' field is set to 'IP Addresses' with the value '0.0.0.0/0'. The 'Next hop type' field has a dropdown menu open, showing options like 'Select next hop type', 'Virtual network gateway', 'Virtual network', 'Internet', 'Virtual appliance', and 'None'. A red arrow points to the 'Select next hop type' option in the dropdown.

For the “**Next Hop Type**”, click on the drop down

This screenshot is identical to the one above, showing the 'Add route' dialog for 'dev-demo-public-rt-eus'. The 'Next hop type' dropdown is open, and the option 'Internet' is selected, highlighted with a red arrow. The other options in the dropdown are 'Select next hop type', 'Virtual network gateway', 'Virtual network', 'Virtual appliance', and 'None'.

Select “**Internet**”

The screenshot shows the Microsoft Azure portal interface. On the left, the navigation menu is open, showing 'Route tables' selected under 'Network foundation'. In the center, a 'dev-demo-public-rt-eus' route table is displayed. On the right, a modal window titled 'Add route' is open, showing fields for route configuration. An orange arrow points from the text 'Then we will leave the “Next Hop Address” blank' to the 'Next hop address' field, which is currently empty.

Then we will leave the “Next Hop Address” blank

The screenshot shows the Microsoft Azure portal interface. On the left, the navigation menu is open, showing 'Route tables' selected under 'Network foundation'. In the center, a 'dev-demo-public-rt-eus' route table is displayed. On the right, a modal window titled 'Add route' is open, showing fields for route configuration. The 'Next hop address' field is empty. An orange arrow points from the text 'Then, click on “Add”' to the 'Add' button at the bottom of the modal.

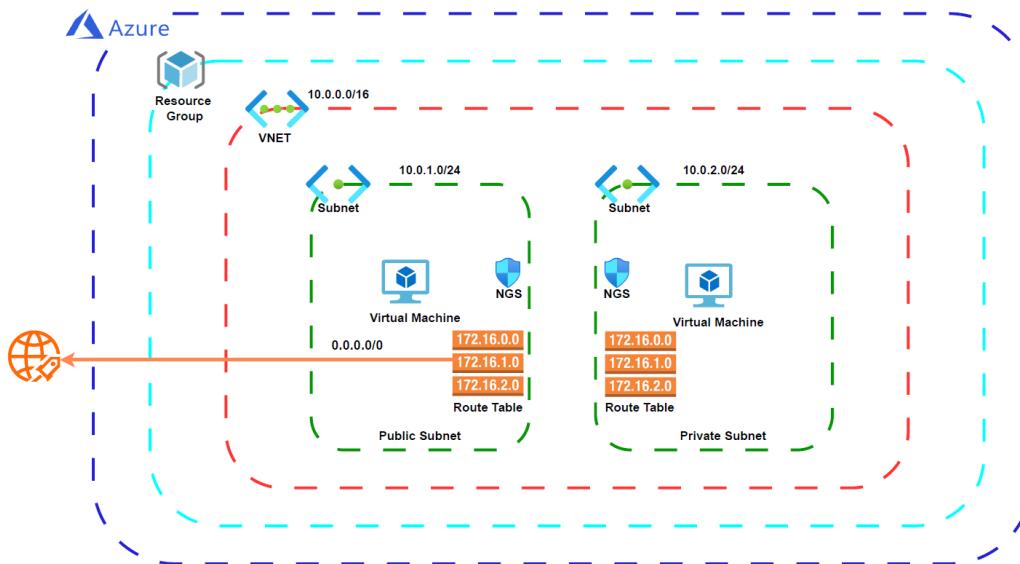
Then, click on “Add”

The screenshot shows the Microsoft Azure portal interface. On the left, the navigation menu is open, showing 'Route tables' as the selected item under 'Virtual network'. The main content area displays the 'dev-demo-public-rt-eus | Routes' page for a route table named 'dev-demo-public-rt-eus'. A success message in a toast notification at the top right states: 'Successfully added route 'internet' to route table 'dev-demo-public-rt-eus''. The table lists one route: 'internet' with address prefix '0.0.0.0/0' and next hop type 'Internet'.

We have successfully added the “**Route**”. So, any resource which will be deployed inside our public subnet will have access to the internet if we provide the public IP address to it.

Part 6: Set up Virtual Machine in VNET

Let us move ahead to deploy some virtual machines in the subnets we have set up so far.



First of all, we will create a virtual machine inside the public subnet and try to access the virtual machine through my local machine / laptop.

Let us head back to the Azure portal

Azure services

- Create a resource
- Route tables
- Virtual networks
- Resource groups
- Subscriptions
- Public IP addresses
- NAT gateways
- Network security groups
- Virtual machines
- More services

Resources

Recent Favorite

Name	Type	Last Viewed
dev-demo-public-rt-eus	Route table	46 minutes ago
dev-demo-private-rt-eus	Route table	2 hours ago
demo-vnet-azure	Resource group	2 hours ago
dev-demo-vnet-eus	Virtual network	9 hours ago
demo-vnet	Virtual network	5 days ago
rg-vm-demo-eus	Resource group	6 days ago
ssh-demo-key	SSH key	6 days ago
demoprojectwebfiles	Storage account	6 days ago
soso	Resource group	6 days ago
sosoebotprod	Storage account	2 weeks ago
sosoebotqa	Storage account	2 weeks ago
sosoebottst	Storage account	2 weeks ago

See all

Search for “Virtual Machines”

Azure services

- Create a resource
- Route tables

Resources

Recent Favorite

Name	Type	Last Viewed
dev-demo-public-rt-eus	Route table	46 minutes ago
dev-demo-private-rt-eus	Route table	2 hours ago
demo-vnet-azure	Resource group	2 hours ago
dev-demo-vnet-eus	Virtual network	9 hours ago
demo-vnet	Virtual network	5 days ago
rg-vm-demo-eus	Resource group	6 days ago
ssh-demo-key	SSH key	6 days ago
demoprojectwebfiles	Storage account	6 days ago
soso	Resource group	6 days ago
sosoebotprod	Storage account	2 weeks ago
sosoebotqa	Storage account	2 weeks ago
sosoebottst	Storage account	2 weeks ago

Services

All Services (30) Marketplace (6) More (4)

- Virtual machines
- Virtual machines (classic)
- Virtual Machines (Operator Nexus)
- SQL Server on Azure Virtual Machines

Marketplace

- Virtual Machines with Confidential App Enclaves
- Managed Virtual Machines
- Managed Services for Azure Virtual Machines
- Cloud Backup for Azure Virtual Machines & Azure Storage

Documentation

- Quickstart - Create a Windows VM in the Azure portal - Azure Virtual Machines
- Availability options for Azure Virtual Machines - Azure Virtual Machines
- Describe Azure Compute and Networking Services - Training
- Renewal for Microsoft Certified: Azure Administrator Associate - Certifications

Continue searching in Microsoft Entra ID

Searching all subscriptions Give feedback

https://portal.azure.com/#blade/Microsoft_Azure_ComputeHub/ComputeHubMenuBlade/virtualMachinesBrowse

Click on “Virtual Machines”

This screenshot shows the Microsoft Azure Compute Infrastructure Virtual machines page. A red arrow points from the text "Click on the drop down on ‘Create’" to the "Create" dropdown menu. The menu is open, displaying four options: "Virtual machine", "Virtual machine scale set (VMSS)", "Presets", and "Hybrid, preconfigured, and high volume solutions".

The main content area displays a message: "No virtual machines to display. Create a virtual machine that runs Linux or Windows. Select an image from the marketplace or use your own customized image." It also includes links to "Learn more about Windows virtual machines" and "Learn more about Linux virtual machines".

Click on the drop down on “Create”

This screenshot shows the same Microsoft Azure Compute Infrastructure Virtual machines page as the previous one, but with a different selection in the "Create" dropdown. The "Virtual machine" option is now highlighted and expanded, while the other three options are collapsed. A red arrow points from the text "Select ‘Virtual Machine’" to the "Virtual machine" option.

The main content area remains the same, displaying the message "No virtual machines to display" and providing links to learn more about Windows and Linux virtual machines.

Select “Virtual Machine”

Microsoft Azure

Search resources, services, and docs (G+/-)

Copilot

ebotsidneysmith@outlook.com DEFAULT DIRECTORY (EBOTSID...)

Home > Compute infrastructure | Virtual machines > Create a virtual machine

Help me create a low cost VM Help me choose the right VM size for my workload Help me create a VM optimized for high availability

Help me create a low cost VM Help me create a VM optimized for high availability Help me choose the right VM size for my workload

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](#)

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 subscription 1)

Resource group * (New) Resource group (Create new)

Instance details

Virtual machine name * (VM1)

Region * (US) East US 2 Deploy to an Azure Extended Zone

Availability options (Availability zone)

Self-selected zone Choose up to 3 availability zones, one VM per zone

Azure-selected zone (Preview) Let Azure assign the best zone for your needs

< Previous Next : Disks > Review + create

Estimated monthly costs

Costs indicated here are estimated only. Pricing may vary depending on your Microsoft agreement, date of purchase, subscription type, usage costs, licensing and currency exchange rates. Total costs may include other resource costs, licensing and subscription implications. This feature may have limited or restricted functionality, but is made available on a preview basis for evaluation and feedback.

Basics	\$0.00
Virtual machine	\$0.00
Size	\$0.00
Standard_B1s	
Disks	\$4.80
Networking	\$0.00
Management	\$0.00
Monitoring	\$0.00
Estimated monthly cost	\$4.80

Give feedback

Our “Subscription” has been selected already. Now, select the “Resource Group” by clicking on the drop down on “Resource Group”.

Microsoft Azure

Search resources, services, and docs (G+/-)

Copilot

ebotsidneysmith@outlook.com DEFAULT DIRECTORY (EBOTSID...)

Home > Compute infrastructure | Virtual machines > Create a virtual machine

Help me create a low cost VM Help me choose the right VM size for my workload Help me create a VM optimized for high availability

Help me create a low cost VM Help me create a VM optimized for high availability Help me choose the right VM size for my workload

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](#)

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 subscription 1)

Resource group * (New) Resource group (Select existing...)

Instance details

Virtual machine name * (VM1)

Region * (US) East US 2 Deploy to an Azure Extended Zone

Availability options (Availability zone)

Self-selected zone Choose up to 3 availability zones, one VM per zone

Azure-selected zone (Preview) Let Azure assign the best zone for your needs

< Previous Next : Disks > Review + create

Estimated monthly costs

Costs indicated here are estimated only. Pricing may vary depending on your Microsoft agreement, date of purchase, subscription type, usage costs, licensing and currency exchange rates. Total costs may include other resource costs, licensing and subscription implications. This feature may have limited or restricted functionality, but is made available on a preview basis for evaluation and feedback.

Basics	\$0.00
Virtual machine	\$0.00
Size	\$0.00
Standard_B1s	
Disks	\$4.80
Networking	\$0.00
Management	\$0.00
Monitoring	\$0.00
Estimated monthly cost	\$4.80

Give feedback

Select “demo-vnet-azure”

Prepared by Sidney Smith Ebot

The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. In the 'Instance details' section, the 'Virtual machine name' field contains 'ubuntu-public-vm'. To the right, a sidebar titled 'Estimated monthly costs' displays a breakdown of costs for a Standard_B1s VM in the East US 2 region, totaling \$4.80. An orange arrow points from the 'Virtual machine name' field to the sidebar.

Estimated monthly costs

Category	Cost (\$)
Basics	\$0.00
Virtual machine	\$0.00
Size	\$0.00
Disks	\$4.80
Networking	\$0.00
Management	\$0.00
Monitoring	\$0.00
Estimated monthly cost	\$4.80

Give the virtual machine a name, I will call it “ubuntu-public-vm”

The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. In the 'Instance details' section, the 'Virtual machine name' field contains 'ubuntu-public-vm' and the 'Region' dropdown is set to '(US) East US 2'. To the right, a sidebar titled 'Estimated monthly costs' displays a breakdown of costs for a Standard_B1s VM in the East US 2 region, totaling \$4.80. An orange arrow points from the 'Region' dropdown to the sidebar.

Estimated monthly costs

Category	Cost (\$)
Basics	\$0.00
Virtual machine	\$0.00
Size	\$0.00
Disks	\$4.80
Networking	\$0.00
Management	\$0.00
Monitoring	\$0.00
Estimated monthly cost	\$4.80

On the “Region”, we will select the region we are working in. That is “East US 2”

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](#)

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 * Deploy to an Azure Extended Zone

Availability options Self-selected zone Choose up to 3 availability zones, one VM per zone Azure-selected zone (Preview) Let Azure assign the best zone for your needs

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

Estimated monthly costs

Costs indicated here are estimates only. Pricing may vary depending on your Microsoft agreement, date of purchase, subscription type, usage costs, licensing and currency exchange rates. Total costs may include other resource costs, licensing and subscription implications. This feature may have limited or restricted functionality, but is made available on a preview basis for evaluation and feedback.

Category	Cost
Basics	\$0.00
Virtual machine	\$0.00
Size Standard_B1s	\$0.00
Disks	\$4.80
Networking	\$0.00
Management	\$0.00
Monitoring	\$0.00
Estimated monthly cost	\$4.80

Then on “Availability Option”, select “Availability Zone”

Basics Disks Networking Management Monitoring Advanced Tags Review + create

Help me create a low cost VM Help me create a VM optimized for high availability Help me choose the right VM size for my workload

Availability options Zone options Self-selected zone Choose up to 3 availability zones, one VM per zone Azure-selected zone (Preview) Let Azure assign the best zone for your needs

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 * See all images | Configure VM generation

VM architecture Arm64 x64

Run with Azure Spot discount

Size * See all sizes

Enable Hibernation Hibernate does not currently support Trusted launch and Confidential virtual machines for Linux images. [Learn more](#)

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

Estimated monthly costs

Costs indicated here are estimates only. Pricing may vary depending on your Microsoft agreement, date of purchase, subscription type, usage costs, licensing and currency exchange rates. Total costs may include other resource costs, licensing and subscription implications. This feature may have limited or restricted functionality, but is made available on a preview basis for evaluation and feedback.

Category	Cost
Basics	\$0.00
Virtual machine	\$0.00
Size Standard_B1s	\$0.00
Disks	\$4.80
Networking	\$0.00
Management	\$0.00
Monitoring	\$0.00
Estimated monthly cost	\$4.80

On, “Zone Option”, select “Self-selected Zone”

Create a virtual machine

Availability options: Availability zone

Zone options: Self-selected zone (selected), Choose up to 3 availability zones, one VM per zone; Azure-selected zone (Preview), Let Azure assign the best zone for your needs.

Availability zone *: Zone 1 (highlighted with an orange arrow)

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

Security type: Trusted launch virtual machines

Image *: Ubuntu Server 24.04 LTS - x64 Gen2

VM architecture: x64 (selected)

Run with Azure Spot discount:

Size *: Standard_B1s - 1 vcpu, 1 GiB memory (\$7.59/month) (free services eligible)

Enable Hibernation: (disabled)

Estimated monthly costs:

Category	Cost
Basics	\$0.00
Virtual machine	\$0.00
Size	\$0.00
Disks	\$4.80
Networking	\$0.00
Management	\$0.00
Monitoring	\$0.00
Estimated monthly cost	\$4.80

< Previous | Next : Disks > | Review + create | Give feedback

Then on “Availability Zone”, select “Zone 1”

Create a virtual machine

Availability options: Availability zone

Zone options: Self-selected zone (selected), Choose up to 3 availability zones, one VM per zone; Azure-selected zone (Preview), Let Azure assign the best zone for your needs.

Availability zone *: Zone 1 (highlighted with an orange arrow)

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

Security type: Trusted launch virtual machines (highlighted with an orange arrow)

Image *: Ubuntu Server 24.04 LTS - x64 Gen2

VM architecture: x64 (selected)

Run with Azure Spot discount:

Size *: Standard_B1s - 1 vcpu, 1 GiB memory (\$7.59/month) (free services eligible)

Enable Hibernation: (disabled)

Estimated monthly costs:

Category	Cost
Basics	\$0.00
Virtual machine	\$0.00
Size	\$0.00
Disks	\$4.80
Networking	\$0.00
Management	\$0.00
Monitoring	\$0.00
Estimated monthly cost	\$4.80

< Previous | Next : Disks > | Review + create | Give feedback

For “Security Type”, we will leave it as “Trusted Launch Virtual Machine”

The screenshot shows the Microsoft Azure 'Create a virtual machine' wizard. The current step is 'Image *'. The 'Image' dropdown is open, showing 'Ubuntu Server 24.04 LTS - x64 Gen2' as the selected option. Other options visible include 'See all images' and 'Configure VM generation'. To the right of the form is a sidebar titled 'Estimated monthly costs' which provides a breakdown of the estimated monthly cost for the selected configuration.

On “Image”, we will use “Ubuntu Server”

The screenshot shows the Microsoft Azure 'Create a virtual machine' wizard. The current step is 'VM architecture'. The 'VM architecture' dropdown is open, showing 'x64' as the selected option. Other options visible include 'Arm64'. To the right of the form is a sidebar titled 'Estimated monthly costs' which provides a breakdown of the estimated monthly cost for the selected configuration.

For “VM architecture”, select “x64”

The screenshot shows the 'Create a virtual machine' wizard in Microsoft Azure. On the right, there is a sidebar titled 'Estimated monthly costs' which lists the estimated cost for the selected configuration. The configuration includes:

- Virtual machine:** Standard_B1s
- Size:** Standard_B1s - 1 vcpu, 1 GiB memory (\$7.59/month) (free services eligible)
- Disks:** \$4.80
- Networking:** \$0.00
- Management:** \$0.00
- Monitoring:** \$0.00
- Total Estimated monthly cost:** \$4.80

In the main form, the 'Run with Azure Spot discount' checkbox is unchecked. A red arrow points to this checkbox. Other settings shown include Self-selected zone, Ubuntu Server 24.04 LTS - x64 Gen2 image, and Standard_B1s size.

On “Run with Azure Spot discount”, we will leave it unchecked

The screenshot shows the 'Create a virtual machine' wizard in Microsoft Azure. The 'Size' dropdown menu is open, displaying the following options:

- Standard_B1s - 1 vcpu, 1 GiB memory (\$7.59/month) (free services eligible)
- See all sizes

A red arrow points to the 'Standard_B1s' option in the dropdown menu. The rest of the configuration is identical to the previous screenshot, including the 'Run with Azure Spot discount' checkbox being unchecked.

For “Size”, we are going to use the minimum. So, we will use “**Standard_B1s**”

Create a virtual machine

Availability options: Availability zone

Zone options: Self-selected zone (Choose up to 3 availability zones, one VM per zone) or Azure-selected zone (Preview) (Let Azure assign the best zone for your needs)

Availability zone: Zone 1

Security type: Trusted launch virtual machines

Image: Ubuntu Server 24.04 LTS - x64 Gen2

VM architecture: x64

Run with Azure Spot discount: Standard_B1s - 1 vcpu, 1 GiB memory (\$7.59/month) (free services eligible)

Size: Standard_B1s

Enable Hibernation: (disabled)

Estimated monthly costs

- Basics: \$0.00
- Virtual machine: \$0.00
- Size: Standard_B1s
- Disks: \$4.80
- Networking: \$0.00
- Management: \$0.00
- Monitoring: \$0.00
- Estimated monthly cost:** \$4.80

Scroll down to “Administrator Account”

Create a virtual machine

Administrator account

Authentication type: SSH public key

Username: azureuser

SSH public key source: Generate new key pair

SSH Key Type: RSA SSH Format

Key pair name: ubuntu-public-vm_key

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports: Allow selected ports

Select inbound ports: SSH (22)

Estimated monthly costs

- Basics: \$0.00
- Virtual machine: \$0.00
- Size: Standard_B1s
- Disks: \$4.80
- Networking: \$0.00
- Management: \$0.00
- Monitoring: \$0.00
- Estimated monthly cost:** \$4.80

On “administration Type”, select “SSH public key”

Create a virtual machine

Administrator account

Authentication type: SSH public key Password

Username *: **azureuser**

SSH public key source: **Generate new key pair**

SSH Key Type: RSA SSH Format Ed25519 SSH Format

Key pair name *: **ubuntu-public-vm_key**

Inbound port rules: Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports *: Allow selected ports

Select inbound ports *: **SSH (22)**

Estimated monthly costs

Category	Cost
Basics	\$0.00
Virtual machine	\$0.00
Size	\$0.00
Standard_B1s	
Disks	\$4.80
Networking	\$0.00
Management	\$0.00
Monitoring	\$0.00
Estimated monthly cost	\$4.80

On “Username”, we will use the default username “**azureuser**”

Create a virtual machine

Administrator account

Authentication type: SSH public key Password

Username *: **azureuser**

SSH public key source: **Generate new key pair**

SSH Key Type: RSA SSH Format Ed25519 SSH Format

Key pair name *: **ubuntu-public-vm_key**

Inbound port rules: Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports *: Allow selected ports

Select inbound ports *: **SSH (22)**

Estimated monthly costs

Category	Cost
Basics	\$0.00
Virtual machine	\$0.00
Size	\$0.00
Standard_B1s	
Disks	\$4.80
Networking	\$0.00
Management	\$0.00
Monitoring	\$0.00
Estimated monthly cost	\$4.80

Then on “**SSH Public key Source**”, Select “**Generate new key pair**”.

Create a virtual machine

Administrator account

Authentication type: SSH public key Password

Azure now automatically generates an SSH key pair for you and allows you to store it for future use. It is a fast, simple, and secure way to connect to your virtual machine.

Username *: azureuser

SSH public key source: Generate new key pair

SSH Key Type: RSA SSH Format Ed25519 SSH Format

Ed25519 provides a fixed security level of no more than 128 bits for 256-bit key, while RSA could offer better security with keys longer than 3072 bits.

Key pair name *: ubuntu-public-vm_key

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports *: None Allow selected ports

Select inbound ports *: SSH (22)

< Previous Next : Disks > Review + create

Estimated monthly costs

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Category	Cost
Basics	\$0.00
Virtual machine	\$0.00
Size	\$0.00
Standard_B1s	
Disks	\$4.80
Networking	\$0.00
Management	\$0.00
Monitoring	\$0.00
Estimated monthly cost	\$4.80

Give feedback

Then, on “SSH Key type”, select “RSA SSH Format”

Create a virtual machine

Administrator account

Authentication type: SSH public key Password

Azure now automatically generates an SSH key pair for you and allows you to store it for future use. It is a fast, simple, and secure way to connect to your virtual machine.

Username *: azureuser

SSH public key source: Generate new key pair

SSH Key Type: RSA SSH Format Ed25519 SSH Format

Ed25519 provides a fixed security level of no more than 128 bits for 256-bit key, while RSA could offer better security with keys longer than 3072 bits.

Key pair name *: ubuntu-public-vm_key

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports *: None Allow selected ports

Select inbound ports *: SSH (22)

< Previous Next : Disks > Review + create

Estimated monthly costs

Costs indicated here are estimates only. Pricing may vary depending on your Microsoft agreement, date of purchase, subscription type, usage costs, licensing and currency exchange rates. Total costs may include other resource costs, licensing and subscription implications. This feature may have limited or restricted functionality, but is made available on a preview basis for evaluation and feedback.

Category	Cost
Basics	\$0.00
Virtual machine	\$0.00
Size	\$0.00
Standard_B1s	
Disks	\$4.80
Networking	\$0.00
Management	\$0.00
Monitoring	\$0.00
Estimated monthly cost	\$4.80

Give feedback

For the “Key Pair Name”, I will maintain it as “ubuntu-public-vm-key”

Create a virtual machine

Help me create a low cost VM | Help me choose the right VM size for my workload | Help me create a VM optimized for high availability

Estimated monthly costs

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Give feedback about your estimate experience

Basics

- Virtual machine \$0.00
- Size Standard_B1s

Disks \$4.80

Networking \$0.00

Management \$0.00

Monitoring \$0.00

Estimated monthly cost \$4.80

< Previous | Next : Disks > | Review + create | Give feedback

Then on “Public Inbound Ports”, select “Allow selected ports”

Create a virtual machine

Help me create a low cost VM | Help me choose the right VM size for my workload | Help me create a VM optimized for high availability

Estimated monthly costs

Costs indicated here are estimates only. Pricing may vary depending on your Microsoft agreement, date of purchase, subscription type, usage costs, licensing and currency exchange rates. Total costs may include other resource costs, licensing and subscription implications. This feature may have limited or restricted functionality, but is made available on a preview basis for evaluation and feedback.

Give feedback about your estimate experience

Basics

- Virtual machine \$0.00
- Size Standard_B1s

Disks \$4.80

Networking \$0.00

Management \$0.00

Monitoring \$0.00

Estimated monthly cost \$4.80

< Previous | Next : Disks > | Review + create | Give feedback

Then, on “Select Inbound ports”, select “SSH (22)”. This is going to be our Network Security Group (NSG) which will allow us to communicate on port 22 so that we can access our virtual machine. So, I am going to keep the inbound port on 22 open. Later on, we will create the Network Security group

Prepared by Sidney Smith Ebot

Create a virtual machine

Help me create a low cost VM | Help me choose the right VM size for my workload | Help me create a VM optimized for high availability

Username * ✓

SSH public key source ▼

SSH Key Type RSA SSH Format Ed25519 SSH Format
Ed25519 provides a fixed security level of no more than 128 bits for 256-bit key, while RSA could offer better security with keys longer than 3072 bits.

Key pair name * ✓

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports * None Allow selected ports

Select inbound ports * ▼

⚠ This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

< Previous Next : Disks > Review + create Give feedback

Click on “Next: Disks”

Create a virtual machine

Help me create a low cost VM | Help me choose the right VM size for my workload | Help me create a VM optimized for high availability

Basics Disks Networking Management Monitoring Advanced Tags Review + create

Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. [Learn more](#)

VM disk encryption

Azure disk storage encryption automatically encrypts your data stored on Azure managed disks (OS and data disks) at rest by default when persisting it to the cloud.

Encryption at host
Encryption at host is not registered for the selected subscription. [Learn more](#)

OS disk

OS disk size Image default (30 GiB)

OS disk type * Premium SSD (locally-redundant storage)

Delete with VM

Key management Platform-managed key

Enable Ultra Disk compatibility

Data disks for ubuntu-public-vm

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

ID	Name	Size (GiB)	Disk type	Host caching	Delete with VM

< Previous Next : Networking > Review + create Give feedback

Here, we will leave everything as default. That is OS Disk size of 30GiB. Then, click on “Next: Networking”

Estimated monthly costs

Category	Cost
Basics	\$0.00
Disks	\$4.80
Networking	\$3.65
Public IP	\$3.65
VM outbound data transfer	\$0.00
Estimated data transferred (GB)	\$0.00
100	

Estimated monthly cost \$8.45

This is where we are going to set up the VNet and subnet for our virtual machine. Click on the drop down on “Virtual Network”

Estimated monthly costs

Category	Cost
Basics	\$0.00
Disks	\$4.80
Networking	\$3.65
Public IP	\$3.65
VM outbound data transfer	\$0.00
Estimated data transferred (GB)	\$0.00
100	

Estimated monthly cost \$8.45

And select our Virtual Network, that is “**dev-demo-vnet-eus**”

Prepared by Sidney Smith Ebot

The screenshot shows the 'Networking' tab of the Azure VM creation wizard. On the right, an 'Estimated monthly costs' sidebar lists \$8.45 for the selected configuration. The main form includes fields for Virtual network, Subnet, Public IP, NIC network security group, and Public inbound ports. A warning message at the bottom states: '⚠️ This will allow all IP addresses to access your virtual machine. This is only recommended for certain scenarios. See the Advanced controls in the Networking tab.' Navigation buttons at the bottom are '< Previous', 'Next : Management >', and 'Review + create'.

Now, we have to select the subnet. Click on the drop down on “Subnet”

The screenshot shows the 'Networking' tab of the Azure VM creation wizard. The 'Subnet' dropdown now displays '(New) snet-eastus2-1'. The 'Compatible subnets' dropdown shows two options: 'dev-demo-public-subnet-eus (10.0.1.0/24)' and 'dev-demo-private-subnet-eus (10.0.2.0/24)'. The 'Estimated monthly cost' sidebar remains at \$8.45. Navigation buttons at the bottom are '< Previous', 'Next : Management >', and 'Review + create'.

Select our public subnet

Networking

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.

Network interface

When creating a virtual machine, a network interface will be created for you.

Virtual network: dev-demo-vnet-eus (demo-vnet-azure)

Subnet *: dev-demo-public-subnet-eus

Public IP: (new) ubuntu-public-vm-ip

NIC network security group: Basic

Public inbound ports *: Allow selected ports

Select inbound ports *: SSH (22)

Estimated monthly costs

Costs indicated here are estimates only. Pricing may vary depending on your Microsoft agreement, date of purchase, subscription type, usage costs, licensing and currency exchange rates. Total costs may include other resource costs, licensing and subscription implications. This feature may have limited or restricted functionality, but is made available on a preview basis for evaluation and feedback.

> Basics	\$0.00
> Disks	\$4.80
> Networking	\$3.65
Public IP	\$3.65
VM outbound data transfer	\$0.00
Estimated data transferred (GB)	\$0.00
100	
Estimated monthly cost	\$8.45

On “Public IP”, we will assign the public IP for the virtual machine.

Networking

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.

Network interface

When creating a virtual machine, a network interface will be created for you.

Virtual network: dev-demo-vnet-eus (demo-vnet-azure)

Subnet *: dev-demo-public-subnet-eus

Public IP: (new) ubuntu-public-vm-ip

NIC network security group: Basic

Public inbound ports *: Allow selected ports

Select inbound ports *: SSH (22)

Estimated monthly costs

Costs indicated here are estimates only. Pricing may vary depending on your Microsoft agreement, date of purchase, subscription type, usage costs, licensing and currency exchange rates. Total costs may include other resource costs, licensing and subscription implications. This feature may have limited or restricted functionality, but is made available on a preview basis for evaluation and feedback.

> Basics	\$0.00
> Disks	\$4.80
> Networking	\$3.65
Public IP	\$3.65
VM outbound data transfer	\$0.00
Estimated data transferred (GB)	\$0.00
100	
Estimated monthly cost	\$8.45

Leave everything as default and scroll down to the end

Prepared by Sidney Smith Ebot

Microsoft Azure

Search resources, services, and docs (G+/)

Copilot

ebotsidneysmith@outlook.com

DEFAULT DIRECTORY (EBOTSIDNEY...)

Home > Compute infrastructure | Virtual machines >

Create a virtual machine

Help me create a low cost VM Help me choose the right VM size for my workload Help me create a VM optimized for high availability

Help me create a low cost VM Help me create a VM optimized for high availability Help me choose the right VM size for my workload

Basic Advanced

Public inbound ports * None Allow selected ports

Select inbound ports * SSH (22)

This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

Delete public IP and NIC when VM is deleted

Enable accelerated networking The selected VM size does not support accelerated networking.

Load balancing

You can place this virtual machine in the backend pool of an existing Azure load balancing solution. [Learn more](#)

Load balancing options None Azure load balancer Application gateway

Supports all TCP/UDP network traffic, port-forwarding, and outbound flows. Web traffic load balancer for HTTP/HTTPS with URL-based routing, SSL termination, session persistence, and web application firewall.

< Previous Next: Management > Review + create

Estimated monthly costs

Costs indicated here are estimates only. Pricing may vary depending on your Microsoft agreement, date of purchase, subscription type, usage costs, licensing and currency exchange rates. Total costs may include other resource costs, licensing and subscription implications. This feature may have limited or restricted functionality, but is made available on a preview basis for evaluation and feedback.

Give feedback about your estimate experience

Category	Cost
Basics	\$0.00
Disks	\$4.80
Networking	\$3.65
Public IP	\$3.65
VM outbound data transfer	\$0.00
Estimated data transferred (GB)	\$0.00
100	
Estimated monthly cost	\$8.45

Give feedback

Leave everything as default and click on “Next: Management”

Microsoft Azure

Search resources, services, and docs (G+/)

Copilot

ebotsidneysmith@outlook.com

DEFAULT DIRECTORY (EBOTSIDNEY...)

Home > Compute infrastructure | Virtual machines >

Create a virtual machine

Help me create a low cost VM Help me choose the right VM size for my workload Help me create a VM optimized for high availability

Help me create a low cost VM Help me choose the right VM size for my workload Help me create a VM optimized for high availability

Basics Disks Networking Management Monitoring Advanced Tags Review + create

Configure management options for your VM.

Microsoft Defender for Cloud

Microsoft Defender for Cloud provides unified security management and advanced threat protection across hybrid cloud workloads. [Learn more](#)

Your subscription is protected by Foundational Cloud Security Posture Management Free Plan.

Identity

Enable system assigned managed identity

Microsoft Entra ID

Login with Microsoft Entra ID RBAC role assignment of Virtual Machine Administrator Login or Virtual Machine User Login is required when using Microsoft Entra ID login. [Learn more](#)

Microsoft Entra ID login now uses SSH certificate-based authentication. You will need to use an SSH client that supports OpenSSH certificates. You can use Azure CLI or Cloud Shell from the Azure Portal. [Learn more](#)

Auto-shutdown

Enable auto-shutdown

< Previous Next: Monitoring > Review + create

Estimated monthly costs

Costs indicated here are estimates only. Pricing may vary depending on your Microsoft agreement, date of purchase, subscription type, usage costs, licensing and currency exchange rates. Total costs may include other resource costs, licensing and subscription implications. This feature may have limited or restricted functionality, but is made available on a preview basis for evaluation and feedback.

Give feedback about your estimate experience

Category	Cost
Basics	\$0.00
Disks	\$4.80
Networking	\$3.65
Management	\$0.00
Monitoring	\$0.00
Advanced	\$0.00
Estimated monthly cost	\$8.45

Give feedback

Here we will leave everything as default and click on “Next: Monitoring”

Prepared by Sidney Smith Ebot

The screenshot shows the Microsoft Azure 'Create a virtual machine' wizard. The current step is 'Monitoring'. On the left, there are sections for 'Alerts', 'Diagnostics' (with options for boot diagnostics, OS guest diagnostics, and managed storage account), and 'Health'. On the right, the 'Estimated monthly costs' table is displayed, showing charges for Basics (\$0.00), Disks (\$4.80), Networking (\$3.65), Management (\$0.00), and Monitoring (\$0.00). The total estimated monthly cost is \$8.45. A note indicates that costs are estimates only and may vary.

Category	Cost
Basics	\$0.00
Disks	\$4.80
Networking	\$3.65
Management	\$0.00
Monitoring	\$0.00
Total Estimated monthly cost	\$8.45

Here, we are also not going to change anything. Click on “Next: Advanced”

The screenshot shows the Microsoft Azure 'Create a virtual machine' wizard at the 'Advanced' step. The 'Advanced' tab is selected. On the left, there are sections for 'Extensions' (with a link to 'Select an extension to install') and 'VM applications' (with a link to 'Select a VM application to install'). On the right, the 'Estimated monthly costs' table is shown, identical to the previous screenshot, with a total estimated monthly cost of \$8.45. A note about estimated costs is present.

Category	Cost
Basics	\$0.00
Disks	\$4.80
Networking	\$3.65
Management	\$0.00
Monitoring	\$0.00
Advanced	\$0.00
No items added	
Total Estimated monthly cost	\$8.45

Here we are going to leave everything as default. Click on “Next: Tags”

Prepared by Sidney Smith Ebot

The screenshot shows the 'Create a virtual machine' wizard on the 'Tags' step. At the top, there are three help buttons: 'Help me create a low cost VM', 'Help me choose the right VM size for my workload', and 'Help me create a VM optimized for high availability'. Below these are tabs for Basics, Disks, Networking, Management, Monitoring, Advanced, and Tags, with 'Tags' being the active tab. A note says: 'Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups.' A note below that says: 'Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.' On the left, there's a table for defining tags with columns for Name, Value, and Resource. A dropdown shows '13 selected'. On the right, the 'Estimated monthly costs' section shows the breakdown for Basics (\$0.00), Disks (\$4.80), Networking (\$3.65), Management (\$0.00), Monitoring (\$0.00), and Advanced (\$0.00). The total estimated monthly cost is \$8.45. A 'Give feedback' link is at the bottom right.

We will skip the “Tags”. Click on “Next: Review + Create”

The screenshot shows the 'Create a virtual machine' wizard on the 'Review + Create' step. At the top, there are three help buttons: 'Help me create a low cost VM', 'Help me choose the right VM size for my workload', and 'Help me create a VM optimized for high availability'. Below these are tabs for Basics, Disks, Networking, Management, Monitoring, Advanced, and Tags, with 'Review + create' being the active tab. A green validation message says 'Validation passed'. On the left, there's a 'Price' section showing '1 X Standard B1s by Microsoft' at '0.0104 USD/hr' with a note 'Subscription credits apply'. There's also a 'TERMS' section with a detailed legal notice. On the right, the 'Estimated monthly costs' section is identical to the previous screen, showing a total of \$8.45. A warning message at the bottom says '⚠ You have set SSH port(s) open to the internet. This is only recommended for testing. If you want to change this setting, go'. A red arrow points from this message down towards the 'Create' button. At the bottom, there are 'Previous' and 'Next >' buttons, and a large blue 'Create' button.

We have to review the information here. Then click on “Create”

Prepared by Sidney Smith Ebot

Validation passed

Help me create a low cost VM | Help me choose the right VM size for my workload | Help me create a VM optimized for high availability

Basics Disks Networking Management Monitoring Advanced Tags Review + create

Price

1 X Standard B1s by Microsoft Subscription credits apply 0.0104 USD/hr Pricing for other VM sizes

TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the offer(s); (b) authorize Microsoft to bill my current payment method for the fees associated with the offer(s); and (c) agree that Microsoft may share my contact information with the provider(s) of the offering(s) for support, billing and other transactional purposes. See the [Azure Marketplace Terms](#) for additional details.

Name: Sidney Ebot
Preferred e-mail address: ebotsidneysmith@outlook.com
Preferred phone number:

Estimated monthly costs

Costs indicated here are estimates only. Pricing may vary depending on your Microsoft agreement, date of purchase, subscription type, usage costs, licensing and currency exchange rates. Total costs may include other resource costs, licensing and subscription implications. This feature may have limited or restricted functionality, but is made available on a preview basis for evaluation and feedback.

Category	Cost
Basics	\$0.00
Disks	\$4.80
Networking	\$3.65
Management	\$0.00
Monitoring	\$0.00
Advanced	\$0.00
Estimated monthly cost	\$8.45

You have set SSH port(s) open to the internet. This is only recommended for testing. If you want to change this setting, go to the [Virtual machine settings](#).

< Previous | Next > | Create | Download a template for automation | Give feedback

Click on “Download private key and create resource”

Search | Delete | Cancel | Redeploy | Download | Refresh

Overview

Your deployment is complete

Deployment name: CreateVm-canonical.ubuntu-24_04-lts-server-2... Start time: 12/1/2025, 1:22:42 AM
Subscription: Azure subscription-2... Correlation ID: cdc0cd0b-70e0-4cc6-814a-90e424f3b19e

Deployment details

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

Next steps

Go to resource | Create another VM

Give feedback | Tell us about your experience with deployment

Cost Management
Get notified to stay within your budget and prevent unexpected charges on your bill.
Set up cost alerts >

Microsoft Defender for Cloud
Secure your apps and infrastructure
Go to Microsoft Defender for Cloud >

Free Microsoft tutorials
Start learning today >

Work with an expert
Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support.
Find an Azure expert >

The virtual machine has been created. Click on “Go to Resource”

Prepared by Sidney Smith Ebot

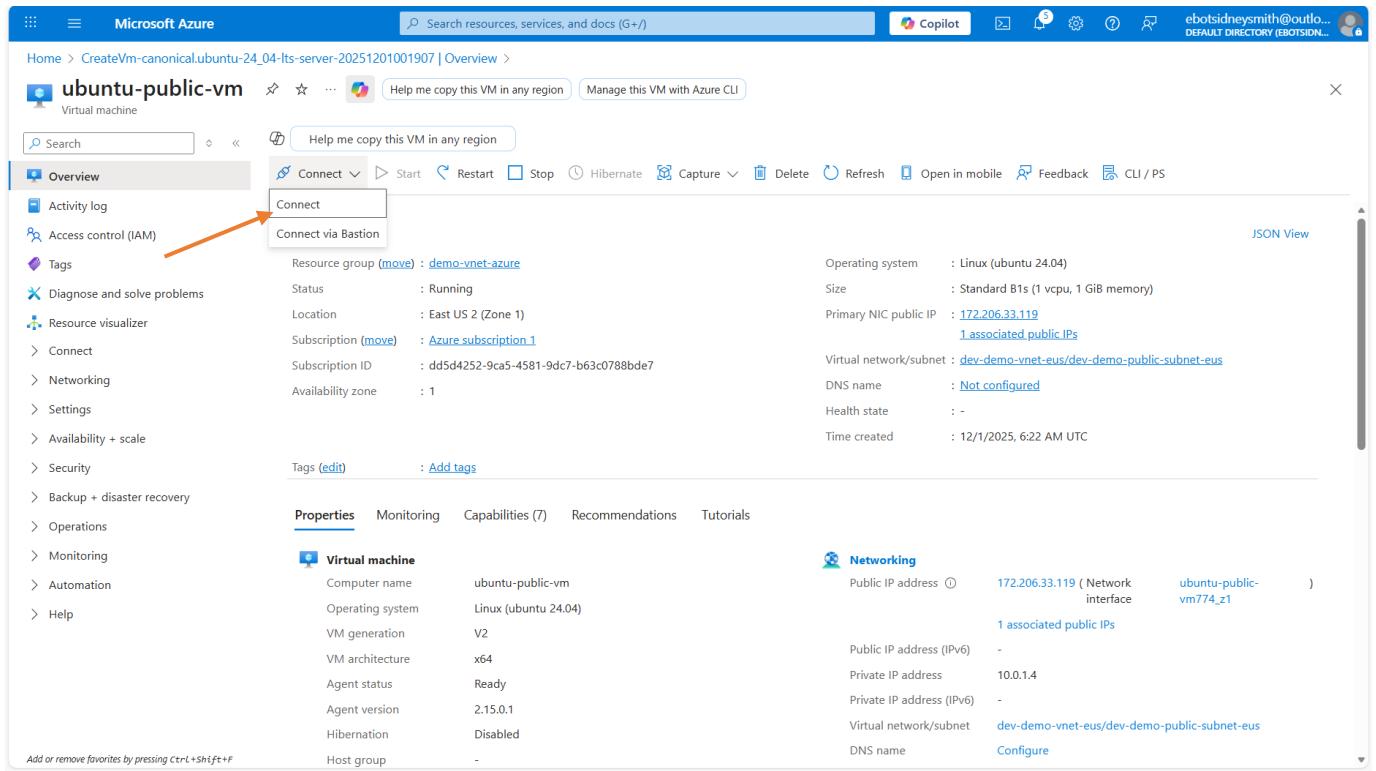
The screenshot shows the Microsoft Azure portal interface for a virtual machine named "ubuntu-public-vm". The "Overview" tab is selected. In the "Essentials" section, the "Status" is listed as "Running" with an orange arrow pointing to it. The "Primary NIC public IP" is listed as "172.206.33.119" with another orange arrow pointing to it. The "Networking" section shows a public IP address of "172.206.33.119" and a private IP address of "10.0.1.4". The "Properties" section provides detailed information about the VM, including its computer name, operating system, and various configuration settings.

You can see the virtual machine is running and the Public IP address is “**172.206.33.119**”. This is the public IP address we are going to use to connect.

The screenshot shows the Microsoft Azure portal interface for the same virtual machine. The "Connect" button in the top navigation bar is highlighted with a large orange arrow. The rest of the page content is identical to the previous screenshot, showing the VM's status as "Running" and its public IP address as "172.206.33.119".

We have to connect to the Virtual machine. To do this, click on the drop down on “**Connect**”

Prepared by Sidney Smith Ebot



ubuntu-public-vm | Overview

Help me copy this VM in any region | Manage this VM with Azure CLI

Search

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Resource visualizer

Connect

Networking

Settings

Availability + scale

Security

Backup + disaster recovery

Operations

Monitoring

Automation

Help

Tags (edit) : Add tags

Properties Monitoring Capabilities (7) Recommendations Tutorials

Virtual machine

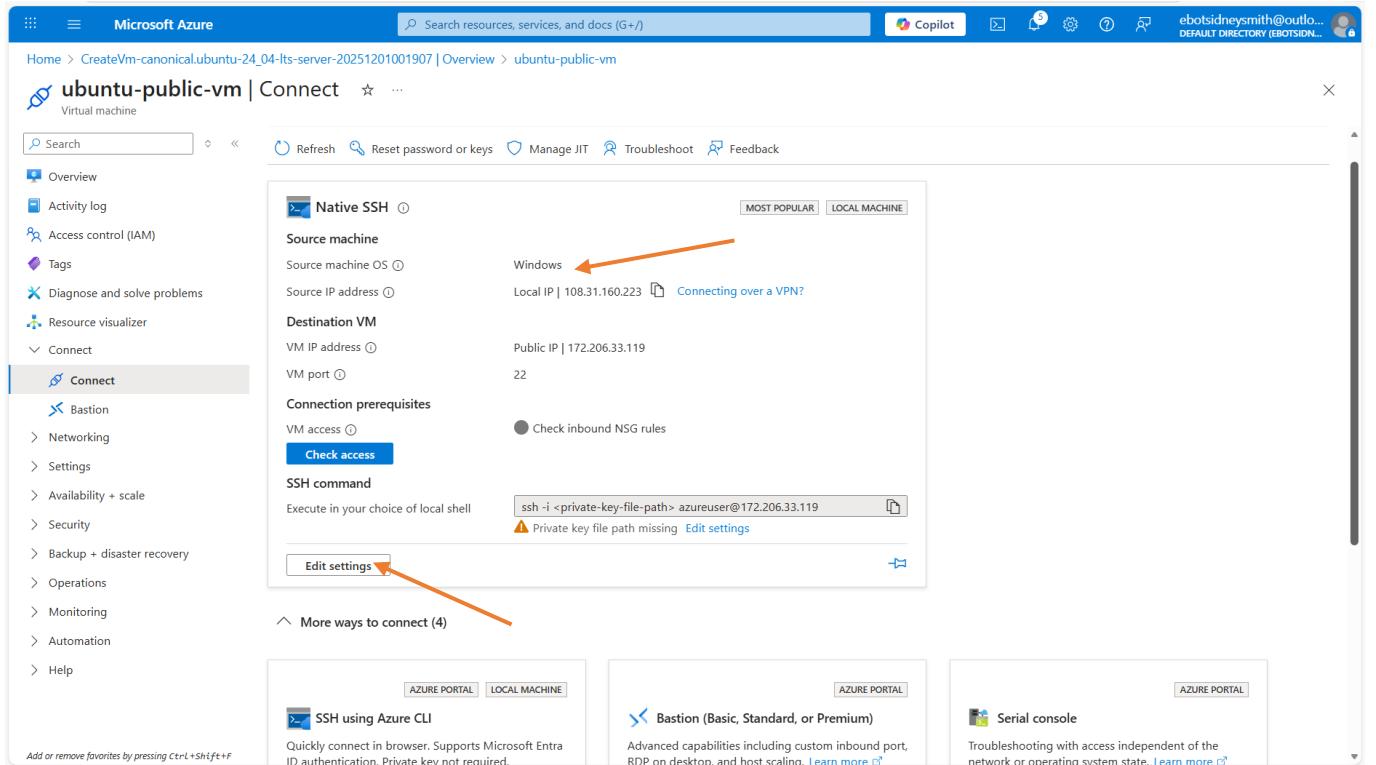
Computer name	ubuntu-public-vm
Operating system	Linux (ubuntu 24.04)
VM generation	V2
VM architecture	x64
Agent status	Ready
Agent version	2.15.0.1
Hibernation	Disabled
Host group	-

Networking

Public IP address	172.206.33.119 (Network interface)
Public IP address (IPv6)	-
Private IP address	10.0.1.4
Private IP address (IPv6)	-
Virtual network/subnet	dev-demo-vnet-eus/dev-demo-public-subnet-eus
DNS name	Configure

JSON View

Select “connect”



ubuntu-public-vm | Connect

Virtual machine

Refresh Reset password or keys Manage JIT Troubleshoot Feedback

Native SSH

Source machine

Source machine OS: Windows

Source IP address: Local IP | 108.31.160.223 Connecting over a VPN?

Destination VM

VM IP address: Public IP | 172.206.33.119

VM port: 22

Connection prerequisites

VM access: Check inbound NSG rules

SSH command

Execute in your choice of local shell: ssh -i <private-key-file-path> azureuser@172.206.33.119

Private key file path missing Edit settings

Edit settings

More ways to connect (4)

AZURE PORTAL LOCAL MACHINE

SSH using Azure CLI

Bastion (Basic, Standard, or Premium)

Serial console

You can see that the “Source Machine” is “Windows”, we have to change it to “Linux” since we are using ubuntu server. Click on “Edit Settings”

Native SSH

Connect from your local machine

Source machine

Source machine OS: Windows

Source IP address: Local IP | 50.1

Destination VM

VM IP address: Public IP | 172.206.33.119

VM port: 22

Connection prerequisites

VM access: Port 22 is checked

SSH command

Execute in your choice of local shell: ssh -i <private key>

Check access

SSH command

Execute below commands in your choice of local shell to connect via SSH.

Provide a path to your SSH private key file on your local machine

Example: C:\Users\<your-profile>\Downloads\id_rsa.pem

Can't find your private key? [Reset your SSH private key](#)

Connect to your VM via SSH

For added security, SSH private key file path is only saved locally on this browser.

AZURE PORTAL LOCAL MACHINE

SSH using Azure CLI

Save changes Close Troubleshooting Give feedback

Click on the drop down on “Source Machine” and select “Linux”

Native SSH

Connect from your local machine

Source machine

Source machine OS: Linux

Source IP address: Local IP | 50.1

Destination VM

VM IP address: Public IP | 172.206.33.119

VM port: 22

Connection prerequisites

VM access: Port 22 is checked

SSH command

Execute below commands in your choice of local shell to connect via SSH.

Provide a path to your SSH private key file on your local machine

Example: ~/ssh/id_rsa.pem

Can't find your private key? [Reset your SSH private key](#)

Use chmod to enhance security by assigning read-only access to your private key.

For added security, SSH private key file path is only saved locally on this browser.

AZURE PORTAL LOCAL MACHINE

SSH using Azure CLI

Save changes Close without saving Troubleshooting Give feedback

Provide the path to your SSH private key, just enter the name of the private key. My private key is called “ubuntu-public-vm_key.pem”

Prepared by Sidney Smith Ebot

The screenshot shows the Microsoft Azure portal interface for connecting to a virtual machine named "ubuntu-public-vm". The left sidebar has a "Connect" section selected. The main area is titled "Native SSH" and shows the configuration for connecting from a local machine. The "Destination VM" section includes fields for "VM IP address" (Public IP | 172.206.33.119) and "VM port" (22). The "Connection prerequisites" section shows "VM access" checked and "Port 22 is" checked. The "SSH command" section shows the command "ssh -i <private key>" and a note about private keys. A red arrow points to the "Save changes" button at the bottom right of the configuration pane.

Then click on “Save Changes”

The screenshot shows the Microsoft Azure portal interface for connecting to a virtual machine named "ubuntu-public-vm". The left sidebar has a "Connect" section selected. The main area is titled "Native SSH" and shows the configuration for connecting from a local machine. The "Destination VM" section includes fields for "VM IP address" (Public IP | 172.206.33.119) and "VM port" (22). The "Connection prerequisites" section shows "VM access" checked and "Port 22 is" checked. The "SSH command" section shows the command "ssh -i <private key>" and a note about private keys. A red arrow points to the "Close" button at the bottom right of the configuration pane.

Then, click on “Close”

Microsoft Azure

ubuntu-public-vm | Connect

Native SSH

Source machine: Linux, Source IP address: Local IP | 50.169.57.140, Destination VM: Public IP | 172.206.33.119, VM port: 22

Connection prerequisites: Check inbound NSG rules (radio button selected)

SSH command: ssh -i ubuntu-public-vm_key.pem azureuser@172.206.33.119

More ways to connect (4)

Click on “Check Access”

Microsoft Azure

ubuntu-public-vm | Connect

Native SSH

Source machine: Linux, Source IP address: Local IP | 50.169.57.140, Destination VM: Public IP | 172.206.33.119, VM port: 22

Connection prerequisites: Port 22 is accessible from source IP(s) (checkbox checked)

SSH command: ssh -i ubuntu-public-vm_key.pem azureuser@172.206.33.119

More ways to connect (4)

Click on the drop down on “More ways to connect”

The screenshot shows the Microsoft Azure portal interface for a virtual machine named 'ubuntu-public-vm'. The left sidebar has 'Connect' selected under the 'Virtual machine' category. In the main content area, the 'Native SSH' method is chosen. The 'SSH command' field contains the command: `ssh -i ubuntu-public-vm_key.pem azureuser@172.206.33.119`. An orange arrow points from the copy icon in this field to the clipboard icon in the top right corner of the command input box.

Here you can connect using different methods. We will use “**Native SSH**”. Copy the SSH command above and run-on command prompt terminal:

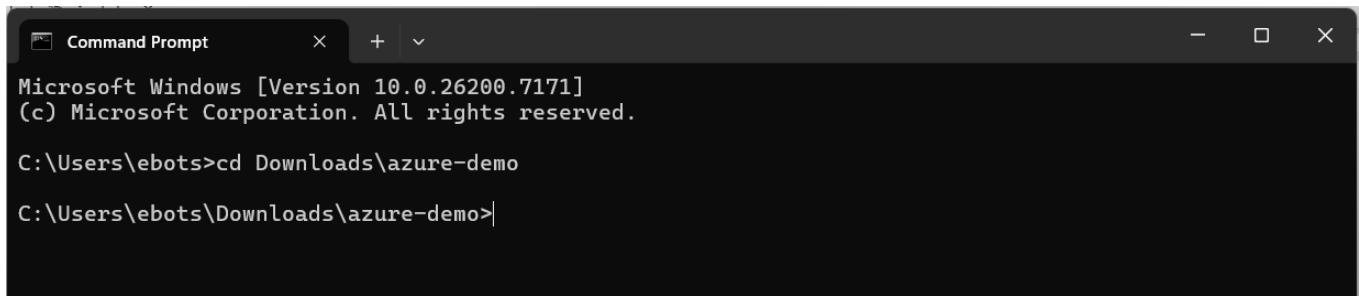
```
ssh -i ubuntu-public-vm_key.pem azureuser@172.206.33.119
```

Open the command prompt terminal and navigate to where the private key file is stored. It is stored in this path: C:\Users\ebots\Downloads\azure-demo

The screenshot shows a Windows Command Prompt window. The title bar says 'Command Prompt'. The window displays the following text:
 Microsoft Windows [Version 10.0.26200.7171]
 (c) Microsoft Corporation. All rights reserved.
 C:\Users\ebots>

Navigate to “**Downloads**” folder using the command:

```
cd Downloads\azure-demo
```



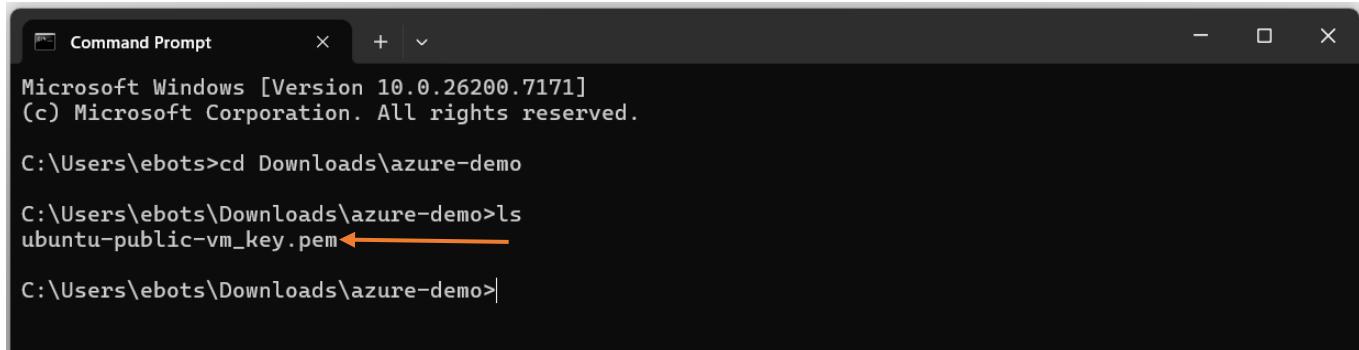
```
Command Prompt
Microsoft Windows [Version 10.0.26200.7171]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ebots>cd Downloads\azure-demo

C:\Users\ebots\Downloads\azure-demo>
```

Now, run the command to check if the private key file is in this path:

```
ls
```



```
Command Prompt
Microsoft Windows [Version 10.0.26200.7171]
(c) Microsoft Corporation. All rights reserved.

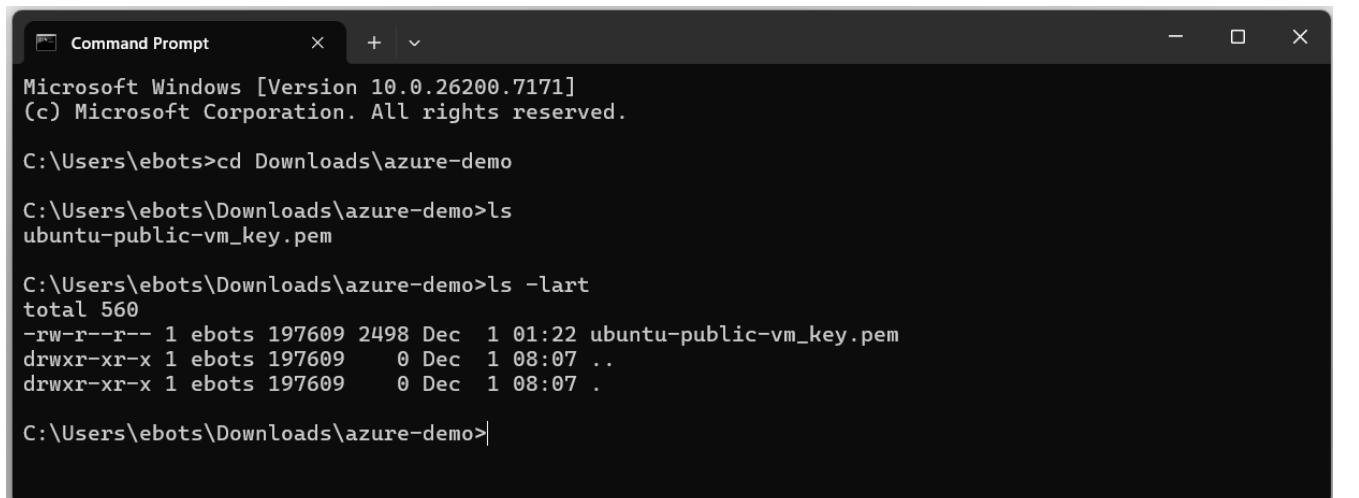
C:\Users\ebots>cd Downloads\azure-demo

C:\Users\ebots\Downloads\azure-demo>ls
ubuntu-public-vm_key.pem←

C:\Users\ebots\Downloads\azure-demo>
```

You can see our private key file here. Now, run the command to check its permission:

```
ls -lart
```



```
Command Prompt
Microsoft Windows [Version 10.0.26200.7171]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ebots>cd Downloads\azure-demo

C:\Users\ebots\Downloads\azure-demo>ls
ubuntu-public-vm_key.pem

C:\Users\ebots\Downloads\azure-demo>ls -lart
total 560
-rw-r--r-- 1 ebots 197609 2498 Dec  1 01:22 ubuntu-public-vm_key.pem
drwxr-xr-x 1 ebots 197609     0 Dec  1 08:07 ..
drwxr-xr-x 1 ebots 197609     0 Dec  1 08:07 .

C:\Users\ebots\Downloads\azure-demo>
```

The private key has a read and write permission. For us to use this key, we need to reduce this permission to read only by running the command:

```
chmod 400 ubuntu-public-vm_key.pem
```

```
Command Prompt
Microsoft Windows [Version 10.0.26200.7171]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ebots>cd Downloads\azure-demo

C:\Users\ebots\Downloads\azure-demo>ls
ubuntu-public-vm_key.pem

C:\Users\ebots\Downloads\azure-demo>ls -lart
total 560
-rw-r--r-- 1 ebots 197609 2498 Dec  1 01:22 ubuntu-public-vm_key.pem
drwxr-xr-x 1 ebots 197609     0 Dec  1 08:07 ..
drwxr-xr-x 1 ebots 197609     0 Dec  1 08:07 .

C:\Users\ebots\Downloads\azure-demo>chmod 400 ubuntu-public-vm_key.pem

C:\Users\ebots\Downloads\azure-demo>
```

Then verify the permission again using the command:

```
ls -lart
```

```
Command Prompt
ubuntu-public-vm_key.pem

C:\Users\ebots\Downloads\azure-demo>ls -lart
total 560
-r--r--r-- 1 ebots 197609 2498 Dec  1 01:22 ubuntu-public-vm_key.pem
drwxr-xr-x 1 ebots 197609     0 Dec  1 08:07 ..
drwxr-xr-x 1 ebots 197609     0 Dec  1 08:07 .

C:\Users\ebots\Downloads\azure-demo>chmod 400 ubuntu-public-vm_key.pem

C:\Users\ebots\Downloads\azure-demo>ls -lart
total 560
-r--r--r-- 1 ebots 197609 2498 Dec  1 01:22 ubuntu-public-vm_key.pem
drwxr-xr-x 1 ebots 197609     0 Dec  1 08:07 ..
drwxr-xr-x 1 ebots 197609     0 Dec  1 08:07 .

C:\Users\ebots\Downloads\azure-demo>
```

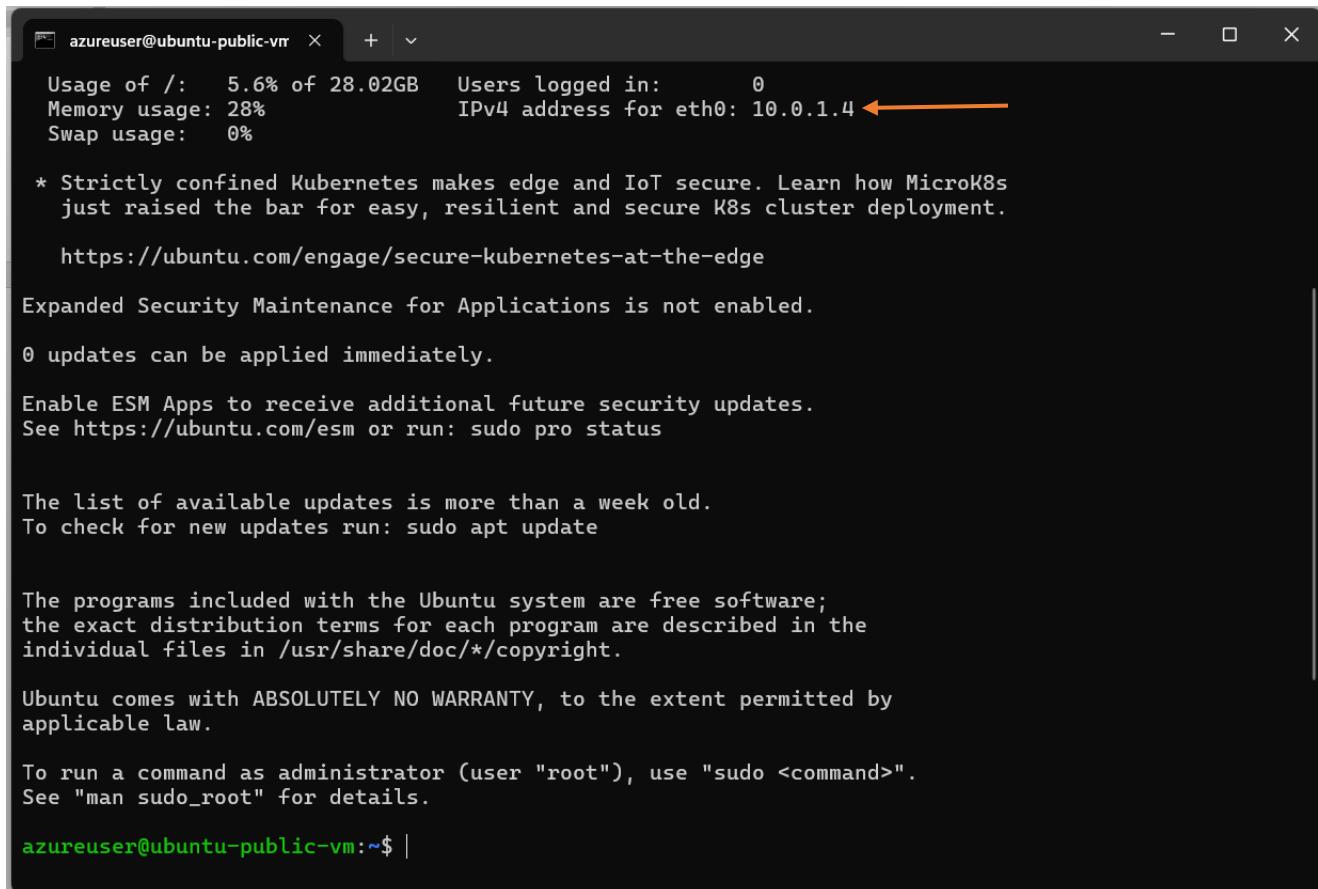
You can see that we have the read only permission now.

Then, run the command:

```
ssh -i ubuntu-public-vm_key.pem azureuser@172.206.33.119
```

```
Command Prompt - ssh -i ub
C:\Users\ebots\Downloads\azure-demo>ssh -i ubuntu-public-vm_key.pem azureuser@172.206.33.119
The authenticity of host '172.206.33.119 (172.206.33.119)' can't be established.
ED25519 key fingerprint is SHA256:vWFJMXt3dBRYLROv/5w5WVtQ0fgY560VnICJ+kjUYVY.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? |
```

Type “**yes**” and press “**Enter**”



The screenshot shows a terminal window titled "azureuser@ubuntu-public-vm ~". The window displays various system status messages:

- System usage: Usage of /: 5.6% of 28.02GB, Memory usage: 28%, Swap usage: 0%.
- Network information: IPv4 address for eth0: 10.0.1.4 (highlighted with an orange arrow).
- Security note: Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s just raised the bar for easy, resilient and secure K8s cluster deployment. <https://ubuntu.com/engage/secure-kubernetes-at-the-edge>
- Security status: Expanded Security Maintenance for Applications is not enabled.
- Update status: 0 updates can be applied immediately.
- ESM Apps information: Enable ESM Apps to receive additional future security updates. See <https://ubuntu.com/esm> or run: sudo pro status
- Update frequency: The list of available updates is more than a week old. To check for new updates run: sudo apt update
- Copyright notice: The programs included with the Ubuntu system are free software; the exact distribution terms for each program are described in the individual files in /usr/share/doc/*/*copyright.
- Warranty notice: Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by applicable law.
- sudo command information: To run a command as administrator (user "root"), use "sudo <command>". See "man sudo_root" for details.
- User prompt: azureuser@ubuntu-public-vm:~\$ |

We are now connected to the Virtual Machine. So, we are able to access our virtual machine with the name "**azureuser**". You can also see the IP address of our subnet.