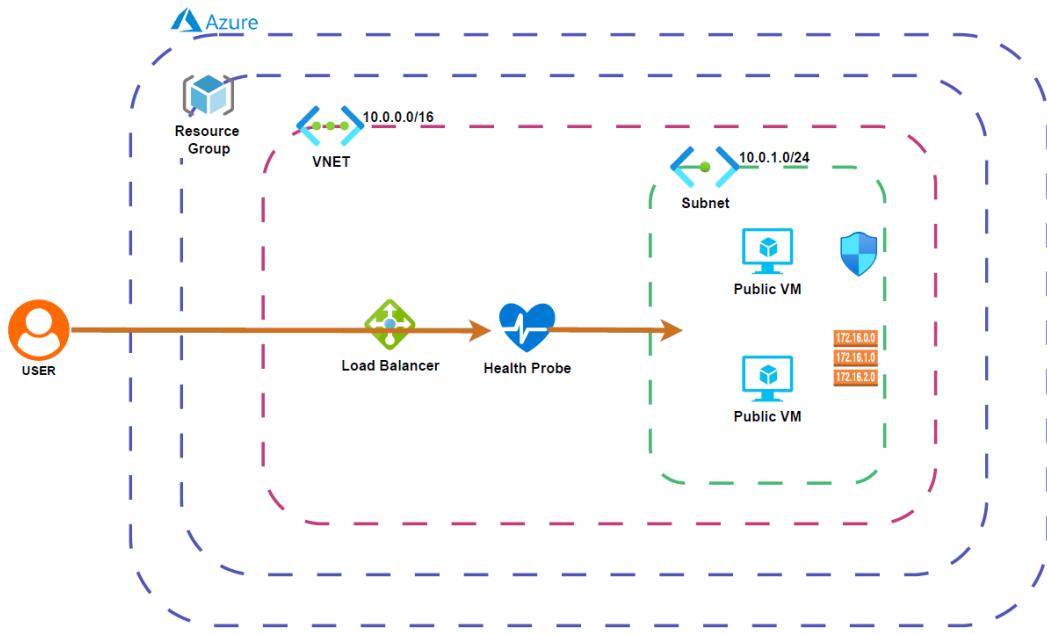


SECTION 7: AZURE LOAD BALANCER

In this section, we will look at Azure Load Balancer which is one of the most important topics when working with Azure cloud.

Part 1: Introduction

Let us take a look at what we are going to implement in this section.



In the architecture diagram above, you can see we have a load balancer which we have to implement to control our incoming traffic. The incoming traffic will be routed to our virtual machine which is sitting inside a subnet. In the subnet, we will be having a couple of virtual machines which will be load balanced with our load balancer. In this demo, we will be using three virtual machines to implement load balancer.

You can see in the diagram above that, in this implementation, we will be needing a **Resource Group**, **Virtual Network (VNet)**, a **Subnet**, a **Route table**, and a **Network Security Group (NSG)**. Once we have implemented the Resource Group, VNet, subnet and NSG, we will then provision our Virtual machines. When all these are ready, then we will set up our load balancer along with a Health Probe.

Then, we will set up the load balancer rule which will include the set of three virtual machines along with the health probe which will continuously monitor the health of the three virtual machines. Finally, the load balancer will start load balancing our request.

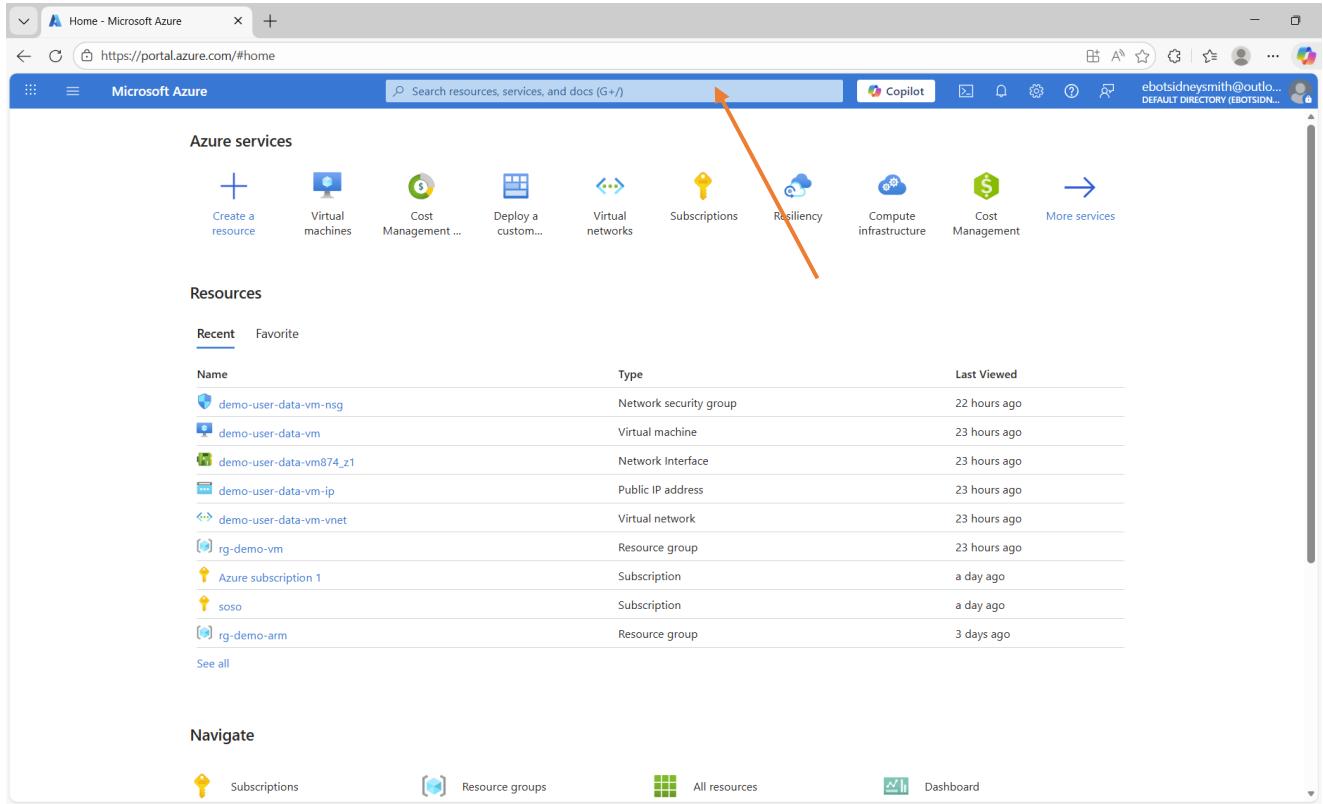
This is our target for this section, which we will use to show how the load balancer works in Azure cloud.

Part 2: Load Balancer Network Set up

Here, we will set up the network for load balancer.

Step 1: Create Resource Group

In this step, we will be creating the resource group for this demo. Go to Azure portal



The screenshot shows the Microsoft Azure portal interface. At the top, there is a navigation bar with icons for Home, Copilot, and user information. Below the navigation bar is a search bar labeled "Search resources, services, and docs (G+/-)". The main content area is titled "Azure services" and features several quick access icons: "Create a resource" (plus sign), "Virtual machines", "Cost Management ...", "Deploy a custom...", "Virtual networks", "Subscriptions" (highlighted with an orange arrow), "Resiliency", "Compute infrastructure", "Cost Management", and "More services". Below this is a section titled "Resources" with tabs for "Recent" and "Favorite". A table lists recent resources: demo-user-data-vm-nsg (Network security group, last viewed 22 hours ago), demo-user-data-vm (Virtual machine, last viewed 23 hours ago), demo-user-data-vm874_z1 (Network Interface, last viewed 23 hours ago), demo-user-data-vm-ip (Public IP address, last viewed 23 hours ago), demo-user-data-vm-vnet (Virtual network, last viewed 23 hours ago), rg-demo-vm (Resource group, last viewed 23 hours ago), Azure subscription 1 (Subscription, last viewed a day ago), soso (Subscription, last viewed a day ago), and rg-demo-arm (Resource group, last viewed 3 days ago). At the bottom, there is a "Navigate" section with links for "Subscriptions", "Resource groups", "All resources", and "Dashboard".

From our diagram, we have to start by creating our resource group. So, search for “Resource Group”.

The screenshot shows the Microsoft Azure portal interface. At the top, there is a search bar with the placeholder "resource groups". Below the search bar, the "Azure services" section is visible, featuring a "Create a resource" button and a "Virtual machines" link. A red arrow points from the text "Click on 'Create'" to the "Create a resource" button. To the right of the services section, there is a "Services" dropdown menu with "All" selected, showing "Services (38)" and "Marketplace (2)". Below the services, there is a "Resource groups" section with a list of items including "Subscriptions", "Resource Manager", and "Marketplace". On the far right, there are links for "Compute infrastructure", "Cost Management", and "More services". The bottom of the screen shows a "Last Viewed" list of recent documents and a "Give feedback" button.

Select “Resource Group”

The screenshot shows the "Resource Manager | Resource groups" page in the Microsoft Azure portal. The URL in the address bar is "https://portal.azure.com/#view/HubsExtension/ServiceMenuBlade/extension/Microsoft_Azure_Resources/menuid/ResourceManager/itemId/resourcegroups". The page title is "Resource Manager | Resource groups". The left sidebar includes links for "Resource Manager", "All resources", "Favorite resources", "Recent resources", and "Resource groups" (which is currently selected). A red arrow points from the text "Click on 'Create'" to the "Create" button in the top navigation bar. The main content area displays a table of resource groups, with two entries shown:

Name	Subscription	Location	Tags
NetworkWatcherRG	Azure subscription 1	East US 2	
rg-demo-vm	Azure subscription 1	East US 2	

Let us create a resource group where you will place all your resources. Click on “Create”

Prepared by Sidney Smith Ebot

The screenshot shows the 'Create a resource group' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. The 'Subscription' dropdown is set to 'Azure subscription 1'. The 'Resource group name' input field is empty and highlighted with a red arrow. The 'Region' dropdown is set to '(US) East US 2'. At the bottom, there are 'Previous', 'Next', and 'Review + create' buttons.

Our subscription has been selected. Let us now give our resource group a name. I will call it “rg-demo-lb”.

The screenshot shows the 'Create a resource group' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. The 'Subscription' dropdown is set to 'Azure subscription 1'. The 'Resource group name' input field contains 'rg-demo-lb'. The 'Region' dropdown is set to '(US) East US 2' and is highlighted with a red arrow. At the bottom, there are 'Previous', 'Next', and 'Review + create' buttons.

For the “Region”, we will keep it as “East US 2”. Make sure you use this region on all the resources in this demo.

Prepared by Sidney Smith Ebot

Microsoft Azure

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

Copilot

ebotsidneysmith@outlook.com

DEFAULT DIRECTORY (EBOTSID...)

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 * (rg-demo-lb)

Region * (US) East US 2

Previous Next Review + create

Click on “Next”

Microsoft Azure

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DEFAULT DIRECTORY (EBOTSID...)

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
rg-demo-lb	rg-demo-lb	Resource group

Previous Next Review + create

For the “Tags”, let us just add a “Name” with value “rg-demo-lb”

Prepared by Sidney Smith Ebot

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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
Name	: rg-demo-lb	Resource group
		Resource group

Previous Next Review + create

Click on “Next”

Microsoft Azure

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DEFAULT DIRECTORY (EBOTSIDNEY)

Home > Resource Manager | Resource groups >

Create a resource group

Basics Tags Review + create

Automation Link

Basics

Subscription	Azure subscription 1
Resource group name	rg-demo-lb
Region	East US 2

Tags

Name	rg-demo-lb
------	------------

Previous Next Create

Review and click on “Create”

Prepared by Sidney Smith Ebot

A screenshot of the Microsoft Azure Resource Manager interface. The top navigation bar shows 'Microsoft Azure' and a search bar. On the right, there are several status indicators, including a green checkmark for 'Resource group created'. The main content area is titled 'Resource Manager | Resource groups'. A red arrow points from the text 'The resource group has been created. Click on "Refresh"' to the 'Refresh' button in the top toolbar. The table below lists three resource groups: 'NetworkWatcherRG', 'rg-demo-vm', and 'rg-demo-lb'. The 'rg-demo-lb' row is highlighted with a blue background.

Name	Subscription	Location	Tags
NetworkWatcherRG	Azure subscription 1	East US 2	
rg-demo-vm	Azure subscription 1	East US 2	
rg-demo-lb	Azure subscription 1	East US 2	Name: rg-demo-lb

The resource group has been created. Click on “Refresh”

A screenshot of the Microsoft Azure Resource Manager interface, similar to the previous one but showing a different state. The top navigation bar shows 'Microsoft Azure' and a search bar. The main content area is titled 'Resource Manager | Resource groups'. A red arrow points from the text 'You can see the resource group we just created.' to the 'rg-demo-lb' row in the table, which is highlighted with a blue background. The table lists the same three resource groups as before.

Name	Subscription	Location	Tags
NetworkWatcherRG	Azure subscription 1	East US 2	
rg-demo-vm	Azure subscription 1	East US 2	
rg-demo-lb	Azure subscription 1	East US 2	Name: rg-demo-lb

You can see the resource group we just created.

Step 3: Create Virtual Network (VNet)

Moving further, we have to create a virtual Network (VNet). VNet is similar to VPC in AWS cloud. Go back to the Azure portal and search for “Virtual Networks”.

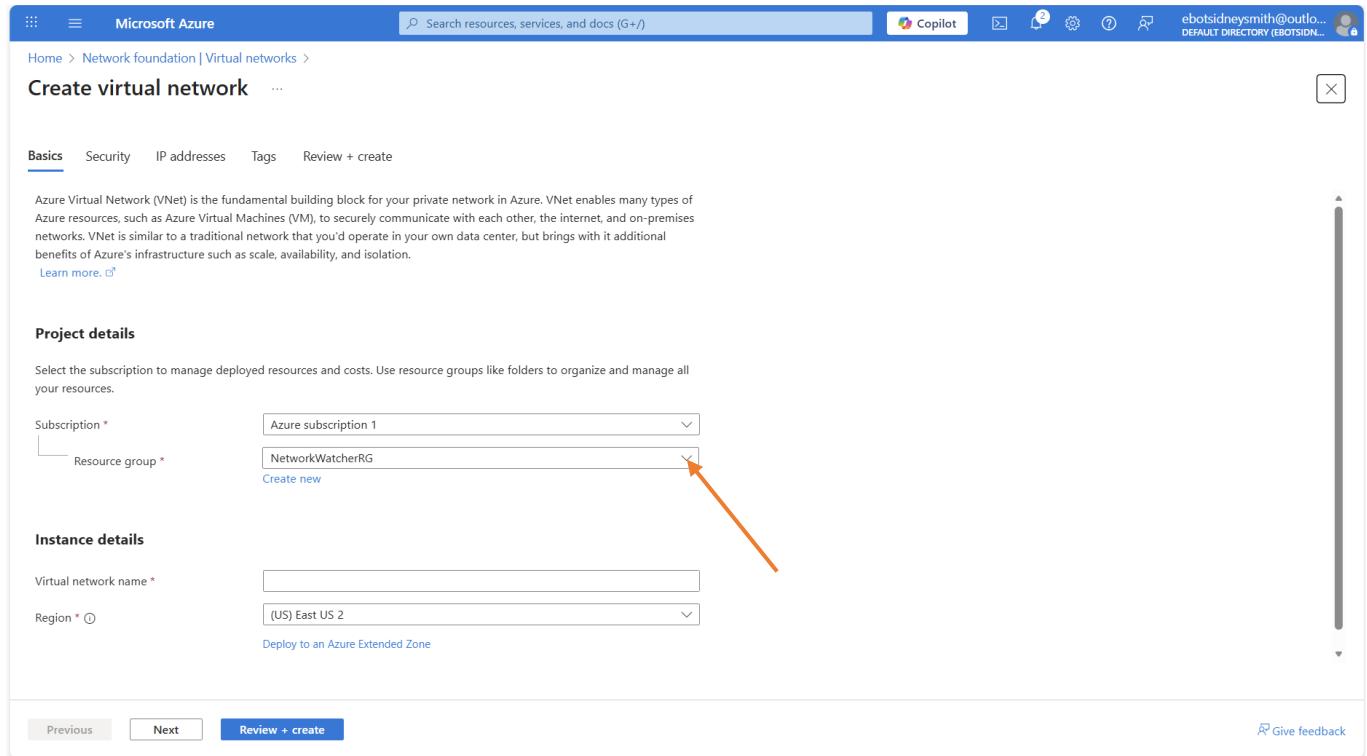
The screenshot shows the Microsoft Azure Resource Manager dashboard. In the search bar at the top, 'Virtual Networks' is typed. Below the search bar, there are tabs for 'All', 'Services (54)', and 'Marketplace (8)'. Under the 'Services' tab, 'Virtual networks' is highlighted with a blue box and an orange arrow pointing to the 'Create' button. Other service categories listed include 'Virtual network appliances', 'Virtual network gateways', and 'Virtual Network Managers'. To the right, a detailed view of a specific resource is shown: a Virtual network named 'rg-demo-lb' located in East US 2, with a tag 'Name: rg-demo-lb'. Documentation links for Azure virtual network service endpoints, What is Azure Virtual Network?, Azure Storage firewall rules, and Azure network security groups overview are also visible.

Select “Virtual Networks”

The screenshot shows the Microsoft Azure Network foundation Virtual networks page. The left sidebar lists various network components: Overview, Virtual network (selected), Virtual Network overview, Virtual networks (selected), NAT gateways, Public IP addresses, Network interfaces, Network security groups, Application security groups, Bastions, Route tables, Route servers, Private Link, DNS, Monitoring and management, Go to Network Watcher, and Virtual network managers. The main area displays a table of existing virtual networks. A new row is being added, with the 'Name' field set to 'demo-user-data-vm-vnet', 'Resource Group' to 'rg-demo-vm', 'Location' to 'East US 2', and 'Subscription' to 'Azure subscription 1'. At the top of the table, there is a 'Create' button with a plus sign and a gear icon, which is highlighted with an orange arrow. Other buttons in the header include 'Manage view', 'Refresh', 'Export to CSV', 'Open query', 'Assign tags', 'Add to service group', and 'Group by none'.

Let us create the virtual network. Click on “Create”

Prepared by Sidney Smith Ebot



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 * NetworkWatcherRG 

Create new

Instance details

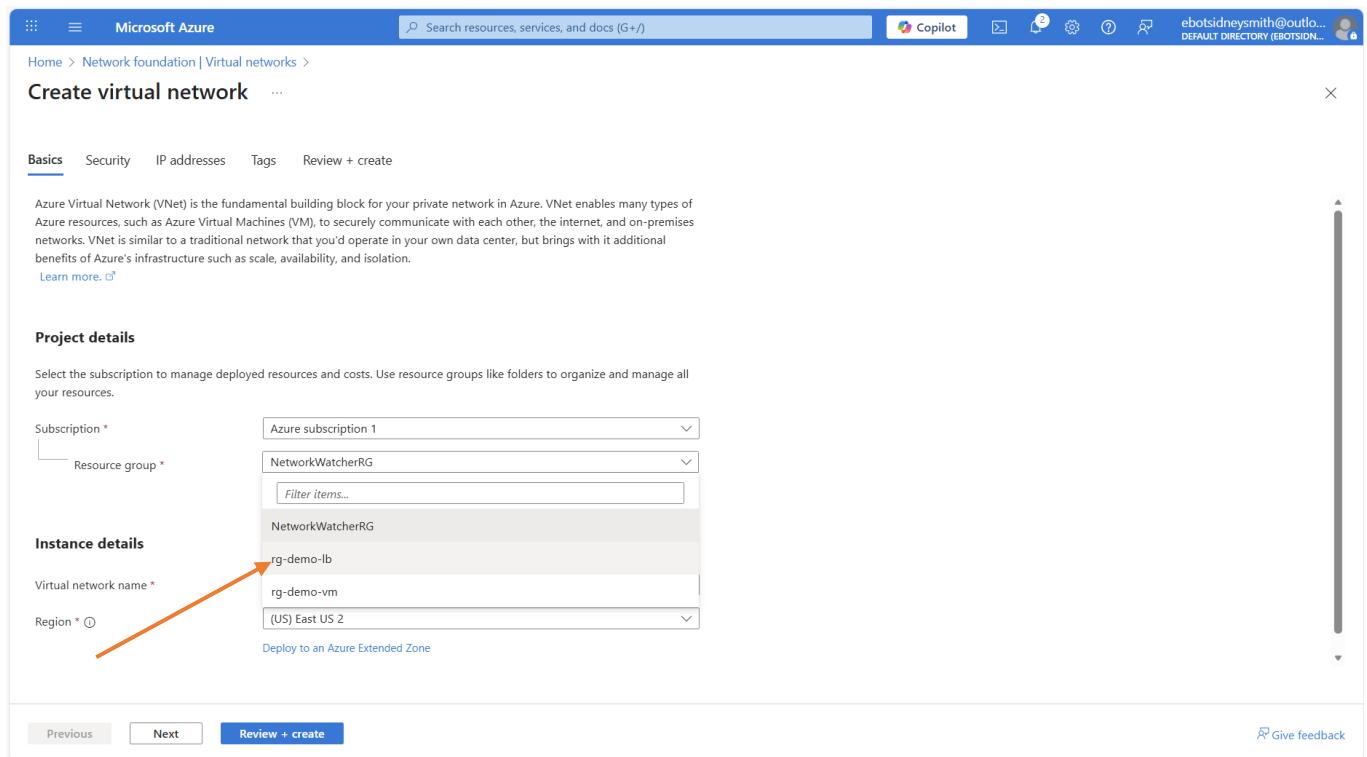
Virtual network name *

Region * (US) East US 2

Deploy to an Azure Extended Zone

Previous Next Review + create Give feedback

Our subscription has been selected. Let us now select our resource group. Click on the drop down on “Resource Group”.



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 * NetworkWatcherRG

Filter items... NetworkWatcherRG

rg-demo-lb

rg-demo-vm

Region * (US) East US 2

Deploy to an Azure Extended Zone

Previous Next Review + create Give feedback

Select “rg-demo-lb”

Prepared by Sidney Smith Ebots

The screenshot shows the 'Create virtual network' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. In the 'Project details' section, 'Subscription' is set to 'Azure subscription 1' and 'Resource group' is set to 'rg-demo-lb'. In the 'Instance details' section, 'Virtual network name' is empty, 'Region' is set to '(US) East US 2', and there is a link to 'Deploy to an Azure Extended Zone'. At the bottom, there are 'Previous', 'Next', and 'Review + create' buttons.

Let us give virtual network a name, we will call it “**demo-lb-vnet**”.

The screenshot shows the 'Create virtual network' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. In the 'Project details' section, 'Subscription' is set to 'Azure subscription 1' and 'Resource group' is set to 'rg-demo-lb'. In the 'Instance details' section, 'Virtual network name' is filled with 'demo-lb-vnet', 'Region' is set to '(US) East US 2', and there is a link to 'Deploy to an Azure Extended Zone'. A red arrow points to the 'Region' dropdown. At the bottom, there are 'Previous', 'Next', and 'Review + create' buttons.

We will keep the “**Region**” as “**East US 2**” as required.

Prepared by Sidney Smith Ebot

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 * rg-demo-lb

Create new

Instance details

Virtual network name * demo-lb-vnet

Region * (US) East US 2

Deploy to an Azure Extended Zone

Previous Next Review + create Give feedback

Then, click on “Next”

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 Next Review + create Give feedback

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

Microsoft Azure

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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

10.0.0.0/16	Delete address space		
This address prefix overlaps with virtual network 'demo-user-data-vm-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)	-
Edit Delete			

Previous Next **Review + create** Give feedback

Here, we have to add the CIDR range, per our diagram the CIDR range is “**10.0.0.0/16**” which is same as our default value here. We do not need a default subnet since we have to create our own subnet. So, delete the default subnet by clicking on the “**delete**” icon.

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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](#)

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

+ Add a subnet

10.0.0.0/16	Delete address space		
This address prefix overlaps with virtual network 'demo-user-data-vm-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
<input style="width: 150px; height: 20px; border: 1px solid #ccc; border-radius: 5px; padding: 2px; margin-bottom: 5px;" type="text" value="Add IPv4 address space"/> Edit Delete			

Previous **Next** **Review + create** Give feedback

Click on “**Next**”

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Microsoft Azure

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

Copilot

Home > Network foundation | Virtual networks >

Create virtual network ...

Basics Security IP addresses 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
<input type="text"/>	:	<input type="text"/> All resources selected
<input type="text"/>	:	<input type="text"/> All resources selected

Previous Next Review + create Give feedback

Here, let us add a “Tag”. We will give it a “Name” and the value will be “demo-lb-vnet”

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

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
Name	: demo-lb-vnet	All resources selected
<input type="text"/>	:	<input type="text"/> All resources selected

Previous Next Review + create Give feedback

Click on “Next”

Prepared by Sidney Smith Ebot

The screenshot shows the 'Create virtual network' wizard in the Microsoft Azure portal. The 'Review + create' tab is selected. A green bar at the top indicates 'Validation passed'. The configuration includes:

- Subscription:** Azure subscription 1
- Resource Group:** rg-demo-lb
- Name:** demo-lb-vnet
- Region:** East US 2
- Security:** Azure Bastion: Disabled, Azure Firewall: Disabled, Azure DDoS Network Protection: Disabled
- IP addresses:** Address space: 10.0.0.0/16 (65,536 addresses)
- Tags:** Name: demo-lb-vnet

At the bottom, there are 'Previous' and 'Next' buttons, a 'Create' button (highlighted with a red arrow), and a link to 'Download a template for automation'. A 'Give feedback' link is also present.

Click on “Create”

The screenshot shows the 'demo-lb-vnet-1765948943384 | Overview' page. The deployment is complete, indicated by a green checkmark icon and the message 'Your deployment is complete'. Deployment details are listed:

- Deployment name: demo-lb-vnet-1765948943384
- Subscription: Azure subscription 1
- Resource group: rg-demo-lb
- Start time: 12/17/2025, 12:22:26 AM
- Correlation ID: 032ca754-b748-498c-a897-b970e2368167

The 'Next steps' section contains a 'Go to resource' button (highlighted with a red arrow) and links for 'Give feedback' and 'Tell us about your experience with deployment'.

On the right side, there are promotional sections for Cost management, Microsoft Defender for Cloud, Free Microsoft tutorials, and Work with an expert.

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

demo-lb-vnet | Overview

Essentials

- Resource group (move) : rg-demo-lb
- Location (move) : East US 2
- Subscription (move) : Azure subscription 1
- Subscription ID : dd5d4252-9ca5-4581-9dc7-b63c0788bd7e
- Address space : 10.0.0.0/16
- Subnets : 0 subnets
- DNS servers : Azure provided DNS service
- BGP community string : Configure
- Virtual network ID : 3c7c800f-6ba2-4ef1-b28c-d91c9e2735aa

Tags (edit) : Name : demo-lb-vnet

Capabilities (5)

- DDoS protection** : Not configured
- Azure Firewall** : Not configured
- Peerings** : Not configured
- Microsoft Defender for Cloud** : Not configured
- Private endpoints** : Not configured

This is the Virtual Network we have created.

Step 4: Create a Subnet

The next thing is to create a subnet where we will create our virtual machines. Go to Azure portal and search for “Virtual Networks”

demo-lb-vnet | Overview

Services

- Virtual networks
- Virtual network appliances
- Virtual network gateways
- Virtual Network Managers

Documentation

- Azure virtual network service endpoints
- What is Azure Virtual Network?
- Azure Storage firewall rules
- Azure network security groups overview

Peerings

Microsoft Defender for Cloud

<https://portal.azure.com/#view/HubsExtension/AssetMenuBlade/~/virtualnet...>

Select “Virtual Networks”

Microsoft Azure

Network foundation | Virtual networks

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

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

Showing 1 - 2 of 2. Display count: auto

Click on the virtual network we just created.

Microsoft Azure

Network foundation | Virtual networks

demo-lb-vnet

Virtual network

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Resource visualizer

Settings

- Address space
- Connected devices
- Subnets
- Bastion
- DDoS protection
- Firewall
- Microsoft Defender for Cloud
- Network manager
- DNS
- Peering
- Service endpoints
- Private endpoints

Address space
10.0.0.0/16

Subnets
0 subnets

DNS servers
Azure provided DNS service

BGP community string
Configure

Virtual network ID
3c7c800f-6ba2-4ef1-b28c-d91c9e2735aa

Tags (edit)
Name : demo-lb-vnet

Topology Properties Capabilities (5) Recommendations Tutorials

DDoS protection
Configure additional protection from distributed denial of service attacks.
Not configured

Azure Firewall
Protect your network with a stateful L3-L7 firewall.
Not configured

Click on “Subnets”

The screenshot shows the Microsoft Azure portal interface. On the left, the navigation menu is expanded under 'Virtual networks'. In the center, the 'demo-lb-vnet' virtual network is selected. On the right, the 'Subnets' blade is open for the 'demo-lb-vnet' virtual network. The blade has a search bar at the top. Below it, there's a table with columns: Name, IPv4, IPv6, Available IPs, and Delegated to. A red arrow points to the '+ Subnet' button at the top left of the blade.

Let us add the subnet, click on “Subnet”

The screenshot shows the Microsoft Azure portal interface. The left sidebar shows the 'Virtual networks' section. The right side displays the 'Add a subnet' dialog for the 'demo-lb-vnet' virtual network. The dialog has several sections: 'Subnet purpose' (with a dropdown set to 'Default'), 'Name' (input field 'default'), 'IPv4' (checkbox checked, address range '10.0.0.0/16', starting address '10.0.0.0', size '/24 (256 addresses)'), 'IPv6' (checkbox unchecked), and 'Private subnet' (checkbox unchecked). At the bottom are 'Add' and 'Cancel' buttons. A red arrow points to the 'Default' dropdown in the 'Subnet purpose' section.

We will leave the “Subnet Purpose” as “Default”

The screenshot shows the Microsoft Azure portal interface. On the left, there's a navigation sidebar with various options like Overview, Virtual network, 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, Go to Network Watcher, and Virtual network managers. The 'Virtual networks' section is currently selected. In the center, there's a search bar and a 'Create' button. Below the search bar, a message says 'You are viewing a new version of Browse experience. Click here to access the old experience.' A list of existing virtual networks is shown: demo-lb-vnet (selected), demo-user-data-vm-vnet, and demo-user-data-vm-vnet. On the right, a modal window titled 'Add a subnet' is open. It has sections for Subnet purpose (set to Default), Name (set to default, highlighted with a red arrow), IPv4 (Include an IPv4 address space checked, IPv4 address range set to 10.0.0.0/16, Starting address set to 10.0.0.0, Size set to /24 (256 addresses)), IPv6 (checkbox unchecked, message: 'This virtual network has no IPv6 address ranges.'), and Private subnet (checkbox unchecked, message: 'After March 31, 2026, private subnet will be the default selection for new virtual networks.'). At the bottom of the modal are 'Add' and 'Cancel' buttons.

Let us give the subnet a name. We will call its “**demo-lb-subnet**”

This screenshot is similar to the previous one, showing the 'Add a subnet' dialog in the Microsoft Azure portal. The 'Name' field now contains 'demo-lb-subnet'. The 'Starting address' field is highlighted with a red arrow. The rest of the configuration remains the same: Subnet purpose (Default), IPv4 (Include an IPv4 address space checked, IPv4 address range set to 10.0.0.0/16, Starting address set to 10.0.0.0, Size set to /24 (256 addresses)), IPv6 (checkbox unchecked, message: 'This virtual network has no IPv6 address ranges.'), and Private subnet (checkbox unchecked, message: 'After March 31, 2026, private subnet will be the default selection for new virtual networks.'). The 'Add' and 'Cancel' buttons are at the bottom.

From our diagram, the IP range of our subnet is “**10.0.1.0/24**”. For the “Starting address” is “**10.0.1.0**”

The screenshot shows the Microsoft Azure portal interface. On the left, there's a navigation sidebar with various options like Overview, Virtual network, 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, Go to Network Watcher, and Virtual network managers. The 'Virtual networks' section is currently selected.

The main area displays a 'Network foundation | Virtual networks' page for a resource named 'demo-lb-vnet'. A message indicates that a new version of the experience is available. Below this, there are two items: 'demo-lb-vnet' and 'demo-user-data-vm-vnet'. A search bar and a 'Create' button are also present.

A modal window titled 'Add a subnet' is open on the right. It contains fields for 'Subnet purpose' (set to 'Default'), 'Name' (set to 'demo-lb-subnet'), and 'IPv4' settings. The 'IPv4 address range' is set to '10.0.0.0/16' (10.0.0 - 10.0.255.255). Under 'Size', the value is set to '/24 (256 addresses)', which is highlighted with an orange arrow. The 'Subnet address range' is shown as '10.0.1.0 - 10.0.1.255'. The 'IPv6' section is collapsed, and the 'Private subnet' section is expanded, showing a note about private subnets enhancing security and a checkbox for 'Enable private subnet (no default outbound access)', which is unchecked.

The “size” will be “24”

This screenshot is identical to the one above, showing the 'Add a subnet' dialog. The only difference is that the checkbox for 'Enable private subnet (no default outbound access)' is now checked, indicated by an orange arrow pointing to the checked box.

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

Prepared by Sidney Smith Ebot

The screenshot shows the Microsoft Azure portal interface. On the left, the navigation menu is open, showing 'Virtual networks' selected under 'Virtual networks'. In the center, a modal window titled 'Add a subnet' is displayed. The 'Private subnet' section is active, with a note explaining that private subnets enhance security by not providing default outbound access. It includes fields for 'Name' (set to 'demo-lb-vnet'), 'NAT gateway' (set to 'None'), 'Network security group' (set to 'None'), and 'Route table' (set to 'None'). The 'Service Endpoints' section is shown below, with a 'Services' dropdown set to 'Select a service endpoint' and an 'Add' button highlighted with a red arrow. The bottom right of the modal has a 'Cancel' button.

We will leave the rest as default and click on “Add”

The screenshot shows the Microsoft Azure portal interface. The left navigation menu is open, showing 'Virtual networks' selected under 'Virtual networks'. The main area displays the 'demo-lb-vnet | Subnets' page for a virtual network. The 'Subnets' section is selected in the sidebar. A table lists one subnet: 'demo-lb-subnet' with an IP range of '10.0.1.0/24' and '251' available IPs. An orange arrow points to the row for 'demo-lb-subnet'. The top right of the page has buttons for '+ Subnet', 'Refresh', 'Manage users', 'Delete', and 'Export to CSV'.

The subnet has been added.

Step 5: Create a Route Table

In this step, we will be creating a route table so that we can specify which incoming request to route to the created subnet.

Go back to the Azure portal.

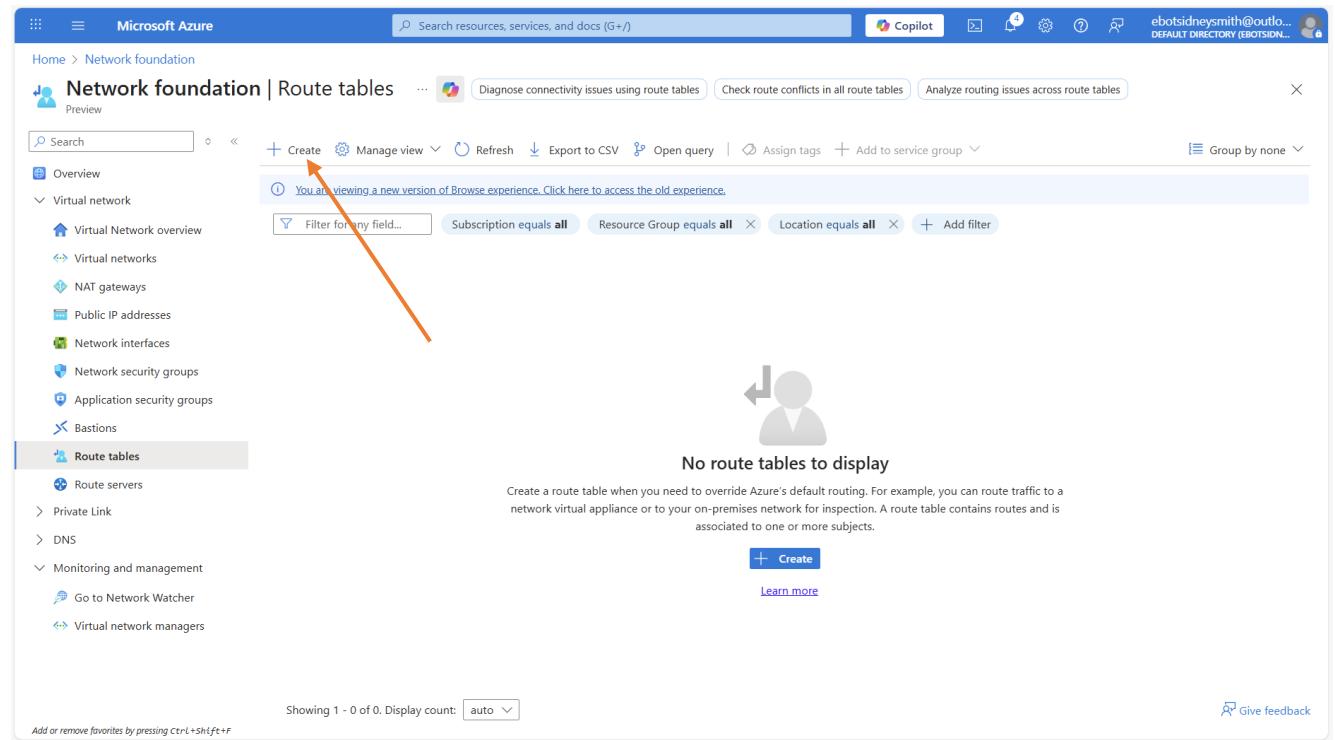
Name	Resource Group	Location	Subscription
demo-lb-vnet	rg-demo-lb	East US 2	Azure subscription 1
demo-user-data-vm-vnet	rg-demo-vm	East US 2	Azure subscription 1

Search for “Route Tables”

Showing 1 - 2 of 2. Display count: auto ▾

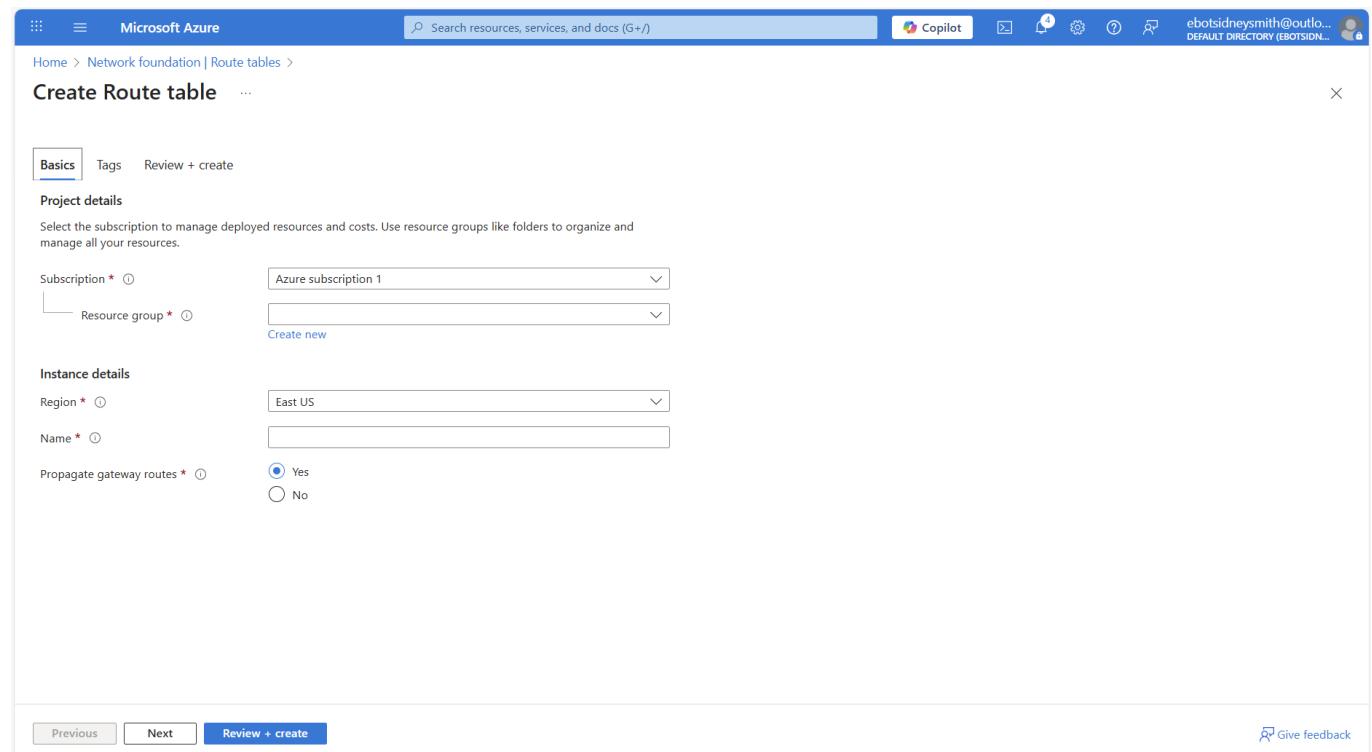
https://portal.azure.com/#view/HubsExtension/AssetMenuBlade/-/routetables/assetName/NetworkFoundation/extensionName/Microsoft_Azure_Network

Select “Route Tables”



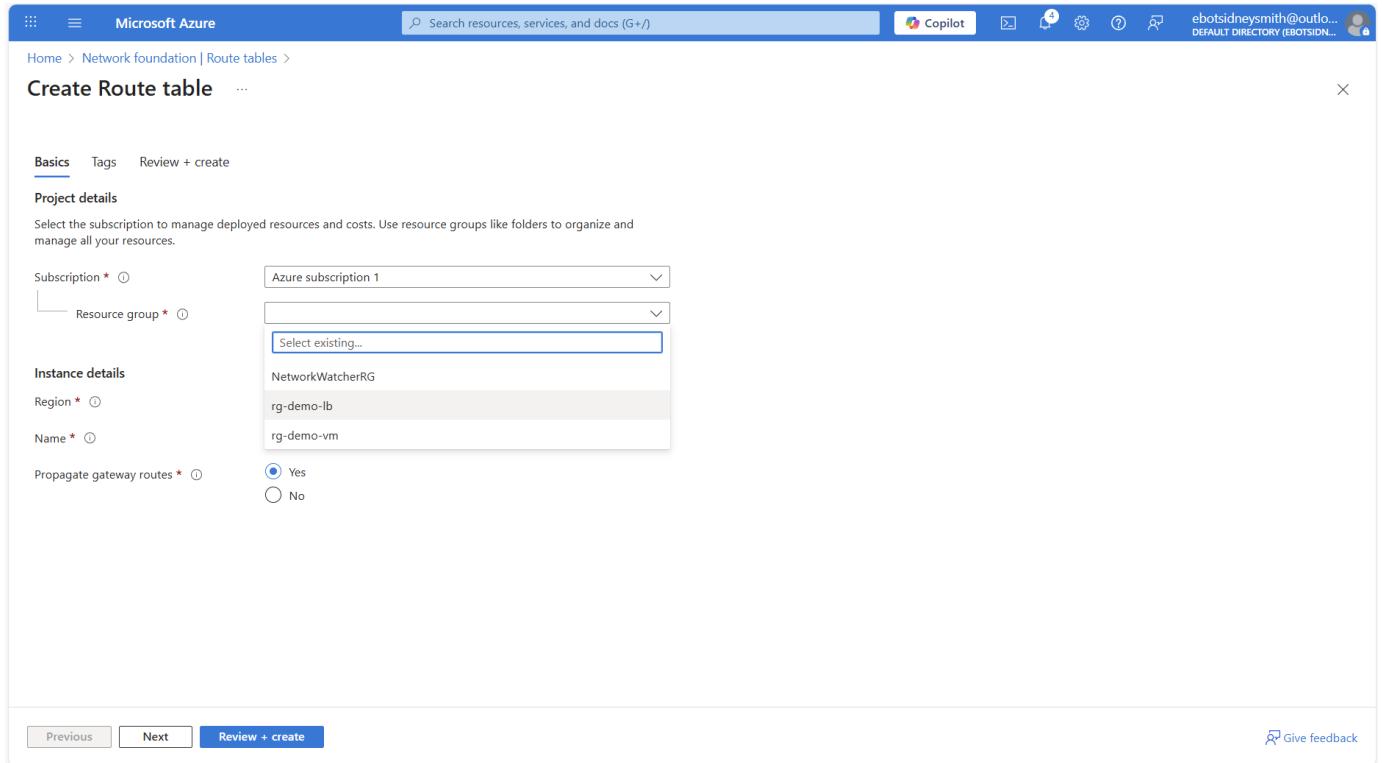
The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes 'Microsoft Azure', a search bar, and various icons. Below the navigation is a breadcrumb trail: 'Home > Network foundation'. The main content area is titled 'Network foundation | Route tables'. On the left, there's a sidebar with categories like 'Virtual network', 'Route tables' (which is selected and highlighted in blue), and 'Route servers'. The main pane displays a message: 'No route tables to display' with a small icon of a person. Below this, there's a brief description: '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.' At the bottom of the main pane, there's a 'Create' button and a 'Learn more' link. The bottom right corner of the page has a 'Give feedback' link.

Let us create the route table, click on “Create”



The screenshot shows the 'Create Route table' wizard. The top navigation bar is identical to the previous screenshot. The main title is 'Create Route table'. The 'Basics' tab is selected. Under 'Project details', it says: 'Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.' There are dropdown menus for 'Subscription' (set to 'Azure subscription 1') and 'Resource group' (with an option to 'Create new'). Under 'Instance details', there are fields for 'Region' (set to 'East US'), 'Name' (empty), and 'Propagate gateway routes' (radio buttons for 'Yes' and 'No', with 'Yes' selected). At the bottom of the wizard, there are 'Previous' and 'Next' buttons, and a 'Review + create' button.

Our “Subscription” has already been selected. Let us select our resource group for this demo. Click on the drop down on “Resource Group”.



Microsoft Azure

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

Copilot

ebotsidneysmith@outlook.com
DEFAULT DIRECTORY (EBOTSIDNEY)

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 * ⓘ Azure subscription 1

Resource group * ⓘ Select existing...

NetworkWatcherRG

rg-demo-lb

rg-demo-vm

Instance details

Region * ⓘ rg-demo-lb

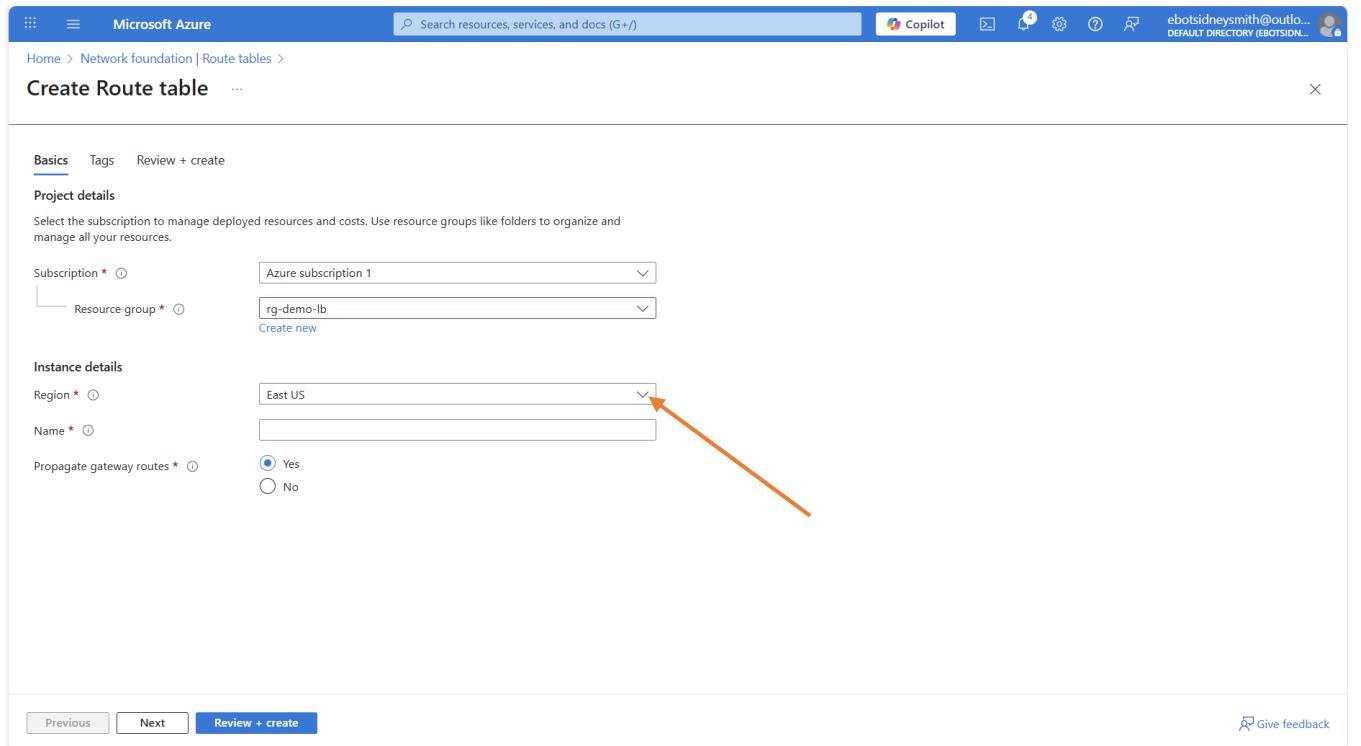
Name * ⓘ rg-demo-vm

Propagate gateway routes * ⓘ Yes

Review + create

Give feedback

Select “rg-demo-lb”



Microsoft Azure

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

Copilot

ebotsidneysmith@outlook.com
DEFAULT DIRECTORY (EBOTSIDNEY)

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 * ⓘ Azure subscription 1

Resource group * ⓘ rg-demo-lb

Create new

Instance details

Region * ⓘ East US

Name * ⓘ rg-demo-vm

Propagate gateway routes * ⓘ Yes

Review + create

Give feedback

Then, we have to select our region. In this demo, our region is “East US 2”. So, click on the drop down on “Region”

Prepared by Sidney Smith Ebot

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 is set to 'Azure subscription 1' and the resource group is 'rg-demo-lb'. Under 'Instance details', the region is currently set to 'East US'. A dropdown menu is open, listing various Azure regions, with 'East US 2' highlighted. The 'Name' field is empty. Other settings include 'Propagate gateway routes' set to 'Yes'. At the bottom, there are 'Previous', 'Next', and 'Review + create' buttons, along with a 'Give feedback' link.

Select “East US 2”.

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 is set to 'Azure subscription 1' and the resource group is 'rg-demo-lb'. Under 'Instance details', the region is now set to 'East US 2'. The 'Name' field is empty. Other settings include 'Propagate gateway routes' set to 'Yes'. An orange arrow points to the 'East US 2' option in the region dropdown. At the bottom, there are 'Previous', 'Next', and 'Review + create' buttons, along with a 'Give feedback' link.

Then, we have to give the route table a name. We will call it “rt-demo-lb”

Prepared by Sidney Smith Ebot

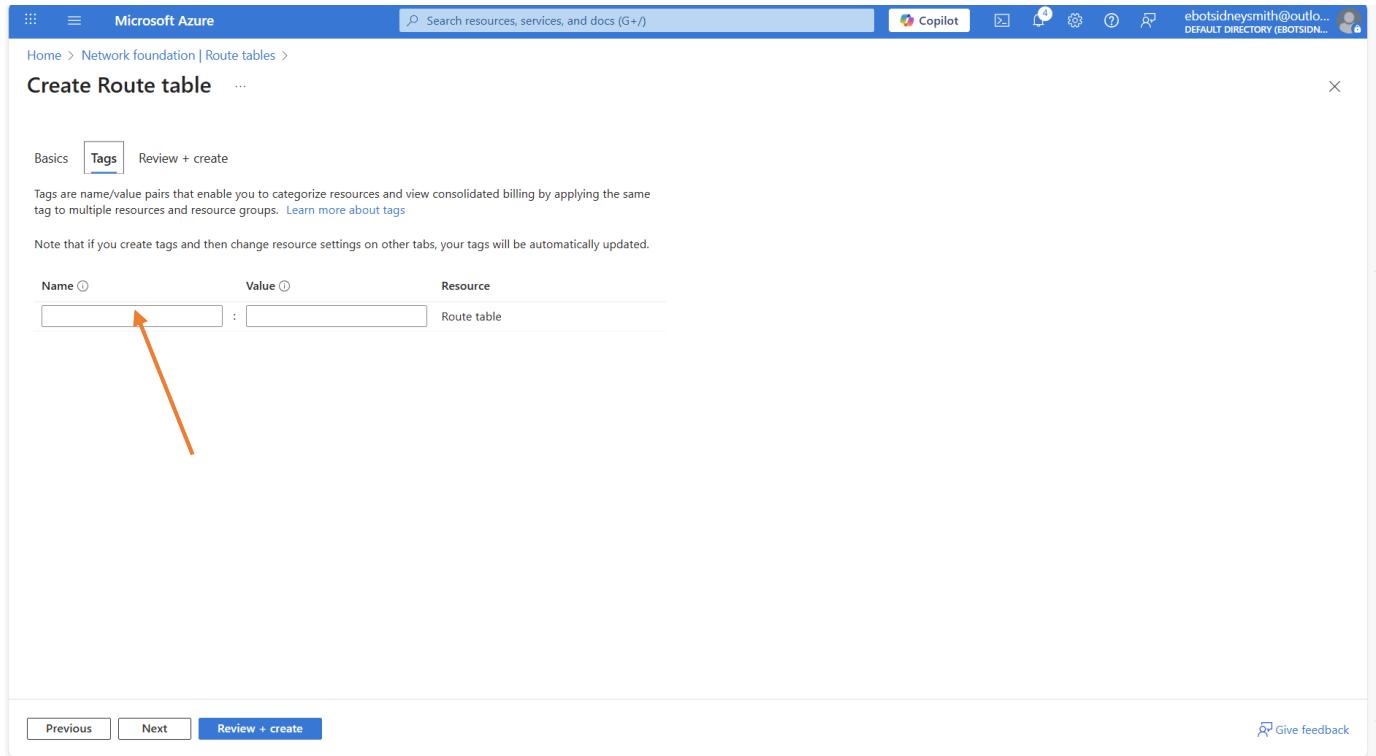
The screenshot shows the 'Create Route table' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. In the 'Project details' section, the subscription is set to 'Azure subscription 1' and the resource group is 'rg-demo-lb'. In the 'Instance details' section, the region is 'East US 2' and the name is 'rt-demo-lb'. A red arrow points to the 'Propagate gateway routes' field, which has 'Yes' selected. At the bottom, there are 'Previous', 'Next', and 'Review + create' buttons.

Then, on “**Propagate Gateway Routes**”, we will select “**Yes**”.

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 is set to 'Azure subscription 1' and the resource group is 'rg-demo-lb'. In the 'Instance details' section, the region is 'East US 2' and the name is 'rt-demo-lb'. The 'Propagate gateway routes' field has 'Yes' selected. A red arrow points down to the 'Next' button at the bottom. At the bottom, there are 'Previous', 'Next', and 'Review + create' buttons.

Then, click on “**Next**”

Prepared by Sidney Smith Ebot



Microsoft Azure

Search resources, services, and docs (G+)

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ebotsidneysmith@outlook.com

DEFAULT DIRECTORY (EBOTSIDN...)

Home > Network foundation | Route tables >

Create Route table

Basics Tags Review + create

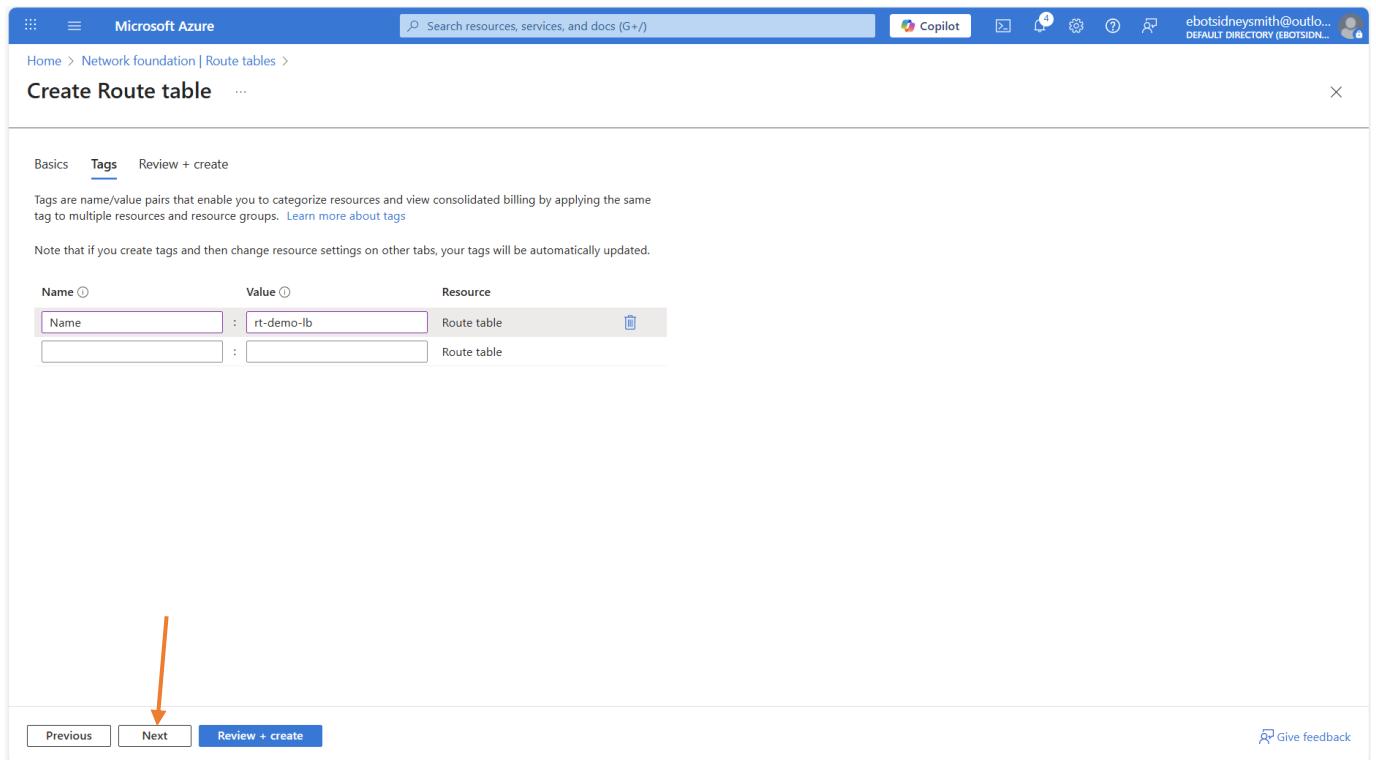
Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. [Learn more about tags](#)

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

Name	Value	Resource
<input type="text"/>	<input type="text"/> :	Route table

Previous Next Review + create Give feedback

Here, we will enter a tag. We will enter “**Name**” with the value “**rt-demo-lb**”



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

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
Name	rt-demo-lb	Route table
		Route table

Previous Next Review + create Give feedback

Click on “**Next**”

Prepared by Sidney Smith Ebot

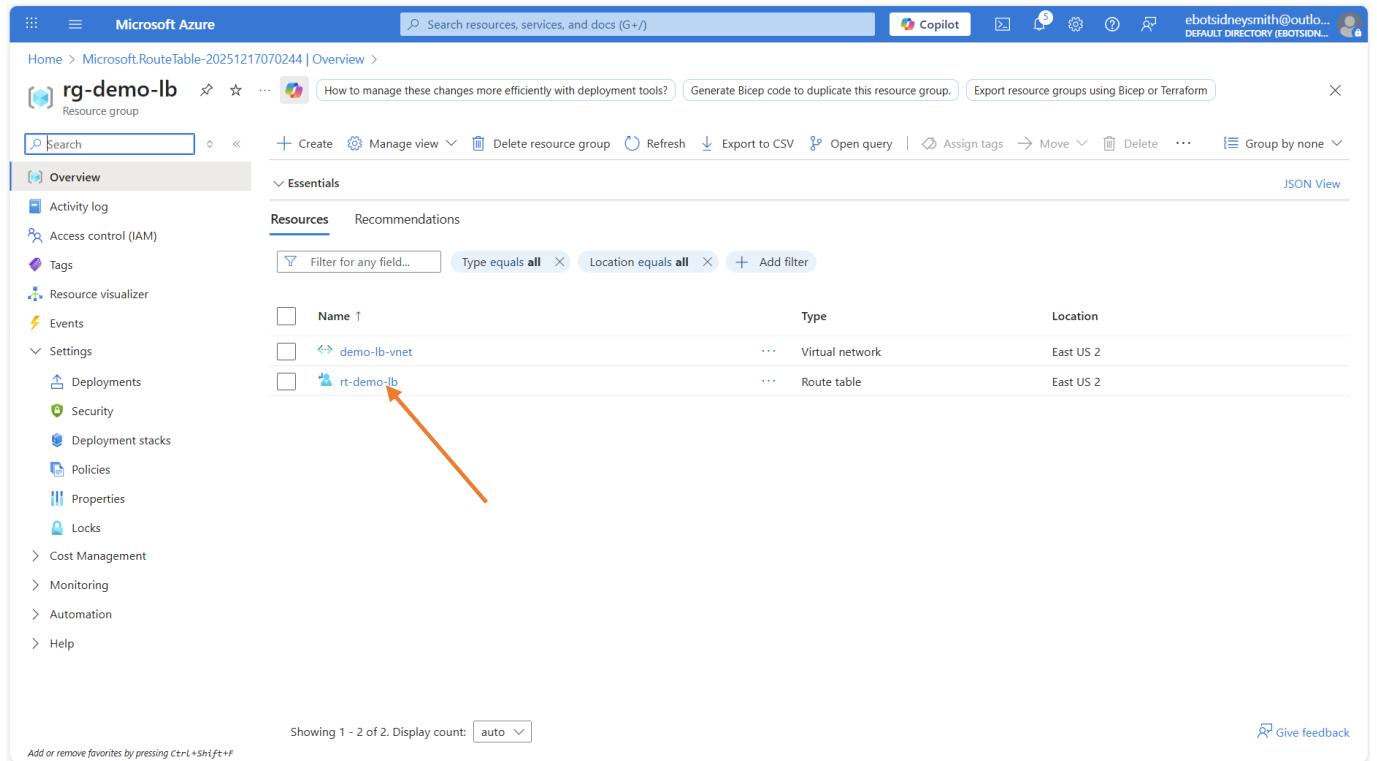
The screenshot shows the 'Create Route table' wizard in the Microsoft Azure portal. The current step is 'Review + create'. It displays basic information such as Subscription (Azure subscription 1), Resource group (rg-demo-lb), Region (East US 2), Name (rt-demo-lb), and Propagate gateway routes (Yes). A 'Tags' section shows a single tag: Name (rt-demo-lb (Route table)). At the bottom, there are 'Previous' and 'Next' buttons, and a prominent blue 'Create' button. An orange arrow points directly at the 'Create' button.

Let us create the route table now. Click on “Create”

The screenshot shows the 'Microsoft.RouteTable-20251217070244 | Overview' page in the Microsoft Azure portal. The 'Deployment' tab is selected, displaying deployment details: Deployment name (Microsoft.RouteTable-20251217070244), Subscription (Azure subscription 1), and Resource group (rg-demo-lb). The status is shown as 'Your deployment is complete' with a green checkmark. Below this, there are sections for 'Deployment details' and 'Next steps'. A blue 'Go to resource' button is located at the bottom left. The right side of the screen features a sidebar with links for 'Cost management', 'Microsoft Defender for Cloud', 'Free Microsoft tutorials', and 'Work with an expert'.

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

Prepared by Sidney Smith Ebot



The screenshot shows the Microsoft Azure Resource Group Overview page for the resource group 'rg-demo-lb'. The left sidebar lists various settings like Activity log, Access control (IAM), Tags, Resource visualizer, Events, and Deployments. The main area displays two resources: 'demo-lb-vnet' (Virtual network, Type) and 'rt-demo-lb' (Route table, Type). An orange arrow points to the 'rt-demo-lb' entry.

Name	Type	Location
demo-lb-vnet	Virtual network	East US 2
rt-demo-lb	Route table	East US 2

You can see that the route table has been created.

Step 6: Associate the Route Table with the Subnet

After creating the route table, we have to associate it with our subnet so that they know that I need to route the traffic to this particular subnet. So, we need to create this association because presently there is no connection between the two resources. It is not an attachment; it is just an association.

To associate the route table with the subnet, go to Azure portal and search for “Route Tables”.

The screenshot shows the Microsoft Azure portal interface. In the top left, the resource group 'rg-demo-lb' is selected. The left sidebar has sections like Overview, Activity log, Access control (IAM), Tags, Resource visualizer, Events, Settings, Deployments, Security, Deployment stacks, Policies, Properties, Locks, Cost Management, Monitoring, Automation, and Help. A red arrow points from the 'Route Tables' link in the sidebar to the 'Route tables' item in the main content area. The main content area shows a list of services: Route tables, Route filters, ExpressRoute circuits, and ExpressRoute Direct. Below this is a 'Documentation' section with links to 'What is Azure Virtual Network?', 'Azure Virtual WAN Overview', 'Tutorial: Create site-to-site connections using Virtual WAN - Azure Virtual WAN', and 'Azure virtual network service endpoints'. At the bottom of the content area, there is a search bar and a 'Give feedback' button. The URL in the address bar is https://portal.azure.com/#view/HubsExtension/AssetMenuBlade/~/routetabl...

Select “Route Tables”

Prepared by Sidney Smith Ebot

The screenshot shows the Microsoft Azure portal interface. The left sidebar navigation bar is visible, with 'Route tables' selected under the 'Network foundation' category. The main content area displays a table of route tables. A single row is selected, highlighted with a blue background and a red arrow pointing to it. The selected route table is named 'rt-demo-lb'. The table includes columns for Name, Resource Group, Location, and Subscription. The resource group is 'rg-demo-lb', location is 'East US 2', and subscription is 'Azure subscription 1'. The table has a header row with filters: 'Name ↑', 'Resource Group', 'Location', and 'Subscription'. Below the table, there is a message: 'Showing 1 - of 1. Display count: auto'. The top right corner shows the user's email (ebotsidneysmith@outlook.com) and profile picture.

Click on the route table we created.

The screenshot shows the Microsoft Azure portal interface, specifically the 'rt-demo-lb' Route table settings page. The left sidebar navigation bar is visible, with 'Route tables' selected under the 'Network foundation' category. The main content area displays the 'Overview' tab of the route table settings. A red arrow points from the 'rt-demo-lb' entry in the list on the left to the 'Settings' link in the navigation menu on the right. The 'Settings' link is highlighted with a blue background. The right pane shows the 'Overview' section with details like Resource group (rg-demo-lb), Location (East US 2), and Subscription (Azure subscription 1). It also shows sections for 'Essentials', 'Routes', and 'Subnets', both of which are currently empty. The top right corner shows the user's email (ebotsidneysmith@outlook.com) and profile picture.

Click on “Settings”

<https://portal.azure.com/#@ebotsidneysmithoutlook.onmicrosoft.com/resource/subscriptions/dd5d4252-9ca5-4581-9dc7-b63c0788bde7/resourceGroups/rg-demo-lb/providers/Microsoft.Network/routeTables/rt-demo-lb/subnets>

Click on “Subnets”

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

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

[Give feedback](https://portal.azure.com/#@ebotsidneysmithoutlook.onmicrosoft.com/resource/subscriptions/dd5d4252-9ca5-4581-9dc7-b63c0788bde7/resourceGroups/rg-demo-lb/providers/Microsoft.Network/routeTables/rt-demo-lb/subnets)

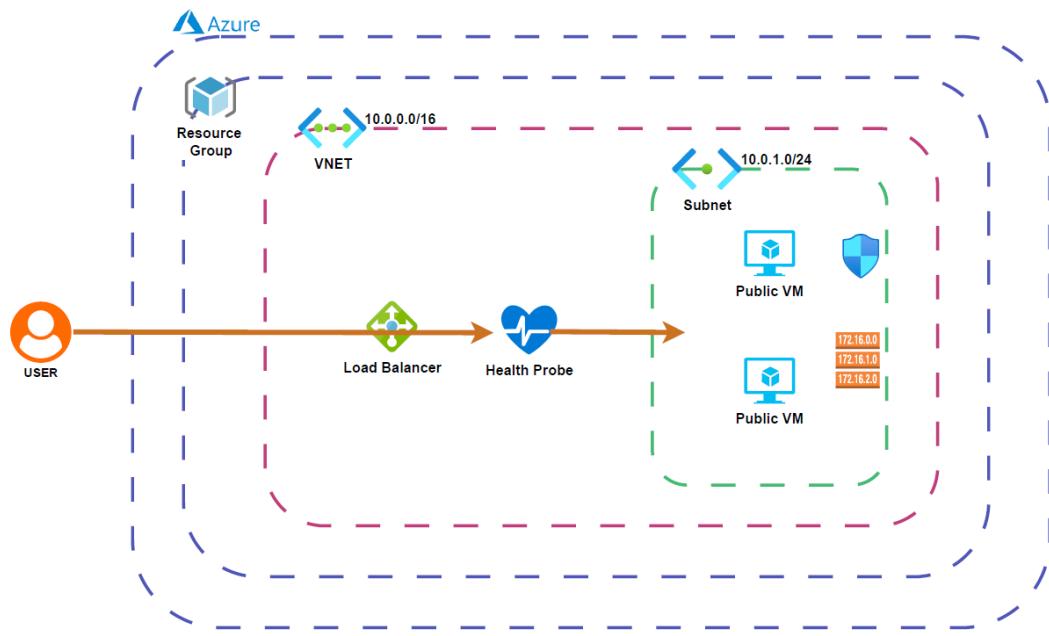
Click on “Associate”

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 route table named 'rt-demo-lb' is displayed. On the right, a modal window titled 'Associate subnet' is open, showing the 'rt-demo-lb | Subnets' route table. Inside the modal, there is a dropdown menu for 'Virtual network' set to 'demo-lb-vnet (rg-demo-lb)' and a dropdown for 'Subnet' set to 'demo-lb-subnet'. An orange arrow points from the 'demo-lb-subnet' dropdown to the 'OK' button at the bottom right of the modal.

Here you have the option to associate the subnet with the route table. You can see that this is the subnet we created for this demo. Go ahead and click on “OK”.

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 route table named 'rt-demo-lb' is displayed. On the right, a modal window titled 'rt-demo-lb | Subnets' is open, showing the 'rt-demo-lb | Subnets' route table. Inside the modal, there is a table titled 'Search subnets' with one entry: 'Name' 'demo-lb-subnet', 'Address range' '10.0.1.0/24', 'Virtual network' 'demo-lb-vnet', and 'Security group' '-'. A success message 'Saved route table for subnet' is displayed in the top right corner of the modal. An orange arrow points from the 'demo-lb-subnet' entry in the table to the 'OK' button at the bottom right of the modal.

You can see that the subnet has been associated with the route table. Let us take a look at the architecture diagram of this demo again.



You can see that we have created the Resource group, the Virtual Network, the Subnet, and the route table. It is remaining the Virtual Machine and the Network Security Group. In the next part, we will be creating the virtual machines.

Part 3: Create the virtual machines

In this part of the demo, we will be creating the virtual machine. Go to Azure portal.

The screenshot shows the Microsoft Azure portal interface. At the top, there is a blue header bar with the 'Microsoft Azure' logo, a search bar containing 'Search resources, services, and docs (G+)', and a user profile icon. Below the header, there is a navigation bar titled 'Azure services' with several icons: 'Create a resource' (plus sign), 'Route tables', 'Virtual networks', 'Resource groups', 'Virtual machines' (highlighted with an orange arrow), 'Cost Management ...', 'Deploy a custom...', 'Subscriptions', 'Resiliency', and 'More services'. The main content area is titled 'Resources' and shows a table of recent resources:

Name	Type	Last Viewed
rt-demo-lb	Route table	a few seconds ago
rg-demo-lb	Resource group	9 hours ago
demo-lb-vnet	Virtual network	16 hours ago
demo-user-data-vm-nsg	Network security group	2 days ago
demo-user-data-vm	Virtual machine	2 days ago
demo-user-data-vm874_z1	Network Interface	2 days ago
demo-user-data-vm-ip	Public IP address	2 days ago
demo-user-data-vm-vnet	Virtual network	2 days ago
rg-demo	Resource group	2 days ago
Azure subscription 1	Subscription	2 days ago
soso	Subscription	2 days ago

At the bottom of the page, there is a 'See all' link and a 'Navigate' button.

Search for “Virtual Machines”

The screenshot shows the Microsoft Azure portal interface. At the top, there is a search bar with the placeholder "Virtual Machines". Below the search bar, the "Azure services" section is visible, featuring a "Create a resource" button and a "Route tables" button. An orange arrow points from the "Route tables" button towards the search bar. To the right of the search bar, there is a dropdown menu titled "Services" with the following items:

- All
- Services (30)
- Marketplace (5)
- More (4)

The "Services" section contains the following items:

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

The "Marketplace" section contains the following items:

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

The "Documentation" section contains the following items:

- Availability options for Azure Virtual Machines - Azure Virtual Machines
- Quickstart - Create a Windows VM in the Azure portal - Azure Virtual Machines
- Describe Azure Compute and Networking Services - Training
- Azure Instance Metadata Service for virtual machines - Azure Virtual Machines

At the bottom of the dropdown menu, there is a "Continue searching in Microsoft Entra ID" link and a "Give feedback" link.

The URL in the browser address bar is https://portal.azure.com/#blade/Microsoft_Azure_ComputeHub/ComputeHubMenuBlade/virtualMachinesBrowse.

Select “Virtual Machines”

The screenshot shows the "Compute infrastructure | Virtual machines" blade. The left sidebar has a "Virtual machines" section selected. The main area displays a message: "No virtual machines to display". Below this, there is a call-to-action button labeled "+ Create" with a dropdown arrow. An orange arrow points from the "Create" button towards the dropdown arrow. The URL in the browser address bar is https://portal.azure.com/#blade/Microsoft_Azure_ComputeHub/ComputeHubMenuBlade/virtualMachinesBrowse.

Click on the drop down on “Create”

The screenshot shows the Microsoft Azure Compute Infrastructure Virtual Machines page. The left sidebar is expanded to show 'Virtual machines' under 'Infrastructure'. The main content area displays four options: 'Virtual machine', 'Virtual machine scale set (VMSS)', 'Presets', and 'Hybrid, preconfigured, and high volume solutions'. A large message 'No virtual machines to display' is centered, with a link to 'Create' below it. At the bottom, there are links to 'Learn more about Windows virtual machines' and 'Learn more about Linux virtual machines'.

Select “Virtual Machine”

The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. It includes fields for 'Subscription' (Azure subscription 1), 'Resource group' ((New) Resource group, Create new), 'Virtual machine name' (empty), 'Region' ((US) East US 2, Deploy to an Azure Extended Zone), 'Availability options' (Availability zone, Self-selected zone selected, Choose up to 3 availability zones, one VM per zone), and 'Zone options' (Azure-selected zone (Preview), Let Azure assign the best zone for your needs). On the right, an 'Estimated monthly costs' summary table is shown, indicating a total cost of \$4.80. Navigation buttons at the bottom include '< Previous', 'Next : Disks >', and '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	
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

Our subscription has been selected. Then select the resource group we created for this project. Click on the drop down on “Resource Group”.

Prepared by Sidney Smith Ebot

Create a virtual machine

Basics

Virtual machine name: rg-demo-lb

Region: rg-demo-vm

Availability options: Self-selected zone

Estimated monthly costs

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

Select “rg-demo-lb”

Create a virtual machine

Basics

Virtual machine name: (empty)

Region: (US) East US 2

Availability options: Self-selected zone

Estimated monthly costs

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

We have to give the virtual machine a name. I will call it “**demo-lb-vm1**” since we will be creating more than one Virtual machine.

Microsoft Azure

Home > Compute infrastructure | Virtual machines >

Create a virtual machine

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

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 * [?](#) rg-demo-lb [Create new](#)

Instance details

Virtual machine name * [?](#) demo-lb-vm1

Region * [?](#) (US) East US 2 [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

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	\$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

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

Then for the “Region”, we will use “East US 2” which is the region are using in this demo.

Microsoft Azure

Home > Compute infrastructure | Virtual machines >

Create a virtual machine

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

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 * [?](#) rg-demo-lb [Create new](#)

Instance details

Virtual machine name * [?](#) demo-lb-vm1

Region * [?](#) (US) East US 2 [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

Availability zone * [?](#) Zone 1 [You can now select multiple zones. Selecting multiple zones will create one VM per zone. \[Learn more\]\(#\)](#)

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	\$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

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

For the “Availability Options”, select “Availability Zone”

Instance details

Virtual machine name * demo-lb-vm1

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

Availability options Availability zone

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 * Zone 1 You can now select multiple zones. Selecting multiple zones will create one VM per zone. Learn more

Security type Trusted launch virtual machines Configure security features

Image * Ubuntu Server 24.04 LTS - x64 Gen2 See all images | Configure VM generation

VM architecture Arm64 x64

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
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

< Previous Next : Disks > Review + create Give feedback

Then, on “Zone Options”, select “Self-selected zone”.

Instance details

Virtual machine name * demo-lb-vm1

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

Availability options Availability zone

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 * Zone 1 You can now select multiple zones. Selecting multiple zones will create one VM per zone. Learn more

Security type Trusted launch virtual machines Configure security features

Image * Ubuntu Server 24.04 LTS - x64 Gen2 See all images | Configure VM generation

VM architecture Arm64 x64

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
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

< Previous Next : Disks > Review + create Give feedback

On “Availability Zone”, select “zone 1”

Instance details

Virtual machine name * demo-lb-vm1

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

Availability options Availability zone

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 * Zone 1 You can now select multiple zones. Selecting multiple zones will create one VM per zone. [Learn more](#)

Security type Trusted launch virtual machines Configure security features

Image * Ubuntu Server 24.04 LTS - x64 Gen2 See all images | Configure VM generation

VM architecture x64

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
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

< Previous Next : Disks > Review + create Give feedback

Then, on “Security Type”, use “Trusted Launch Virtual Machines”

Instance details

Security type Trusted launch virtual machines Configure security features

Image * Ubuntu Server 24.04 LTS - x64 Gen2 See all images | Configure VM generation

VM architecture x64

Run with Azure Spot discount

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

Enable Hibernation

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.

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
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

< Previous Next : Disks > Review + create Give feedback

On “Image”, select “Ubuntu Server”

Prepared by Sidney Smith Ebot

The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. On the left, there's a configuration pane with sections for Security type, Image, VM architecture, Size, and Administrator account. A red arrow points to the 'x64' radio button under 'VM architecture'. On the right, there's a sidebar titled 'Estimated monthly costs' which lists the cost for a Virtual machine (Standard_B1s), Disks, Networking, Management, and Monitoring, totaling \$4.80.

On “VM Architecture”, select “x64”

The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. On the left, there's a configuration pane with sections for Security type, Image, VM architecture, Size, and Administrator account. A red arrow points to the checkbox next to 'Run with Azure Spot discount', which is currently unchecked. On the right, there's a sidebar titled 'Estimated monthly costs' which lists the cost for a Virtual machine (Standard_B1s), Disks, Networking, Management, and Monitoring, totaling \$4.80.

On “Run with Azure Spot Discount”, leave the box “Unchecked”

Prepared by Sidney Smith Ebot

The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. The current step is 'Select size'. A red arrow points to the 'Size' dropdown menu, which is open to show 'Standard_B1s - 1 vcpu, 1 GiB memory (\$7.59/month) (free services eligible)'. Other options like 'Standard_B2s' and 'Standard_B3s' are visible but not selected. The 'Virtual machine' section of the 'Estimated monthly costs' sidebar shows a total cost of \$4.80.

For “Size”, select “**Standard_B1s**”

The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. The current step is 'Review + create'. A red arrow points to the 'Enable Hibernation' checkbox, which is unchecked. The 'Virtual machine' section of the 'Estimated monthly costs' sidebar shows a total cost of \$4.80.

On “**Enable Hibernate**”, leave the box “**Unchecked**”

Create a virtual machine

Authentication type: SSH public key Password

Administrator account

Username *: azureuser

SSH public key source: Generate new key pair

SSH Key Type: RSA SSH Format

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.

Estimated monthly costs

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 “Authentication Type”, select “SSH public key”

Create a virtual machine

Authentication type: SSH public key Password

Administrator account

Username *: azureuser

SSH public key source: Generate new key pair

SSH Key Type: RSA SSH Format

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.

Estimated monthly costs

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

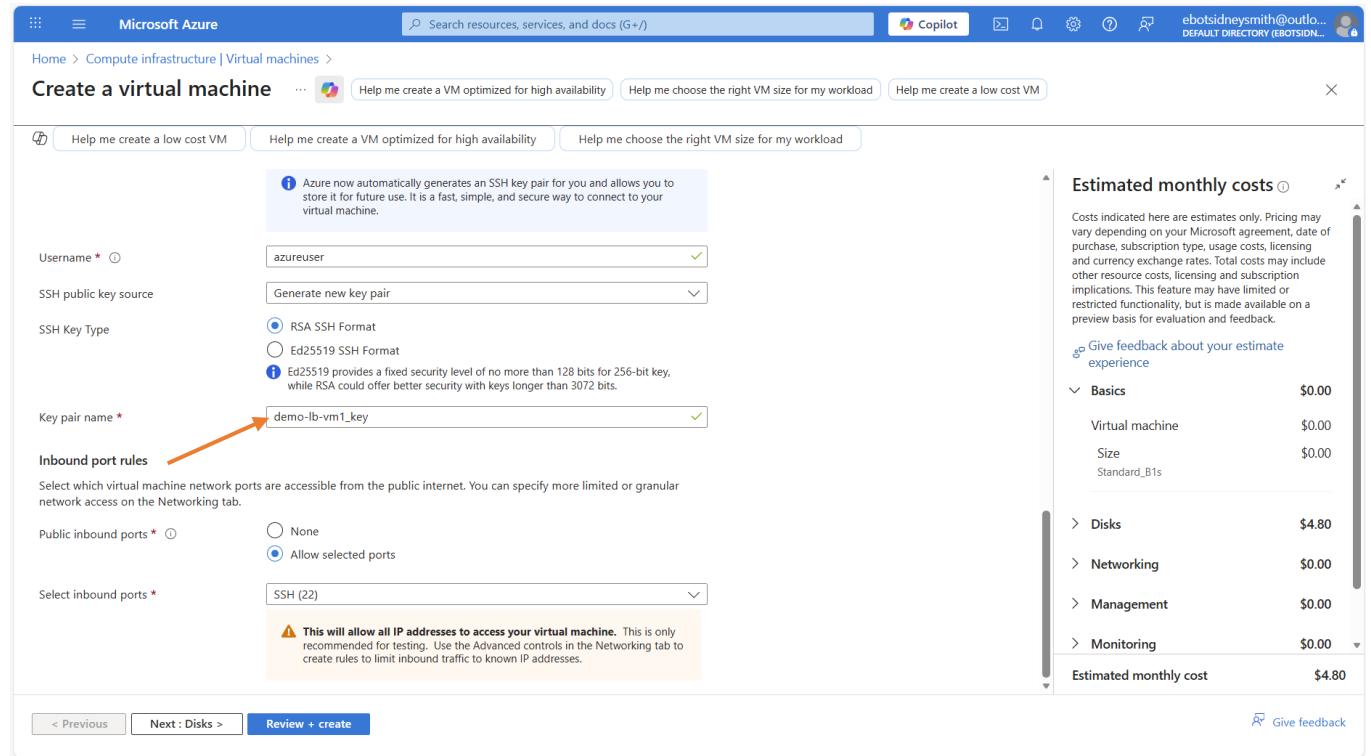
Then on “Username”, we will use “azureuser”

The screenshot shows the 'Create a virtual machine' wizard in Microsoft Azure. The 'SSH public key source' dropdown is open, revealing two options: 'Generate new key pair' (selected) and 'Import existing key pair'. A tooltip above the dropdown explains that Azure generates an SSH key pair for future use. To the right, the 'Estimated monthly costs' sidebar shows a total of \$4.80.

Then, on “SSH Public Key Source”, select “Generate new key pair”

The screenshot shows the 'Create a virtual machine' wizard in Microsoft Azure. The 'SSH Key Type' dropdown is open, showing 'RSA SSH Format' (selected) and 'Ed25519 SSH Format'. A tooltip below the dropdown provides information about Ed25519 security levels. To the right, the 'Estimated monthly costs' sidebar shows a total of \$4.80.

On the “SSH Key Type”, select the “RSA SSH Format”.

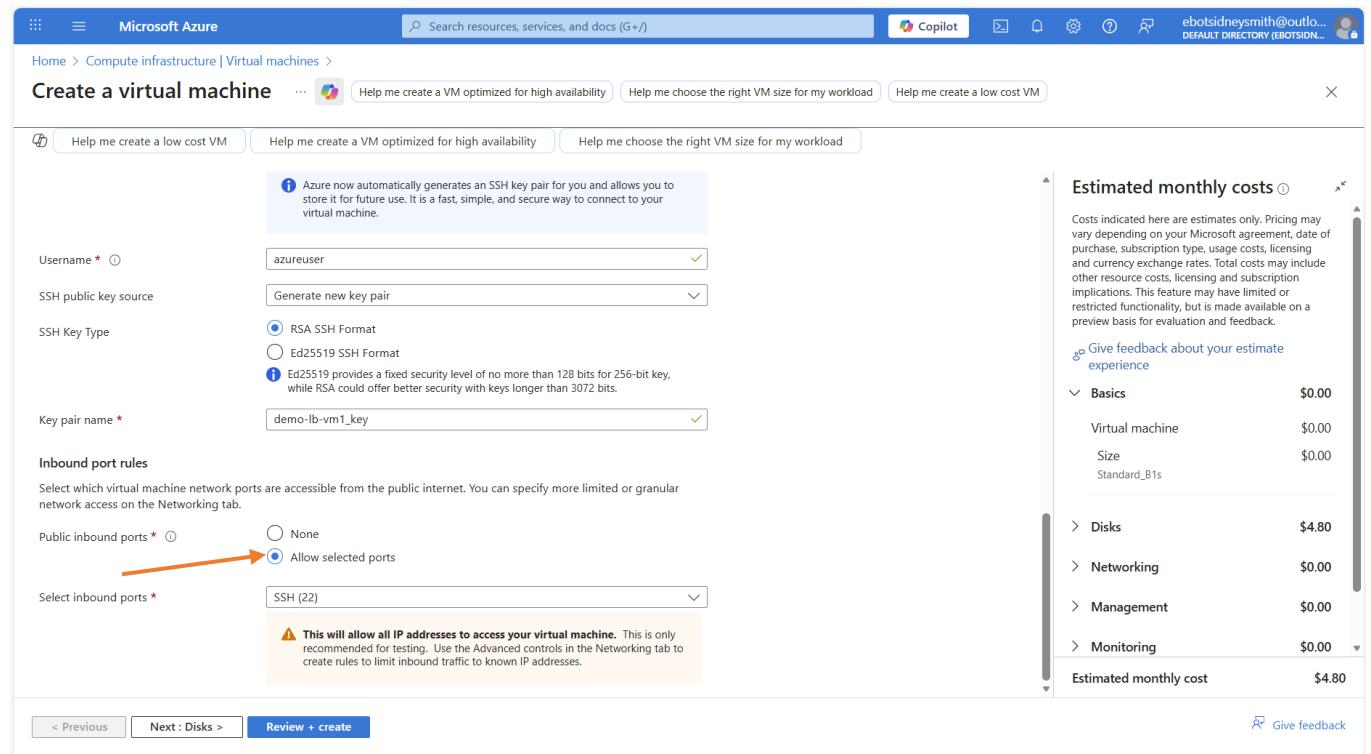


The screenshot shows the 'Create a virtual machine' wizard in Microsoft Azure. The 'Key pair name' field is highlighted with an orange arrow. The estimated monthly costs sidebar shows a total of \$4.80.

Estimated monthly costs

Category	Cost
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

For the “Key Pair Name”, we will just use the default name “demo-lb-vm-key”.



The screenshot shows the 'Create a virtual machine' wizard in Microsoft Azure. The 'Public inbound ports' section is highlighted with an orange arrow. The estimated monthly costs sidebar shows a total of \$4.80.

Estimated monthly costs

Category	Cost
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 “Public Inbound Ports”, select “Allow selected ports”

Create a virtual machine

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 | Help me create a low cost VM

Estimated monthly costs

Category	Cost
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

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)

⚠️ 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

And on the “Select Inbound ports”, select “SSH (22)”.

Create a virtual machine

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 | Help me create a low cost VM

Estimated monthly costs

Category	Cost
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

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)

⚠️ 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”

Prepared by Sidney Smith Ebot

Microsoft Azure

Home > Compute infrastructure | Virtual machines >

Create a virtual machine

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

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

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](#)

There is a charge for the underlying storage resources consumed by your virtual machine. [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 OS disk type *

Delete with VM

Key management

Enable Ultra Disk compatibility

Data disks for demo-lb-vm1

< Previous | Next : Networking > | 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

> Basics	\$0.00
> Disks	\$4.80
OS disk	\$4.80
Premium SSD, 32 GiB	
> Networking	\$0.00
> Management	\$0.00
> Monitoring	\$0.00
Estimated monthly cost	\$4.80

Give feedback

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

Microsoft Azure

Home > Compute infrastructure | Virtual machines >

Create a virtual machine

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

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

Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution. [Learn more](#)

Network interface

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

Virtual network * demo-lb-vnet

Subnet * demo-lb-subnet (10.0.1.0/24)

Public IP Create new Public IP addresses have a nominal charge. [Estimate price](#)

NIC network security group Basic None

Public inbound ports * None Allow selected ports

Select inbound ports *

< 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

> 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
<input type="text" value="100"/>	
Estimated monthly cost	\$8.45

Give feedback

Here, we have to select the “**Virtual Network**” we created for this demo, that is “**demo-lb-vnet**” .

Create a virtual machine

Networking

Virtual network * demo-lb-vnet

Subnet * demo-lb-subnet (10.0.1.0/24)

Public IP Create new

NIC network security group Basic

Public inbound ports * Allow selected ports

Select inbound ports * SSH (22)

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

Then, on “**Subnet**”, we select the subnet we created for this demo, that is “**demo-lb-subnet**”.

Create a virtual machine

Networking

Virtual network * demo-lb-vnet

Subnet * demo-lb-subnet (10.0.1.0/24)

Public IP Create new

NIC network security group Basic

Public inbound ports * Allow selected ports

Select inbound ports * SSH (22)

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

On “**Public IP**”, you can assign the IP based on your requirement. In this case we are just doing a demo. So, click on “**Create New**”.

Prepared by Sidney Smith Ebot

The screenshot shows the 'Create a virtual machine' wizard in Microsoft Azure. The current step is 'Network interface'. On the right, a modal window titled 'Create public IP address' is open, showing fields for 'Name' (demo-lb-vm1-ip), 'SKU' (Standard), and 'Assignment' (Static). A note says 'Availability zones are only supported on Standard SKU public IP addresses.' At the bottom right of the modal is a blue 'OK' button. An orange arrow points from this 'OK' button to the 'OK' button at the bottom right of the main 'Network interface' form.

Click on “OK” and the Public IP will be created.

The screenshot shows the 'Create a virtual machine' wizard in Microsoft Azure. The current step is 'Network interface'. On the right, a sidebar titled 'Estimated monthly costs' provides a breakdown of estimated monthly expenses. It includes sections for Basics (\$0.00), Disks (\$4.80), Networking (\$3.65), and Public IP (\$3.65). The total estimated monthly cost is \$8.45. At the bottom right of the sidebar is a 'Give feedback' link. An orange arrow points from the 'OK' button at the bottom right of the main form to the 'OK' button at the bottom right of the sidebar.

We will leave the rest of the fields as default and click on “Next: Management”

Prepared by Sidney Smith Ebot

The screenshot shows the Microsoft Azure 'Create a virtual machine' wizard at the 'Management' step. The 'Management' tab is selected. On the right, there's a sidebar titled 'Estimated monthly costs' with a breakdown of costs 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 red arrow points down from the 'Auto-shutdown' section towards the 'Next: Monitoring' button.

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

The screenshot shows the Microsoft Azure 'Create a virtual machine' wizard at the 'Monitoring' step. The 'Monitoring' tab is selected. On the right, there's a sidebar titled 'Estimated monthly costs' with a breakdown of costs 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 red arrow points down from the 'Diagnostics' section towards the 'Next: Advanced >' button.

Here, we will also leave everything as default and click on “Next: Advanced”

Prepared by Sidney Smith Ebot

The screenshot shows the Microsoft Azure 'Create a virtual machine' wizard. The 'Advanced' tab is selected. On the right, there's a sidebar titled 'Estimated monthly costs' with a breakdown of costs 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 also present.

Add additional configuration, agents, scripts or applications via virtual machine extensions or cloud-init.

Extensions

Extensions provide post-deployment configuration and automation.

Extensions ⓘ Select an extension to install

VM applications

VM applications contain application files that are securely and reliably downloaded on your VM after deployment. In addition to the application files, an install and uninstall script are included in the application. You can easily add or remove applications on your VM after create. [Learn more](#)

Select a VM application to install

Custom data and cloud init

Pass a cloud-init script, configuration file, or other data into the virtual machine **while it is being provisioned**. The data will be saved on the VM in a known location. [Learn more about custom data for VMs](#)

Custom data

< Previous Next : Tags > Review + create

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

The screenshot shows the Microsoft Azure 'Create a virtual machine' wizard. The 'Tags' tab is selected. A table shows 13 selected tags. A 'Give feedback' link is also present.

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
<input type="text"/>	:	<input type="text"/> 13 selected

< Previous Next : Review + create > Review + create

Here, we will enter a tag with “Name” and value “demo-lb-vm1”

Prepared by Sidney Smith Ebot

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

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

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
Name	: demo-lb-vm1	13 selected
		13 selected

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

< Previous Next : Review + create Review + create

Then click on “Next: Review + Create”

Microsoft Azure

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DEFAULT DIRECTORY (EBOTSID...)

Home > Compute infrastructure | Virtual machines >

Create a virtual machine

Validation passed

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 | Help me create a low cost VM

Basics Disks Networking Management Monitoring Advanced **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 Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details.

Name: Sidney Ebot

Preferred e-mail address: ebotsidneysmith@outlook.com

Preferred phone number:

⚠ You have set SCD port(s) open to the internet. This is only recommended for testing. If you want to change this setting, go to the network interface settings.

Estimated monthly costs \$8.45

Download a template for automation | Give feedback

< Previous Next > **Create**

Click on “Create”

Prepared by Sidney Smith Ebot

Microsoft Azure

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

Copilot

ebotsidneysmith@outlook.com

Home > Compute infrastructure | Virtual machines >

Create a virtual machine

Validation passed

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

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, as well as for marketing purposes related to my purchase rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details.

Name: Sidney Ebot

Preferred e-mail address: ebotsidneysmith@outlook.com

Preferred phone number:

An SSH key pair contains both a public key and a private key. Azure doesn't store the private key. After the SSH key resource is created, you won't be able to download the private key again. [Learn more](#)

Download private key and create resource

Return to create a virtual machine

Estimated monthly costs

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

< Previous Next > Create

Download a template for automation Give feedback

Click on “Download Private key and create resource”

Microsoft Azure

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

Copilot

ebotsidneysmith@outlook.com

Home > CreateVm-canonical.ubuntu-24_04-lts-server-20251217161220 | Overview

Deployment

Deployment succeeded

Deployment 'CreateVm-canonical.ubuntu-24_04-lts-server-20251217161220' to resource group 'rg-demo-lb' was successful.

Go to resource Pin to dashboard

Overview

Inputs Outputs Template

Your deployment is complete

Deployment name: CreateVm-canonical.ubuntu-24_04-lts-server-20251217161220

Subscription: Azure subscription 1

Resource group: rg-demo-lb

Start time: 12/17/2025, 5:35:53 PM

Correlation ID: 29c22611-a4c5-44cf-b009-3c2e2c9bb256

Deployment details

Next steps

Setup auto-shutdown Recommended

Monitor VM health, performance and network dependencies Recommended

Run a script inside the virtual machine Recommended

Go to resource Create another VM

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 deployment has been completed. Click on “Go to Resource”.

Prepared by Sidney Smith Ebot

The screenshot shows the Microsoft Azure portal interface. At the top, there's a navigation bar with 'Microsoft Azure', a search bar, and various icons. Below it, the main content area shows a virtual machine named 'demo-lb-vm1'. The left sidebar has a tree view with categories like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Connect, Networking, Network settings, Load balancing, Application security groups, Network manager, Settings, Availability + scale, Security, Backup + disaster recovery, Operations, Monitoring, Automation, and a footer note about keyboard shortcuts. The main panel displays the 'Essentials' section with details such as Resource group (rg-demo-lb), Status (Running), Location (East US 2 (Zone 1)), Subscription (Azure subscription 1), Subscription ID (dd5d4252-9ca5-4581-9dc7-b63c0788bde7), Availability zone (1), Operating system (Linux (ubuntu 24.04)), Size (Standard B1s (1 vcpu, 1 GiB memory)), Primary NIC public IP (20.186.93.65), Virtual network/subnet (demo-lb-vnet/demo-lb-subnet), DNS name (Not configured), Health state (-), Time created (12/19/2025, 1:22 PM UTC), and Tags (Name : demo-lb-vm1). Below this is a 'Properties' tab with sections for Virtual machine (Computer name: demo-lb-vm1, Operating system: Linux, VM generation: V2, VM architecture: x64, Agent status: Not Ready) and Networking (Public IP address: 20.186.93.65, Private IP address: 10.0.1.4). A 'JSON View' link is also present.

We have created our first virtual machine. We will follow the same procedure to create the second virtual machine called “**demo-lb-vm2**”.

The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. The top navigation bar includes 'Microsoft Azure', a search bar, and user information. The main content area has tabs for 'Create a virtual machine', 'Help me create a low cost VM', 'Help me create a VM optimized for high availability', and 'Help me choose the right VM size for my workload'. Below these are tabs for Basics, Disks, Networking, Management, Monitoring, Advanced, Tags, and 'Review + create'. The 'Review + create' tab is selected. On the left, there's a 'Price' section showing 1 X Standard B1s by Microsoft at 0.0104 USD/hr, with links to 'Subscription credits apply' and 'Pricing for other VM sizes'. A 'TERMS' section contains legal text and links to 'Terms of use | Privacy policy'. In the center, a modal window titled 'Generate new key pair' explains that an SSH key pair contains both a public key and a private key, and that Azure doesn't store the private key. It includes a 'Download private key and create resource' button and a 'Return to create a virtual machine' button. To the right, an 'Estimated monthly costs' table shows costs 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. At the bottom, there are buttons for '< Previous', 'Next >', and 'Create'.

Click on “**Download private key and create resource**”

The screenshot shows the Microsoft Azure Overview page for a completed VM deployment. The main message is "Your deployment is complete". Deployment details include a deployment name, Azure subscription, start time, and correlation ID. Next steps suggest setup auto-shutdown, monitor VM health, and run a script inside the virtual machine. Buttons for "Go to resource" and "Create another VM" are present. A red arrow points from the text "Click on ‘Go to Resource’" to the "Go to resource" button.

Deployment details:

- Deployment name: CreateVm-canonical.ubuntu-24_04-lts-server-20251219084656
- Subscription: Azure subscription 1
- Resource group: rg-demo-lb
- Start time: 12/19/2025, 8:49:19 AM
- Correlation ID: 49ae6e68-20cc-4dd4-9151-8a5335357faa

Next steps:

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

Buttons:

- Go to resource (highlighted with a red arrow)
- Create another VM

Feedback:

Give feedback
Tell us about your experience with deployment

The deployment of the second virtual machine is complete. Click on “Go to Resource”

The screenshot shows the Microsoft Azure Overview page for a specific virtual machine named "demo-lb-vm2". The main pane displays the VM's essentials, including its resource group (rg-demo-lb), status (Running), location (East US 2 (Zone 1)), and operating system (Linux (ubuntu 24.04)). It also shows the primary NIC public IP address (20.246.66.99) highlighted with a red arrow. The properties section includes tabs for Virtual machine, Monitoring, Capabilities (7), Recommendations (14), and Tutorials. The Networking section shows the public IP address (20.246.66.99) and private IP address (10.0.1.5).

Essentials:

- Resource group (move) : rg-demo-lb
- Status : Running
- Location : East US 2 (Zone 1)
- Subscription (move) : Azure subscription 1
- Subscription ID : dd5d4252-9ca5-4581-9dc7-b63c0788bde7
- Availability zone : 1

Properties:

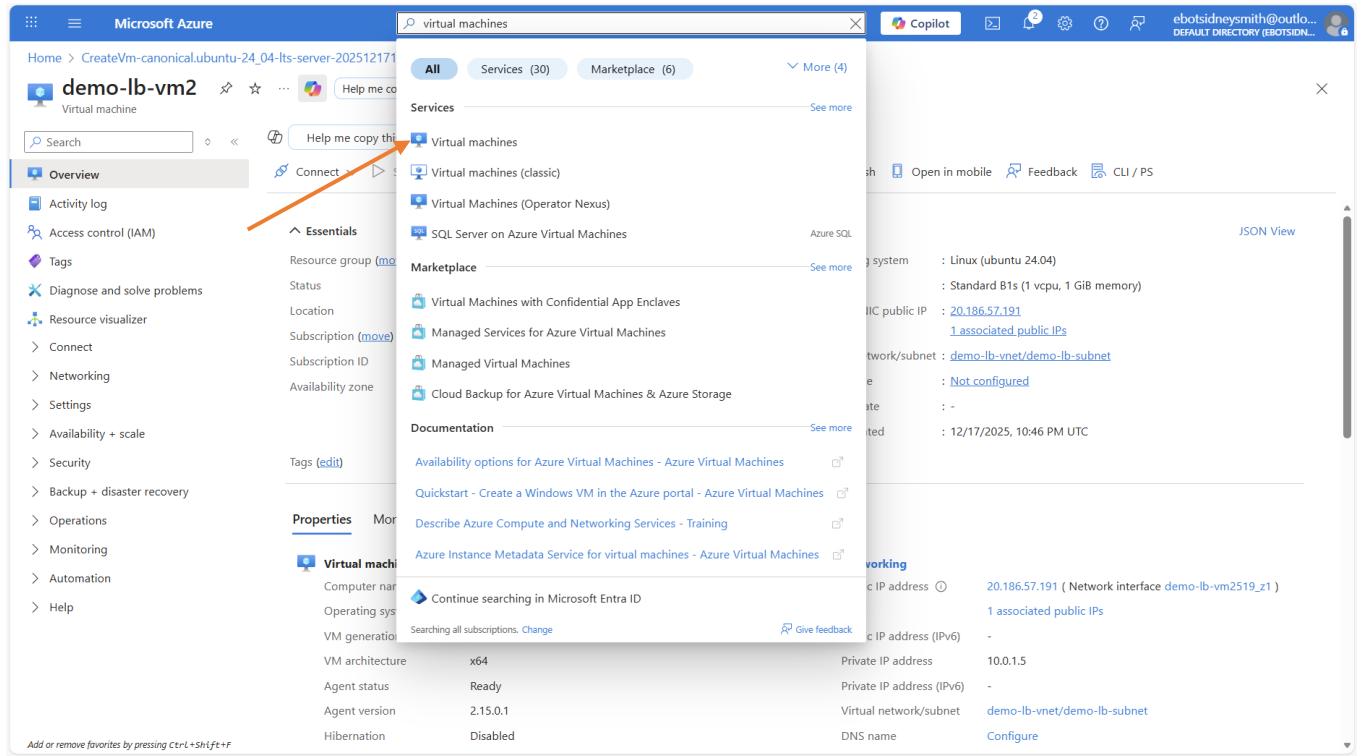
- Operating system : Linux (ubuntu 24.04)
- Size : Standard B1s (1 vcpu, 1 GiB memory)
- Primary NIC public IP : 20.246.66.99 (1 associated public IPs)
- Virtual network/subnet : demo-lb-vnet/demo-lb-subnet
- DNS name : Not configured
- Health state : -
- Time created : 12/19/2025, 1:49 PM UTC

Networking:

- Public IP address : 20.246.66.99 (Network interface demo-lb-vm2829_z1)
1 associated public IPs
- Public IP address (IPv6) : -
- Private IP address : 10.0.1.5
- Private IP address (IPv6) : -

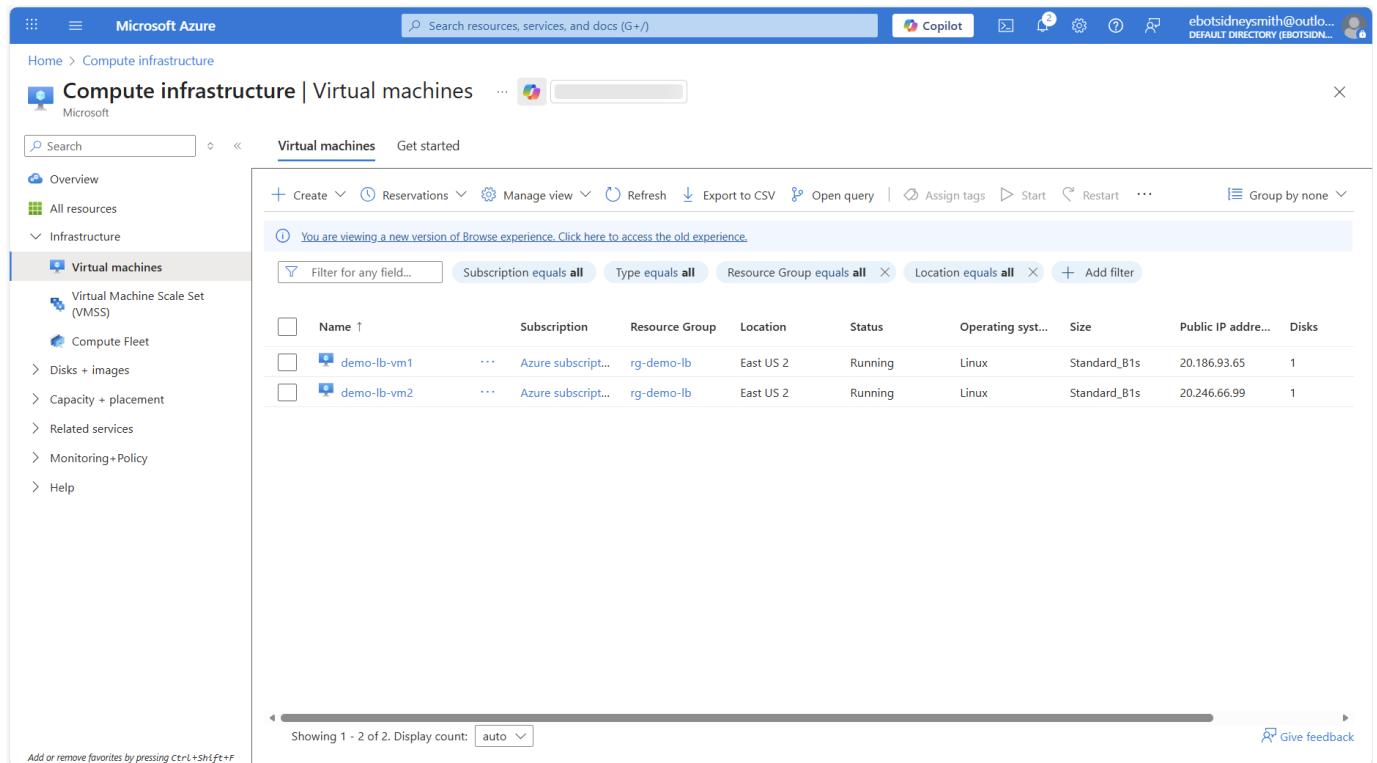
Search for “Virtual Machines”

Prepared by Sidney Smith Ebot



The screenshot shows the Microsoft Azure portal interface. In the top navigation bar, there is a search bar with the text "virtual machines". Below the search bar, the results are displayed under the "All" tab. The first result is "Virtual machines", which is highlighted with a red arrow. Other results include "Virtual machines (classic)", "Virtual Machines (Operator Nexus)", and "SQL Server on Azure Virtual Machines". To the right of the search results, there is a detailed view of a specific virtual machine named "demo-lb-vm2". The details include its operating system (Linux (ubuntu 24.04)), location (Standard_B1s (1 vcpu, 1 GiB memory)), and network information (IP address 20.186.57.191). The JSON View button is also visible.

Click on “Virtual Machines”



The screenshot shows the Microsoft Azure portal interface, specifically the "Compute infrastructure | Virtual machines" page. The left sidebar has "Virtual machines" selected. The main area displays a table of virtual machines. There are two entries in the table:

Name	Subscription	Resource Group	Location	Status	Operating system	Size	Public IP address	Disk
demo-lb-vm1	Azure subscription	rg-demo-lb	East US 2	Running	Linux	Standard_B1s	20.186.93.65	1
demo-lb-vm2	Azure subscription	rg-demo-lb	East US 2	Running	Linux	Standard_B1s	20.246.66.99	1

You can see, we have two virtual machines. Let us access these virtual machines individually. Then, later we will use Load Balancer to access the two virtual machines and our request will be routed.

Part 4: SSH Connect to Virtual Machines and Install Apache 2

In this part, we will SSH connect to the two virtual machines we just created and install Apache.

Since we have to put a load balancer, we need to have some software or software packages running on the virtual machines, so that we can access the homepage of the application by load balancer. The application should be able to tell on which server it is running. For that, we will install Apache 2 on both virtual machines

Step 1: SSH Connect to First Virtual Machine

Let us SSH connect to our first virtual machines. Open Command Prompt terminal and navigate to where our SSH key pair was saved. In this demo, the SSH key is stored in the path: C:\Users\ebots\Downloads using the command:

```
cd Downloads
```

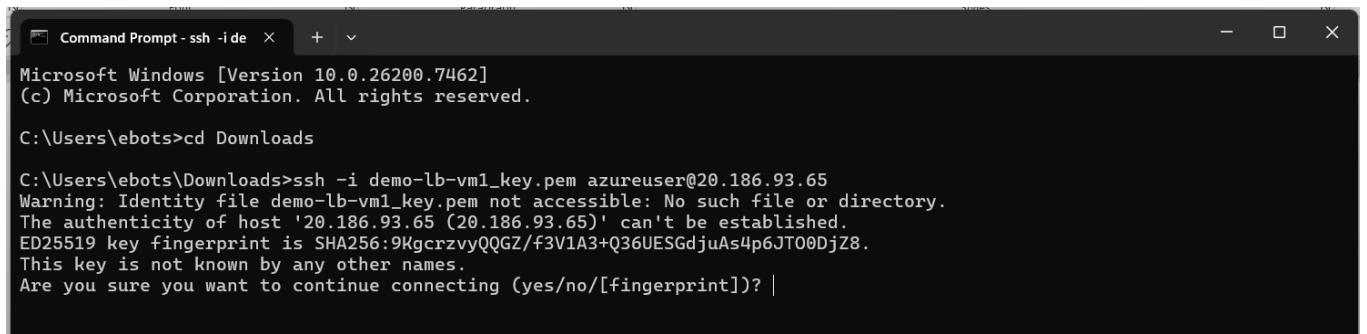


```
Command Prompt
Microsoft Windows [Version 10.0.26200.7462]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ebots>cd Downloads
C:\Users\ebots\Downloads>
```

Then run the command to SSH connect to the virtual machine using the SSH Key “**demo-lb-vm1_key**”

```
ssh -i demo-lb-vm1_key.pem azureuser@20.186.93.65
```



```
Command Prompt - ssh -i de
Microsoft Windows [Version 10.0.26200.7462]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ebots>cd Downloads
C:\Users\ebots\Downloads>ssh -i demo-lb-vm1_key.pem azureuser@20.186.93.65
Warning: Identity file demo-lb-vm1_key.pem not accessible: No such file or directory.
The authenticity of host '20.186.93.65 (20.186.93.65)' can't be established.
ED25519 key fingerprint is SHA256:9KgcrzvyQQGZ/f3V1A3+Q36UESGdjuAs4p6JT00DjZ8.
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**” key

```
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro

System information as of Fri Dec 19 13:58:56 UTC 2025

System load: 0.0          Processes:      112
Usage of /: 5.6% of 28.02GB Users logged in: 0
Memory usage: 28%          IPv4 address for eth0: 10.0.1.4
Swap usage: 0%             Swap: 0B

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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

The 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.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

azureuser@demo-lb-vm1:~$ |
```

Let us install Apache 2 on our first virtual machine. We have to first update the package manager using the command:

```
sudo apt update -y
```

```
Get:23 http://azure.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:24 http://azure.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 c-n-f Metadata [488 B]
Get:25 http://azure.archive.ubuntu.com/ubuntu noble-backports/main amd64 Packages [64.0 kB]
Get:26 http://azure.archive.ubuntu.com/ubuntu noble-backports/main Translation-en [9208 B]
Get:27 http://azure.archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7300 B]
Get:28 http://azure.archive.ubuntu.com/ubuntu noble-backports/main amd64 c-n-f Metadata [368 B]
Get:29 http://azure.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [33.0 kB]
Get:30 http://azure.archive.ubuntu.com/ubuntu noble-backports/universe Translation-en [17.9 kB]
Get:31 http://azure.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [10.5 kB]
Get:32 http://azure.archive.ubuntu.com/ubuntu noble-backports/universe amd64 c-n-f Metadata [14444 B]
Get:33 http://azure.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:34 http://azure.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 c-n-f Metadata [116 B]
Get:35 http://azure.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Get:36 http://azure.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:37 http://azure.archive.ubuntu.com/ubuntu noble-security/main amd64 Components [21.5 kB]
Get:38 http://azure.archive.ubuntu.com/ubuntu noble-security/universe amd64 Packages [916 kB]
Get:39 http://azure.archive.ubuntu.com/ubuntu noble-security/universe Translation-en [207 kB]
Get:40 http://azure.archive.ubuntu.com/ubuntu noble-security/universe amd64 Components [71.5 kB]
Get:41 http://azure.archive.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [19.4 kB]
Get:42 http://azure.archive.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:43 http://azure.archive.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [27.4 kB]
Get:44 http://azure.archive.ubuntu.com/ubuntu noble-security/multiverse Translation-en [5956 B]
Get:45 http://azure.archive.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Get:46 http://azure.archive.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [384 B]
Fetched 33.9 MB in 6s (5759 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
azureuser@demo-lb-vm1:~$ |
```

Next, install Apache 2 using the command:

```
sudo apt install apache2 -y
```

```
azureuser@demo-lb-vm1: ~ + - x
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /usr/lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheload.service → /usr/lib/systemd/system/apache-htcacheload.service.
Processing triggers for ufw (0.36.2-6) ...
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for libc-bin (2.39-0ubuntu8.6) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
azureuser@demo-lb-vm1:~$ |
```

Apache 2 has been installed on our first virtual machine.

To access our virtual machine through the browser, we have to enable port 80 on the inbound rules.

Enable Port 80

Go to the Virtual machine on the Azure Portal

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes 'Microsoft Azure', a search bar, and various icons for Copilot, notifications, and account details. Below the navigation is a breadcrumb trail: 'Home > Compute infrastructure'. The main content area is titled 'Compute infrastructure | Virtual machines' and shows a list of virtual machines. On the left, there's a sidebar with 'Virtual machines' selected, and a list of other options like 'Virtual Machine Scale Set (VMSS)', 'Compute Fleet', 'Disks + images', etc. The main table lists two virtual machines:

Name	Subscription	Resource Group	Location	Status	Operating syst...	Size	Public IP addre...	Disk
demo-lb-vm	Azure subscript...	rg-demo-lb	East US 2	Running	Linux	Standard_B1s	20.80.248.248	1
demo-lb-vm2	Azure subscript...	rg-demo-lb	East US 2	Running	Linux	Standard_B1s	20.186.57.191	1

At the bottom of the table, there's a note: 'Showing 1 - 2 of 2. Display count: auto'. A red arrow points from the text 'Click on the first virtual machine' to the 'demo-lb-vm' entry in the list.

Click on the first virtual machine

This screenshot shows the Microsoft Azure Compute Infrastructure Virtual Machines page. On the left, the 'Virtual machines' section is selected. In the center, a list of virtual machines includes 'demo-lb-vm1' and 'demo-lb-vm2'. On the right, the details for 'demo-lb-vm1' are shown. A red arrow points to the 'Networking' option in the navigation menu on the right side of the screen.

Click on “Networking”

This screenshot shows the same Microsoft Azure Compute Infrastructure Virtual Machines page as the previous one. The 'Virtual machines' section is selected on the left, and 'demo-lb-vm1' is selected in the center. On the right, the 'Networking' section is expanded, and the 'Network settings' option is highlighted with a red arrow. The 'Network settings' section contains options like Load balancing, Application security groups, and Network manager.

Click on “Network Settings”

Microsoft Azure

Compute infrastructure | Virtual machines | demo-lb-vm1

Virtual machines

demo-lb-vm1 | Network settings

Private IP address: 10.0.1.4

Admin security rules: 0 (Configure)

Rules

Network security group demo-lb-vm1-nsg (attached to networkInterface: demo-lb-vm1692_z1) Impacts 0 subnets, 1 network interfaces

+ Create port rule

Prio...	Name	Port	Protocol
300	SSH	22	TCP
65000	AllowVnetInBound	Any	Any
65001	AllowAzureLoadBalancerInB...	Any	Any
65500	DenyAllInBound	Any	Any

Click on the drop down on “Create port Rule”

Microsoft Azure

Compute infrastructure | Virtual machines | demo-lb-vm1

Virtual machines

demo-lb-vm1 | Network settings

Private IP address: 10.0.1.4

Admin security rules: 0 (Configure)

Rules

Network security group demo-lb-vm1-nsg (attached to networkInterface: demo-lb-vm1692_z1) Impacts 0 subnets, 1 network interfaces

+ Create port rule

Inbound port rule

Outbound port rule

Prio...	Name	Port	Protocol
300	SSH	22	TCP
65000	AllowVnetInBound	Any	Any
65001	AllowAzureLoadBalancerInB...	Any	Any
65500	DenyAllInBound	Any	Any

Select “Inbound Rule”

Compute infrastructure | Virtual mac...

demo-lb-vm1 | Networks

Add inbound security rule

Source: Any

Source port ranges: *

Destination: Any

Service: Custom

Destination port ranges: 8080

Protocol: Any

Action: Allow

Priority: 310

Click on the drop down on “service” and select “HTTP”

Compute infrastructure | Virtual mac...

demo-lb-vm1 | Networks

Add inbound security rule

Service: HTTP

Destination port ranges: 80

Protocol: TCP

Action: Allow

Priority: 310

Name: AllowHTTP

Description:

Then on “Name”, enter “AllowHTTP”

The screenshot shows the Microsoft Azure Compute Infrastructure Virtual machines page. A specific virtual machine, 'demo-lb-vm1', is selected. On the right, the 'Network settings' blade for this VM is open. A modal window titled 'Add inbound security rule' is displayed, allowing the configuration of a new network rule. The 'Service' field is set to 'HTTP', 'Destination port ranges' is set to '80', 'Protocol' is set to 'TCP', 'Action' is set to 'Allow', 'Priority' is set to '310', and the 'Name' is 'AllowHTTP'. An orange arrow points to the 'Add' button at the bottom of the modal.

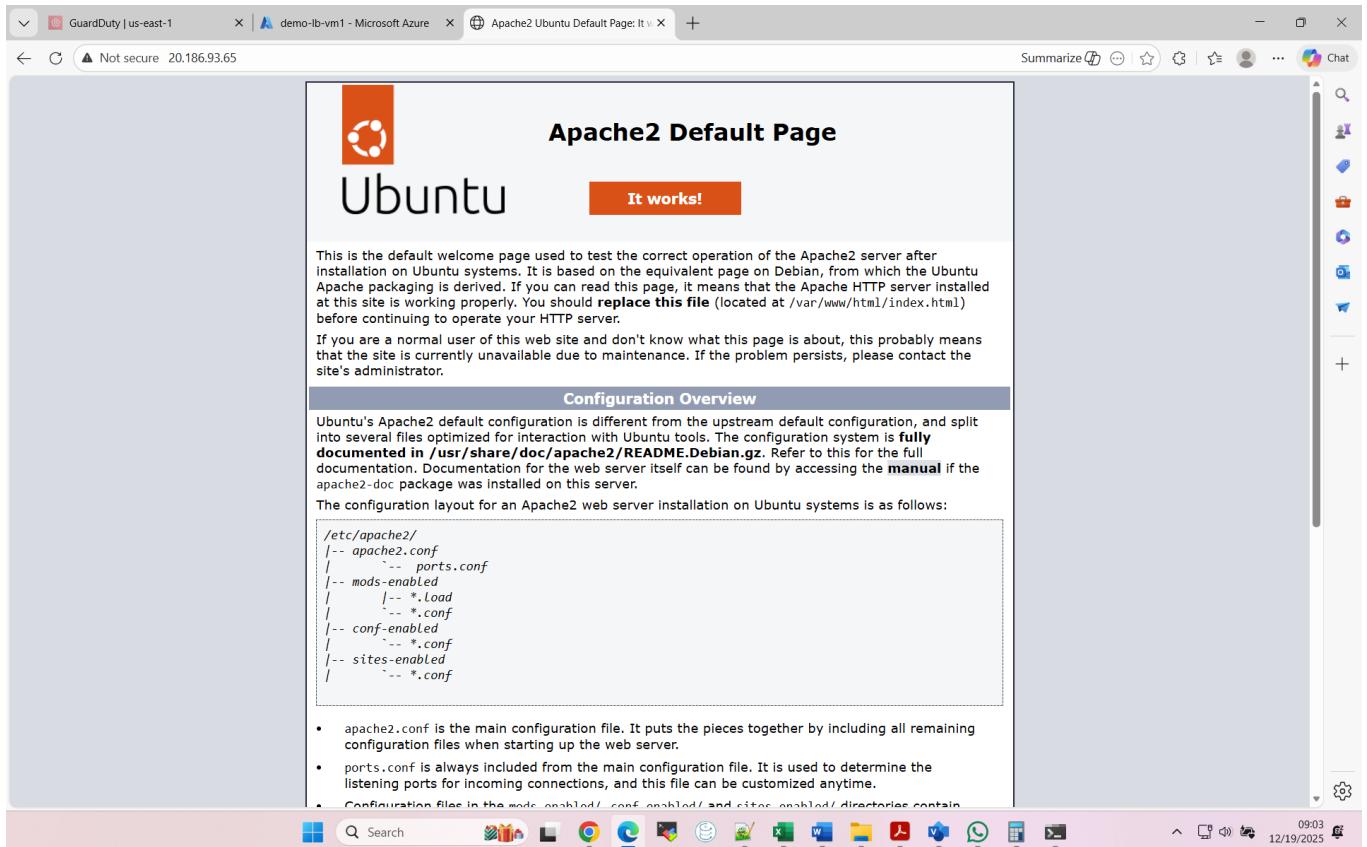
Then click on “Add”

The screenshot shows the Microsoft Azure Compute Infrastructure Virtual machines page. The 'demo-lb-vm1' virtual machine is selected. On the right, the 'Network settings' blade is open. The 'Inbound security rules' section shows a new rule: 'Network security group demo-lb-vm1-nsg (attached to networkInterface: demo-lb-vm1692_z1)'. The 'Create port rule' button is visible at the bottom of the blade.

We have enabled port 80.

Verification of Installation of Apache 2 on First Virtual Machine

Let us verify by trying to open Apache 2 homepage using the Public IP of the virtual machine



It works. So, Apache 2 has been installed successfully.

Modifying the html file

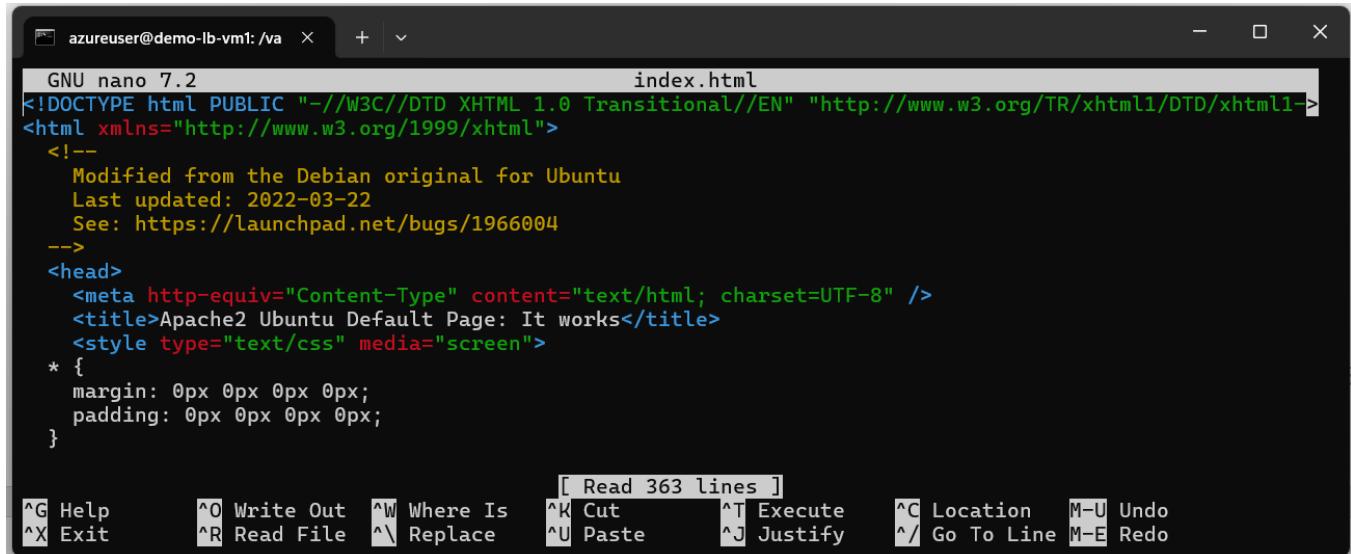
Now, let us modify the index.html file so that we can make it different in the two virtual machines. Head back to the SSH connected virtual machine and run the command:

```
cd /var/www/html/
```

```
azureuser@demo-lb-vm1:~/ | + | - | X
azureuser@demo-lb-vm1:~$ cd /var/www/html/
azureuser@demo-lb-vm1:/var/www/html$ |
```

Then open the index.html file using the command:

```
sudo nano index.html
```

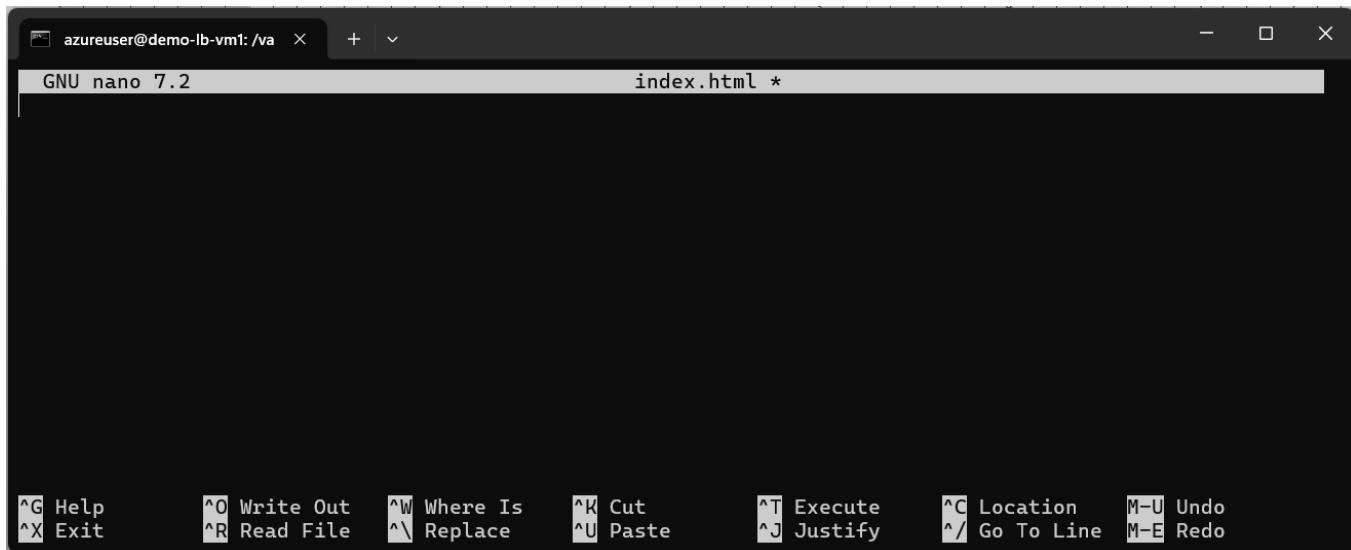


The screenshot shows a terminal window titled "azureuser@demo-lb-vm1: /va". The file being edited is "index.html". The content of the file is as follows:

```
GNU nano 7.2
index.html
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1->
<html xmlns="http://www.w3.org/1999/xhtml">
<!--
    Modified from the Debian original for Ubuntu
    Last updated: 2022-03-22
    See: https://launchpad.net/bugs/1966004
-->
<head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
    <title>Apache2 Ubuntu Default Page: It works</title>
    <style type="text/css" media="screen">
        * {
            margin: 0px 0px 0px 0px;
            padding: 0px 0px 0px 0px;
        }
    </style>
</head>
<body>
</body>
</html>
```

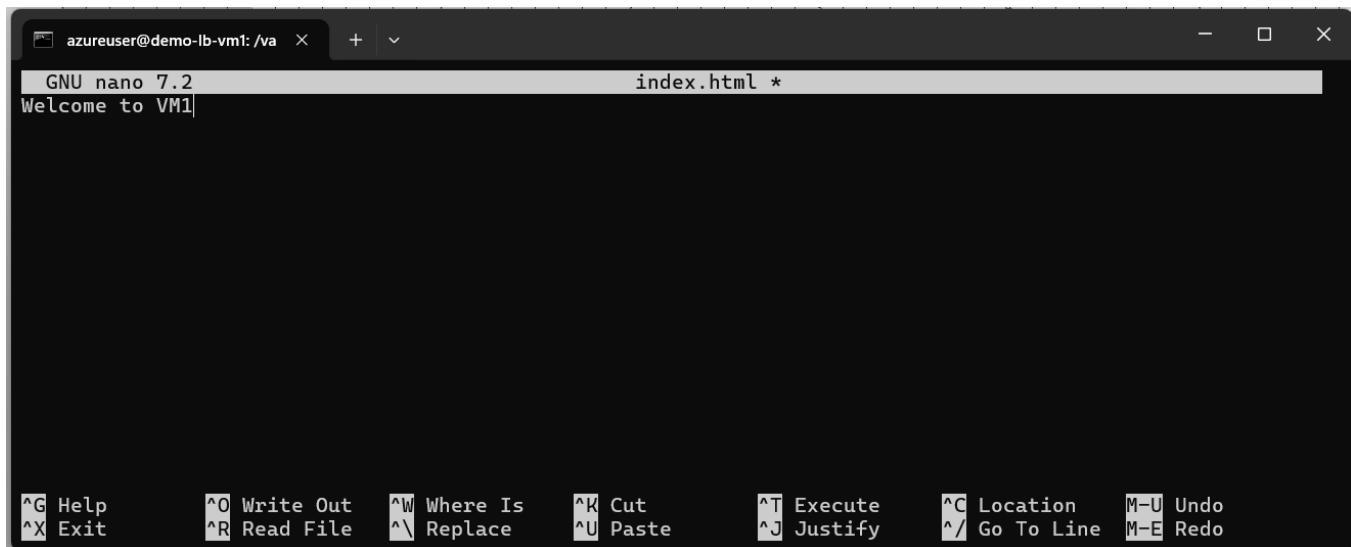
The status bar at the bottom shows various keyboard shortcuts for nano editor commands.

Let us now change the text in the file. First delete all the text in the file using **ALT+T**



The screenshot shows a terminal window titled "azureuser@demo-lb-vm1: /va". The file being edited is "index.html *". The content of the file is empty.

Then, we will enter the text “Welcome to VM1”

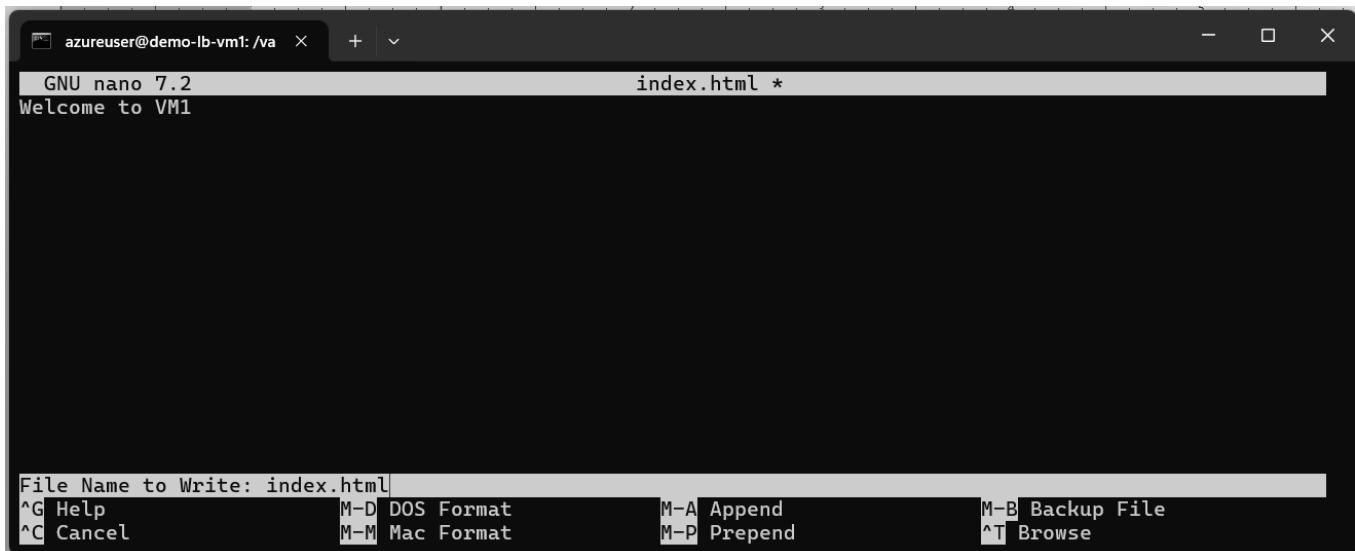


The screenshot shows a terminal window titled "azureuser@demo-lb-vm1: /va". The file being edited is "index.html *". The content of the file is "Welcome to VM1".

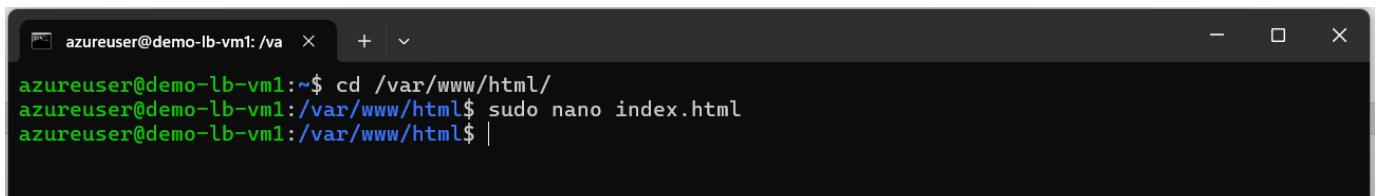
The save the text and exit by using (CTRL+x)



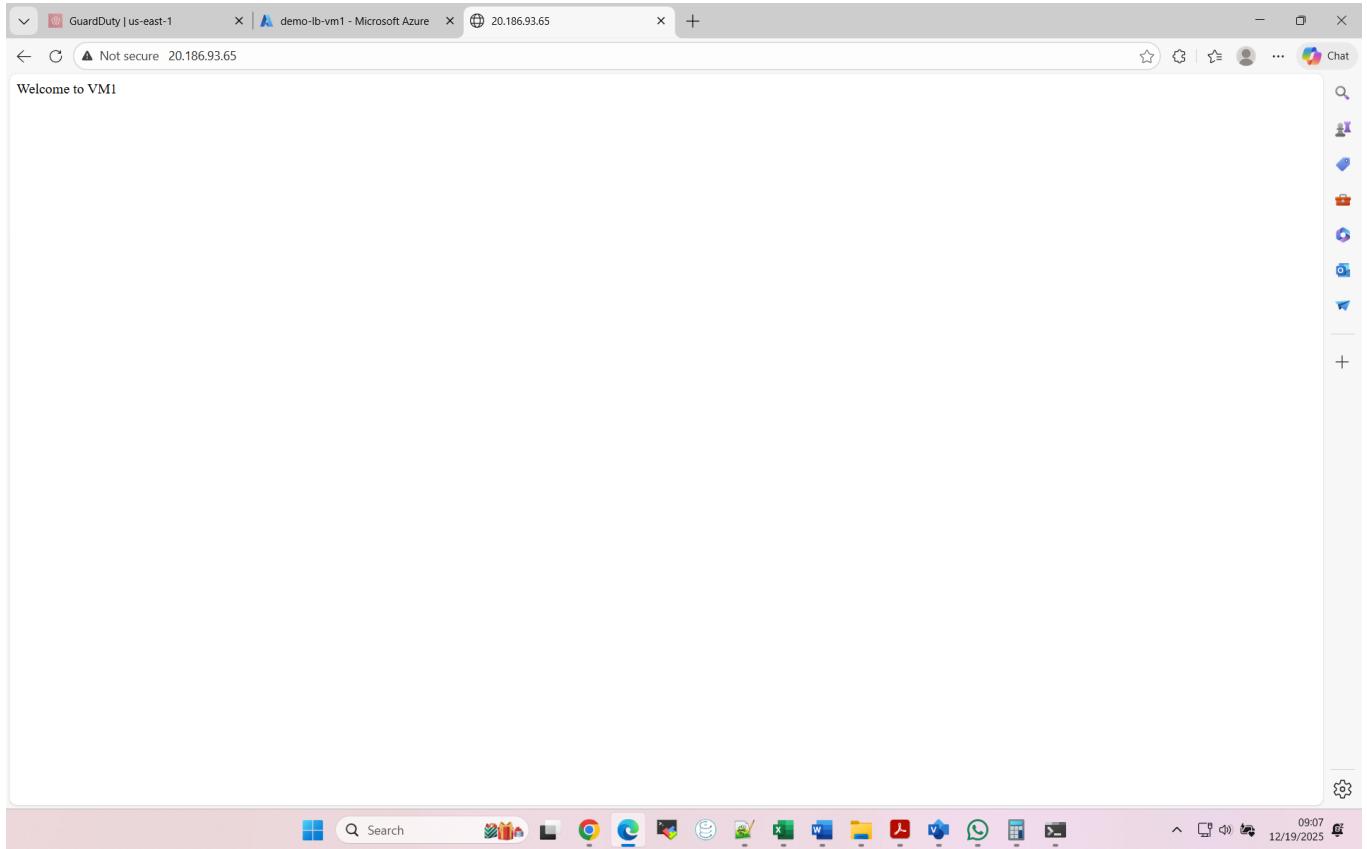
Then, press "Y"



Then, press "Enter"



Now, let us try to access the virtual machine on the browser again.



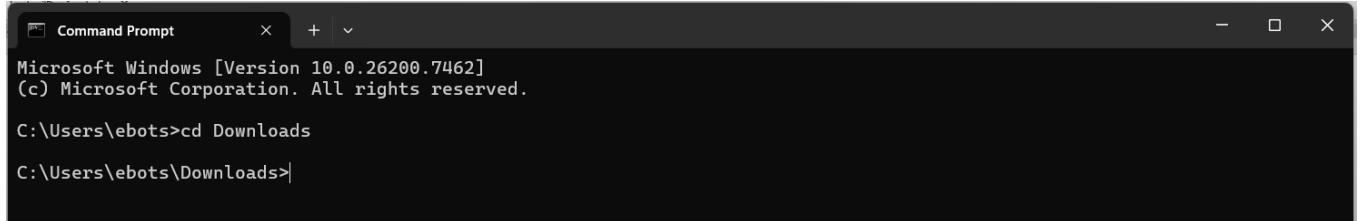
You can see that the Apache 2 homepage has been modified and it is displaying “Welcome to VM1”.

Step 2: SSH Connect to Second Virtual Machine

Let us SSH connect to our first virtual machines. Open PowerShell and navigate to where our SSH key pair file was saved. In this demo, the SSH key is stored in our “**Downloads**” folder.

Navigate to the “Downloads” folder using the command:

```
cd Downloads
```



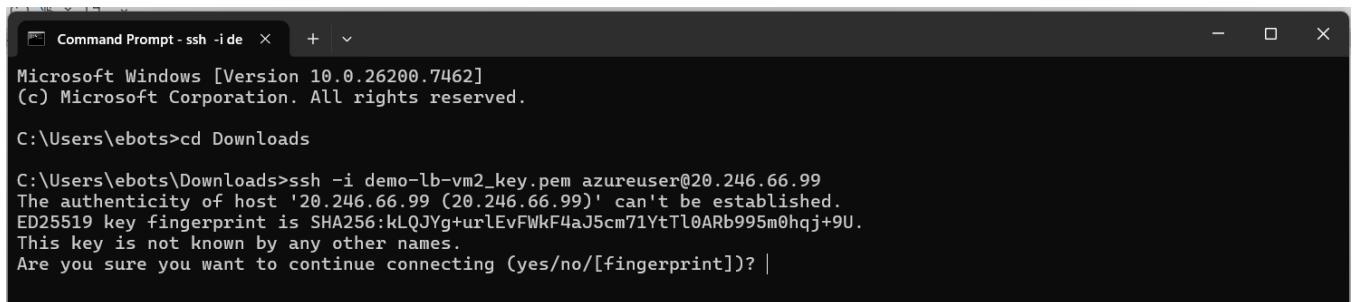
```
Command Prompt
Microsoft Windows [Version 10.0.26200.7462]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ebots>cd Downloads

C:\Users\ebots\Downloads>
```

Then run the command to SSH connect to the virtual machine using the SSH Key “**demo-lb-vm2_key**”

```
ssh -i demo-lb-vm2_key.pem azureuser@20.246.66.99
```

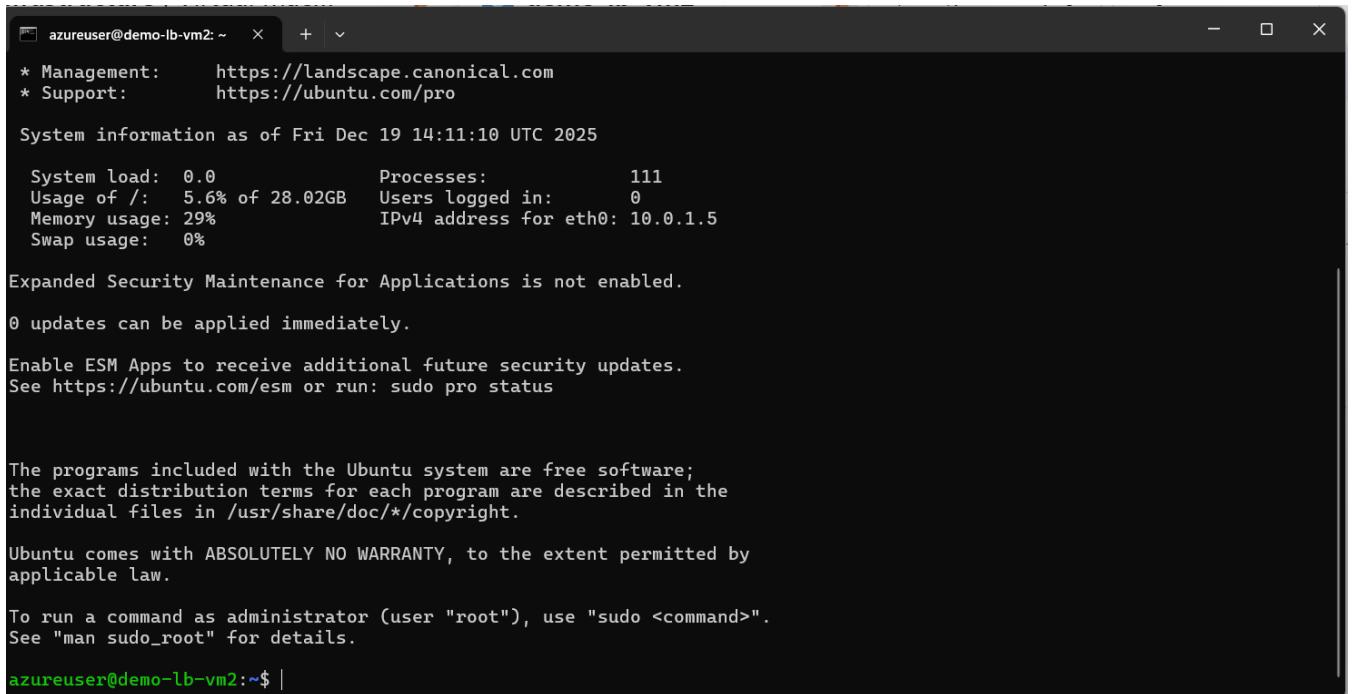


```
Command Prompt - ssh -ide
Microsoft Windows [Version 10.0.26200.7462]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ebots>cd Downloads

C:\Users\ebots\Downloads>ssh -i demo-lb-vm2_key.pem azureuser@20.246.66.99
The authenticity of host '20.246.66.99 (20.246.66.99)' can't be established.
ED25519 key fingerprint is SHA256:KLQJYg+urLEvFWkF4aJ5cm71YtTl0ARb995m0hqj+9U.
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**”



```
azureuser@demo-lb-vm2: ~
* Management:      https://landscape.canonical.com
* Support:        https://ubuntu.com/pro

System information as of Fri Dec 19 14:11:10 UTC 2025

System load:  0.0          Processes:       111
Usage of /:   5.6% of 28.02GB  Users logged in:    0
Memory usage: 29%           IPv4 address for eth0: 10.0.1.5
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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

The 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.

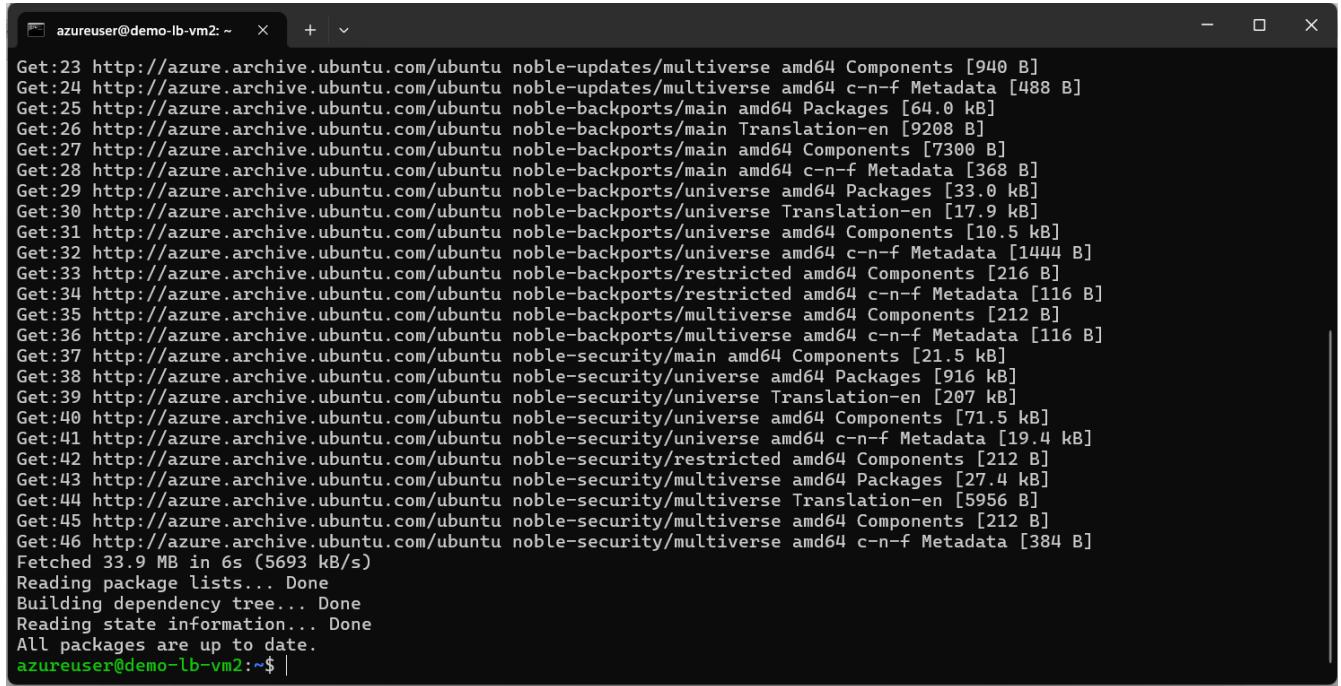
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

azureuser@demo-lb-vm2:~$ |
```

Let us install Apache 2 on our first virtual machine. We have to first update the package manager using the command:

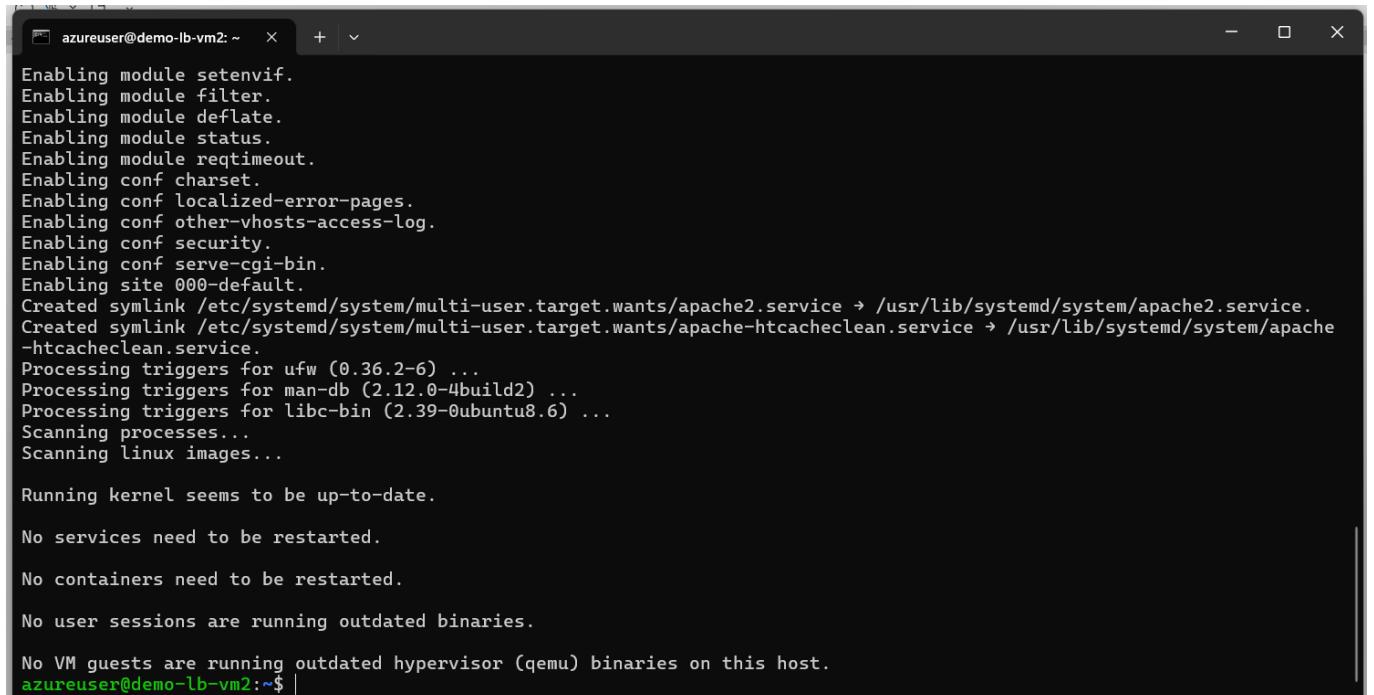
```
sudo apt update -y
```



```
azureuser@demo-lb-vm2: ~ + v
Get:23 http://azure.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:24 http://azure.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 c-n-f Metadata [488 B]
Get:25 http://azure.archive.ubuntu.com/ubuntu noble-backports/main amd64 Packages [64.0 kB]
Get:26 http://azure.archive.ubuntu.com/ubuntu noble-backports/main Translation-en [9208 B]
Get:27 http://azure.archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7300 B]
Get:28 http://azure.archive.ubuntu.com/ubuntu noble-backports/main amd64 c-n-f Metadata [368 B]
Get:29 http://azure.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [33.0 kB]
Get:30 http://azure.archive.ubuntu.com/ubuntu noble-backports/universe Translation-en [17.9 kB]
Get:31 http://azure.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [10.5 kB]
Get:32 http://azure.archive.ubuntu.com/ubuntu noble-backports/universe amd64 c-n-f Metadata [1444 B]
Get:33 http://azure.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:34 http://azure.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 c-n-f Metadata [116 B]
Get:35 http://azure.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Get:36 http://azure.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:37 http://azure.archive.ubuntu.com/ubuntu noble-security/main amd64 Components [21.5 kB]
Get:38 http://azure.archive.ubuntu.com/ubuntu noble-security/universe amd64 Packages [916 kB]
Get:39 http://azure.archive.ubuntu.com/ubuntu noble-security/universe Translation-en [207 kB]
Get:40 http://azure.archive.ubuntu.com/ubuntu noble-security/universe amd64 Components [71.5 kB]
Get:41 http://azure.archive.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [19.4 kB]
Get:42 http://azure.archive.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:43 http://azure.archive.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [27.4 kB]
Get:44 http://azure.archive.ubuntu.com/ubuntu noble-security/multiverse Translation-en [5956 B]
Get:45 http://azure.archive.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Get:46 http://azure.archive.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [384 B]
Fetched 33.9 MB in 6s (5693 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
azureuser@demo-lb-vm2:~$ |
```

Next, install Apache 2 using the command:

```
sudo apt install apache2 -y
```



```
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /usr/lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheload.service → /usr/lib/systemd/system/apache-htcacheload.service.
Processing triggers for ufw (0.36.2-6) ...
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for libc-bin (2.39-0ubuntu8.6) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
azureuser@demo-lb-vm2:~$ |
```

Apache 2 has been installed on our second virtual machine.

Enable Port 80

Go to the Virtual machine on the Azure Portal

The screenshot shows the Microsoft Azure Compute Infrastructure | Virtual machines page. The left sidebar is collapsed. The main area displays a table of virtual machines. Two machines are listed: 'demo-lb-vm1' and 'demo-lb-vm2'. An orange arrow points to the row for 'demo-lb-vm2'.

Name ↑	Subscription	Resource Group	Location	Status	Operating syst...	Size	Public IP addre...	Disks
demo-lb-vm1	Azure subscript...	rg-demo-lb	East US 2	Running	Linux	Standard_B1s	20.80.248.248	1
demo-lb-vm2	Azure subscript...	rg-demo-lb	East US 2	Running	Linux	Standard_B1s	20.186.57.191	1

Click on the second virtual machine

The screenshot shows the Microsoft Azure Compute infrastructure | Virtual machines page for the 'demo-lb-vm2' virtual machine. The left sidebar is collapsed. The main area shows the 'Overview' tab of the VM details page. On the left, a navigation menu has 'Networking' selected. An orange arrow points to this 'Networking' link.

demo-lb-vm2 Virtual machine

Overview

Networking

Essentials

- Resource group ([move](#)) : rg-demo-lb
- Status : Running
- Location : East US 2 (Zone 1)
- Subscription ([move](#)) : Azure subscription 1
- Subscription ID : dd5d4252-9ca5-4581-9dc7-b63c07...
- Availability zone : 1
- Operating system : Linux (ubuntu 24.04)
- Size : Standard B1s (1 vcpu, 1 GiB memory) : 20.246.66.99
- Primary NIC public IP : 1 associated public IPs
- Virtual network/subnet : demo-lb-vnet/demo-lb-subnet
- DNS name : Not configured
- Health state : -
- Time created : 12/19/2025, 1:49 PM UTC
- Tags ([edit](#)) : More (1)

Click on “Networking”

The screenshot shows the Microsoft Azure Compute Infrastructure Virtual machines interface. On the left, the navigation pane has 'Virtual machines' selected. In the center, a list of virtual machines shows 'demo-lb-vm1' and 'demo-lb-vm2'. An orange arrow points from the text 'Click on “Network Settings”' to the 'Network settings' link under the 'Networking' section of the 'demo-lb-vm2' details page.

Click on “Network Settings”

The screenshot shows the 'demo-lb-vm2 | Network settings' page. The 'Network interface / IP configuration' dropdown is open, showing 'demo-lb-vm2519_z1 (primary) / ipconfig1 (primary)'. An orange arrow points from the text 'Click on the drop down on “Create port Rule”' to the '+ Create port rule' button in the bottom right corner of the dropdown menu.

Click on the drop down on “Create port Rule”

The screenshot shows the Microsoft Azure Compute Infrastructure Virtual machines interface. On the left, the 'Virtual machines' blade is open, displaying two VMs: 'demo-lb-vm1' and 'demo-lb-vm2'. On the right, the 'demo-lb-vm2 | Network settings' blade is open. In the 'Network interface / IP configuration' section, it shows 'demo-lb-vm2519_z1 (primary) / ipconfig1 (primary)'. Under the 'Networking' section, the 'Network settings' item is selected. In the 'Rules' section, there is a 'Network security group demo-lb-vm2-nsg' entry. A red arrow points to the '+ Create port rule' button, which is highlighted in blue.

Select “Inbound Rule”

The screenshot shows the Microsoft Azure Compute Infrastructure Virtual machines interface. The 'Virtual machines' blade is open, showing 'demo-lb-vm1' and 'demo-lb-vm2'. The 'demo-lb-vm2 | Network settings' blade is open. In the 'Rules' section, a 'Create port rule' dialog is displayed. A red arrow points to the 'Service' dropdown menu, which is currently set to 'Custom'. Other options in the dropdown include Any, TCP, UDP, ICMPv4, and ICMPv6.

Click on the drop down on “service” and select “HTTP”

Compute infrastructure | Virtual mac...

demo-lb-vm2 | Network

Add inbound security rule

Service: HTTP

Destination port ranges: 80

Protocol: TCP

Action: Allow

Priority: 310

Name: AllowHTTP

Description:

Add Cancel

Then on “Name”, enter “AllowHTTP”

Compute infrastructure | Virtual mac...

demo-lb-vm2 | Network

Add inbound security rule

Service: HTTP

Destination port ranges: 80

Protocol: TCP

Action: Allow

Priority: 310

Name: AllowHTTP

Description:

Add Cancel

Then click on “Add”

The screenshot shows the Microsoft Azure Compute Infrastructure Virtual Machines settings. On the left, under 'Virtual machines', two virtual machines are listed: 'demo-lb-vm1' and 'demo-lb-vm2'. On the right, the 'Network settings' for 'demo-lb-vm2' are displayed. Under 'Inbound port rules (5)', there is a rule for port 80 labeled 'AllowHTTP'. An orange arrow points to this rule. The rule details are as follows:

Prio...	Name	Port	Protocol
300	SSH	22	TCP
310	AllowHTTP	80	TCP
65000	AllowVnetInBound	Any	Any
65001	AllowAzureLoadBalancerInB...	Any	Any
65500	DenyAllInBound	Any	Any

We have enabled port 80.

Verification of Installation of Apache 2 on Second Virtual Machine

Let us verify by trying to open Apache 2 homepage using the Public IP of the virtual machine

The screenshot shows a web browser displaying the 'Apache2 Default Page' for the second virtual machine. The page includes the Ubuntu logo, a 'It works!' button, and a 'Configuration Overview' section. The configuration overview details the layout of the Apache2 configuration files:

```

/etc/apache2/
|-- apache2.conf
|   |-- ports.conf
|   |-- mods-enabled
|   |   |-- *.Load
|   |   |-- *.conf
|   |-- conf-enabled
|   |   |-- *.conf
|   |-- sites-enabled
|   |   |-- *.conf

```

Below this, a bulleted list provides information about the configuration files:

- `apache2.conf` is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.
- `ports.conf` is always included from the main configuration file. It is used to determine the listening ports for incoming connections, and this file can be customized anytime.
- Configuration files in the `mods-enabled/`, `conf-enabled/`, and `sites-enabled/` directories contain

It works. So, Apache 2 has been successfully installed in the second virtual machine.

Modifying the html file

Now, let us modify the index.html file so that we can make it different in the two virtual machines. Head back to the SSH connected virtual machine and run the command:

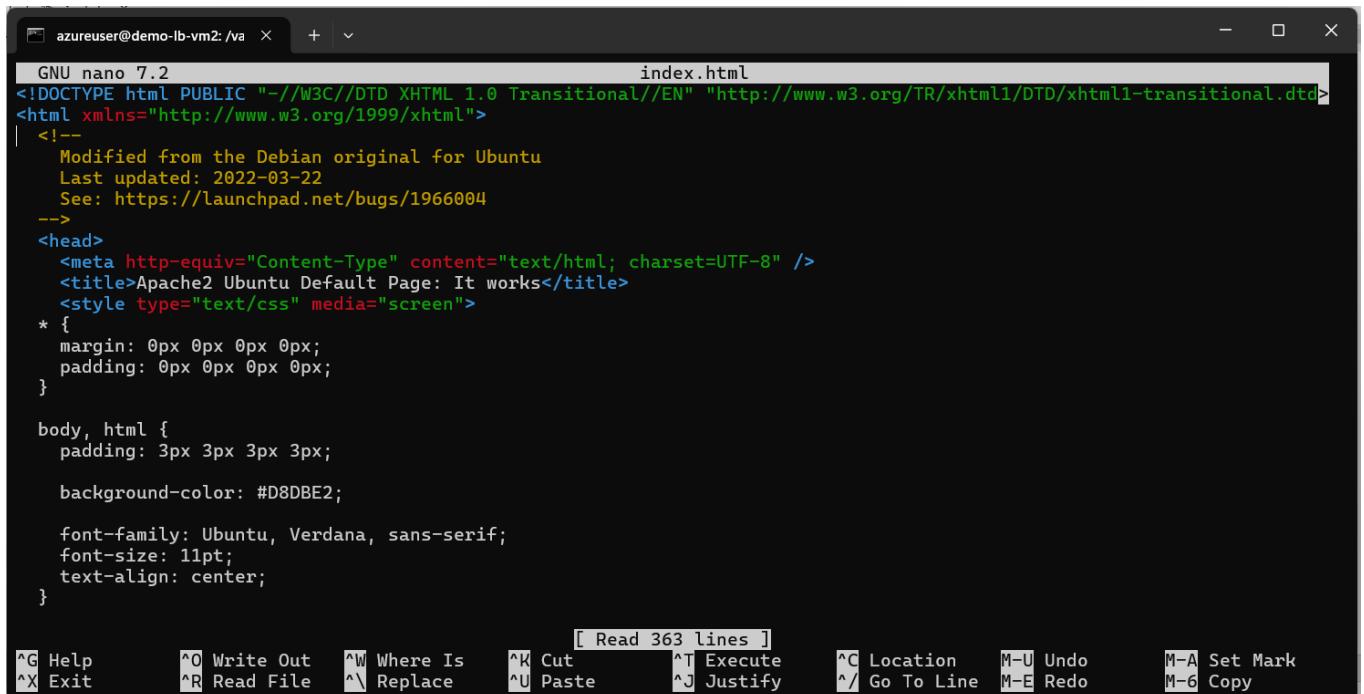
```
cd /var/www/html/
```



```
azureuser@demo-lb-vm2:~$ cd /var/www/html/
azureuser@demo-lb-vm2:/var/www/html$ |
```

Then open the index.html file using the command:

```
sudo nano index.html
```



```
GNU nano 7.2                               index.html
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd>
<html xmlns="http://www.w3.org/1999/xhtml">
| <!--
| Modified from the Debian original for Ubuntu
| Last updated: 2022-03-22
| See: https://launchpad.net/bugs/1966004
-->
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<title>Apache2 Ubuntu Default Page: It works</title>
<style type="text/css" media="screen">
* {
  margin: 0px 0px 0px 0px;
  padding: 0px 0px 0px 0px;
}

body, html {
  padding: 3px 3px 3px 3px;
  background-color: #D8DBE2;

  font-family: Ubuntu, Verdana, sans-serif;
  font-size: 11pt;
  text-align: center;
}
```

[Read 363 lines]

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo ^A Set Mark
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo M-6 Copy

Let us now change the text in the file. First select all the text in the file using **ALT+T**.



```
GNU nano 7.2                               index.html *
```

[Read 363 lines]

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo ^A Set Mark
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo M-6 Copy

Then, we will enter the text “Welcome to VM2”

The screenshot shows a terminal window titled "azureuser@demo-lb-vm2: /va". The command "GNU nano 7.2" is displayed at the top left, and the file name "index.html *" is at the top right. The main area contains the text "Welcome to VM2". At the bottom, there is a menu bar with various keyboard shortcuts for nano editor commands like Help, Write Out, Where Is, Cut, Paste, Execute, Location, Go To Line, Undo, and Redo.

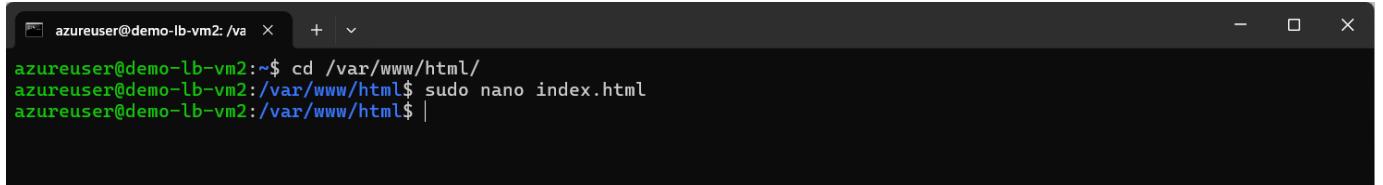
The save the text and exit by using (**ctrl+x**)

The screenshot shows a terminal window titled "azureuser@demo-lb-vm2: /va". The command "GNU nano 7.2" is displayed at the top left, and the file name "index.html *" is at the top right. The main area contains the text "Welcome to VM2". A message "Save modified buffer?" is displayed at the bottom, with options "Y Yes", "N No", and "C Cancel".

Then, press “**Y**”

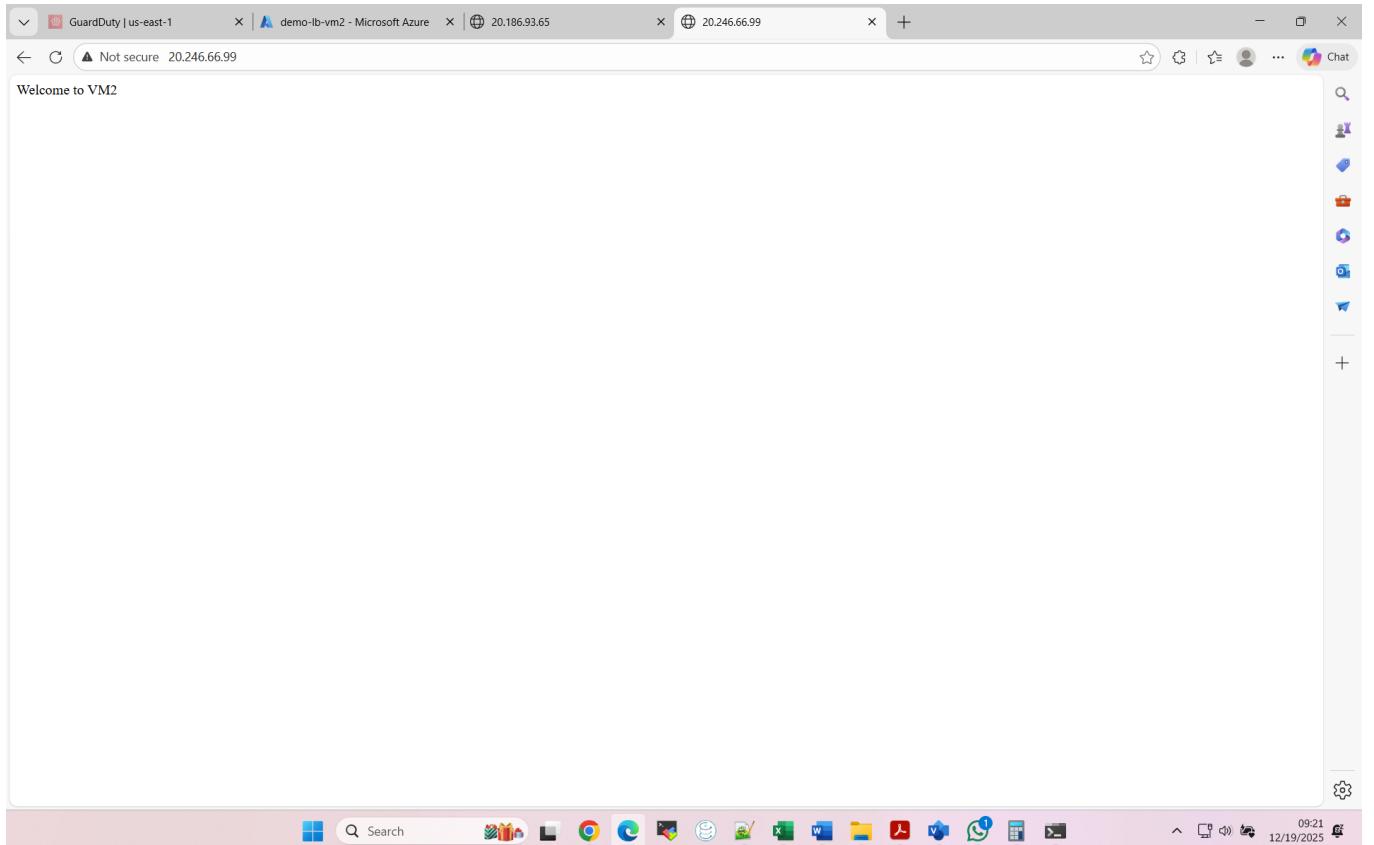
The screenshot shows a terminal window titled "azureuser@demo-lb-vm2: /va". The command "GNU nano 7.2" is displayed at the top left, and the file name "index.html *" is at the top right. The main area contains the text "Welcome to VM2". A message "File Name to Write: index.html" is displayed at the bottom. At the very bottom, there is a menu bar with options for file formats: DOS Format, Mac Format, Append, Prepend, Backup File, Browse, and a cancel option.

Then, press “Enter” key



```
azureuser@demo-lb-vm2:~$ cd /var/www/html/
azureuser@demo-lb-vm2:/var/www/html$ sudo nano index.html
azureuser@demo-lb-vm2:/var/www/html$ |
```

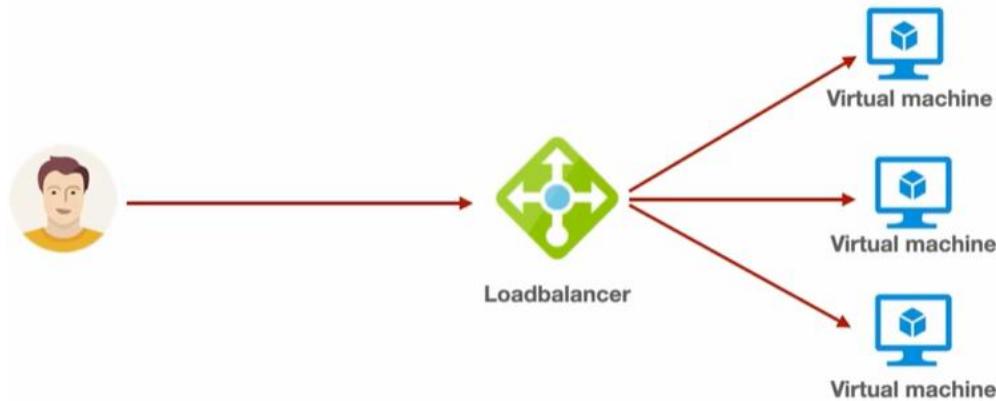
Now, let us try to access the virtual machine on the browser again.



You can see that the Apache 2 homepage has been modified and you can see the message “**Welcome to VM2**”.

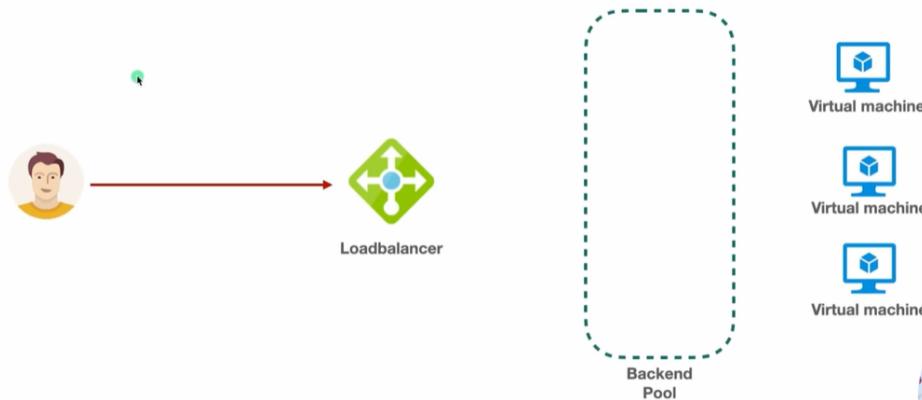
Part 4: Set up and Enable Load Balancer

Now, this is the most important concept of Load Balancer which is how to set up the load balancer between virtual machines.



The diagram above shows how the load balancer is implemented. In this demo, we are using two virtual machines. Now, we need to set up the load balancer. The user will access the load balancer and the load balancer will route the request to the two virtual machines. This is how the load balancer will work.

There is also a concept called “Backend Pool”.



Whenever you are working with Load Balancer, then you need to create a backend pool. Backend pool is just a logical grouping of our virtual machine. We will just put our virtual machines into the Backend Pool. The Backend pool will be created in the Azure portal.

Once the Backend pool is configured, we will have to tell the Load Balancer to use the Backend pool. So, the Load balancer does not need to worry about how many virtual machines we have.

Step 1: Create the Load Balancer

Go to Azure Portal and search for “**Load Balancers**”

Microsoft Azure

Load Balancers

Azure services

Create a resource

Virtual machines

Resources

Recent Favorite

Name

- demo-lb-vm2
- demo-lb-vm1
- demo-lb-vm2519_z1
- demo-lb-vm2-nsg
- demo-lb-vm2-ip
- rg-demo-lb
- demo-lb-vm1-nsg
- demo-lb-vm1-ip
- demo-lb-vm1692_z1
- rt-demo-lb
- demo-lb-vnet
- demo-user-data-vm-nsg

See all

Services

All Services (23) Marketplace (25) More (4)

Load balancers

Load balancing and content delivery

Keywords: Load Balancer, Standard load balancer, Gateway load balancer

NGINXaaS

Keywords: load balancer, loadbalancer

Application gateways

Keywords: Load balancer (Layer 7/HTTP)

Marketplace

Last Viewed

- Load Balancer 20 minutes ago
- Application Gateway 48 minutes ago
- Application Gateway for Containers 6 hours ago
- F5 NGINXaaS – SaaS Load Balancer and ADC – Azure Native ISV Service 6 hours ago
- Documentation
- Load Balancing Options - Azure Architecture Center 6 hours ago
- Availability options for Azure Virtual Machines - Azure Virtual Machines 6 hours ago
- Source Network Address Translation (SNAT) for outbound connections - Azure Lo... 7 hours ago
- AZ-700 Design and Implement Microsoft Azure Network Solutions - Training 7 hours ago
- Continue searching in Microsoft Entra ID 7 hours ago
- Searching all subscriptions. Change 8 hours ago
- Give feedback 24 hours ago
- Network security group 2 days ago

Select “Load Balancers”

Microsoft Azure

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

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Home > Load balancing and content delivery

Load balancing and content delivery | Load balancers

+ 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 load balancers to display

Azure Load Balancer enables your applications to be highly available and scalable. You can scale up and down based on your traffic patterns. Azure Load Balancer is best suited for network traffic requiring high performance and ultra-low latency.

+ Create

Learn more about Load balancers

View service comparison

Showing 1 - 0 of 0. Display count: auto

Add or remove favorites by pressing Ctrl+Shift+F

Give feedback

Click on the drop down on “Create”

Load balancing and content delivery | Load balancers

Search resources, services, and docs (G+)

Home > Load balancing and content delivery

Standard Load balancer
Distribute traffic to backend resources

Gateway Load balancer
Direct traffic to network virtual appliances

No load balancers to display

Azure Load Balancer enables your applications to be highly available and scalable. You can scale up and down based on your traffic patterns. Azure Load Balancer is best suited for network traffic requiring high performance and ultra-low latency.

+ Create

Learn more about Load balancers

View service comparison

Showing 1 - 0 of 0. Display count: auto

Add or remove favorites by pressing Ctrl+Shift+F

Give feedback

Select “Standard Load Balancer”

Create load balancer

Basics Frontend IP configuration Backend pools Inbound rules Outbound rules Tags Review + create

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

Project details

Subscription * Azure subscription 1

Resource group * Create new

Instance details

Name *

Region * East US 2

SKU * Standard (Distribute traffic to backend resources)

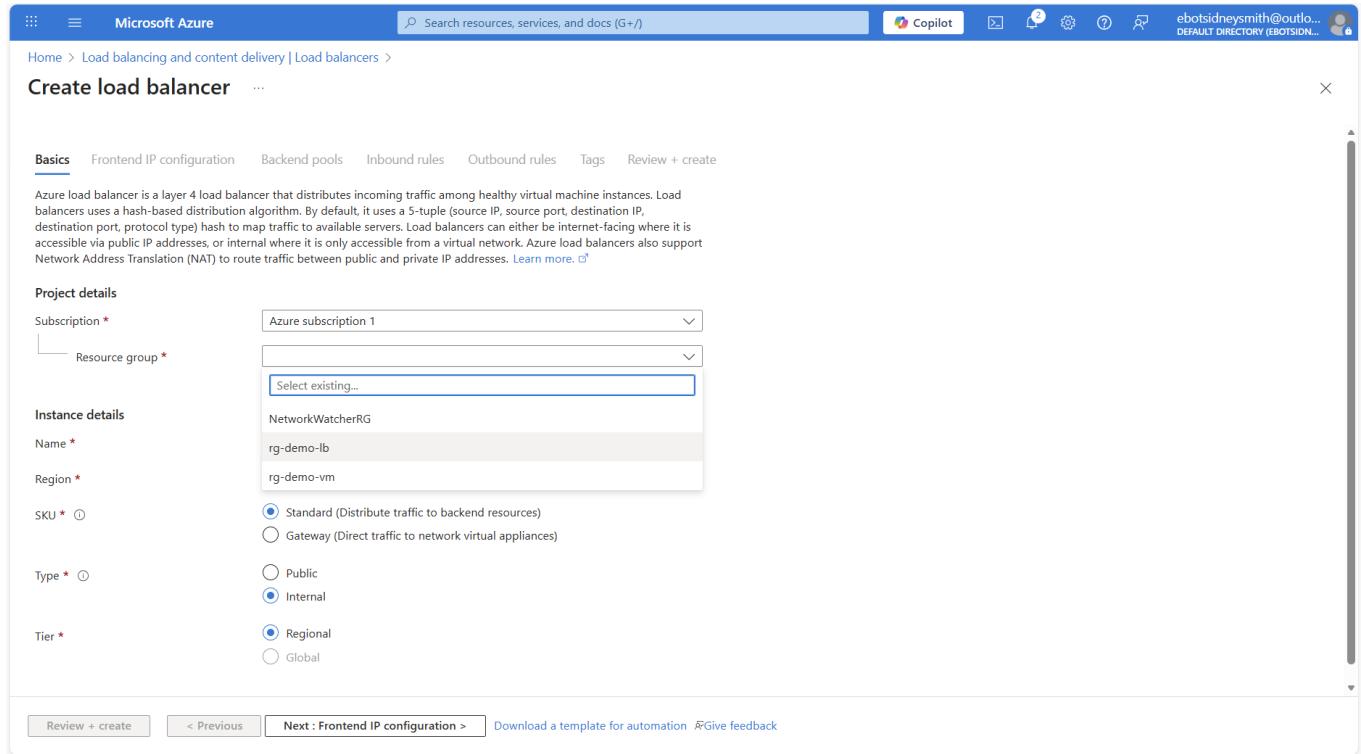
Type * Internal

Tier * Regional

Review + create < Previous Next : Frontend IP configuration > Download a template for automation Give feedback

You can see that our “**subscription**” has already been selected. Click on the drop down and select the resource group of this demo.

Prepared by Sidney Smith Ebot



Microsoft Azure

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Home > Load balancing and content delivery | Load balancers >

Create load balancer

Basics Frontend IP configuration Backend pools Inbound rules Outbound rules Tags Review + create

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

Project details

Subscription * Azure subscription 1

Resource group * Select existing...

NetworkWatcherRG

rg-demo-lb

rg-demo-vm

Instance details

Name * rg-demo-lb

Region * rg-demo-vm

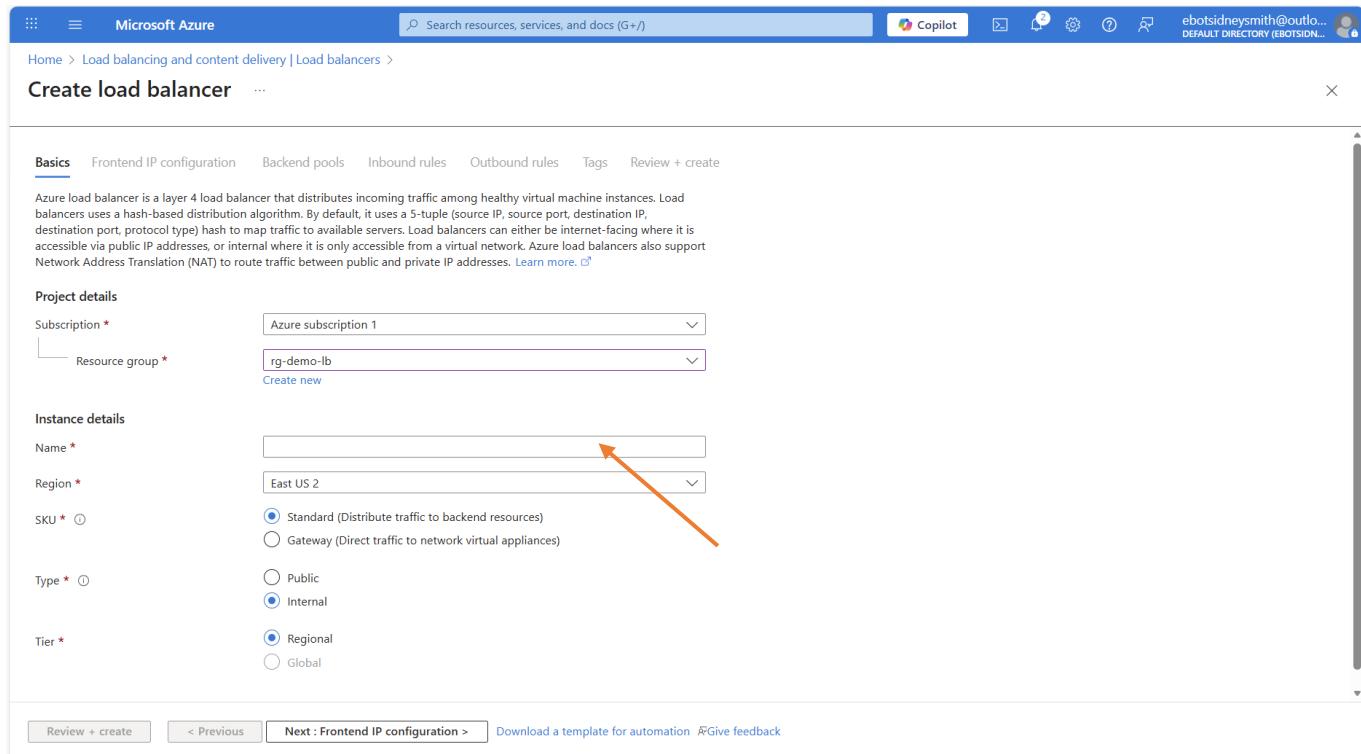
SKU * Standard (Distribute traffic to backend resources)

Type * Internal

Tier * Regional

Review + create < Previous Next : Frontend IP configuration > Download a template for automation Give feedback

Select “rg-demo-lb”



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Home > Load balancing and content delivery | Load balancers >

Create load balancer

Basics Frontend IP configuration Backend pools Inbound rules Outbound rules Tags Review + create

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

Project details

Subscription * Azure subscription 1

Resource group * rg-demo-lb

Create new

Instance details

Name * rg-demo-lb

Region * East US 2

SKU * Standard (Distribute traffic to backend resources)

Type * Internal

Tier * Regional

Review + create < Previous Next : Frontend IP configuration > Download a template for automation Give feedback

Then, give the Load Balancer a name. We will call it “demo-lb”

Prepared by Sidney Smith Ebot

The screenshot shows the 'Create load balancer' wizard in the Microsoft Azure portal. The 'Basics' step is selected. In the 'Instance details' section, the 'Region' dropdown is set to 'East US 2'. The 'SKU' section has 'Standard (Distribute traffic to backend resources)' selected. Other options like 'Gateway' and 'Regional' are also shown. The 'Type' and 'Tier' sections are also visible. At the bottom, there are navigation buttons for 'Review + create', '< Previous', 'Next : Frontend IP configuration >', 'Download a template for automation', and 'Give feedback'.

Our “Region” in this demo is “**East US 2**”, so we will leave it as that.

This screenshot is identical to the one above, showing the 'Create load balancer' Basics step. The 'Region' dropdown is set to 'East US 2'. In the 'SKU' section, the 'Standard (Distribute traffic to backend resources)' radio button is highlighted with a red arrow. The 'Type' and 'Tier' sections are also present. Navigation buttons at the bottom include 'Review + create', '< Previous', 'Next : Frontend IP configuration >', 'Download a template for automation', and 'Give feedback'.

On “SKU”, we will use “**Standard (Distribute Traffic to backend resource)**”

Prepared by Sidney Smith Ebot

Microsoft Azure

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Home > Load balancing and content delivery | Load balancers >

Create load balancer

Basics Frontend IP configuration Backend pools Inbound rules Outbound rules Tags Review + create

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

Project details

Subscription * Azure subscription 1

Resource group * rg-demo-lb Create new

Instance details

Name * demo-lb

Region * East US 2

SKU * Standard (Distribute traffic to backend resources) Gateway (Direct traffic to network virtual appliances)

Type * Public Internal
 Regional Global

Review + create < Previous Next : Frontend IP configuration > Download a template for automation Give feedback

On “Type”, select “Public”

Microsoft Azure

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Home > Load balancing and content delivery | Load balancers >

Create load balancer

Basics Frontend IP configuration Backend pools Inbound rules Outbound rules Tags Review + create

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

Project details

Subscription * Azure subscription 1

Resource group * rg-demo-lb Create new

Instance details

Name * demo-lb

Region * East US 2

SKU * Standard (Distribute traffic to backend resources) Gateway (Direct traffic to network virtual appliances)

Type * Public Internal
 Regional Global

Review + create < Previous Next : Frontend IP configuration > Download a template for automation Give feedback

On “Tier”, select “Regional”

Prepared by Sidney Smith Ebot

The screenshot shows the 'Create load balancer' wizard in Microsoft Azure. The 'Basics' tab is selected. In the 'Project details' section, 'Subscription' is set to 'Azure subscription 1' and 'Resource group' is set to 'rg-demo-lb'. In the 'Instance details' section, 'Name' is 'demo-lb', 'Region' is 'East US 2', 'SKU' is 'Standard (Distribute traffic to backend resources)', 'Type' is 'Public', and 'Tier' is 'Regional'. At the bottom, there are buttons for 'Review + create', '< Previous', 'Next : Frontend IP configuration >', 'Download a template for automation', and 'Give feedback'. A red arrow points down from the 'Tier' section towards the 'Next' button.

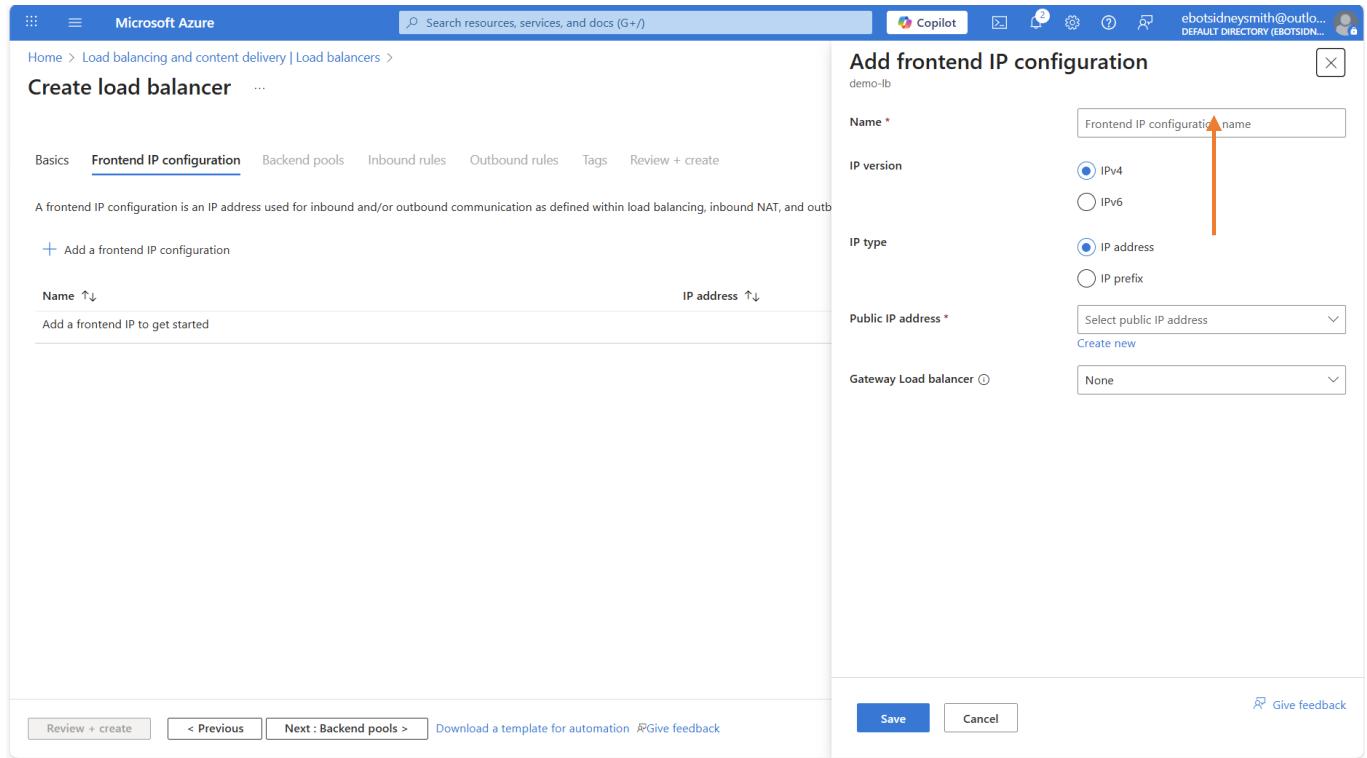
Then, click on “Next: Frontend IP configuration”

The screenshot shows the 'Frontend IP configuration' step of the 'Create load balancer' wizard. The 'Frontend IP configuration' tab is selected. It shows a single row with 'Name' 'IP address' and a note 'Add a frontend IP to get started'. Below this, there is a button '+ Add a frontend IP configuration'. At the bottom, there are buttons for 'Review + create', '< Previous', 'Next : Backend pools >', 'Download a template for automation', and 'Give feedback'. A red arrow points to the '+ Add a frontend IP configuration' button.

Let us now assign the Frontend IP address. Whenever you are working with Load Balancer, it needs to have a public IP address. We need to assign that Public IP address through the Frontend IP configuration.

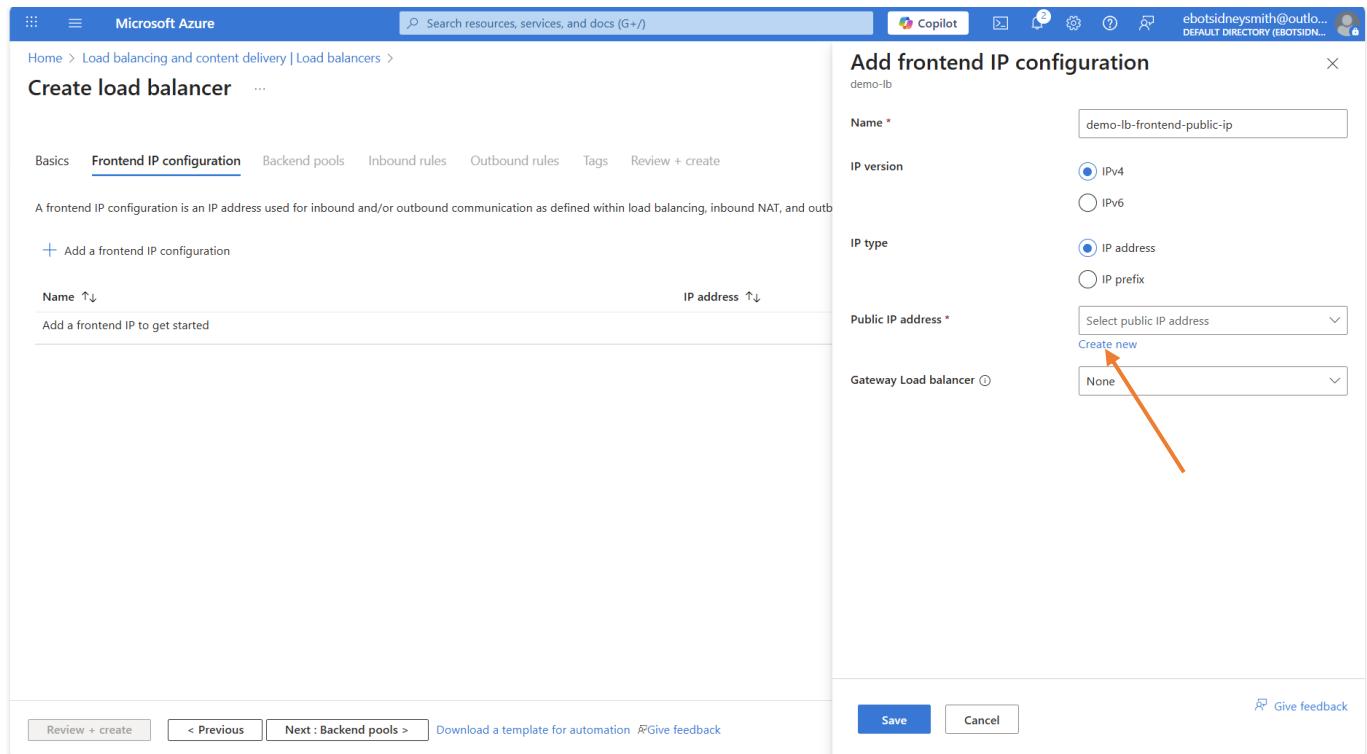
Click on “Add a Frontend IP configuration”

Prepared by Sidney Smith Ebot



The screenshot shows the Microsoft Azure 'Create load balancer' wizard at the 'Frontend IP configuration' step. The 'Name' field is highlighted with a red arrow. The 'IP version' is set to IPv4, 'IP type' to IP address, and 'Public IP address' dropdown is set to 'Select public IP address'. The 'Gateway Load balancer' dropdown is set to 'None'. At the bottom, there are 'Save' and 'Cancel' buttons.

We have to give it a name. We will call it “**demo-lb-frontend-public-ip**”



The screenshot shows the Microsoft Azure 'Create load balancer' wizard at the 'Frontend IP configuration' step. The 'Name' field is filled with 'demo-lb-frontend-public-ip'. The 'IP version' is set to IPv4, 'IP type' to IP address, and 'Public IP address' dropdown is set to 'Create new'. The 'Gateway Load balancer' dropdown is set to 'None'. At the bottom, there are 'Save' and 'Cancel' buttons.

Then, let us create the “**Public IP address**”, click on “**create new**”

Create load balancer

Frontend IP configuration

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

+ Add a frontend IP configuration

Name ↑↓	IP address ↑↓
Add a frontend IP to get started	

Add fronted IP configuration

Name * demo-lb-frontend-public-ip

IP version IPv4

IP type IP address

Public IP address * Select public IP address Create new

Add a public IP address

Name * demo-lb-public-ip

SKU Standard

Tier Regional

Assignment Dynamic

Availability zone * Zone-redundant

Routing preference Microsoft network

Save Cancel

Let us give the Public IP a name, we will call it “**demo-lb-public-ip**”

Create load balancer

Frontend IP configuration

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

+ Add a frontend IP configuration

Name ↑↓	IP address ↑↓
Add a frontend IP to get started	

Add fronted IP configuration

Name * demo-lb-frontend-public-ip

IP version IPv4

IP type IP address

Public IP address * Select public IP address Create new

Add a public IP address

Name * demo-lb-public-ip

SKU Standard

Tier Regional

Assignment Dynamic

Availability zone * Zone-redundant

Routing preference Microsoft network

Save Cancel

Click on “**Save**”

Add frontend IP configuration

demo-lb

Name * demo-lb-frontend-public-ip

IP version IPv4

IP type IP address

Public IP address * (new) demo-lb-public-ip

Gateway Load balancer None

Save

Click on “Save” here

demo-lb-frontend-public-ip

Review + create

The Frontend IP has been configured. We will skip “**Backend Pools**”, “**Inbound Rules**”, “**Outbound Rules**”, “**Tags**” for now. Click on “**Review + Create**”

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Microsoft Azure

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Home > Load balancing and content delivery | Load balancers >

Create load balancer ...

Validation passed

Basics Frontend IP configuration Backend pools Inbound rules Outbound rules Tags Review + create

Basics

Subscription	Azure subscription 1
Resource group	rg-demo-lb
Name	demo-lb
Region	East US 2
SKU	Standard
Tier	Regional
Type	Public

Frontend IP configuration

Frontend IP configuration name	demo-lb-frontend-public-ip
Frontend IP configuration IP address	To be created

Backend pools

None

Inbound rules

None

< Previous Next > Download a template for automation Give feedback

Create

Click on “Create”

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Home >

CreateLoadBalancerBladeV2-20251218001353 | Overview ...

Deployment

Search X << Delete Cancel Redeploy Download Refresh

Overview

Your deployment is complete

Deployment name : CreateLoadBalancerBladeV2-20251218001353 Start time : 12/18/2025, 12:40:28 AM

Subscription : Azure subscription 1 Correlation ID : 799a80e5-4275-4a24-a93d-74eb303183bf

Resource group : rg-demo-lb

Inputs Outputs Template

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 >

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

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This screenshot shows the Microsoft Azure Load Balancer Overview page for a resource named "demo-lb". The "Settings" link in the left sidebar is highlighted with a red arrow. The main content area displays essential details like Resource group, Location, Subscription ID, SKU, Tier, and Tags. A central section titled "Configure high availability and scalability for your applications" provides links to Balance IPv4 and IPv6 addresses, Build highly reliable applications, and Secure your networks.

Click on “Settings”

This screenshot shows the Microsoft Azure Load Balancer Overview page for the same "demo-lb" resource. The "Frontend IP configuration" link under the "Settings" menu is highlighted with a red arrow. The rest of the interface is identical to the previous screenshot, showing the "Essentials" section and the "Configure high availability and scalability for your applications" section.

Click on “Frontend IP Configuration”

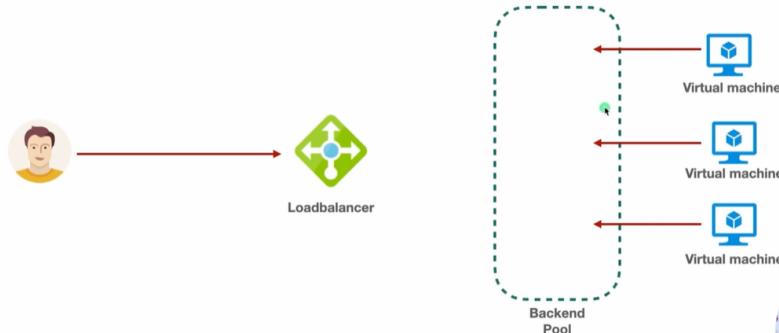
This is the public IP of the load balancer.

The screenshot shows the Azure portal interface for managing a load balancer. The left sidebar shows navigation options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Settings, and Frontend IP configuration. Under Settings, there are sub-options for Backend pools, Health probes, Load balancing rules, Inbound NAT rules, Outbound rules, Properties, and Locks. The main content area is titled 'demo-lb | Frontend IP configuration' and displays a table with one item: Name (demo-lb-frontend-public-ip), IP address (20.161.242.195 (demo-lb-public-ip)), and Rules count (0). A red arrow points from the text 'This is the public IP of the load balancer.' to the IP address in the table.

This is the public IP of the load balancer.

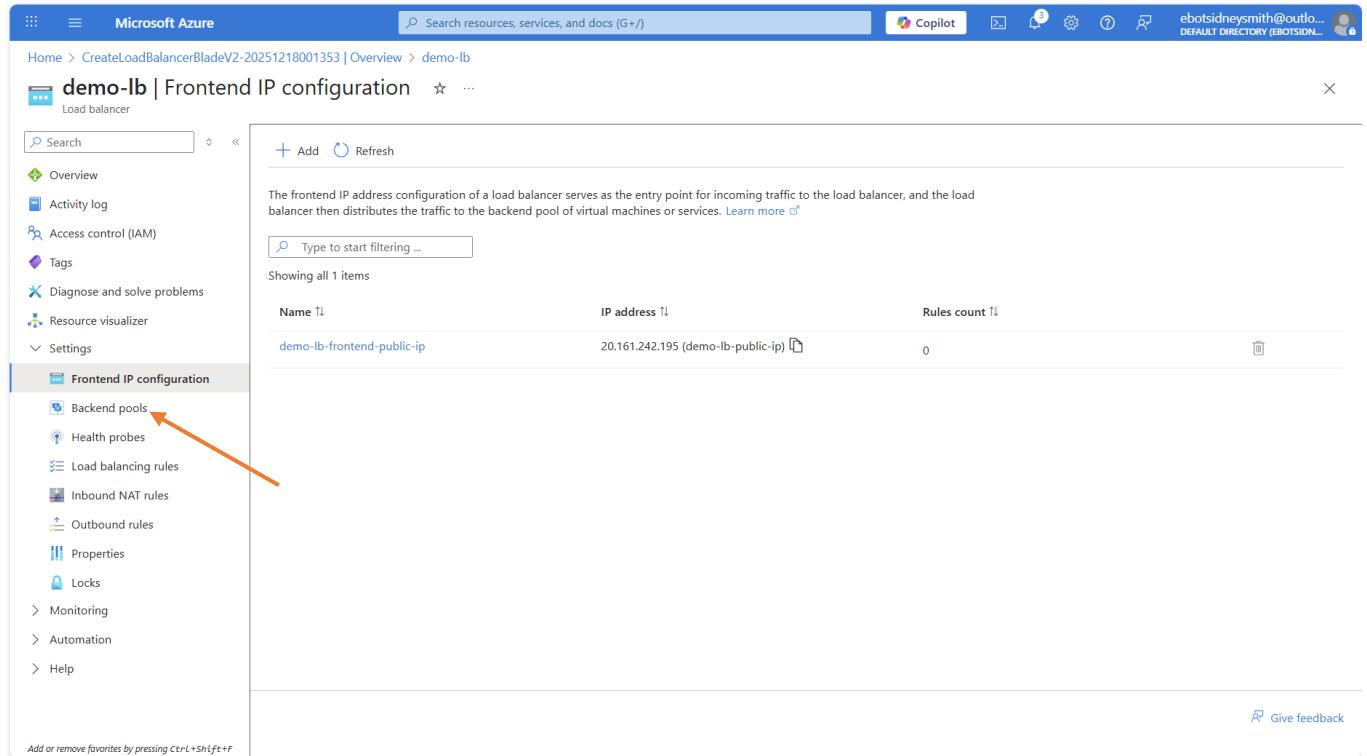
Step 2: Configure the Backend Pool

The next thing is to configure the backend pool



Go to Azure portal

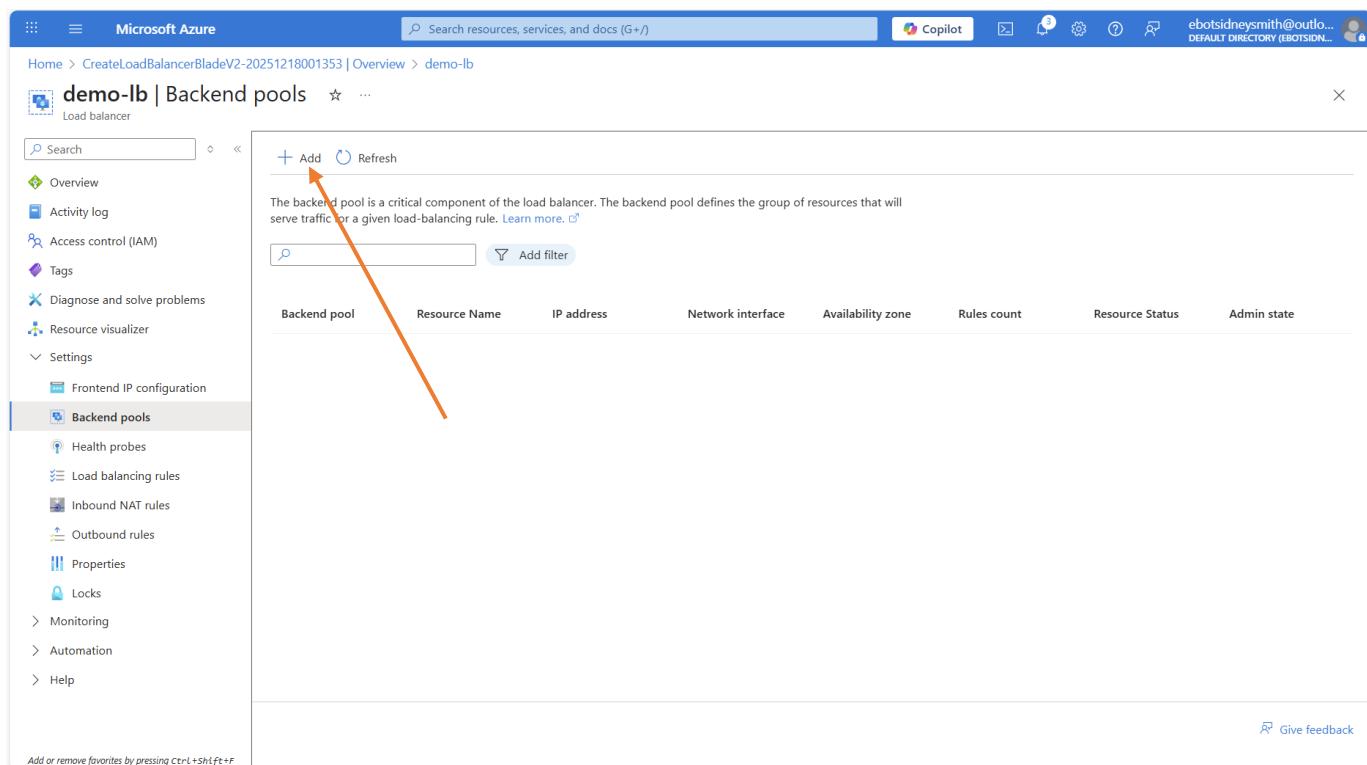
Prepared by Sidney Smith Ebot



This screenshot shows the Microsoft Azure portal interface for managing a load balancer. The left sidebar shows navigation options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Settings, Frontend IP configuration, Backend pools, Health probes, Load balancing rules, Inbound NAT rules, Outbound rules, Properties, Locks, Monitoring, Automation, and Help. The 'Backend pools' option under 'Frontend IP configuration' is highlighted with a red arrow pointing to it.

The main content area displays the 'demo-lb | Frontend IP configuration' page. It includes a search bar, a 'Type to start filtering ...' input field, and a table showing one item: demo-lb-frontend-public-ip with IP address 20.161.242.195 (demo-lb-public-ip) and 0 rules.

Click on “Backend Pools”



This screenshot shows the Microsoft Azure portal interface for managing the backend pools of the load balancer. The left sidebar shows the same navigation options as the previous screenshot, with 'Backend pools' under 'Frontend IP configuration' highlighted with a red arrow pointing to it.

The main content area displays the 'demo-lb | Backend pools' page. It includes a search bar, a 'Type to start filtering ...' input field, and a table with columns: Backend pool, Resource Name, IP address, Network interface, Availability zone, Rules count, Resource Status, and Admin state. A red arrow points to the '+ Add' button at the top left of the table.

Click on “Add”

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The screenshot shows the 'Add backend pool' dialog in the Microsoft Azure portal. At the top, there's a search bar and a Copilot button. Below the title, it says 'demo-lb'. The 'Name *' field is empty. The 'Virtual network' dropdown is open, showing a placeholder 'Select virtual network'. A red arrow points from the text above this section to the dropdown menu. At the bottom, there are 'Save', 'Cancel', and 'Give feedback' buttons.

Let us give the Backend Pool a name, we will call it “**demo-lb-backend-pool-vms**”

The screenshot shows the 'Add backend pool' dialog again. The 'Name *' field now contains 'demo-lb-backend-pool-vms'. The 'Virtual network' dropdown is open, showing a placeholder 'Select virtual network'. A red arrow points from the text above this section to the dropdown menu. At the bottom, there are 'Save', 'Cancel', and 'Give feedback' buttons.

Then, click on the drop down on “**Virtual Network**” and select our virtual network

Prepared by Sidney Smith Ebot

The screenshot shows the 'Add backend pool' configuration page in Microsoft Azure. The 'Name' field is set to 'demo-lb-backend-pool-vms' and the 'Virtual network' dropdown is set to 'demo-lb-vnet (rg-demo-lb)'. The 'Backend Pool Configuration' section has the 'IP address' radio button selected, indicated by an orange arrow. A warning message states: '⚠ When a backend pool is configured by IP address, the backend instances are not secure by default and still use default outbound access. To secure your backend pool, please add a NAT Gateway to your subnet or leverage the private subnet parameter. [Learn more](#)'.

IP addresses

You can only add resources IP address in the Virtual Network. The configuration is associated with the IP address and will apply to any resource which has this IP address assigned.

Backend Address Name	IP address	Resource Name
185ef369-f236-4560-999a-e5064...	<input type="button" value="▼"/>	<input type="text"/>

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

On “Backend Pool Configuration”, select “IP address”

The screenshot shows the same 'Add backend pool' configuration page. The 'IP address' radio button is selected. An orange arrow points to the dropdown menu next to the 'IP address' input field, indicating where to click to select IP addresses from the list.

IP addresses

You can only add resources IP address in the Virtual Network. The configuration is associated with the IP address and will apply to any resource which has this IP address assigned.

Backend Address Name	IP address	Resource Name
185ef369-f236-4560-999a-e5064...	<input type="button" value="▼"/>	<input type="text"/>

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

Then click on the drop down on “IP address” and select the IP addresses of our virtual machines.

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Add backend pool

demo-lb

Name * demo-lb-backend-pool-vms

Virtual network (rg-demo-lb)

Backend Pool Configuration NIC

IP address

⚠ When a backend pool is configured by IP address, the backend instances are not secure by default and still use default outbound access. To secure your backend pool, please add a NAT Gateway to your subnet or leverage the private subnet parameter. [Learn more](#)

IP addresses

You can only add resources IP address in the Virtual Network. The configuration is associated with the IP address and will apply to any resource which has this IP address assigned.

Backend Address Name	IP address	Resource Name
3caabe10-0daa-4175-a82d-f0e3c...	10.0.1.4	demo-lb-vm1 (rg-demo-lb)
74165c62-0630-45b8-a2c2-229a...	10.0.1.5	demo-lb-vm2 (rg-demo-lb)
fb66c8a7-ff0b-4b98-84f8-bd264...		

Save Cancel Give feedback

Click on “Save”

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demo-lb | Backend pools

Load balancer

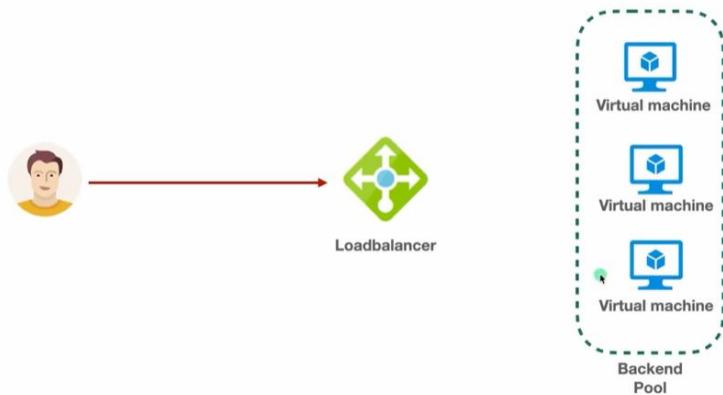
+ Add Refresh

The backend pool is a critical component of the load balancer. The backend pool defines the group of resources that will serve traffic for a given load-balancing rule. [Learn more](#)

Backend pool	Resource Name	IP address	Network interface	Availability zone	Rules count	Resource Status	Admin state
demo-lb-backend-pool-vms (2)	demo-lb-vm1	10.0.1.4	demo-lb-vm1692_z1	1	0	Running	None
demo-lb-backend-pool-vms (2)	demo-lb-vm2	10.0.1.5	demo-lb-vm2519_z1	1	0	Running	None

Give feedback

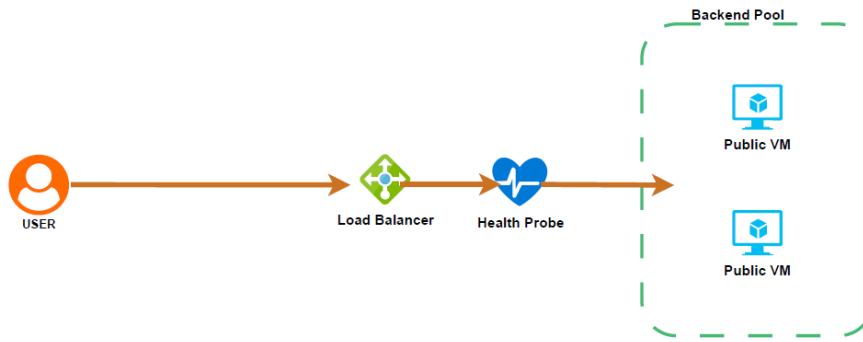
You can see that our Backend Pool has been created. Now our diagram will look like below



The virtual machines have been added to the Backend Pool.

Step 3: Create Health Probe

So, the next after creating the Load balancer and the Backend Pool is to create the Health Probe

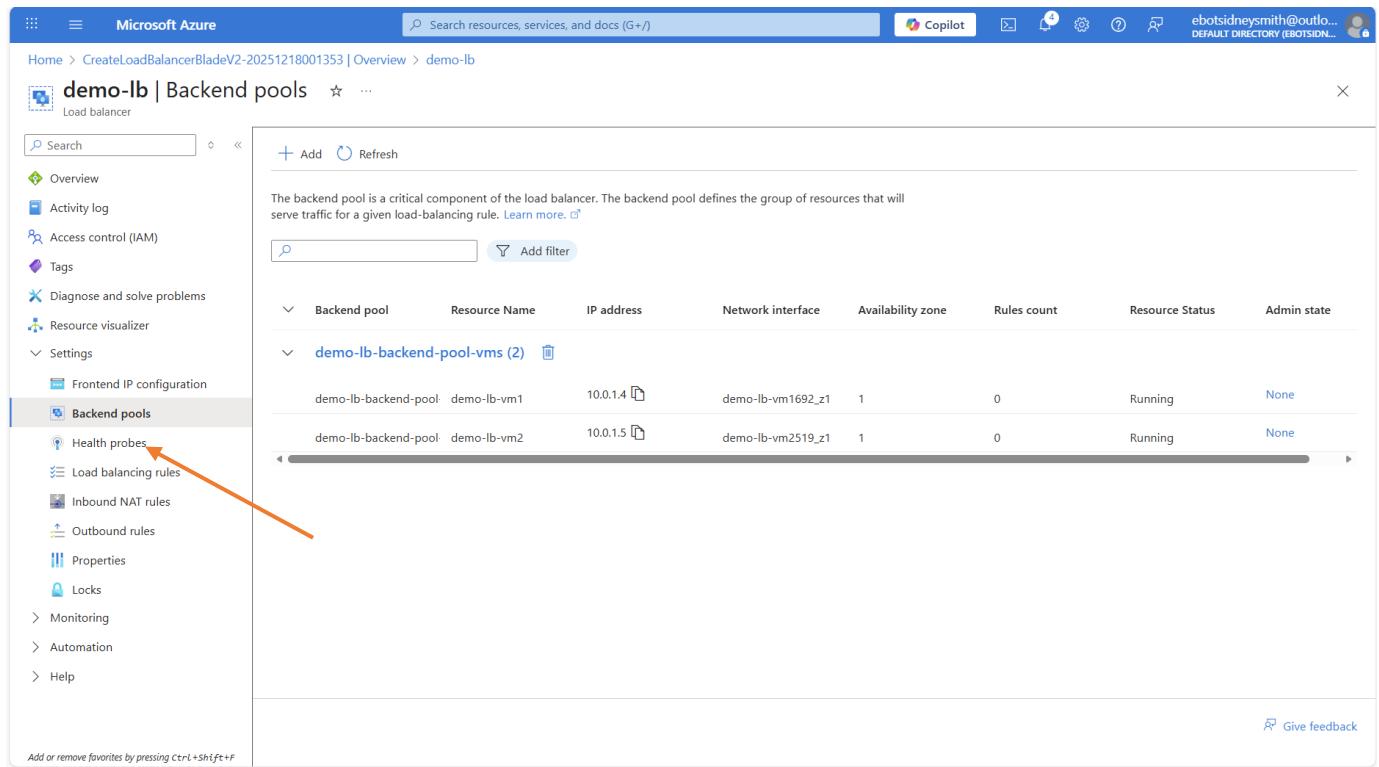


The Health Probe will keep on polling onto the virtual machines in the Backend Pool on port 80 to verify the health of the virtual machines, so that Load balancer can redirect the request on the healthy instances of the virtual machine.

To create the Health Probe, you need to specify which port they need to poll. In this demo, the port is 80.

Go back to the load balancer we created in the Azure portal.

Prepared by Sidney Smith Ebot



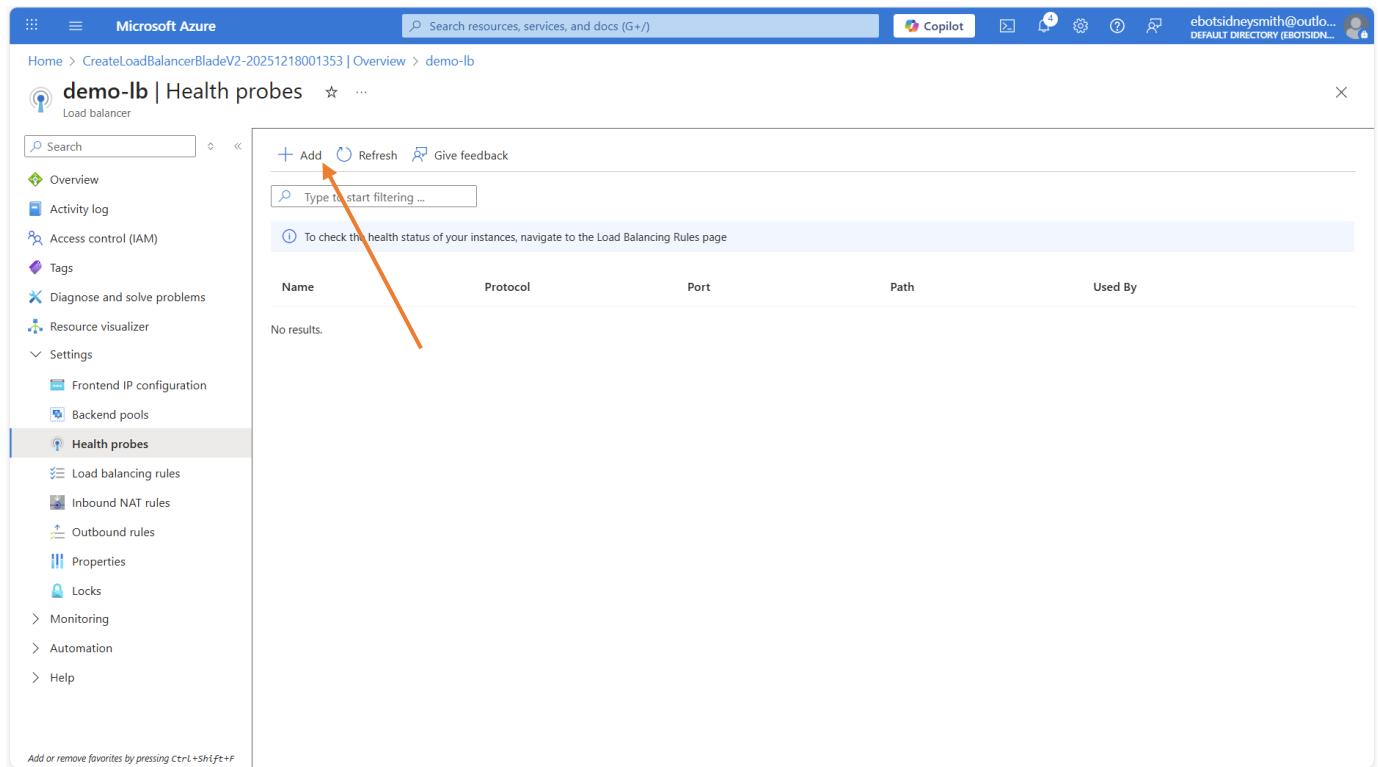
This screenshot shows the Microsoft Azure portal interface for managing a load balancer. The left sidebar navigation pane is open, showing various options under the 'demo-lb' load balancer. The 'Backend pools' option is selected, highlighted with a blue background. An orange arrow points from the text 'Click on "Health Probes"' to the 'Health probes' link in the sidebar.

The main content area displays the 'Backend pools' configuration. It includes a search bar, a 'Add' button, and a 'Refresh' button. A note states: 'The backend pool is a critical component of the load balancer. The backend pool defines the group of resources that will serve traffic for a given load-balancing rule.' Below this is a table listing two backend pools:

Backend pool	Resource Name	IP address	Network interface	Availability zone	Rules count	Resource Status	Admin state
demo-lb-backend-pool-vms (2)	demo-lb-vm1	10.0.1.4	demo-lb-vm1692_z1	1	0	Running	None
	demo-lb-vm2	10.0.1.5	demo-lb-vm2519_z1	1	0	Running	None

At the bottom right of the main content area, there is a 'Give feedback' link.

Click on “Health Probes”



This screenshot shows the Microsoft Azure portal interface for managing health probes. The left sidebar navigation pane is open, showing various options under the 'demo-lb' load balancer. The 'Health probes' option is selected, highlighted with a blue background. An orange arrow points from the text 'Click on "Add"' to the 'Add' button in the top navigation bar.

The main content area displays the 'Health probes' configuration. It includes a search bar, a 'Type to start filtering ...' input field, a 'Give feedback' link, and a note: 'To check the health status of your instances, navigate to the Load Balancing Rules page'. Below this is a table with columns: Name, Protocol, Port, Path, and Used By. The table currently shows 'No results.'

Click on “Add”

Prepared by Sidney Smith Ebot

The screenshot shows the Microsoft Azure portal with the URL [https://portal.azure.com/#blade/HubsBlade](#). The user is navigating through the 'CreateLoadBalancerBladeV2-20251218001353 | Overview > demo-lb | Health probes > Add health probe'. The page has a header with 'Microsoft Azure', a search bar, and various icons. The main content area contains fields for 'Name' (Health Probe Name), 'Protocol' (TCP), 'Port' (80), 'Interval (seconds)' (5), and 'Used by' (Not used). A note at the top states: 'Health probes are used to check the status of a backend pool instance. If the health probe fails to get a response from a backend instance then no new connections will be sent to that backend instance until the health probe succeeds again.' At the bottom are 'Save' and 'Cancel' buttons, and a 'Give feedback' link.

Then, let us give it a name. We will call it “**demo-lb-health-probe**”

The screenshot shows the Microsoft Azure portal with the URL [https://portal.azure.com/#blade/HubsBlade](#). The user is navigating through the 'CreateLoadBalancerBladeV2-20251218001353 | Overview > demo-lb | Health probes > Add health probe'. The page has a header with 'Microsoft Azure', a search bar, and various icons. The main content area contains fields for 'Name' (demo-lb-health-probe), 'Protocol' (TCP), 'Port' (80), 'Interval (seconds)' (5), and 'Used by' (Not used). A note at the top states: 'Health probes are used to check the status of a backend pool instance. If the health probe fails to get a response from a backend instance then no new connections will be sent to that backend instance until the health probe succeeds again.' An orange arrow points down to the 'Save' button at the bottom left. At the bottom are 'Save' and 'Cancel' buttons, and a 'Give feedback' link.

We will leave the “**Protocol**” as “**TCP**”, the “**Port**” as “**80**” and “**Interval**” as “**5**”. Then click on “**Save**”

The screenshot shows the Microsoft Azure portal with the URL [https://portal.azure.com/#blade/HubsBlade/resourceType/loadBalancers/resourceName/demo-lb/section/HealthProbes](#). The left sidebar shows the navigation path: Home > CreateLoadBalancerBladeV2-20251218001353 | Overview > demo-lb. The main content area is titled "demo-lb | Health probes". It displays a table with one row:

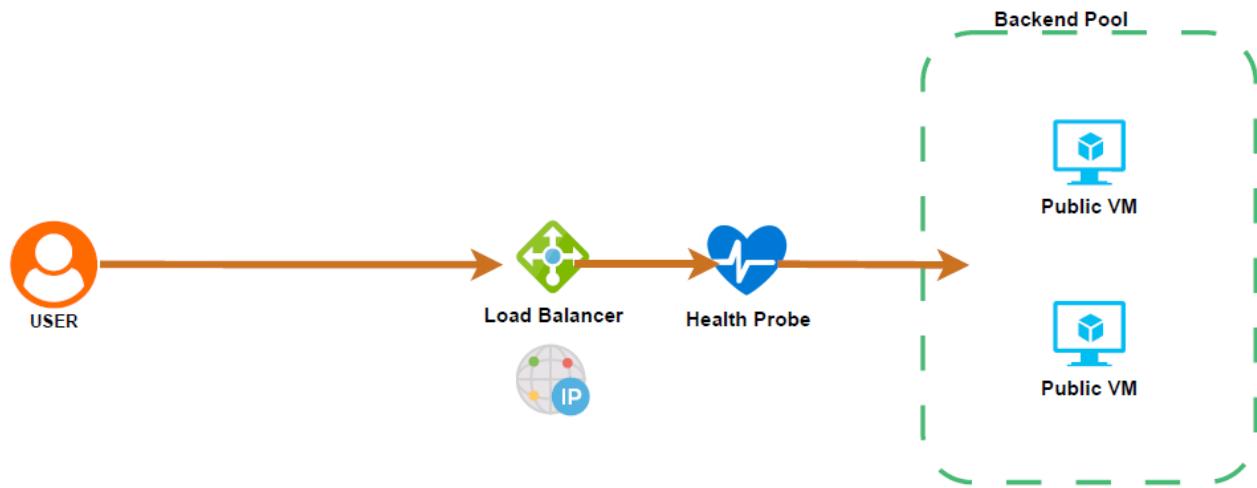
Name	Protocol	Port	Path	Used By
demo-lb-health-probe	Tcp	80	-	-

Below the table is a note: "To check the health status of your instances, navigate to the Load Balancing Rules page". The sidebar on the left has the following sections:

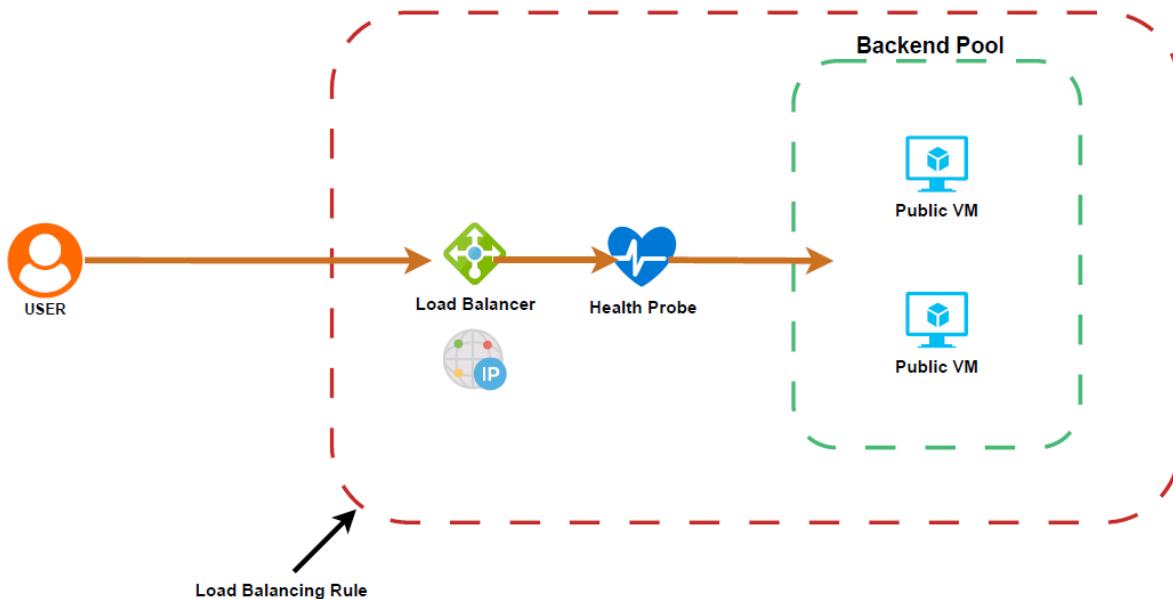
- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Resource visualizer
- Settings
 - Frontend IP configuration
 - Backend pools
 - Health probes** (selected)
 - Load balancing rules
 - Inbound NAT rules
 - Outbound rules
 - Properties
 - Locks
- Monitoring
- Automation
- Help

Our “**Probe**” has been created.

Now, moving further.



This set up is pretty ready, but we have one more thing which will combine everything together. This is called the Load balancer rule.



Here we need to put everything together which include Frontend IP configuration, Backend Pool and Health Probe. All of these should be glued together.

To do this, we go to the Load balancer in our Azure portal

The screenshot shows the Microsoft Azure portal interface for a Load Balancer named 'demo-lb'. The left sidebar menu is open, showing options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Settings (with sub-options Frontend IP configuration, Backend pools, and Health probes), Load balancing rules (which is highlighted with a red arrow), Inbound NAT rules, Outbound rules, Properties, Locks, Monitoring, Automation, and Help. The main content area displays a table for 'Health probes' with one entry: 'demo-lb-health-probe' (Protocol: Tcp, Port: 80). At the bottom of the page, there is a note: 'To check the health status of your instances, navigate to the Load Balancing Rules page'.

Click on “Load Balancing Rules”

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The screenshot shows the Microsoft Azure portal interface for managing load balancer rules. The left sidebar is open, showing navigation options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Settings, Frontend IP configuration, Backend pools, Health probes, and Load balancing rules. The 'Load balancing rules' section is currently selected. The main content area displays a table header with columns: Name, Protocol, Backend pool, Health probe, and Health status. A message below the table states: "A load balancer rule is used to define how incoming traffic is distributed to all the instances within the backend pool. A load-balancing rule maps a given frontend IP configuration and port to multiple backend IP addresses and ports. An example would be a rule created on port 80 to load balance web traffic." Below the table, a search bar and a message stating "No results." are visible.

Click on “Add”

The screenshot shows the 'Add load balancing rule' form. The 'Name' field is highlighted with a red arrow pointing to it. Other fields include 'IP version' (set to IPv4), 'Frontend IP address' (dropdown menu), 'Backend pool' (dropdown menu), 'Protocol' (set to TCP), 'Port' (input field), 'Backend port' (input field), 'Health probe' (dropdown menu with 'Create new' option), and 'Session persistence' (set to None). At the bottom are 'Save' and 'Cancel' buttons.

Then, we will give it a name. We will call it “**demo-lb-rule**”

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Home > CreateLoadBalancerBladeV2-20251218001353 | Overview > demo-lb | Load balancing rules >

Add load balancing rule

demo-lb

A load balancing rule distributes incoming traffic that is sent to a selected IP address and port combination across a group of backend pool instances. Only backend instances that the health probe considers healthy receive new traffic. [Learn more.](#)

Name * demo-lb-rule

IP version * IPv4 IPv6

Frontend IP address * Select an existing frontend IP address

Backend pool * Select an existing backend pool

Protocol TCP UDP

Port *

Backend port *

Health probe * Select an existing probe [Create new](#)

Session persistence None

Save Cancel Give feedback

Then, select the “Frontend IP Configuration”

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DEFAULT DIRECTORY (EBOTSID...)

Home > CreateLoadBalancerBladeV2-20251218001353 | Overview > demo-lb | Load balancing rules >

Add load balancing rule

demo-lb

A load balancing rule distributes incoming traffic that is sent to a selected IP address and port combination across a group of backend pool instances. Only backend instances that the health probe considers healthy receive new traffic. [Learn more.](#)

Name * demo-lb-rule

IP version * IPv4 IPv6

Frontend IP address * demo-lb-frontend-public-ip (20.161.242.195)

Backend pool * Select an existing backend pool

Protocol TCP UDP

Port *

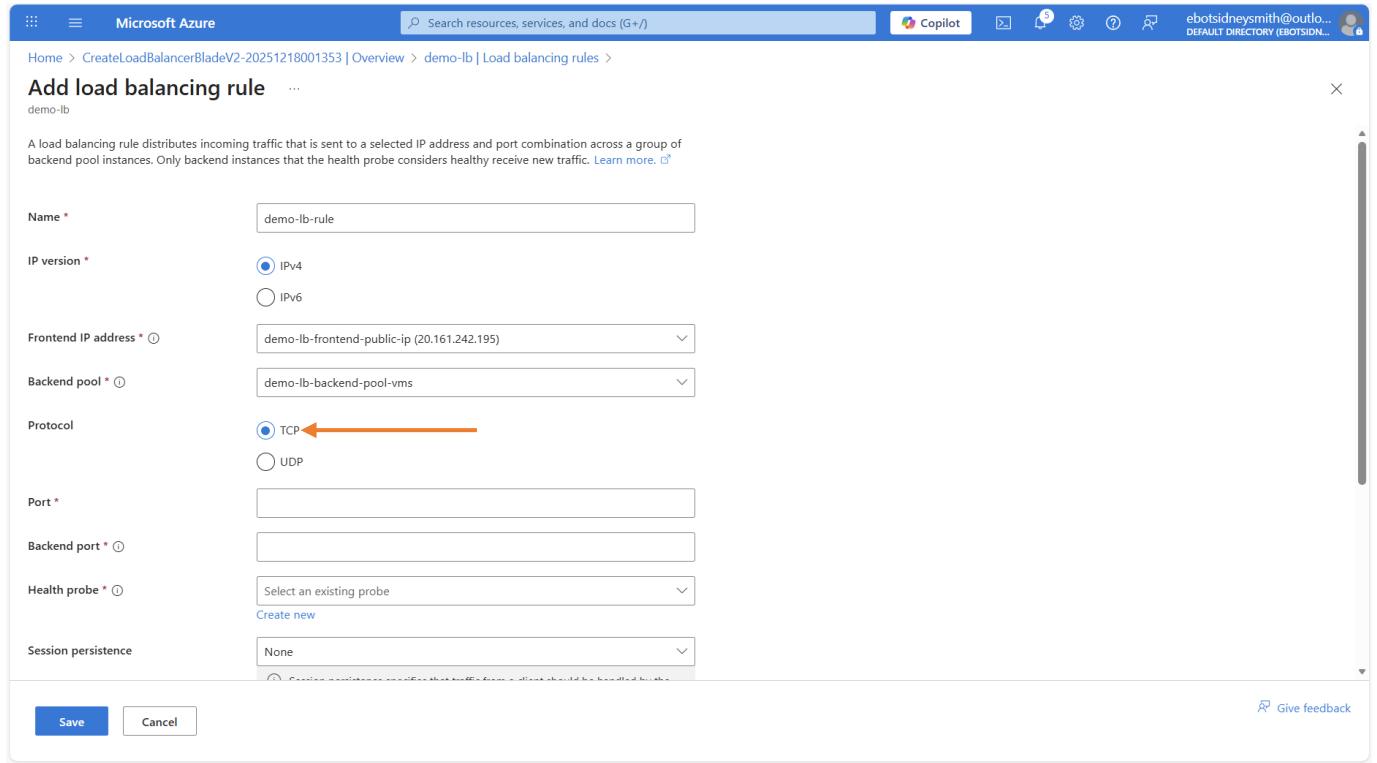
Backend port *

Health probe * Select an existing probe [Create new](#)

Session persistence None

Save Cancel Give feedback

Then, select the “Backend Pool”



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Home > CreateLoadBalancerBladeV2-20251218001353 | Overview > demo-lb | Load balancing rules >

Add load balancing rule ...

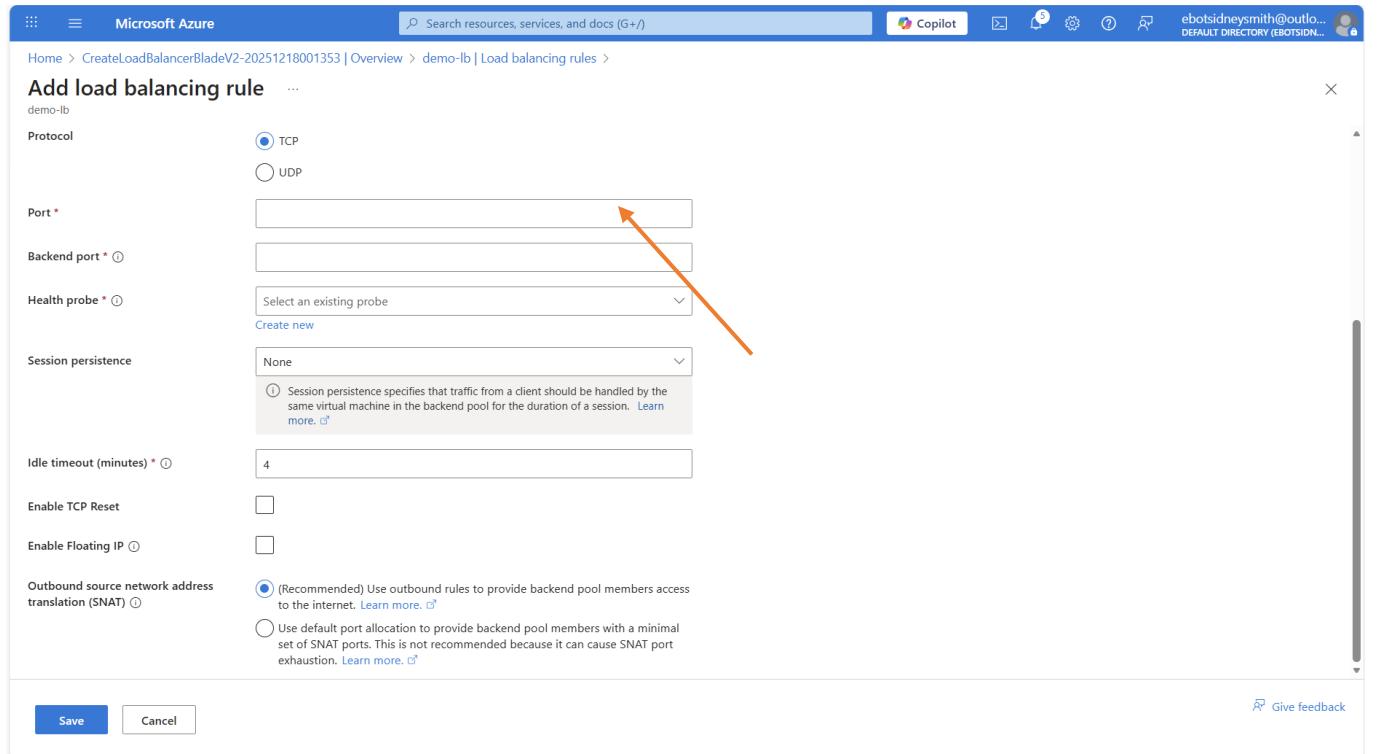
demo-lb

A load balancing rule distributes incoming traffic that is sent to a selected IP address and port combination across a group of backend pool instances. Only backend instances that the health probe considers healthy receive new traffic. [Learn more.](#)

Name *	demo-lb-rule
IP version *	<input checked="" type="radio"/> IPv4 <input type="radio"/> IPv6
Frontend IP address *	demo-lb-frontend-public-ip (20.161.242.195)
Backend pool *	demo-lb-backend-pool-vms
Protocol	<input checked="" type="radio"/> TCP <input type="radio"/> UDP
Port *	
Backend port *	
Health probe *	Select an existing probe Create new
Session persistence	None

Save Cancel Give feedback

On “Protocol”, select “TCP”



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Home > CreateLoadBalancerBladeV2-20251218001353 | Overview > demo-lb | Load balancing rules >

Add load balancing rule ...

demo-lb

Protocol

TCP
 UDP

Port *

Backend port *

Health probe *

Session persistence

Idle timeout (minutes) *

Enable TCP Reset

Enable Floating IP

Outbound source network address translation (SNAT) *

Save Cancel Give feedback

For the “Port”, enter “80”

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DEFAULT DIRECTORY (EBOTSID...)

Home > CreateLoadBalancerBladeV2-20251218001353 | Overview > demo-lb | Load balancing rules >

Add load balancing rule ...

demo-lb

Protocol TCP UDP

Port * 80

Backend port * 80

Health probe *

Session persistence

Idle timeout (minutes) * 4

Enable TCP Reset

Enable Floating IP

Outbound source network address translation (SNAT) (Recommended) Use outbound rules to provide backend pool members access to the internet. [Learn more.](#) Use default port allocation to provide backend pool members with a minimal set of SNAT ports. This is not recommended because it can cause SNAT port exhaustion. [Learn more.](#)

Save Cancel Give feedback

Then, for “Backend Port”, also enter “80”

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DEFAULT DIRECTORY (EBOTSID...)

Home > CreateLoadBalancerBladeV2-20251218001353 | Overview > demo-lb | Load balancing rules >

Add load balancing rule ...

demo-lb

Protocol TCP UDP

Port * 80

Backend port * 80

Health probe *

Session persistence

Idle timeout (minutes) * 4

Enable TCP Reset

Enable Floating IP

Outbound source network address translation (SNAT) (Recommended) Use outbound rules to provide backend pool members access to the internet. [Learn more.](#) Use default port allocation to provide backend pool members with a minimal set of SNAT ports. This is not recommended because it can cause SNAT port exhaustion. [Learn more.](#)

Save Cancel Give feedback

For “Health Probe”, click on the drop down and select the health probe we created.

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Add load balancing rule ...

demo-lb

Protocol TCP UDP

Port * 80

Backend port * 80

Health probe * demo-lb-health-probe (TCP:80) [Create new](#)

Session persistence None

Idle timeout (minutes) * 4

Enable TCP Reset

Enable Floating IP

Outbound source network address translation (SNAT) (Recommended) Use outbound rules to provide backend pool members access to the internet. [Learn more.](#) Use default port allocation to provide backend pool members with a minimal set of SNAT ports. This is not recommended because it can cause SNAT port exhaustion. [Learn more.](#)

Save Cancel Give feedback

Leave the rest of the fields as default

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Add load balancing rule ...

demo-lb

Protocol TCP UDP

Port * 80

Backend port * 80

Health probe * demo-lb-health-probe (TCP:80) [Create new](#)

Session persistence None

Idle timeout (minutes) * 4

Enable TCP Reset

Enable Floating IP

Outbound source network address translation (SNAT) (Recommended) Use outbound rules to provide backend pool members access to the internet. [Learn more.](#) Use default port allocation to provide backend pool members with a minimal set of SNAT ports. This is not recommended because it can cause SNAT port exhaustion. [Learn more.](#)

Save Cancel Give feedback

Then, click on “Save”

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The screenshot shows the Microsoft Azure portal interface. The left sidebar is open, showing navigation options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Settings (Frontend IP configuration, Backend pools, Health probes, Load balancing rules), Inbound NAT rules, Outbound rules, Properties, Locks, Monitoring, Automation, and Help. The 'Load balancing rules' option under 'Settings' is selected, indicated by a blue border. The main content area displays a table of load balancer rules. A single row is selected, highlighted with a blue background. An orange arrow points from the text 'The load balancer rule has been created.' in the previous step down to the selected row in the table. The table columns are Name, Protocol, Backend pool, Health probe, and Health status. The selected row contains the values: demo-lb-rule, TCP/80, demo-lb-backend-pool-vms, demo-lb-health-probe, and View details.

The load balancer rule has been created. Search for “Load Balancer”

The screenshot shows the Microsoft Azure portal interface. The left sidebar is open, showing navigation options like Overview, Load balancing (Content delivery, DNS load balancing, Related services), Application gateways, and Load balancers. The 'Load balancers' option is selected, indicated by a blue border. The main content area displays a table of load balancers. A single row is selected, highlighted with a blue background. An orange arrow points from the text 'Click on the Load Balancer' in the previous step down to the selected row in the table. The table columns are Name, SKU, Resource Group, Location, and Subscription. The selected row contains the values: demo-lb, Standard, rg-demo-lb, East US 2, and Azure subscription 1.

Click on the Load Balancer

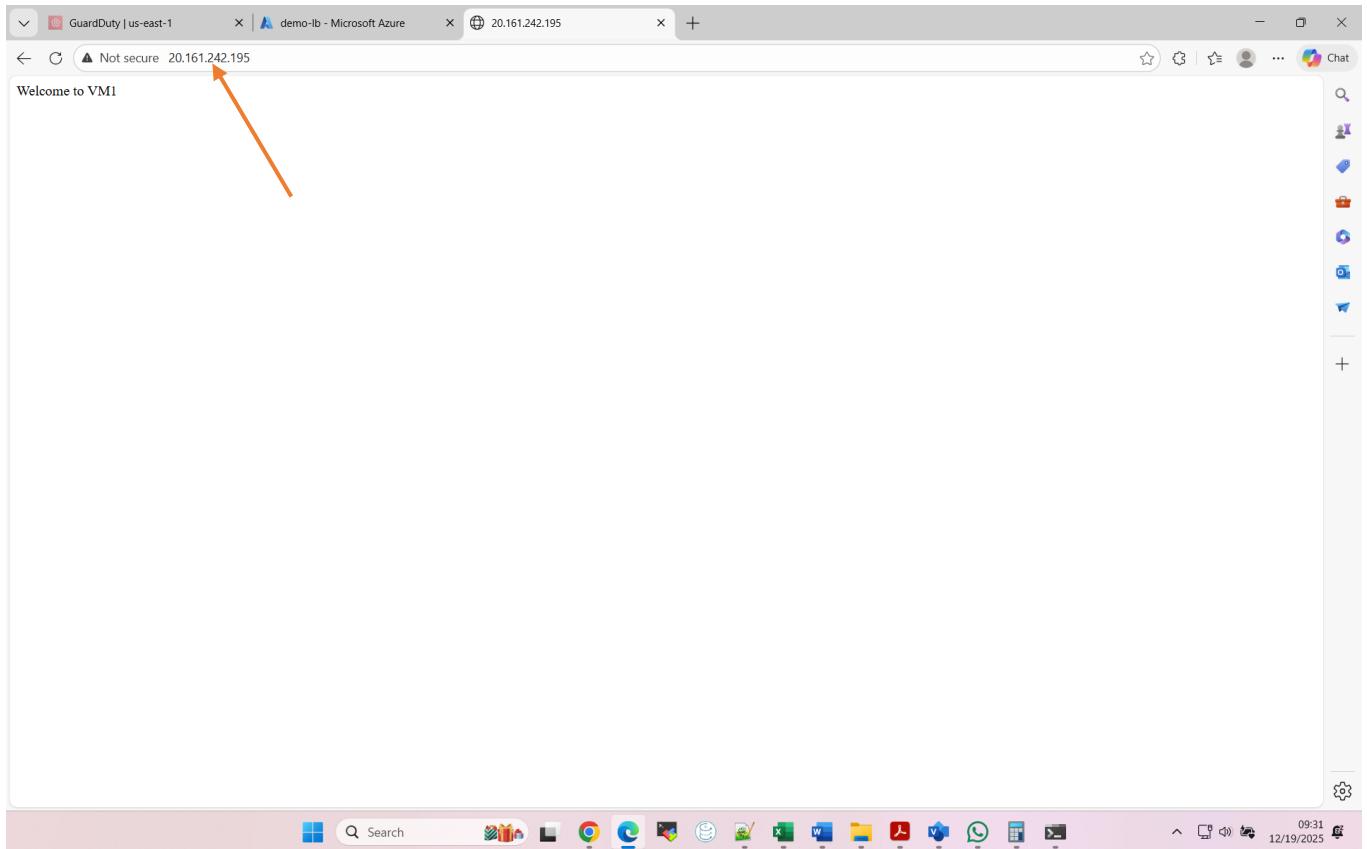
The screenshot shows the Microsoft Azure portal interface for 'Load balancing and content delivery | Load balancers'. On the left, the 'Load balancers' section is selected, showing a list with one item: 'demo-lb'. A red arrow points from the text 'Then, click on "Frontend IP Configurations"' to the 'Frontend IP configuration' link under the 'Settings' section of the 'demo-lb' load balancer's details page on the right.

Then, click on “Frontend IP Configurations”

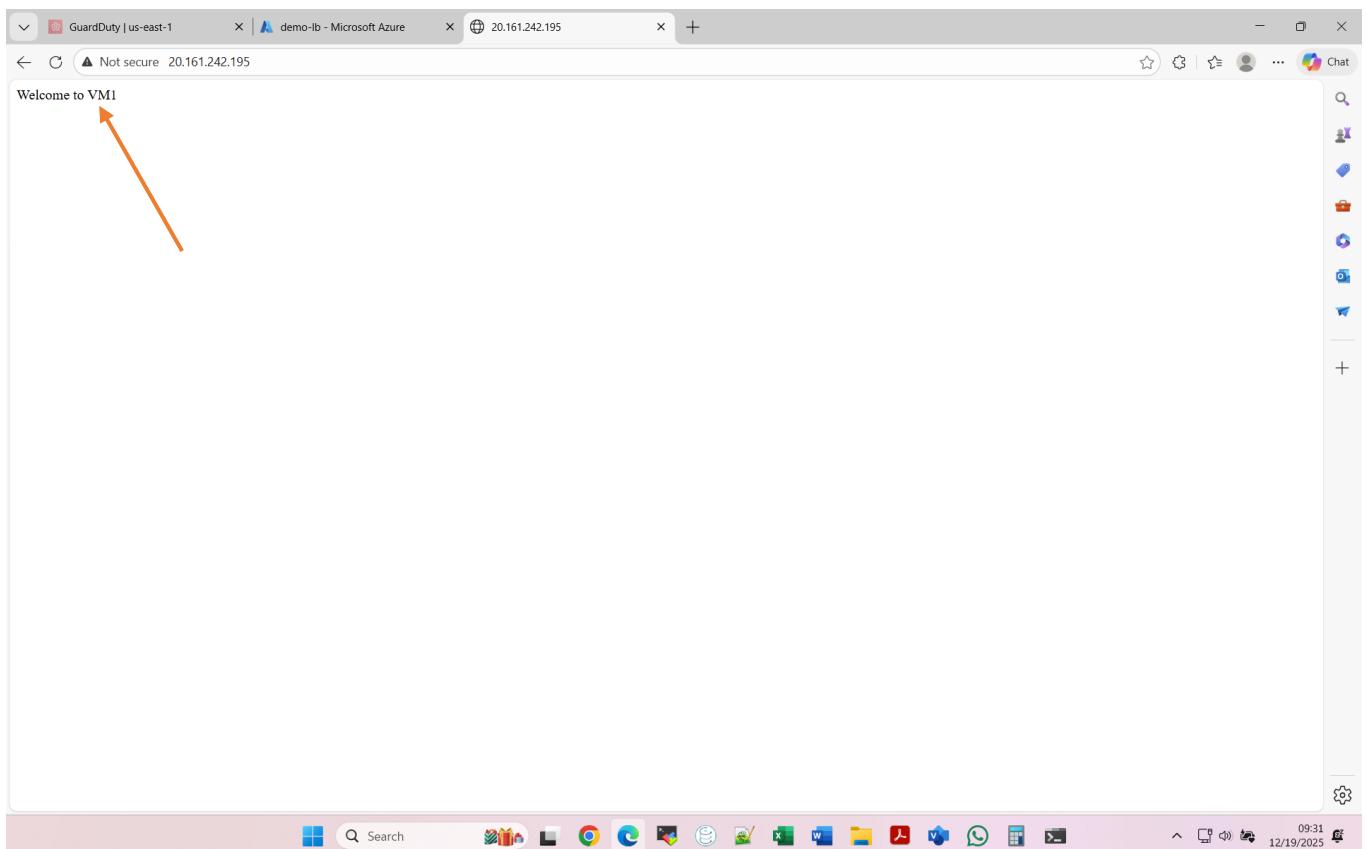
The screenshot shows the 'demo-lb | Frontend IP configuration' page. It displays a table with one item: 'demo-lb-frontend-public-ip'. An orange arrow points from the text 'Let us now try to access the virtual machines using the public IP of the load balancer. Both virtual machines should be accessible.' to the 'IP address' column of the table, which shows '20.161.242.195 (demo-lb-pub)'.

Name	IP address	Rules count
demo-lb-frontend-public-ip	20.161.242.195 (demo-lb-pub)	1

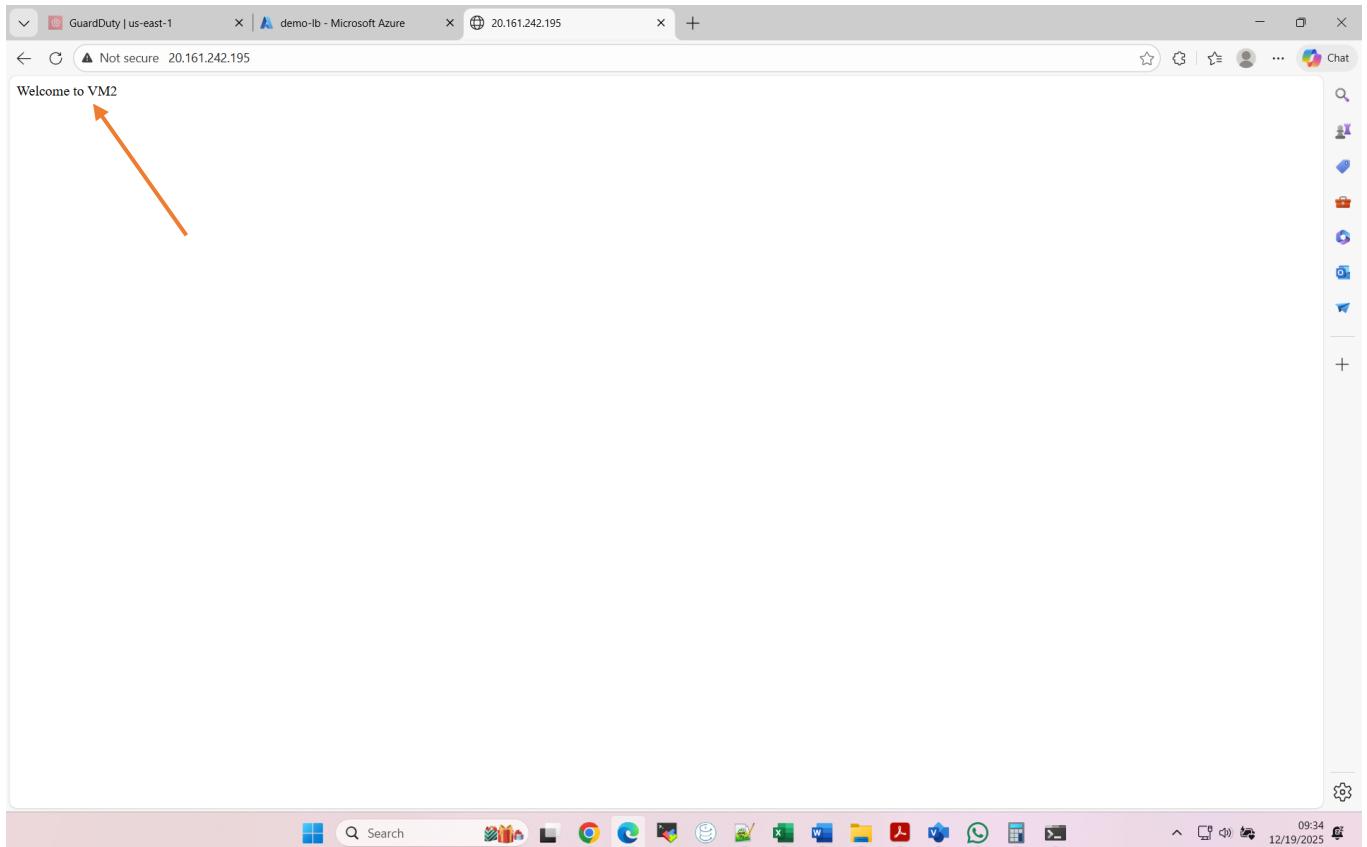
Let us now try to access the virtual machines using the public IP of the load balancer. Both virtual machines should be accessible.



You can see that it is accessing the Virtual machine with the Public IP address “**20.161.242.195**”. This is the homepage of our first virtual machine.



Refresh the page



You can see that it takes us to the home page of the second virtual machine.

So, our load balancer is working as expected, it is able to route the traffic between the two virtual machines.