# IT4090
# Cloud Computing
# 4th Year, 1st Semester

Azure Lab 4

(Create a public load balancer to load balance VMs using the Azure portal)

## Azure Lab Assignment

Submitted to

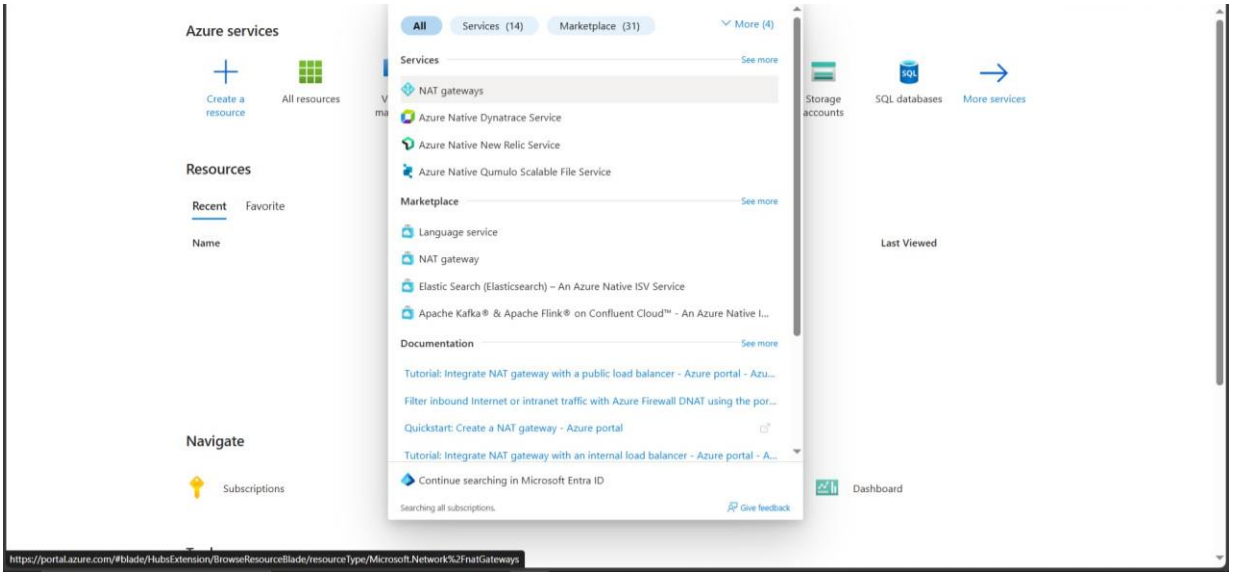
Sri Lanka Institute of Information Technology

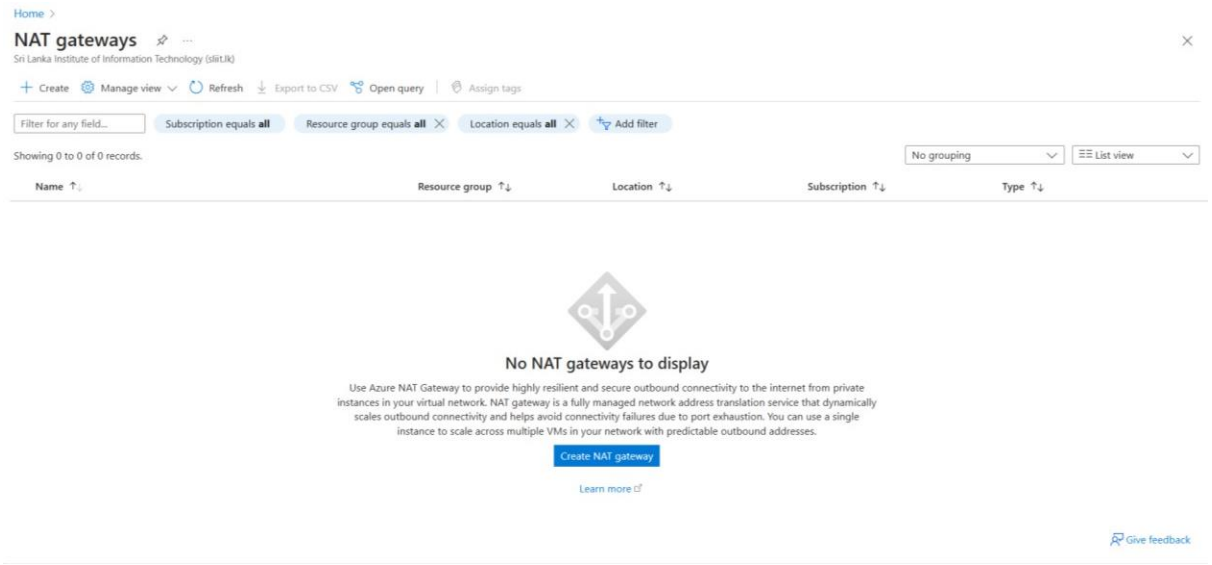
**IT21228094**

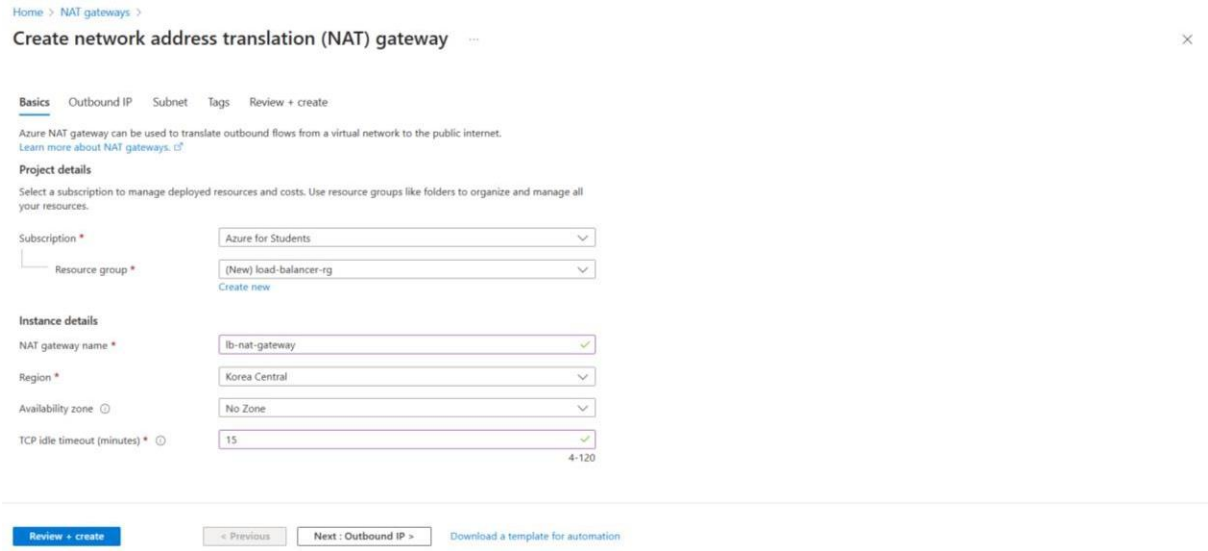
In partial fulfillment of the requirements for the

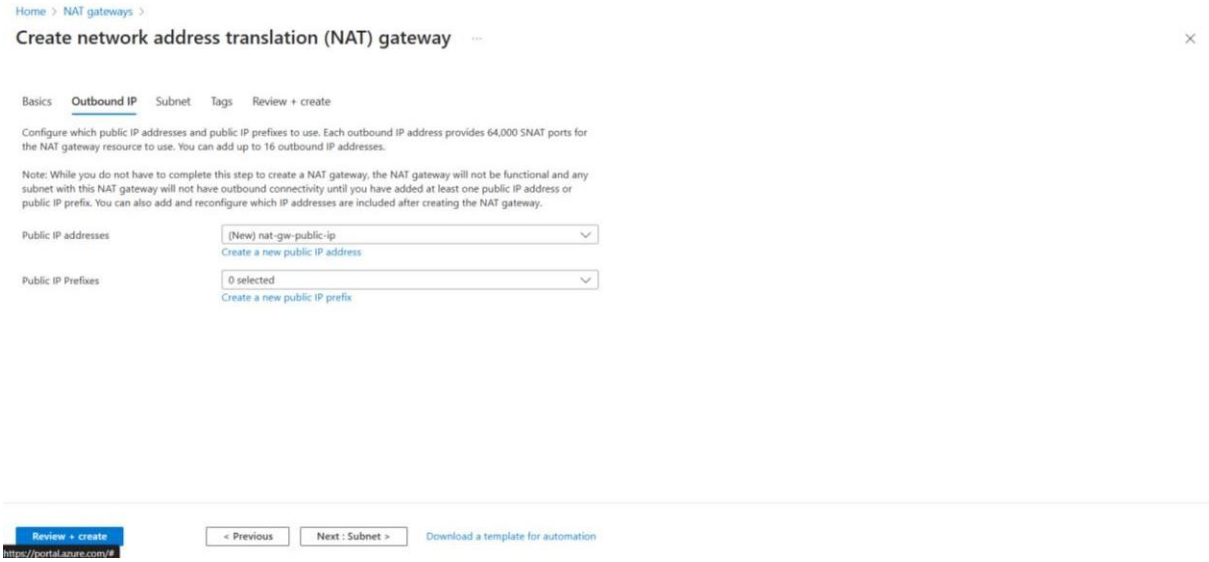
Bachelor of Science Special Honors Degree in Information Technology

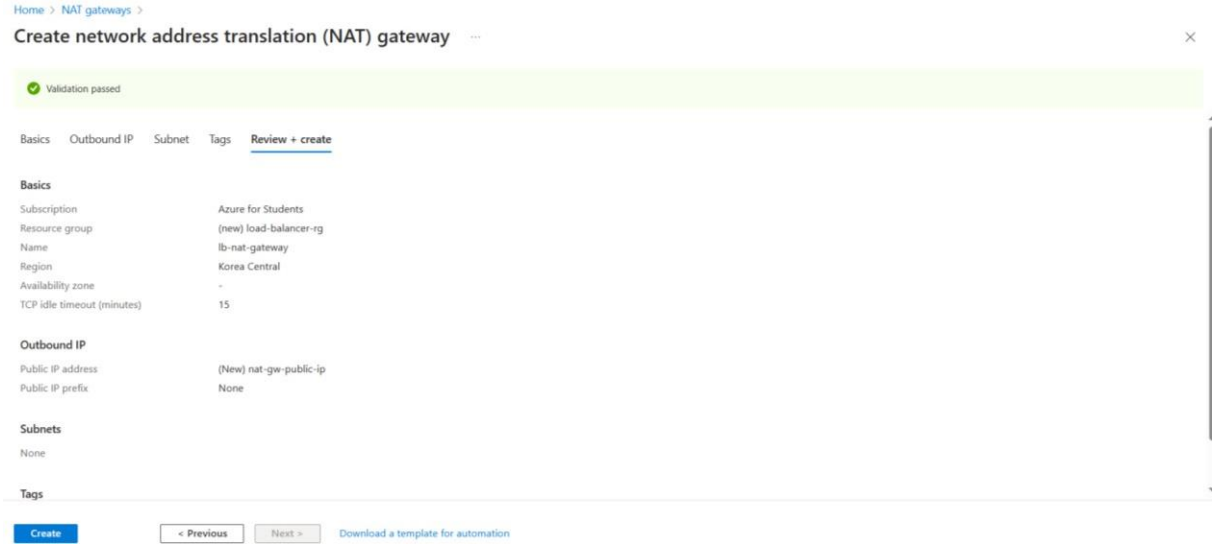
06.09.2024


Azure services
Create a resource
All resources
Storage accounts
SQL databases
More services
Resources
Recent
Favorite
Name
Last Viewed
Navigate
Subscriptions
Dashboard
All
Services (14)
Marketplace (31)
More (4)
Services
See more
NAT gateways
Azure Native Dynatrace Service
Azure Native New Relic Service
Azure Native Qumulo Scalable File Service
Marketplace
See more
Language service
NAT gateway
Elastic Search (Elasticsearch) – An Azure Native ISV Service
Apache Kafka® & Apache Flink® on Confluent Cloud™ - An Azure Native I...
Documentation
See more
Tutorial: Integrate NAT gateway with a public load balancer - Azure portal - Azu...
Filter inbound Internet or intranet traffic with Azure Firewall DNAT using the por...
Quickstart: Create a NAT gateway - Azure portal
Tutorial: Integrate NAT gateway with an internal load balancer - Azure portal - A...
Continue searching in Microsoft Entra ID
Searching all subscriptions.
Give feedback
https://portal.azure.com/#blade/HubsExtension/BrowseResourceBlade/resourceType/Microsoft.Network%2FnatGateways

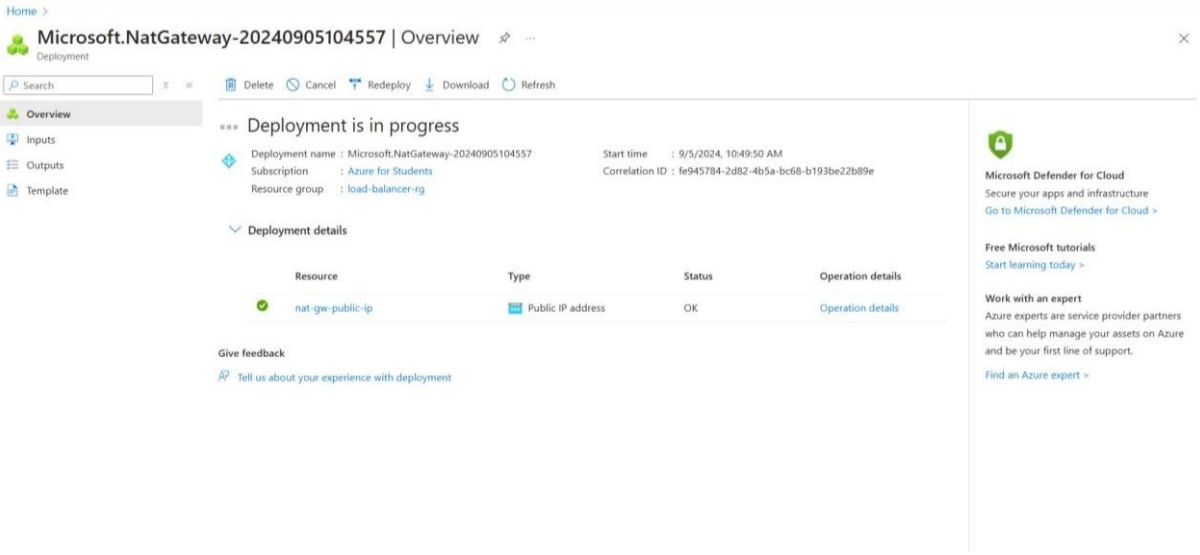

Home
NAT gateways
Sri Lanka Institute of Information Technology (sliit.lk)
Create
Manage view
Refresh
Export to CSV
Open query
Assign tags
Filter for any field...
Subscription equals all
Resource group equals all
Location equals all
Add filter
Showing 0 to 0 of 0 records.
No grouping
List view
Name
Resource group
Location
Subscription
Type
No NAT gateways to display
Use Azure NAT Gateway to provide highly resilient and secure outbound connectivity to the internet from private instances in your virtual network. NAT gateway is a fully managed network address translation service that dynamically scales outbound connectivity and helps avoid connectivity failures due to port exhaustion. You can use a single instance to scale across multiple VMs in your network with predictable outbound addresses.
Create NAT gateway
Learn more
Give feedback

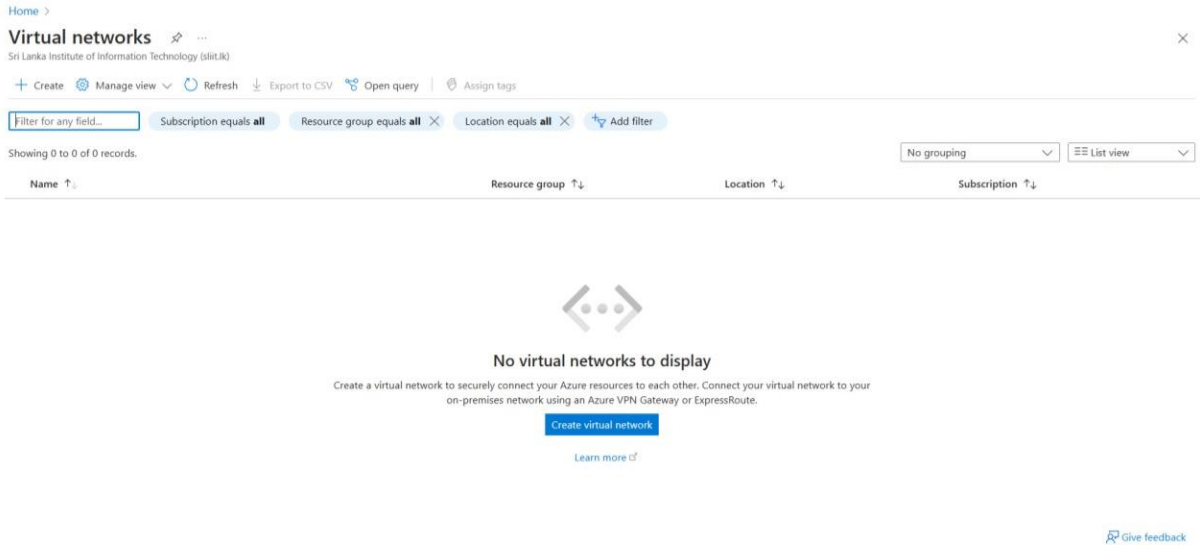

Home > NAT gateways >
Create network address translation (NAT) gateway
Basics Outbound IP Subnet Tags Review + create
Azure NAT gateway can be used to translate outbound flows from a virtual network to the public internet.
Learn more about NAT gateways.
Project details
Select a subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.
Subscription *
Azure for Students
Resource group *
(New) load-balancer-rg
Create new
Instance details
NAT gateway name *
lb-nat-gateway
Region *
Korea Central
Availability zone
No Zone
TCP idle timeout (minutes) *
15
4-120
Review + create
< Previous
Next : Outbound IP >
Download a template for automation

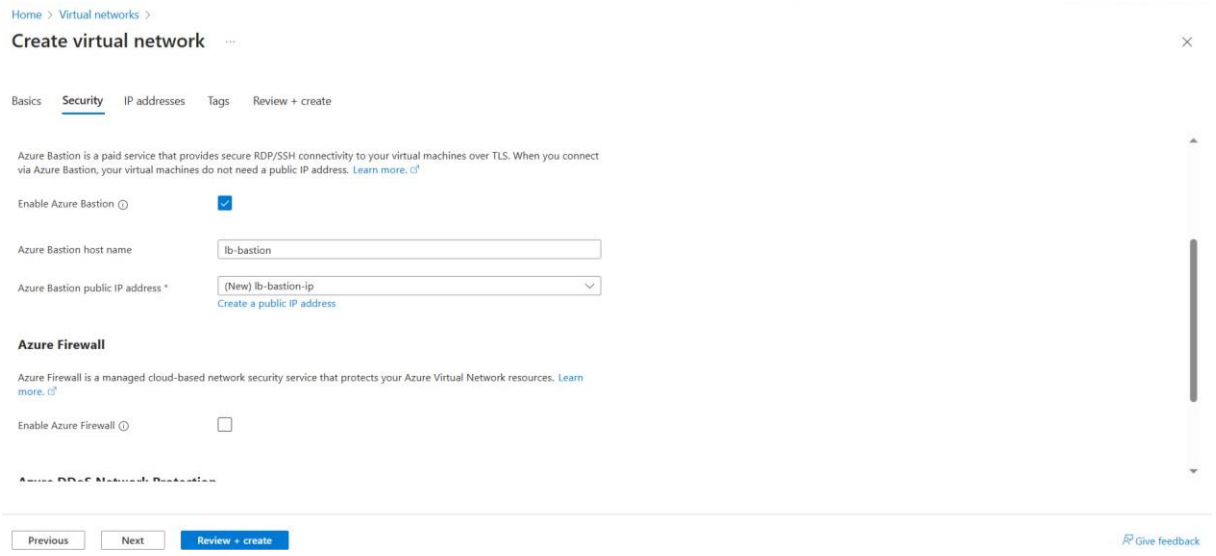

Home > NAT gateways >
Create network address translation (NAT) gateway
Basics Outbound IP Subnet Tags Review + create
Configure which public IP addresses and public IP prefixes to use. Each outbound IP address provides 64,000 SNAT ports for the NAT gateway resource to use. You can add up to 16 outbound IP addresses.
Note: While you do not have to complete this step to create a NAT gateway, the NAT gateway will not be functional and any subnet with this NAT gateway will not have outbound connectivity until you have added at least one public IP address or public IP prefix. You can also add and reconfigure which IP addresses are included after creating the NAT gateway.
Public IP addresses
(New) nat-gw-public-ip
Create a new public IP address
Public IP Prefixes
0 selected
Create a new public IP prefix
Review + create
< Previous
Next : Subnet >
Download a template for automation
https://portal.azure.com/#

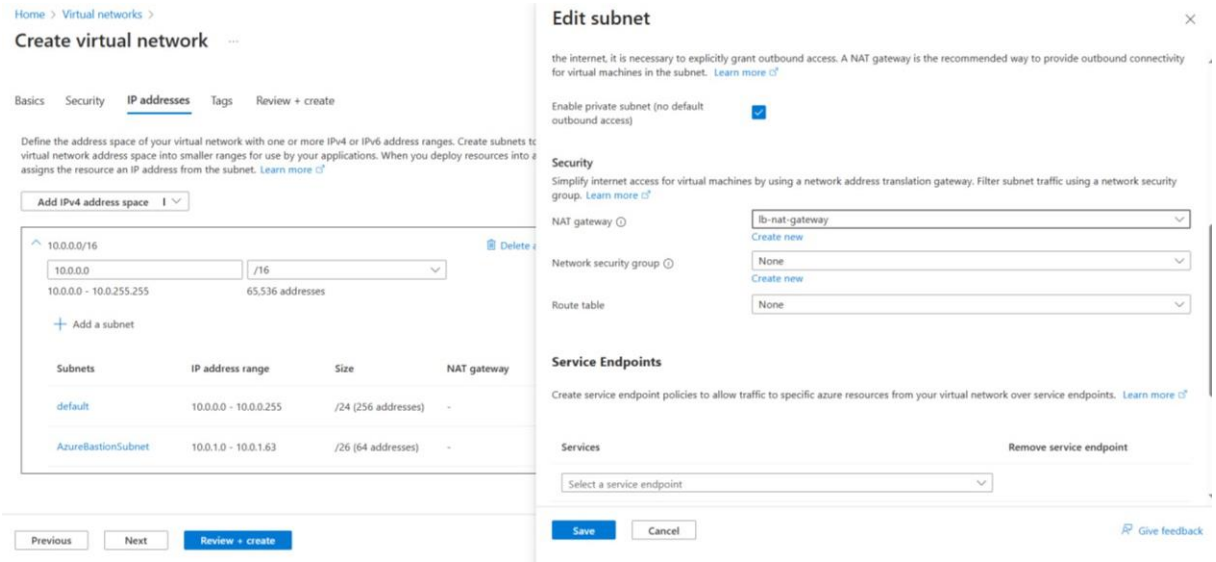

Home > NAT gateways >
Create network address translation (NAT) gateway
Validation passed
Basics
Outbound IP
Subnet
Tags
Review + create
Basics
Subscription
Azure for Students
Resource group
(new) load-balancer-rg
Name
lb-nat-gateway
Region
Korea Central
Availability zone
-
TCP idle timeout (minutes)
15
Outbound IP
Public IP address
(New) nat-gw-public-ip
Public IP prefix
None
Subnets
None
Tags
Create
< Previous
Next >
Download a template for automation

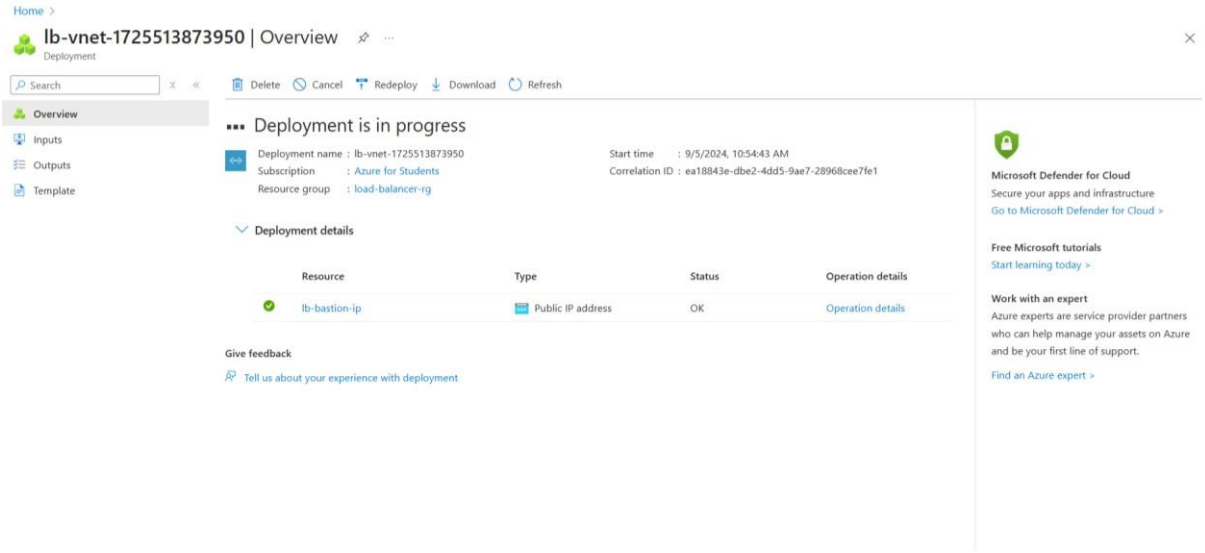

Home > NAT gateways >
Create network address translation (NAT) gateway
Submitting deployment...
Submitting the deployment template for resource group 'load-balancer-rg'.
Validation passed
Basics
Subscription
Azure for Students
Resource group
(new) load-balancer-rg
Name
lb-nat-gateway
Region
Korea Central
Availability zone
-
TCP idle timeout (minutes)
15
Outbound IP
Public IP address
(New) nat-gw-public-ip
Public IP prefix
None
Subnets
None
Tags
None
Create
< Previous
Next >
Download a template for automation

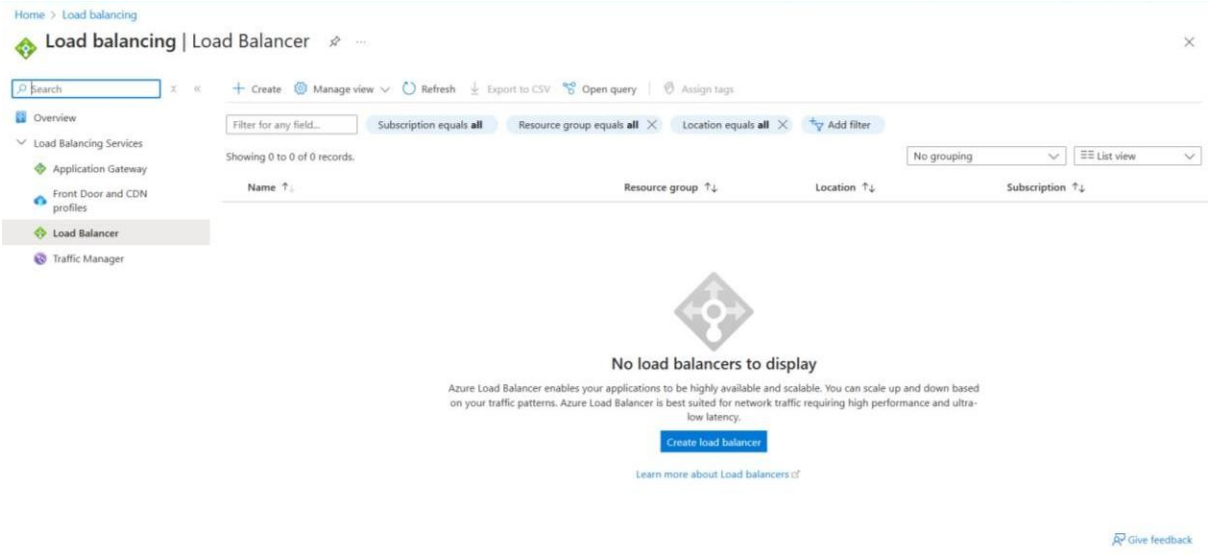

Home
Microsoft.NatGateway-20240905104557 | Overview
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Deployment is in progress
Deployment name : Microsoft.NatGateway-20240905104557
Subscription : Azure for Students
Resource group : load-balancer-rg
Start time : 9/5/2024, 10:49:50 AM
Correlation ID : fe945784-2d82-4b5a-bc68-b193be22b89e
Deployment details
Resource
Type
Status
Operation details
nat-gw-public-ip
Public IP address
OK
Operation details
Give feedback
Tell us about your experience with deployment
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 >

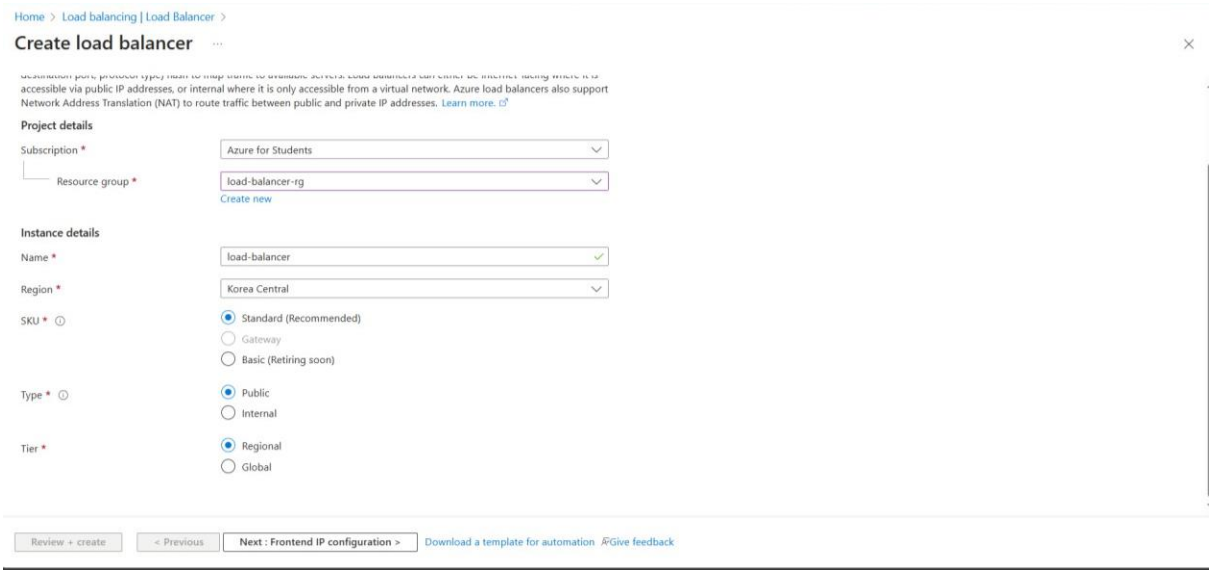

Home
Virtual networks
Sri Lanka Institute of Information Technology (sliit.lk)
Create
Manage view
Refresh
Export to CSV
Open query
Assign tags
Filter for any field...
Subscription equals all
Resource group equals all
Location equals all
Add filter
Showing 0 to 0 of 0 records.
No grouping
List view
Name
Resource group
Location
Subscription
No virtual networks to display
Create a virtual network to securely connect your Azure resources to each other. Connect your virtual network to your on-premises network using an Azure VPN Gateway or ExpressRoute.
Create virtual network
Learn more
Give feedback

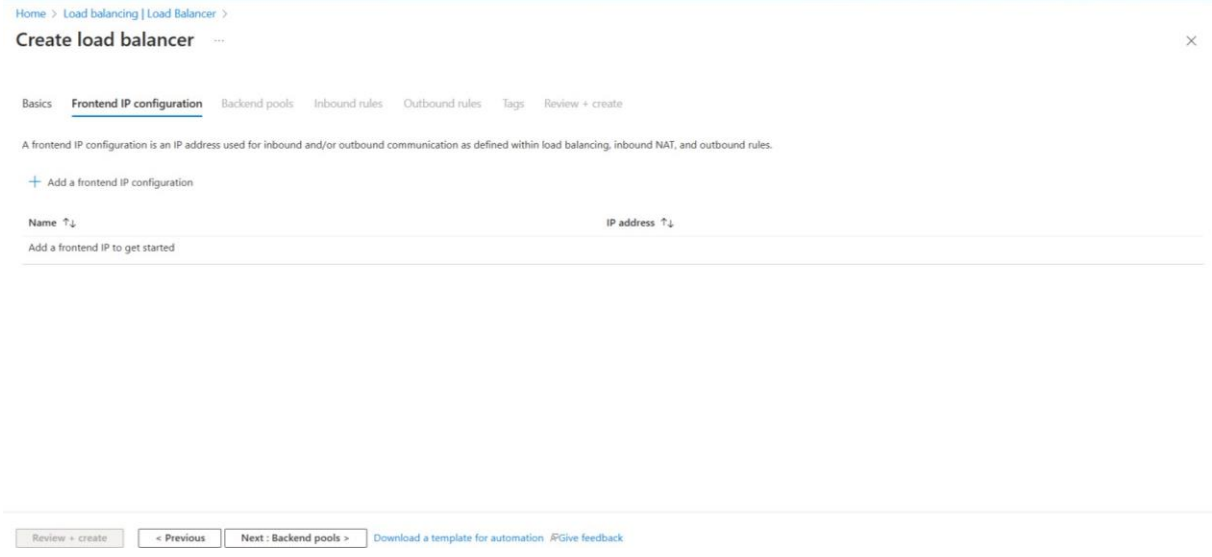

Home > Virtual networks >
Create virtual network
Basics
Security
IP addresses
Tags
Review + create
Azure Bastion is a paid service that provides secure RDP/SSH connectivity to your virtual machines over TLS. When you connect via Azure Bastion, your virtual machines do not need a public IP address. Learn more.
Enable Azure Bastion
Azure Bastion host name
lb-bastion
Azure Bastion public IP address *
(New) lb-bastion-ip
Create a public IP address
Azure Firewall
Azure Firewall is a managed cloud-based network security service that protects your Azure Virtual Network resources. Learn more.
Enable Azure Firewall
Previous
Next
Review + create
Give feedback

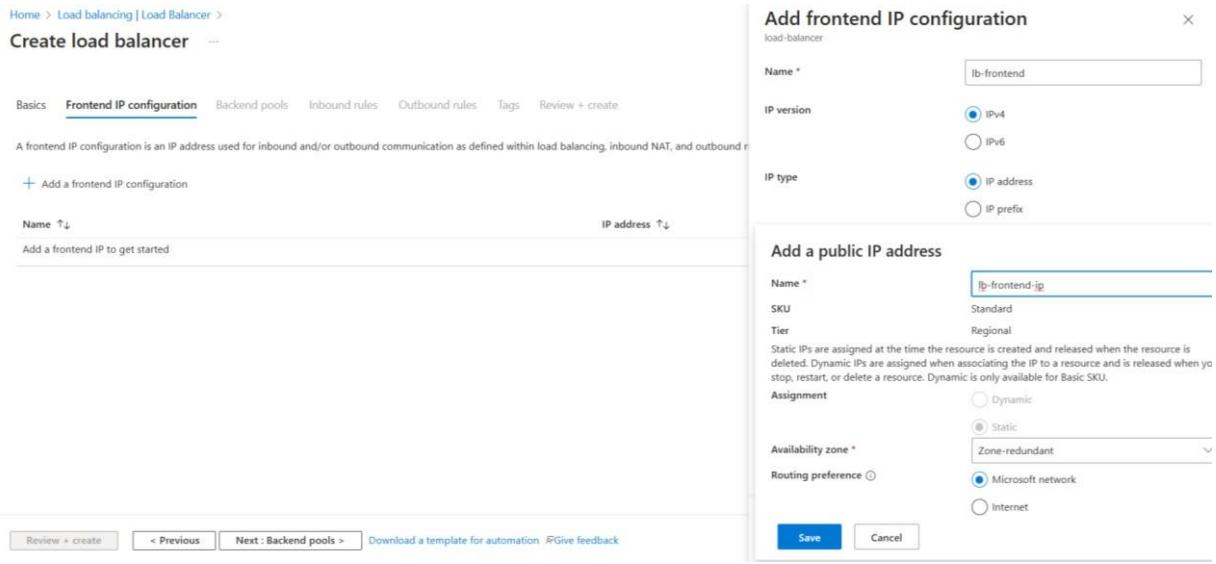

Home > Virtual networks >
Create virtual network
Basics
Security
IP addresses
Tags
Review + create
Add IPv4 address space
10.0.0.0/16
10.0.0.0
/16
10.0.0.0 - 10.0.255.255
65,536 addresses
Add a subnet
Subnets
IP address range
Size
NAT gateway
default
10.0.0.0 - 10.0.0.255
/24 (256 addresses)
AzureBastionSubnet
10.0.1.0 - 10.0.1.63
/26 (64 addresses)
Previous
Next
Review + create
Edit subnet
the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. Learn more
Enable private subnet (no default outbound access)
Security
Simplify internet access for virtual machines by using a network address translation gateway. Filter subnet traffic using a network security group. Learn more
NAT gateway
lb-nat-gateway
Create new
Network security group
None
Create new
Route table
None
Service Endpoints
Create service endpoint policies to allow traffic to specific azure resources from your virtual network over service endpoints. Learn more
Services
Remove service endpoint
Select a service endpoint
Save
Cancel
Give feedback

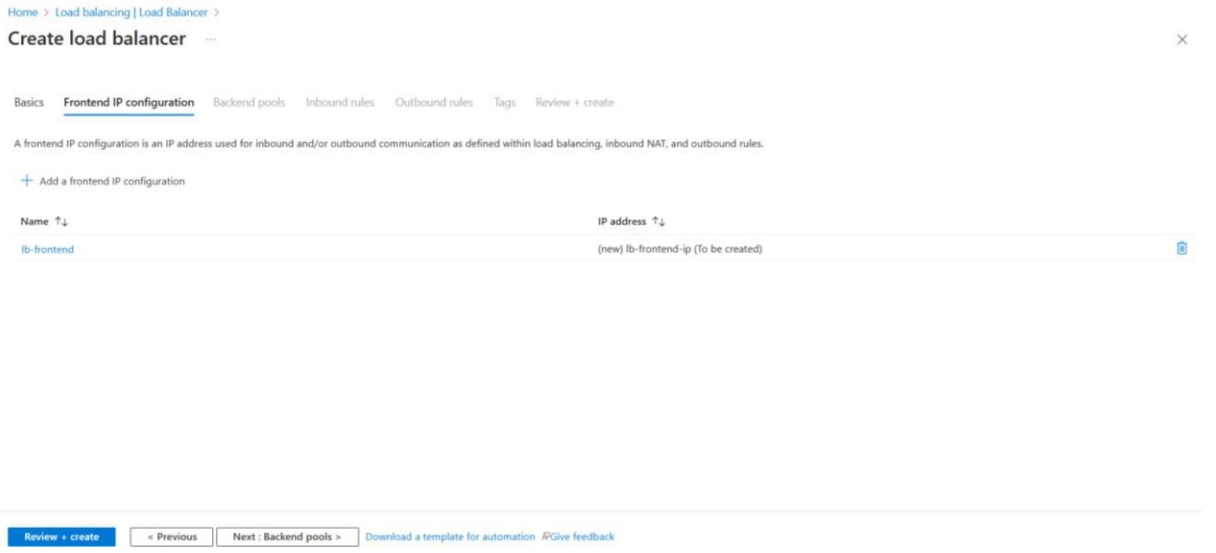

Home >
lb-vnet-1725513873950 | Overview
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Deployment is in progress
Deployment name : lb-vnet-1725513873950
Subscription : Azure for Students
Resource group : load-balancer-rg
Start time : 9/5/2024, 10:54:43 AM
Correlation ID : ea18843e-dbe2-4dd5-9ae7-28968cee7fe1
Deployment details
Resource
Type
Status
Operation details
lb-bastion-ip
Public IP address
OK
Operation details
Give feedback
Tell us about your experience with deployment
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 >

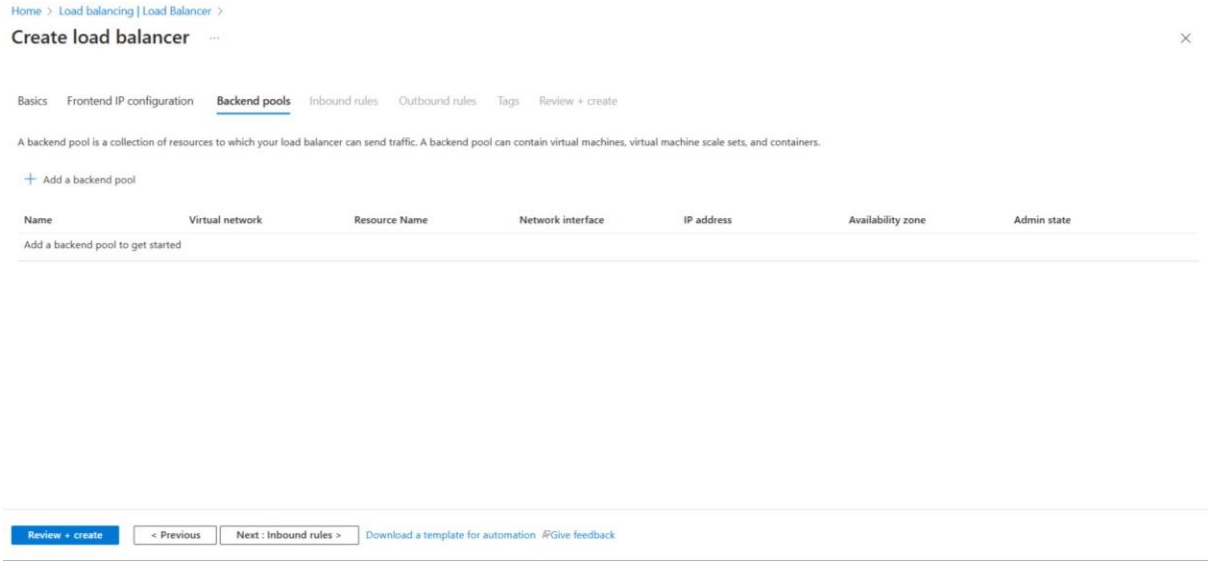

Home > Load balancing
Load balancing | Load Balancer
Search
Overview
Load Balancing Services
Application Gateway
Front Door and CDN profiles
Load Balancer
Traffic Manager
Create
Manage view
Refresh
Export to CSV
Open query
Assign tags
Filter for any field...
Subscription equals all
Resource group equals all
Location equals all
Add filter
Showing 0 to 0 of 0 records.
No grouping
List view
Name
Resource group
Location
Subscription
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 load balancer
Learn more about Load balancers
Give feedback

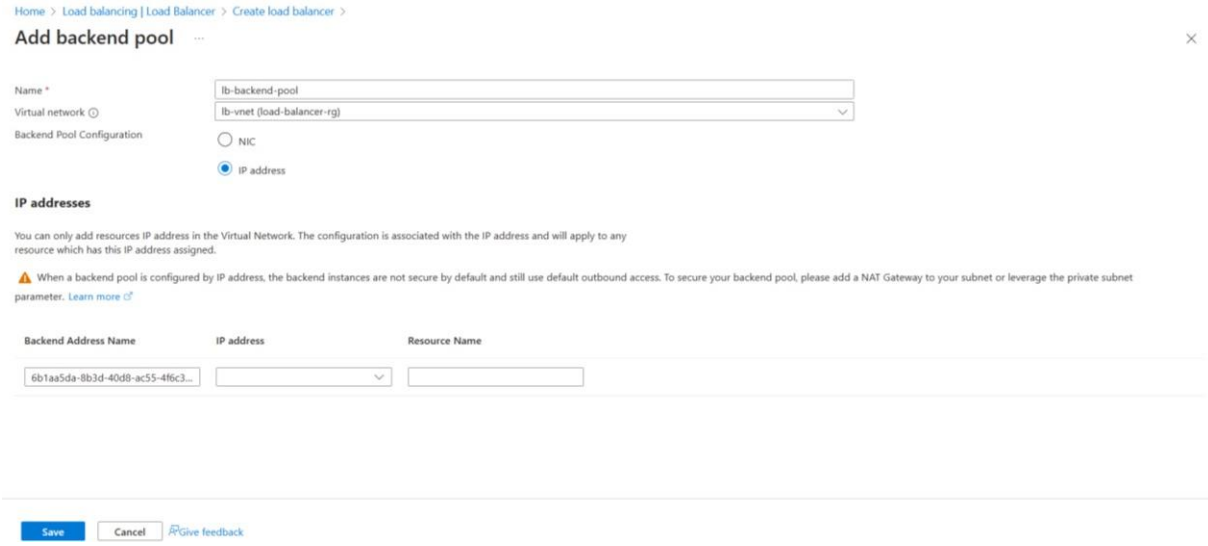

Home > Load balancing | Load Balancer >
Create load balancer
accessible via public IP addresses, or internal where it is only accessible from a virtual network. Azure load balancers also support Network Address Translation (NAT) to route traffic between public and private IP addresses. Learn more.
Project details
Subscription *
Azure for Students
Resource group *
load-balancer-rg
Create new
Instance details
Name *
load-balancer
Region *
Korea Central
SKU *
Standard (Recommended)
Gateway
Basic (Retiring soon)
Type *
Public
Internal
Tier *
Regional
Global
Review + create
< Previous
Next : Frontend IP configuration >
Download a template for automation
Give feedback

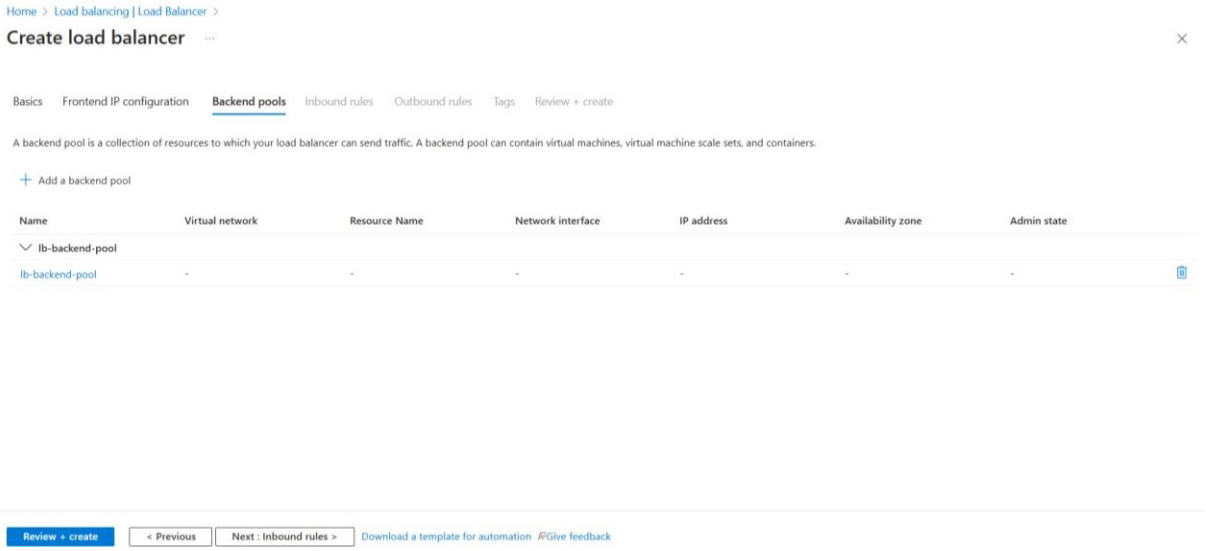

Home > Load balancing | Load Balancer >
Create load balancer
Basics
Frontend IP configuration
Backend pools
Inbound rules
Outbound rules
Tags
Review + create
A frontend IP configuration is an IP address used for inbound and/or outbound communication as defined within load balancing, inbound NAT, and outbound rules.
Add a frontend IP configuration
Name
IP address
Add a frontend IP to get started
Review + create
< Previous
Next : Backend pools >
Download a template for automation
Give feedback

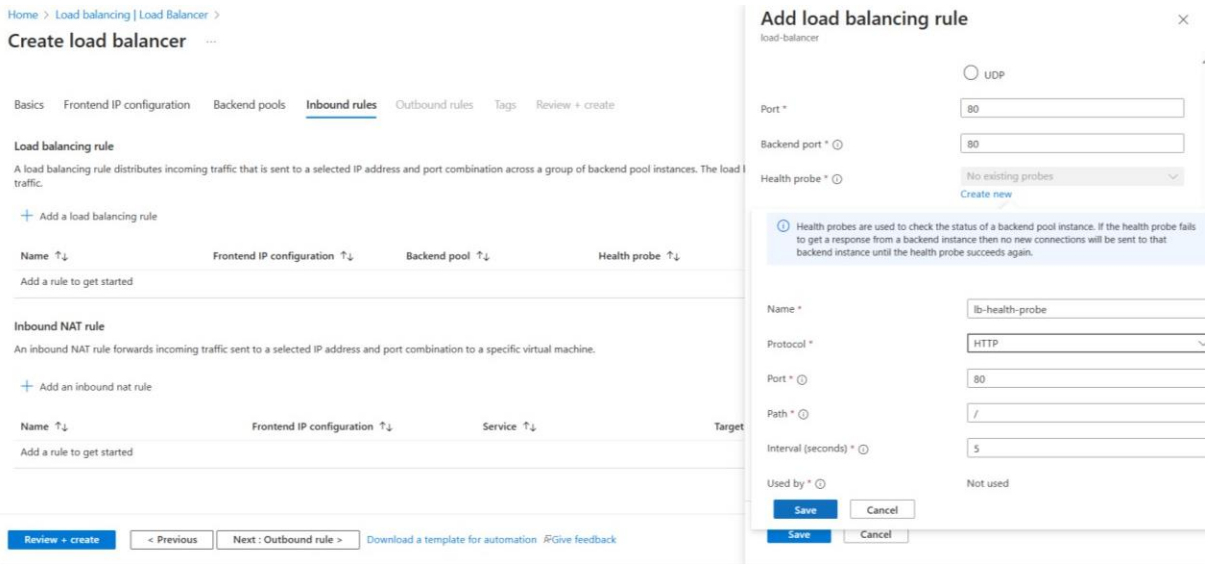

Home > Load balancing | Load Balancer >
Create load balancer
Basics
Frontend IP configuration
Backend pools
Inbound rules
Outbound rules
Tags
Review + create
A frontend IP configuration is an IP address used for inbound and/or outbound communication as defined within load balancing, inbound NAT, and outbound r
Add a frontend IP configuration
Name
IP address
Add a frontend IP to get started
Review + create
< Previous
Next : Backend pools >
Download a template for automation
Give feedback
Add frontend IP configuration
load-balancer
Name *
lb-frontend
IP version
IPv4
IPv6
IP type
IP address
IP prefix
Add a public IP address
Name *
lb-frontend-ip
SKU
Standard
Tier
Regional
Static IPs are assigned at the time the resource is created and released when the resource is deleted. Dynamic IPs are assigned when associating the IP to a resource and is released when yo stop, restart, or delete a resource. Dynamic is only available for Basic SKU.
Assignment
Dynamic
Static
Availability zone *
Zone-redundant
Routing preference
Microsoft network
Internet
Save
Cancel

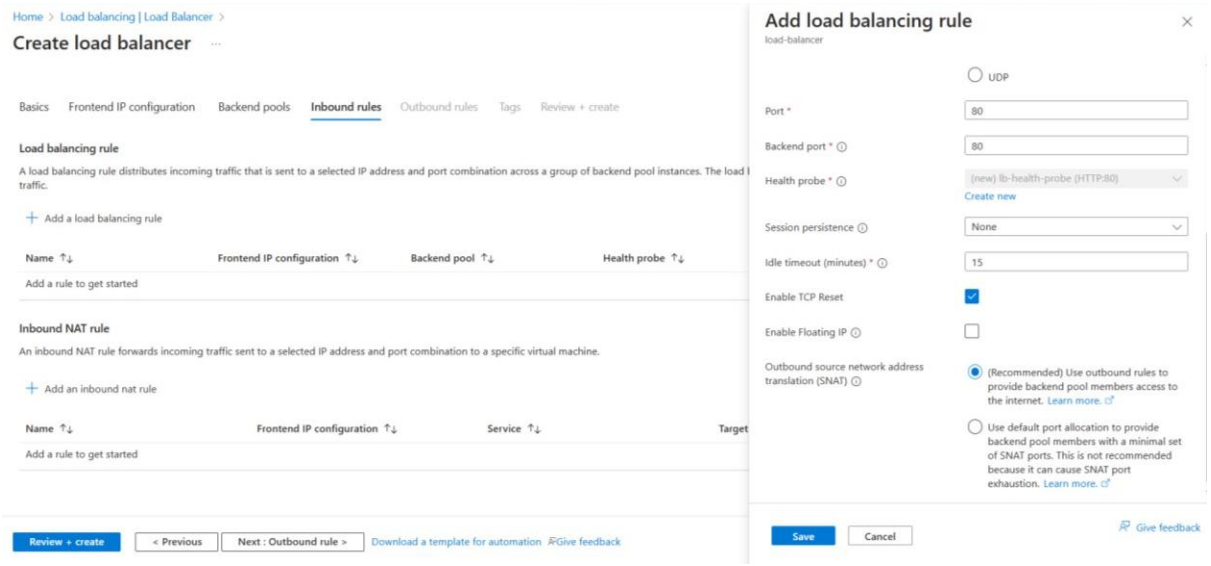

Home > Load balancing | Load Balancer >
Create load balancer
Basics
Frontend IP configuration
Backend pools
Inbound rules
Outbound rules
Tags
Review + create
A frontend IP configuration is an IP address used for inbound and/or outbound communication as defined within load balancing, inbound NAT, and outbound rules.
Add a frontend IP configuration
Name
IP address
lb-frontend
(new) lb-frontend-ip (To be created)
Review + create
< Previous
Next : Backend pools >
Download a template for automation
Give feedback

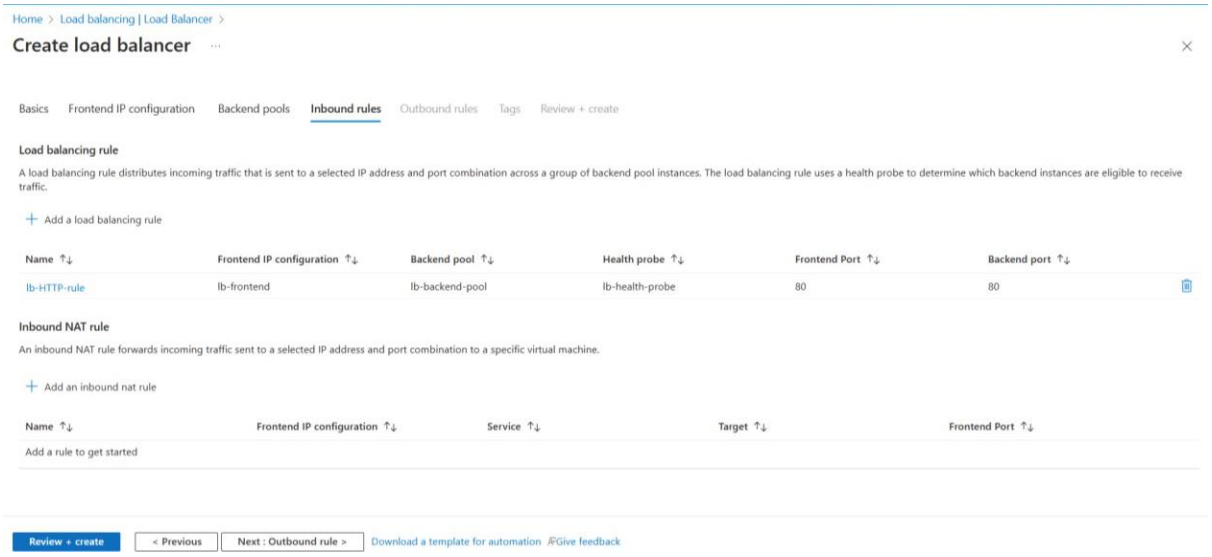

Home > Load balancing | Load Balancer >
Create load balancer
Basics
Frontend IP configuration
Backend pools
Inbound rules
Outbound rules
Tags
Review + create
A backend pool is a collection of resources to which your load balancer can send traffic. A backend pool can contain virtual machines, virtual machine scale sets, and containers.
Add a backend pool
Name
Virtual network
Resource Name
Network interface
IP address
Availability zone
Admin state
Add a backend pool to get started
Review + create
< Previous
Next : Inbound rules >
Download a template for automation
Give feedback

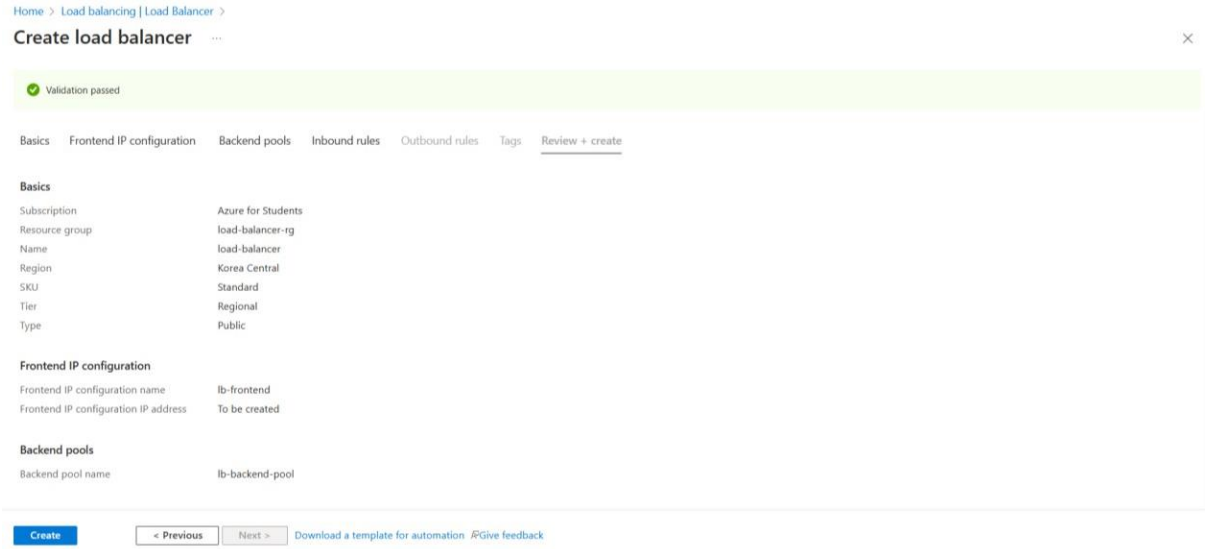

Home > Load balancing | Load Balancer > Create load balancer >
Add backend pool
Name *
lb-backend-pool
Virtual network
lb-vnet (load-balancer-rg)
Backend Pool Configuration
NIC
IP address
IP addresses
You can only add resources IP address in the Virtual Network. The configuration is associated with the IP address and will apply to any resource which has this IP address assigned.
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
Backend Address Name
IP address
Resource Name
6b1aa5da-8b3d-40d8-ac55-4f6c3...
Save
Cancel
Give feedback

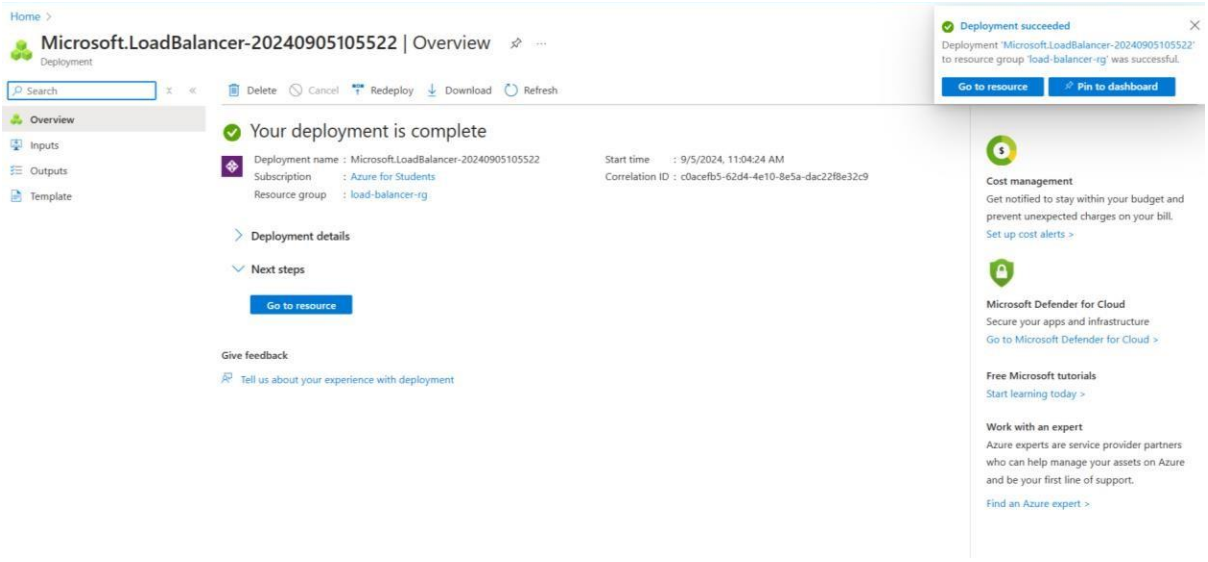

Home > Load balancing | Load Balancer >
Create load balancer
Basics
Frontend IP configuration
Backend pools
Inbound rules
Outbound rules
Tags
Review + create
A backend pool is a collection of resources to which your load balancer can send traffic. A backend pool can contain virtual machines, virtual machine scale sets, and containers.
Add a backend pool
Name
Virtual network
Resource Name
Network interface
IP address
Availability zone
Admin state
lb-backend-pool
lb-backend-pool
Review + create
< Previous
Next : Inbound rules >
Download a template for automation
Give feedback


Home > Load balancing | Load Balancer >
Create load balancer
Basics
Frontend IP configuration
Backend pools
Inbound rules
Outbound rules
Tags
Review + create
Load balancing rule
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.
Add a load balancing rule
Name
Frontend IP configuration
Backend pool
Health probe
Add a rule to get started
Inbound NAT rule
An inbound NAT rule forwards incoming traffic sent to a selected IP address and port combination to a specific virtual machine.
Add an inbound nat rule
Name
Frontend IP configuration
Service
Target
Add a rule to get started
Review + create
< Previous
Next : Outbound rule >
Download a template for automation
Give feedback
Add load balancing rule
load-balancer
UDP
Port *
80
Backend port *
80
Health probe *
No existing probes
Create new
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.
Name *
lb-health-probe
Protocol *
HTTP
Port *
80
Path *
/
Interval (seconds) *
5
Used by *
Not used
Save
Cancel
Save
Cancel


Home > Load balancing | Load Balancer >
Create load balancer
Basics
Frontend IP configuration
Backend pools
Inbound rules
Outbound rules
Tags
Review + create
Load balancing rule
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. The load
traffic.
Add a load balancing rule
Name
Frontend IP configuration
Backend pool
Health probe
Add a rule to get started
Inbound NAT rule
An inbound NAT rule forwards incoming traffic sent to a selected IP address and port combination to a specific virtual machine.
Add an inbound nat rule
Name
Frontend IP configuration
Service
Target
Add a rule to get started
Review + create
< Previous
Next : Outbound rule >
Download a template for automation
Give feedback
Add load balancing rule
load-balancer
UDP
Port *
80
Backend port *
80
Health probe *
(new) lb-health-probe (HTTP:80)
Create new
Session persistence
None
Idle timeout (minutes) *
15
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


Home > Load balancing | Load Balancer >
Create load balancer
Basics
Frontend IP configuration
Backend pools
Inbound rules
Outbound rules
Tags
Review + create
Load balancing rule
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. The load balancing rule uses a health probe to determine which backend instances are eligible to receive traffic.
Add a load balancing rule
Name
Frontend IP configuration
Backend pool
Health probe
Frontend Port
Backend port
lb-HTTP-rule
lb-frontend
lb-backend-pool
lb-health-probe
80
80
Inbound NAT rule
An inbound NAT rule forwards incoming traffic sent to a selected IP address and port combination to a specific virtual machine.
Add an inbound nat rule
Name
Frontend IP configuration
Service
Target
Frontend Port
Add a rule to get started
Review + create
< Previous
Next : Outbound rule >
Download a template for automation
Give feedback


Home > Load balancing | Load Balancer >
Create load balancer
Validation passed
Basics
Frontend IP configuration
Backend pools
Inbound rules
Outbound rules
Tags
Review + create
Basics
Subscription
Azure for Students
Resource group
load-balancer-rg
Name
load-balancer
Region
Korea Central
SKU
Standard
Tier
Regional
Type
Public
Frontend IP configuration
Frontend IP configuration name
lb-frontend
Frontend IP configuration IP address
To be created
Backend pools
Backend pool name
lb-backend-pool
Create
< Previous
Next >
Download a template for automation
Give feedback


Home >
Microsoft.LoadBalancer-20240905105522 | Overview
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Your deployment is complete
Deployment name : Microsoft.LoadBalancer-20240905105522
Subscription : Azure for Students
Resource group : load-balancer-rg
Start time : 9/5/2024, 11:04:24 AM
Correlation ID : c0acefb5-62d4-4e10-8e5a-dac22f8e32c9
Deployment details
Next steps
Go to resource
Give feedback
Tell us about your experience with deployment
Deployment succeeded
Deployment 'Microsoft.LoadBalancer-20240905105522' to resource group 'load-balancer-rg' was successful.
Go to resource
Pin to dashboard
Cost management
Get notified to stay within your budget and prevent unexpected charges on your bill.
Set up cost alerts >
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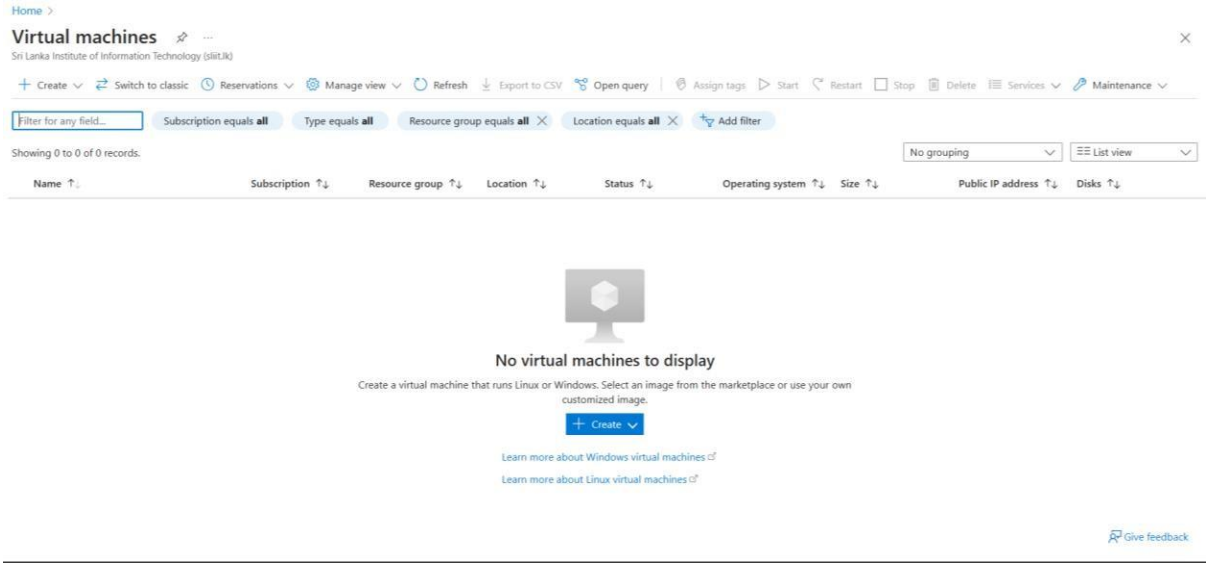
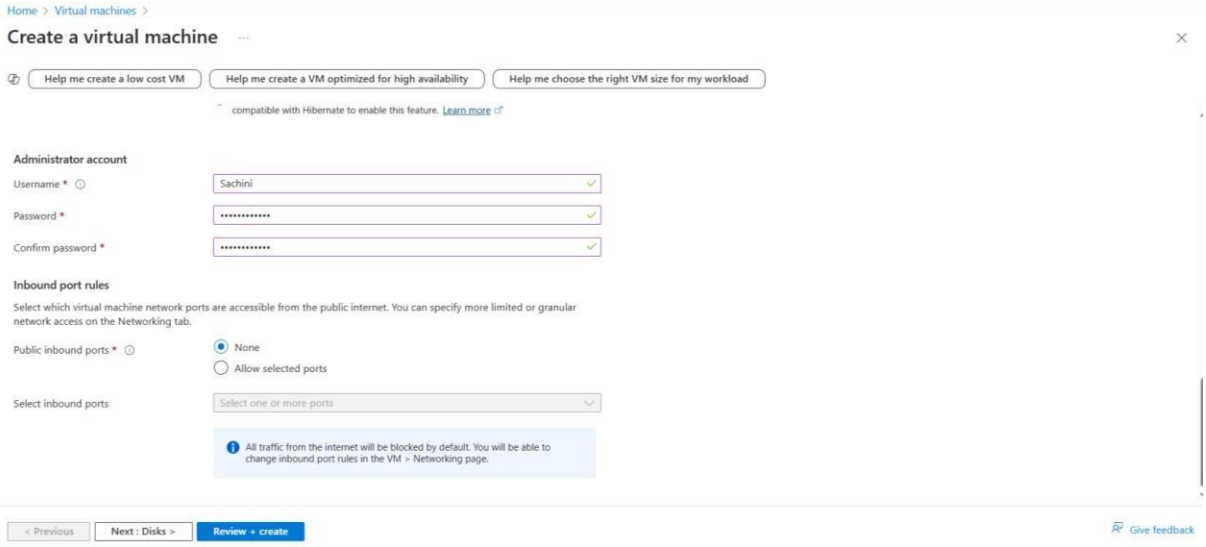
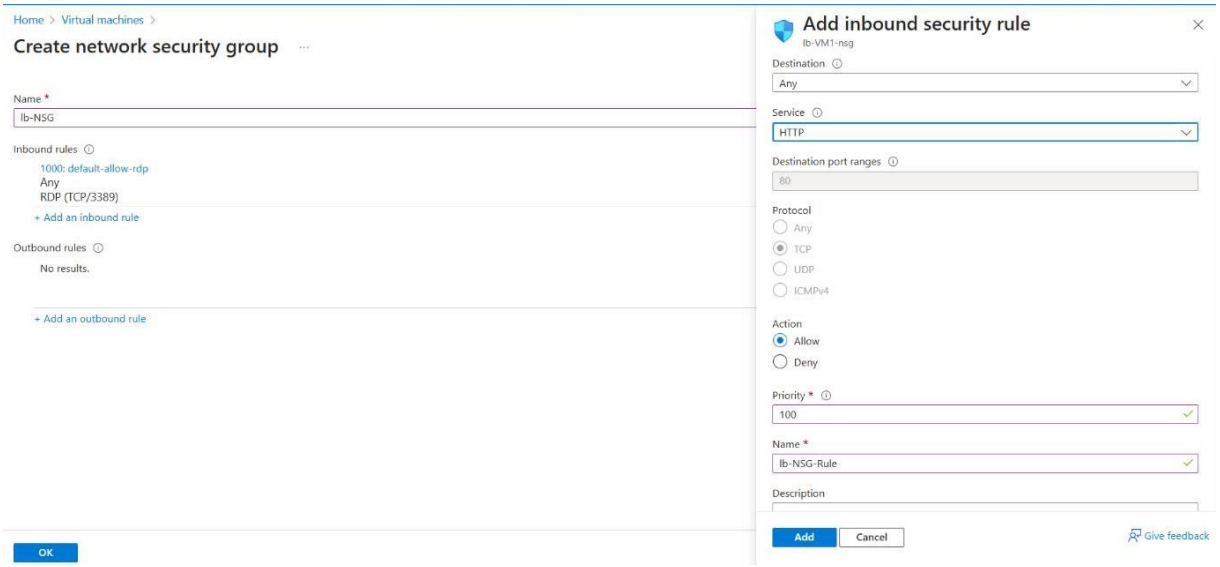
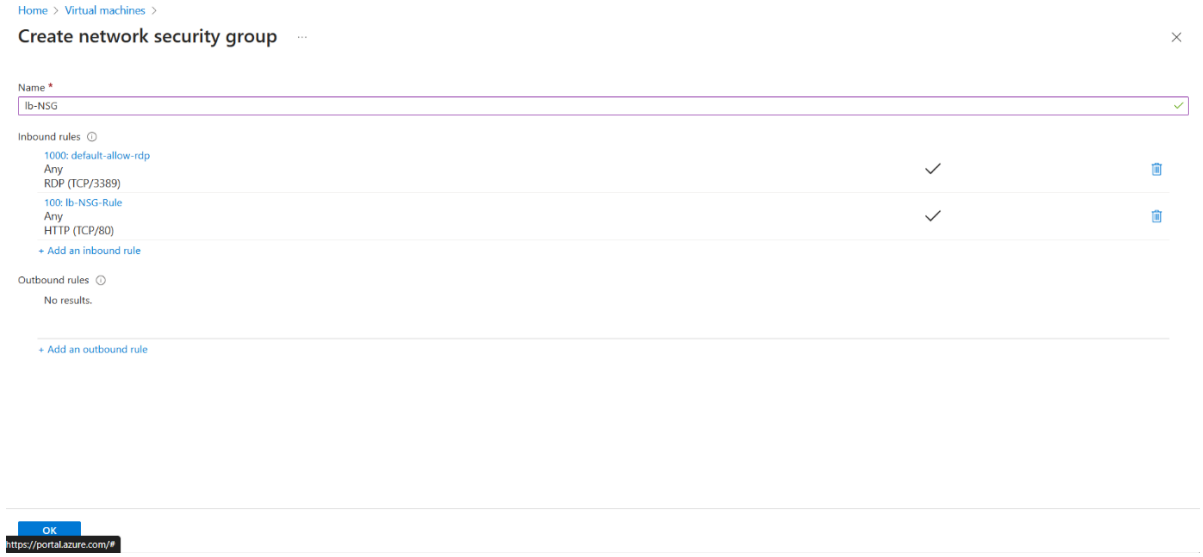
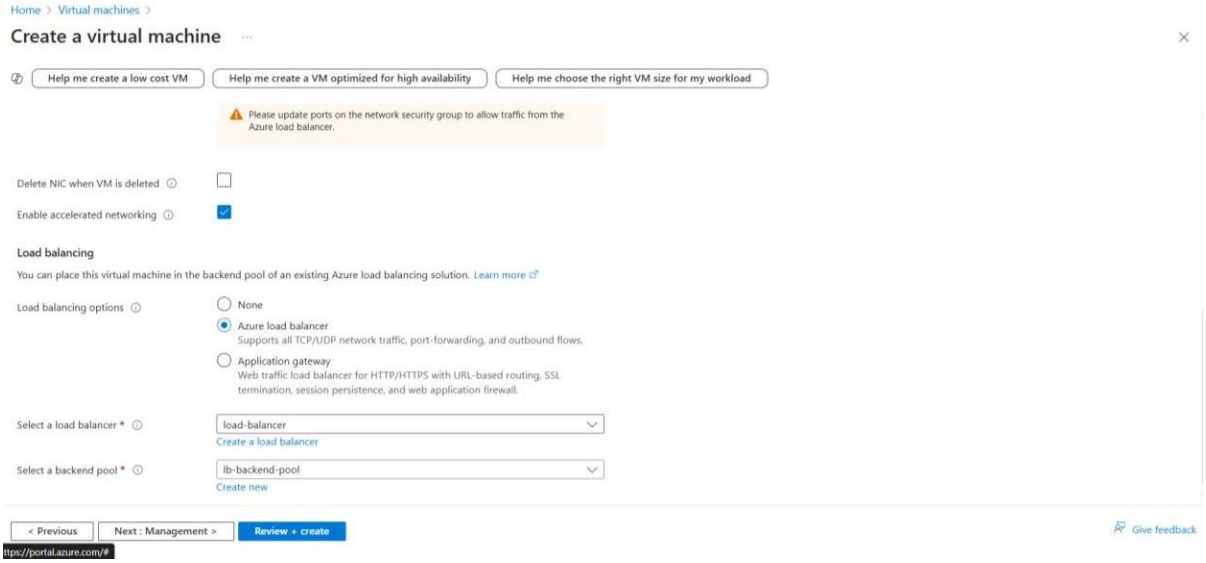
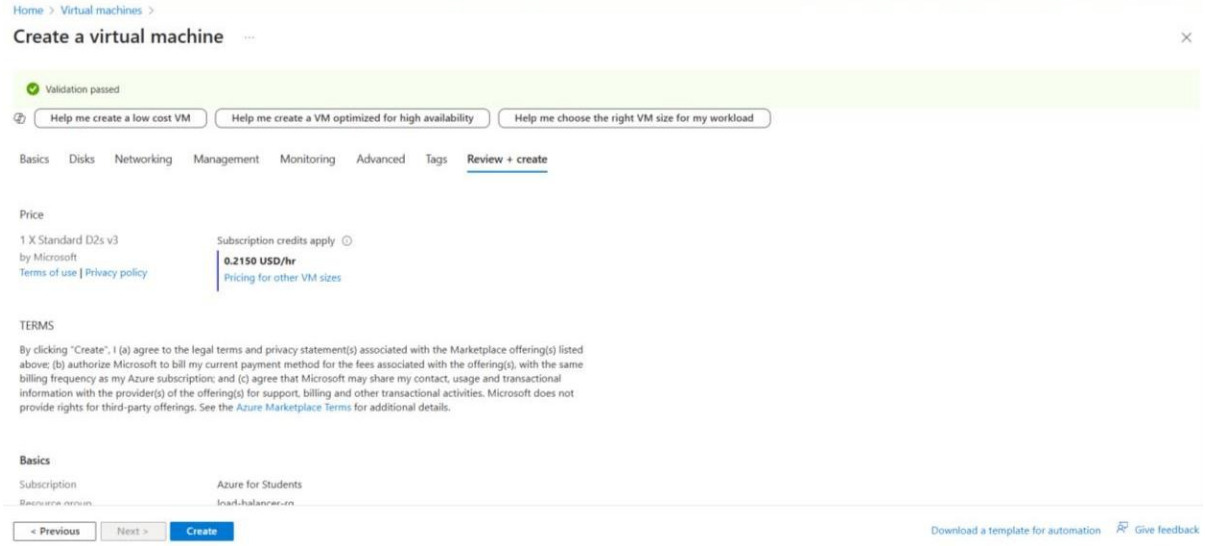

Home >
Virtual machines
Sri Lanka Institute of Information Technology (sliit.lk)
Create
Switch to classic
Reservations
Manage view
Refresh
Export to CSV
Open query
Assign tags
Start
Restart
Stop
Delete
Services
Maintenance
Filter for any field...
Subscription equals all
Type equals all
Resource group equals all
Location equals all
Add filter
Showing 0 to 0 of 0 records.
No grouping
List view
Name
Subscription
Resource group
Location
Status
Operating system
Size
Public IP address
Disks
No virtual machines to display
Create a virtual machine that runs Linux or Windows. Select an image from the marketplace or use your own customized image.
Create
Learn more about Windows virtual machines
Learn more about Linux virtual machines
Give feedback

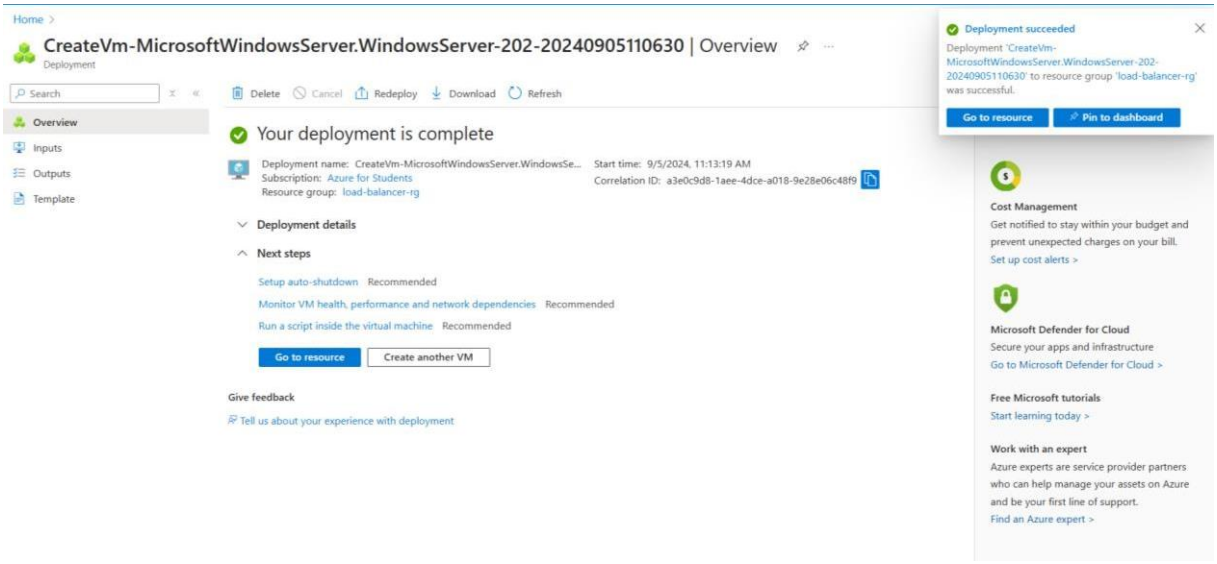

Home > Virtual machines >
Create a virtual machine
Help me create a low cost VM
Help me create a VM optimized for high availability
Help me choose the right VM size for my workload
compatible with Hibernate to enable this feature. Learn more
Administrator account
Username *
Sachini
Password *
Confirm password *
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
Select one or more ports
All traffic from the internet will be blocked by default. You will be able to change inbound port rules in the VM > Networking page.
< Previous
Next : Disks >
Review + create
Give feedback


Home > Virtual machines >
Create network security group
Name *
lb-NSG
Inbound rules
1000: default-allow-rdp
Any
RDP (TCP/3389)
+ Add an inbound rule
Outbound rules
No results.
+ Add an outbound rule
OK
Add inbound security rule
lb-VM1-nsg
Destination
Any
Service
HTTP
Destination port ranges
80
Protocol
Any
TCP
UDP
ICMPv4
Action
Allow
Deny
Priority *
100
Name *
lb-NSG-Rule
Description
Add
Cancel
Give feedback


Home > Virtual machines >
Create network security group
Name *
lb-NSG
Inbound rules
1000: default-allow-rdp
Any
RDP (TCP/3389)
100: lb-NSG-Rule
Any
HTTP (TCP/80)
+ Add an inbound rule
Outbound rules
No results.
+ Add an outbound rule
OK
https://portal.azure.com/#


Home > Virtual machines >
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
Please update ports on the network security group to allow traffic from the Azure load balancer.
Delete NIC when VM is deleted
Enable accelerated networking
Load balancing
You can place this virtual machine in the backend pool of an existing Azure load balancing solution. Learn more
Load balancing options
None
Azure load balancer
Supports all TCP/UDP network traffic, port-forwarding, and outbound flows.
Application gateway
Web traffic load balancer for HTTP/HTTPS with URL-based routing, SSL termination, session persistence, and web application firewall.
Select a load balancer *
load-balancer
Create a load balancer
Select a backend pool *
lb-backend-pool
Create new
< Previous
Next : Management >
Review + create
Give feedback
ttps://portal.azure.com/#


Home > 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
Basics
Disks
Networking
Management
Monitoring
Advanced
Tags
Review + create
Price
1 X Standard D2s v3
by Microsoft
Terms of use | Privacy policy
Subscription credits apply
0.2150 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.
Basics
Subscription
Azure for Students
< Previous
Next >
Create
Download a template for automation
Give feedback


Home
CreateVm-MicrosoftWindowsServer.WindowsServer-202-20240905110630 | Overview
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Your deployment is complete
Deployment name: CreateVm-MicrosoftWindowsServer.WindowsSe...
Subscription: Azure for Students
Resource group: load-balancer-rg
Start time: 9/5/2024, 11:13:19 AM
Correlation ID: a3e0c9d8-1aee-4dce-a018-9e28e06c48f9
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
Deployment succeeded
Deployment 'CreateVm-MicrosoftWindowsServer.WindowsServer-202-20240905110630' to resource group 'load-balancer-rg' was successful.
Go to resource
Pin to dashboard
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 >
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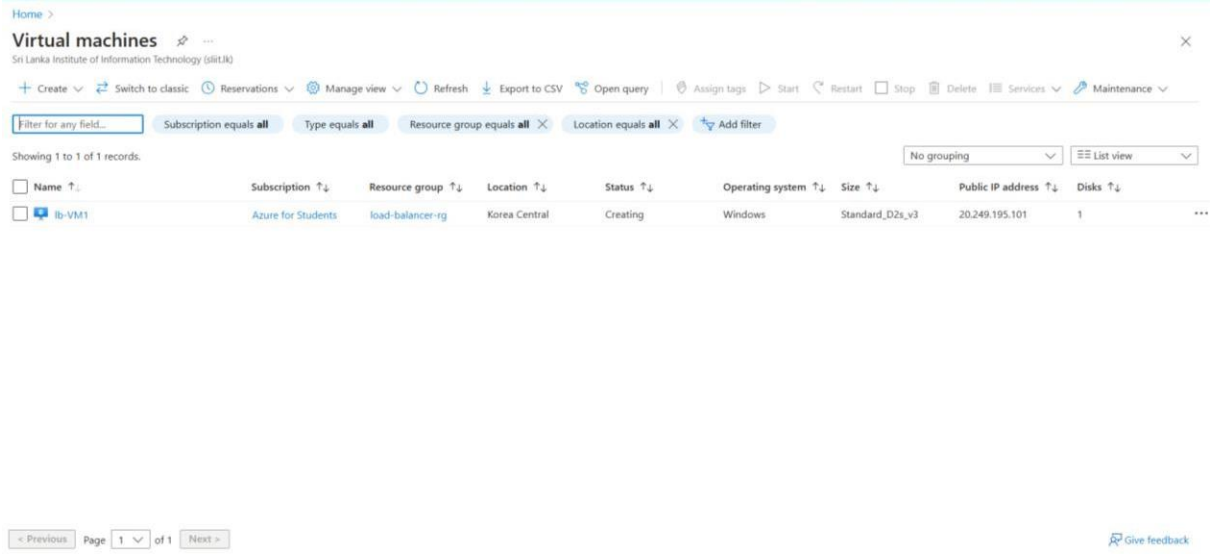
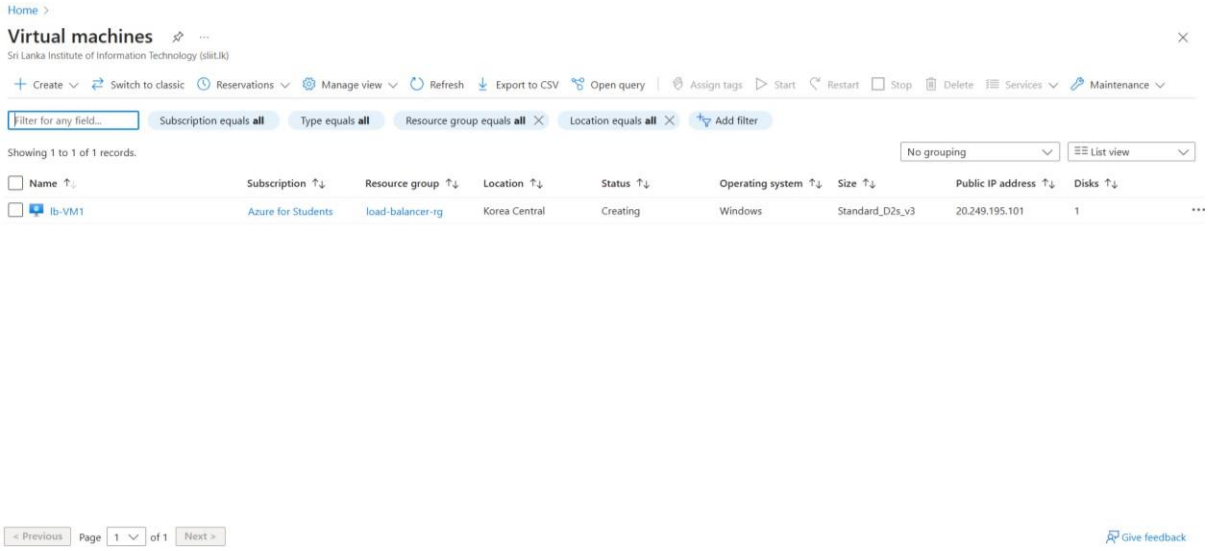

Home
Virtual machines
Sri Lanka Institute of Information Technology (sliit.lk)
Create
Switch to classic
Reservations
Manage view
Refresh
Export to CSV
Open query
Assign tags
Start
Restart
Stop
Delete
Services
Maintenance
Filter for any field...
Subscription equals all
Type equals all
Resource group equals all
Location equals all
Add filter
Showing 1 to 1 of 1 records.
No grouping
List view
Name
Subscription
Resource group
Location
Status
Operating system
Size
Public IP address
Disks
lb-VM1
Azure for Students
load-balancer-rg
Korea Central
Creating
Windows
Standard_D2s_v3
20.249.195.101
1
< Previous
Page 1 of 1
Next >
Give feedback


Home >
Virtual machines
Sri Lanka Institute of Information Technology (sliit.lk)
Create
Switch to classic
Reservations
Manage view
Refresh
Export to CSV
Open query
Assign tags
Start
Restart
Stop
Delete
Services
Maintenance
Filter for any field...
Subscription equals all
Type equals all
Resource group equals all
Location equals all
Add filter
Showing 1 to 1 of 1 records.
No grouping
List view
Name
Subscription
Resource group
Location
Status
Operating system
Size
Public IP address
Disks
lb-VM1
Azure for Students
load-balancer-rg
Korea Central
Creating
Windows
Standard_D2s_v3
20.249.195.101
1
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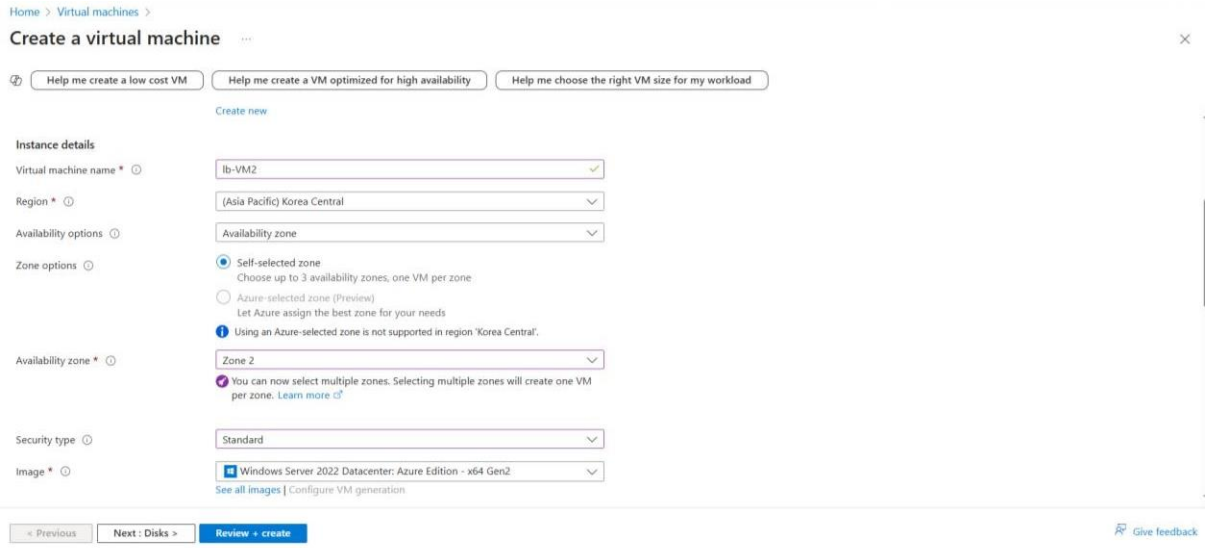
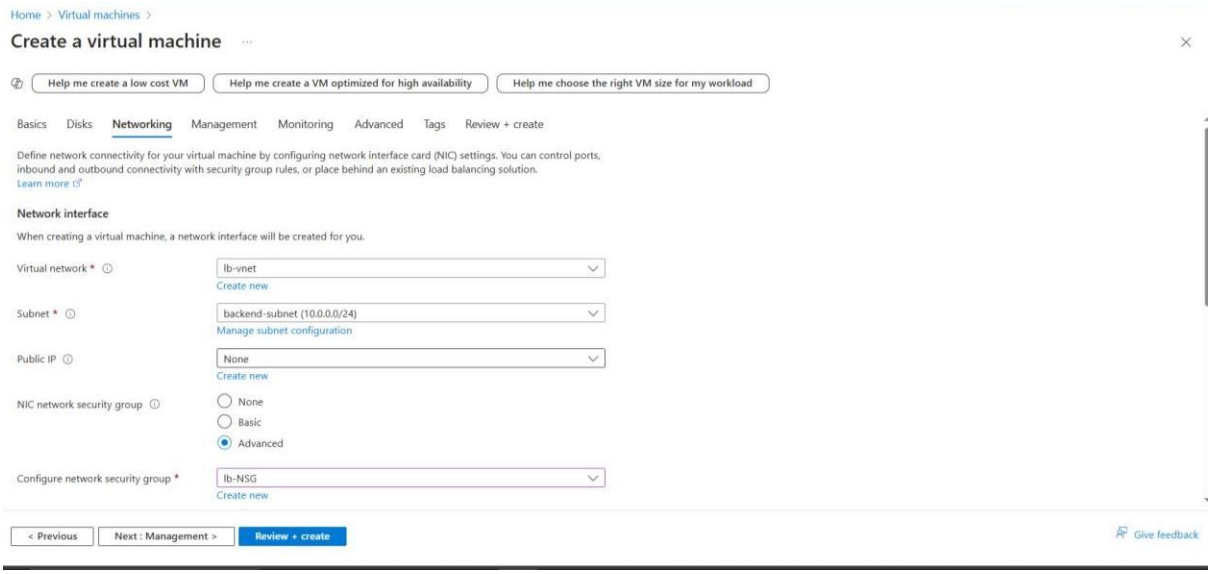
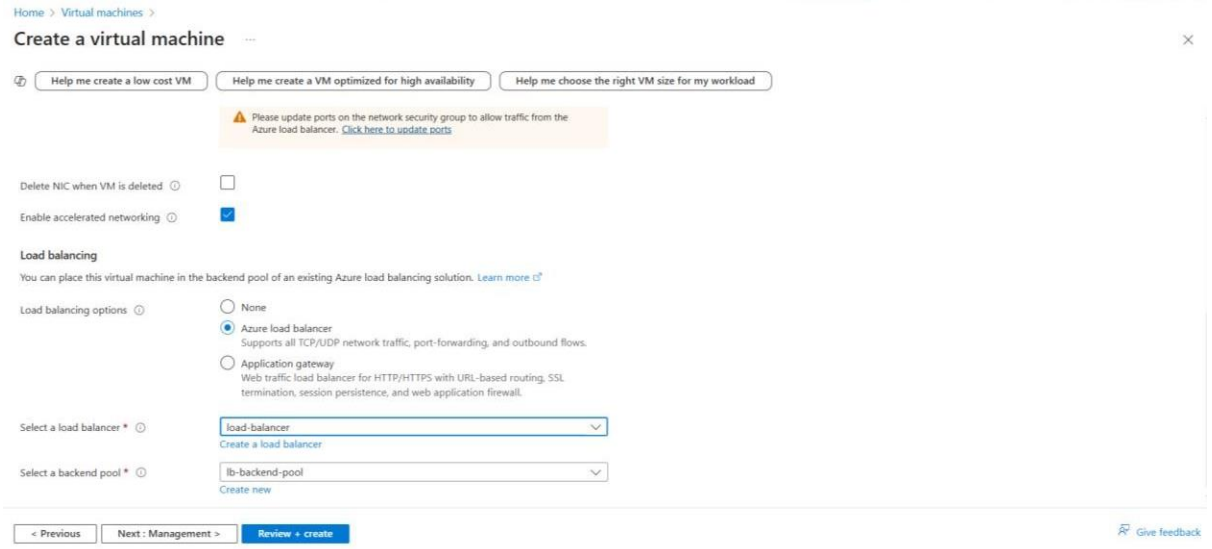
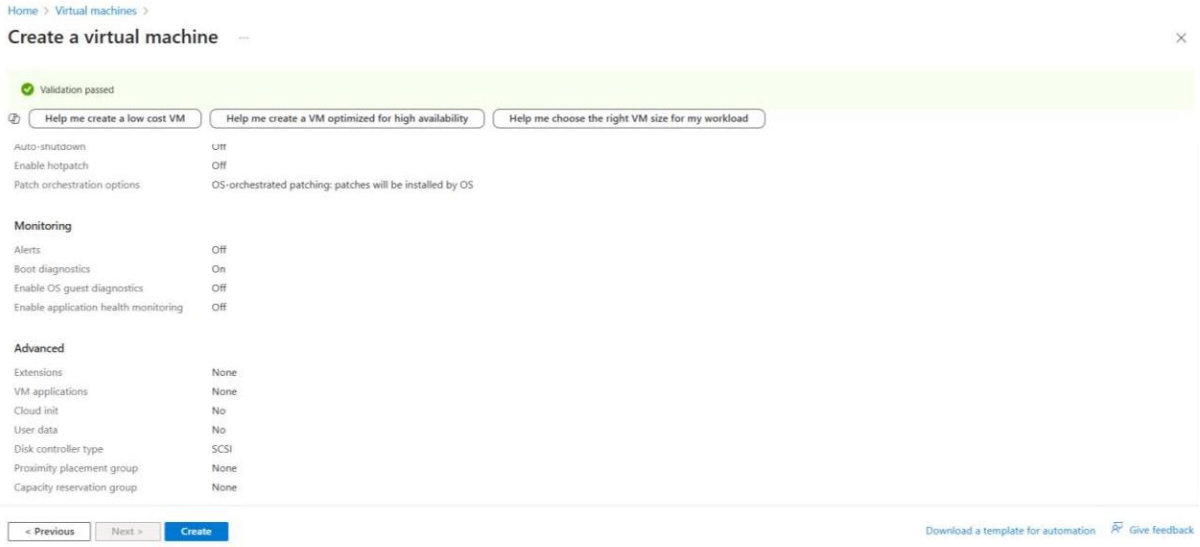
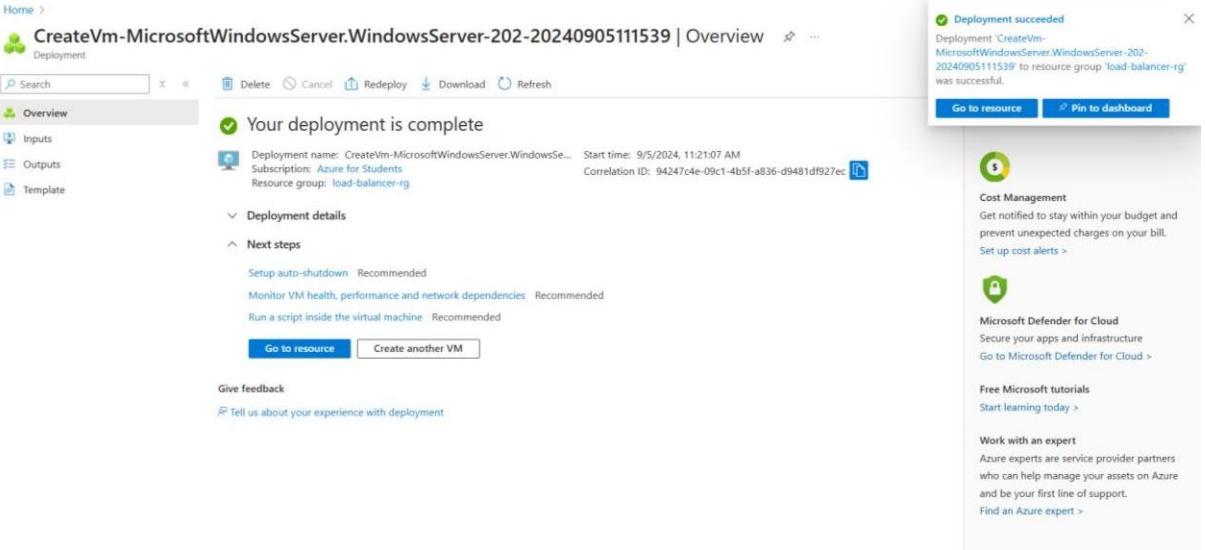
Give feedback


Home > Virtual machines >
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
Create new
Instance details
Virtual machine name *
lb-VM2
Region *
(Asia Pacific) Korea Central
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
Using an Azure-selected zone is not supported in region 'Korea Central'.
Availability zone *
Zone 2
You can now select multiple zones. Selecting multiple zones will create one VM per zone. Learn more
Security type
Standard
Image *
Windows Server 2022 Datacenter: Azure Edition - x64 Gen2
See all images | Configure VM generation
< Previous
Next : Disks >
Review + create
Give feedback


Home > Virtual machines >
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
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 *
lb-vnet
Create new
Subnet *
backend-subnet (10.0.0.0/24)
Manage subnet configuration
Public IP
None
Create new
NIC network security group
None
Basic
Advanced
Configure network security group *
lb-NSG
Create new
< Previous
Next : Management >
Review + create
Give feedback


Home > Virtual machines >
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
Please update ports on the network security group to allow traffic from the Azure load balancer. Click here to update ports
Delete NIC when VM is deleted
Enable accelerated networking
Load balancing
You can place this virtual machine in the backend pool of an existing Azure load balancing solution. Learn more
Load balancing options
None
Azure load balancer
Supports all TCP/UDP network traffic, port-forwarding, and outbound flows.
Application gateway
Web traffic load balancer for HTTP/HTTPS with URL-based routing, SSL termination, session persistence, and web application firewall.
Select a load balancer *
load-balancer
Create a load balancer
Select a backend pool *
lb-backend-pool
Create new
< Previous
Next : Management >
Review + create
Give feedback


Home > 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
Auto-shutdown Off
Enable hotpatch Off
Patch orchestration options OS-orchestrated patching: patches will be installed by OS
Monitoring
Alerts Off
Boot diagnostics On
Enable OS guest diagnostics Off
Enable application health monitoring Off
Advanced
Extensions None
VM applications None
Cloud init No
User data No
Disk controller type SCSI
Proximity placement group None
Capacity reservation group None
< Previous
Next >
Create
Download a template for automation
Give feedback


Home >
CreateVm-MicrosoftWindowsServer.WindowsServer-202-20240905111539 | Overview
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Your deployment is complete
Deployment name: CreateVm-MicrosoftWindowsServer.WindowsSe...
Subscription: Azure for Students
Resource group: load-balancer-rg
Start time: 9/5/2024, 11:21:07 AM
Correlation ID: 94247c4e-09c1-4b5f-a836-d9481df927ec
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
Deployment succeeded
Deployment 'CreateVm-MicrosoftWindowsServer.WindowsServer-202-20240905111539' to resource group 'load-balancer-rg' was successful.
Go to resource
Pin to dashboard
Cost Management
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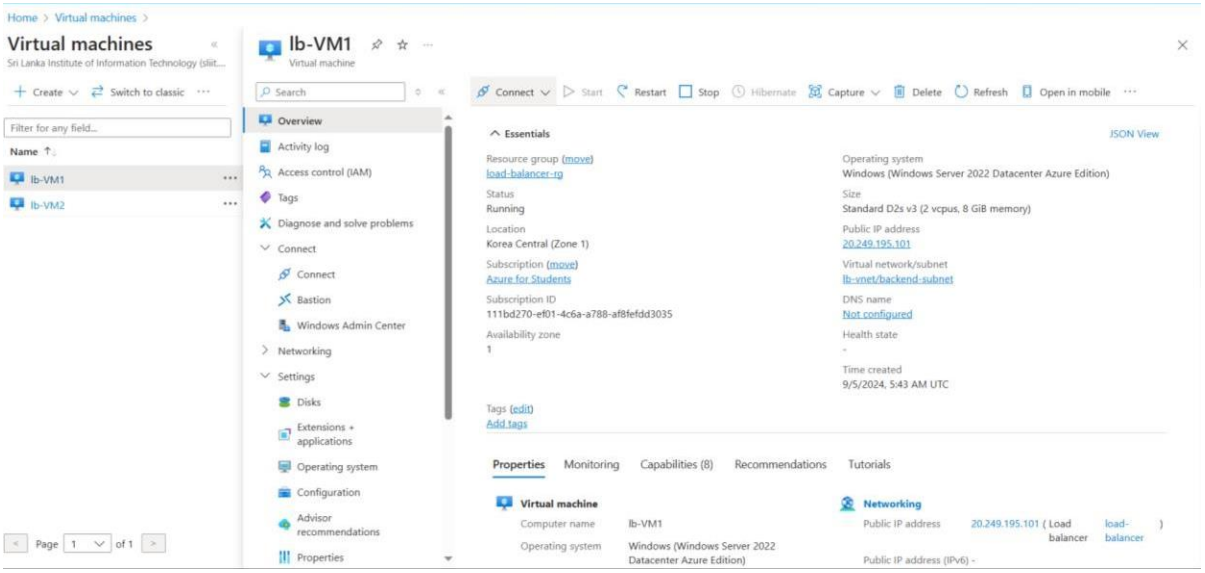
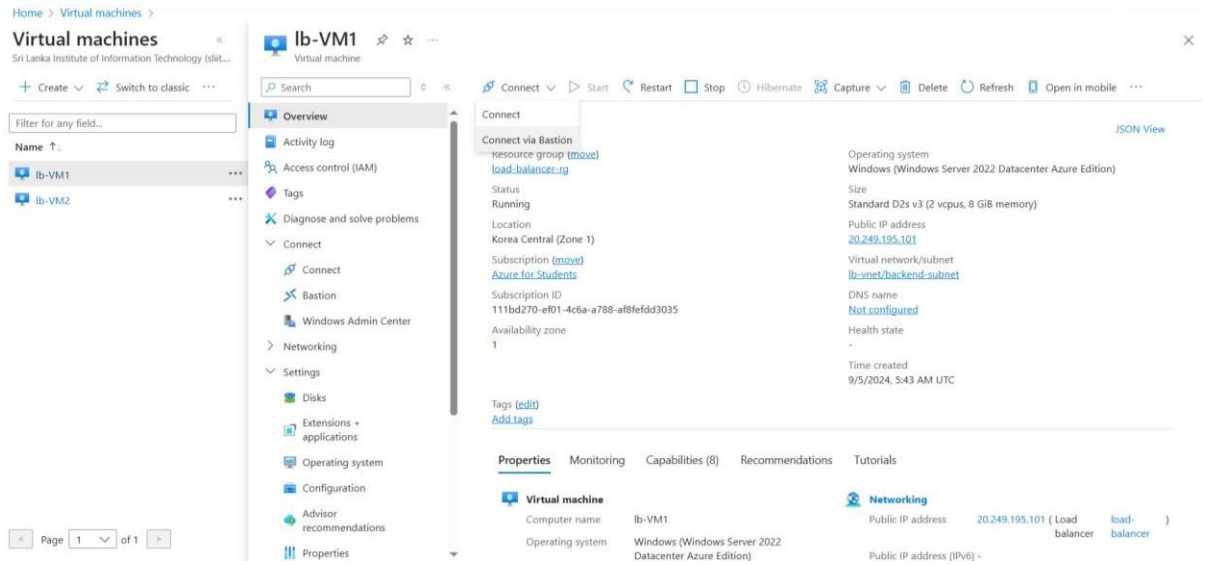

Home > Virtual machines >
Virtual machines
Sri Lanka Institute of Information Technology (sliit...
Create
Switch to classic
Filter for any field...
Name
lb-VM1
lb-VM2
Page 1 of 1
lb-VM1
Virtual machine
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Connect
Connect
Bastion
Windows Admin Center
Networking
Settings
Disks
Extensions + applications
Operating system
Configuration
Advisor recommendations
Properties
Connect
Start
Restart
Stop
Hibernate
Capture
Delete
Refresh
Open in mobile
Essentials
JSON View
Resource group (move)
load-balancer-rg
Status
Running
Location
Korea Central (Zone 1)
Subscription (move)
Azure for Students
Subscription ID
111bd270-ef01-4c6a-a788-af8fefdd3035
Availability zone
1
Operating system
Windows (Windows Server 2022 Datacenter Azure Edition)
Size
Standard D2s v3 (2 vcpus, 8 GiB memory)
Public IP address
20.249.195.101
Virtual network/subnet
lb-vnet/backend-subnet
DNS name
Not configured
Health state
-
Time created
9/5/2024, 5:43 AM UTC
Tags (edit)
Add tags
Properties
Monitoring
Capabilities (8)
Recommendations
Tutorials
Virtual machine
Computer name
lb-VM1
Operating system
Windows (Windows Server 2022 Datacenter Azure Edition)
Networking
Public IP address
20.249.195.101 ( Load balancer load-balancer )
Public IP address (IPv6) -


Home > Virtual machines >
Virtual machines
Sri Lanka Institute of Information Technology (sliit...
Create
Switch to classic
Filter for any field...
Name
lb-VM1
lb-VM2
Page 1 of 1
lb-VM1
Virtual machine
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Connect
Connect
Bastion
Windows Admin Center
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Settings
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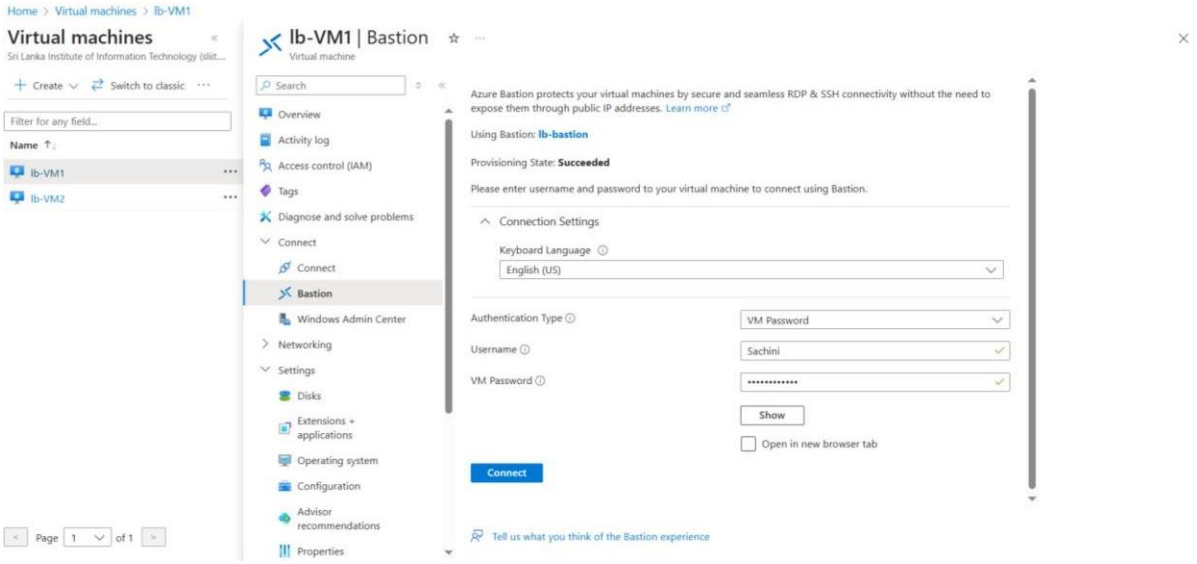
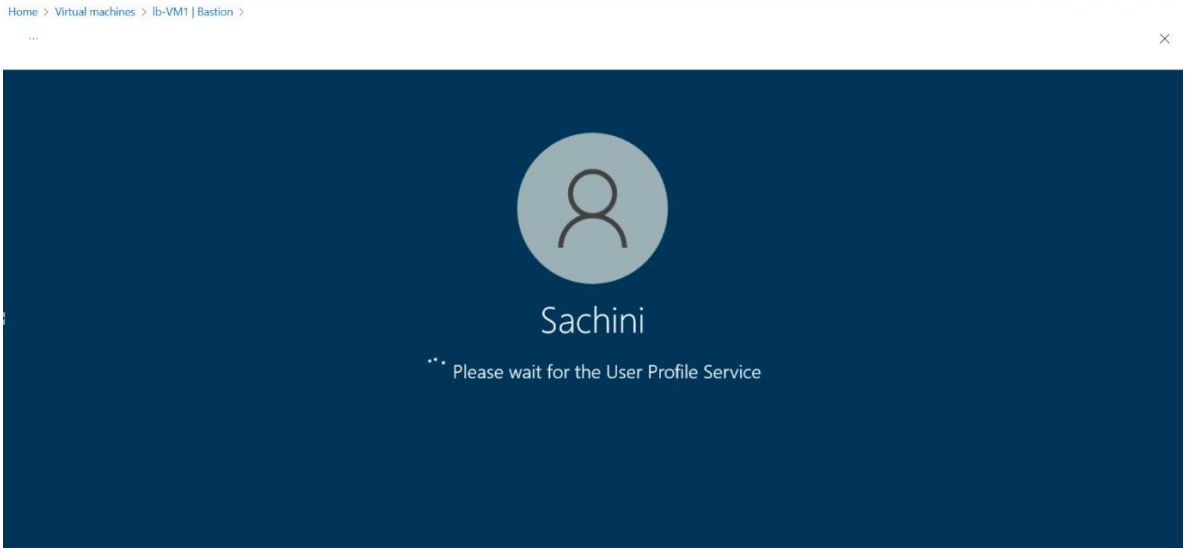
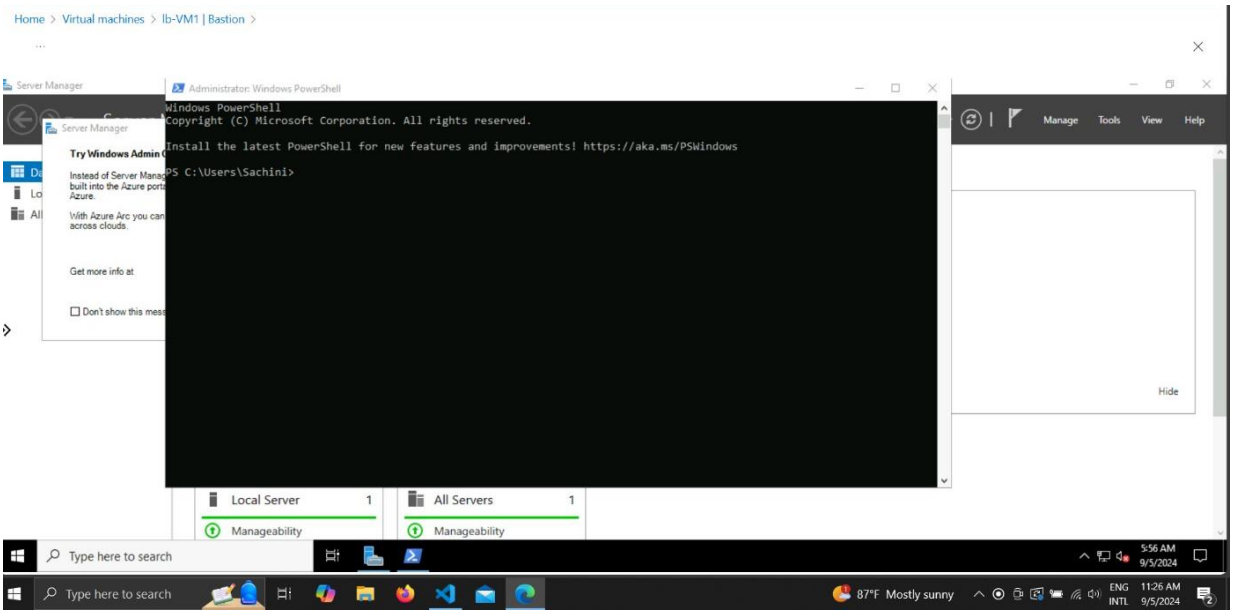
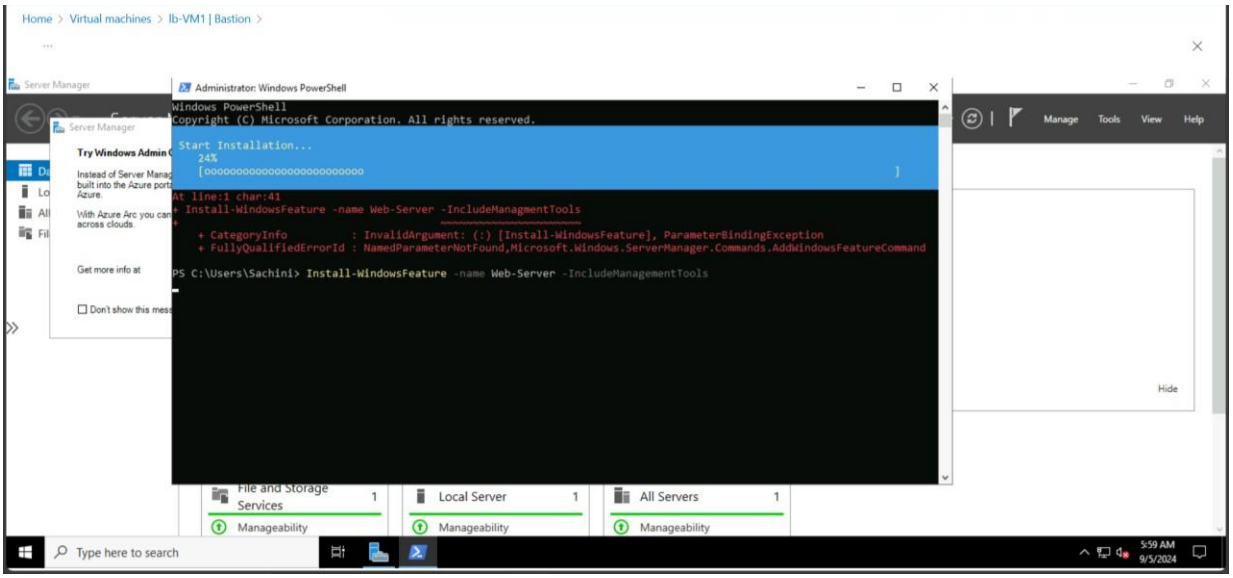
Operating system
Configuration
Advisor recommendations
Properties
Connect
Start
Restart
Stop
Hibernate
Capture
Delete
Refresh
Open in mobile
Connect
Connect via Bastion
JSON View
Resource group (move)
load-balancer-rg
Status
Running
Location
Korea Central (Zone 1)
Subscription (move)
Azure for Students
Subscription ID
111bd270-ef01-4c6a-a788-af8fefdd3035
Availability zone
1
Operating system
Windows (Windows Server 2022 Datacenter Azure Edition)
Size
Standard D2s v3 (2 vcpus, 8 GiB memory)
Public IP address
20.249.195.101
Virtual network/subnet
lb-vnet/backend-subnet
DNS name
Not configured
Health state
-
Time created
9/5/2024, 5:43 AM UTC
Tags (edit)
Add tags
Properties
Monitoring
Capabilities (8)
Recommendations
Tutorials
Virtual machine
Computer name
lb-VM1
Operating system
Windows (Windows Server 2022 Datacenter Azure Edition)
Networking
Public IP address
20.249.195.101 ( Load balancer load-balancer )
Public IP address (IPv6) -


Home > Virtual machines > lb-VM1
Virtual machines
Sri Lanka Institute of Information Technology (slit...
Create
Switch to classic
Filter for any field...
Name
lb-VM1
lb-VM2
Page 1 of 1
lb-VM1 | Bastion
Virtual machine
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Connect
Connect
Bastion
Windows Admin Center
Networking
Settings
Disks
Extensions + applications
Operating system
Configuration
Advisor recommendations
Properties
Azure Bastion protects your virtual machines by secure and seamless RDP & SSH connectivity without the need to expose them through public IP addresses. Learn more
Using Bastion: lb-bastion
Provisioning State: Succeeded
Please enter username and password to your virtual machine to connect using Bastion.
Connection Settings
Keyboard Language
English (US)
Authentication Type
VM Password
Username
Sachini
VM Password
Show
Open in new browser tab
Connect
Tell us what you think of the Bastion experience


Home > Virtual machines > lb-VM1 | Bastion >
Sachini
Please wait for the User Profile Service


Home > Virtual machines > lb-VM1 | Bastion >
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
PS C:\Users\Sachini>
Server Manager
Manage
Tools
View
Help
Local Server 1
All Servers 1
Manageability
Type here to search
87°F Mostly sunny
5:56 AM
9/5/2024
11:26 AM
9/5/2024


Home > Virtual machines > lb-VM1 | Bastion >
Administrator: Windows PowerShell
Windows PowerShell
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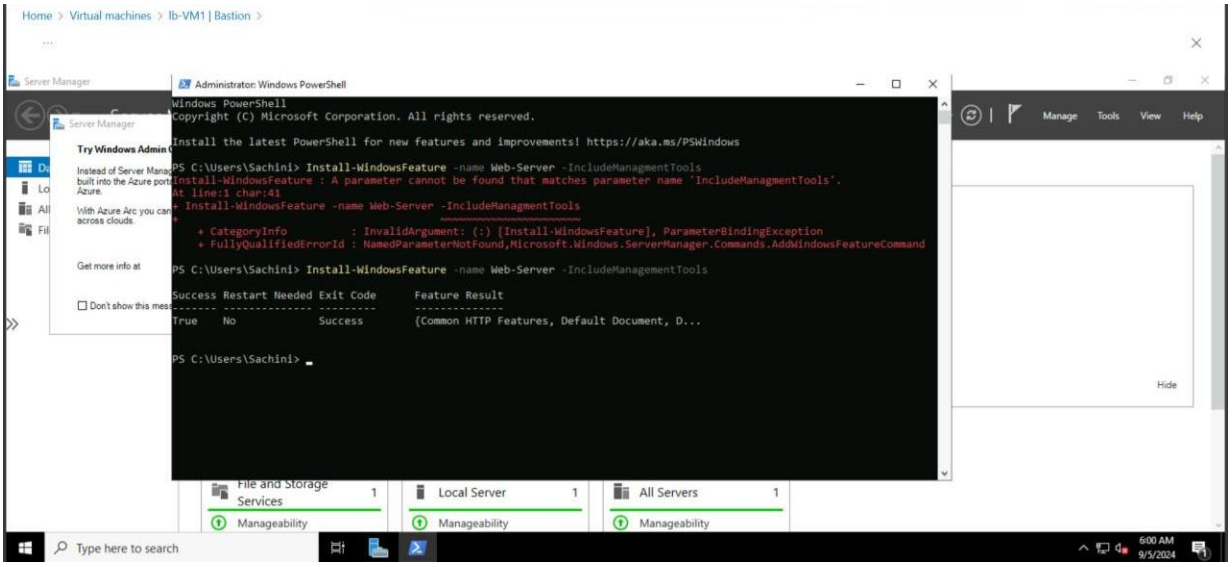
Start Installation...
24%
At line:1 char:41
+ Install-WindowsFeature -name Web-Server -IncludeManagmentTools
+ CategoryInfo : InvalidArgument: (:) [Install-WindowsFeature], ParameterBindingException
+ FullyQualifiedErrorId : NamedParameterNotFound,Microsoft.Windows.ServerManager.Commands.AddWindowsFeatureCommand
PS C:\Users\Sachini> Install-WindowsFeature -name Web-Server -IncludeManagementTools
Server Manager
Manage
Tools
View
Help
File and Storage Services 1
Local Server 1
All Servers 1
Manageability
Type here to search
5:59 AM
9/5/2024


Home > Virtual machines > lb-VM1 | Bastion >
Administrator: Windows PowerShell
Windows PowerShell
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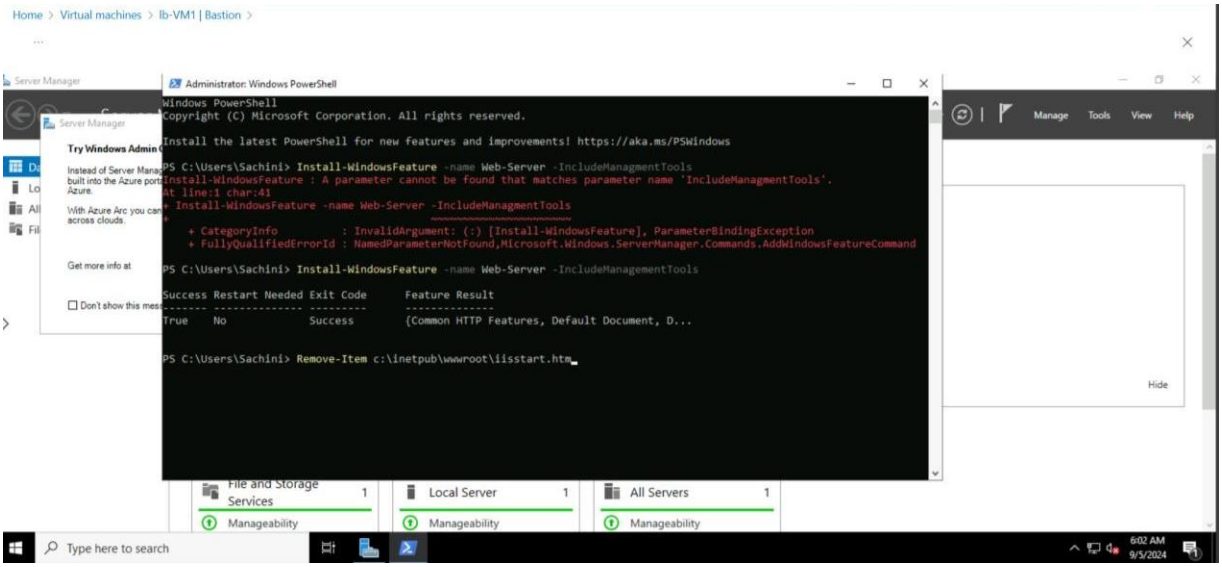
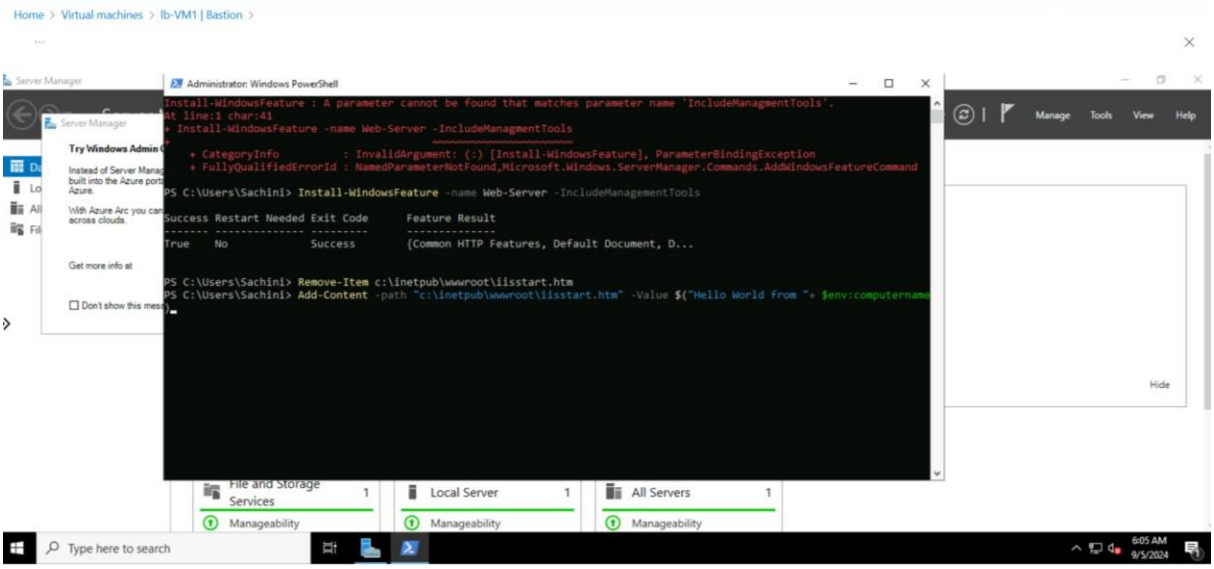
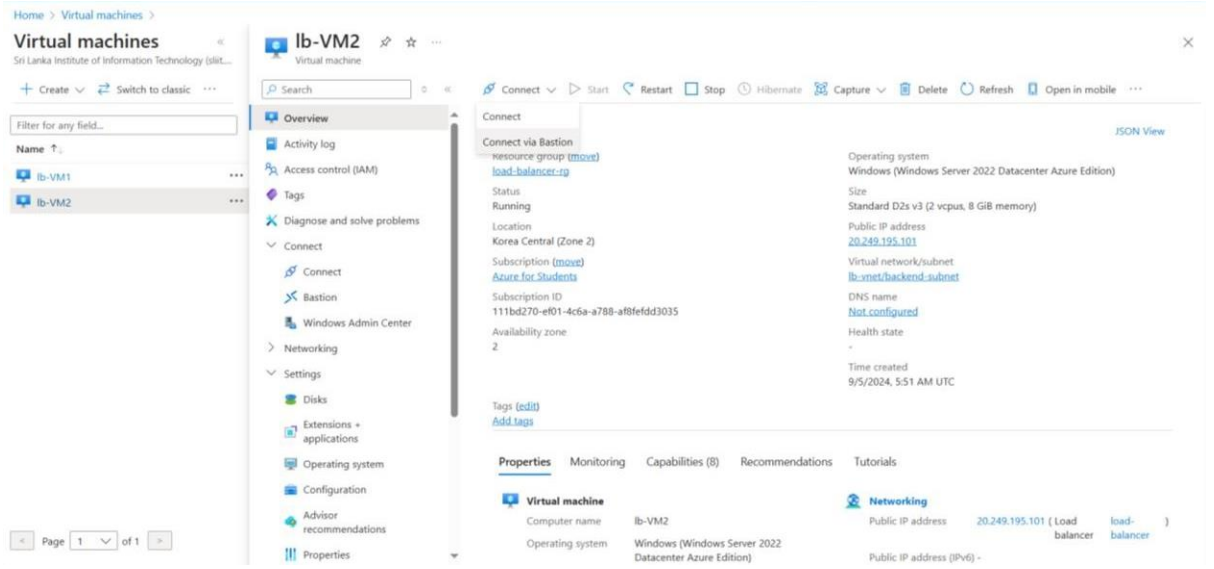
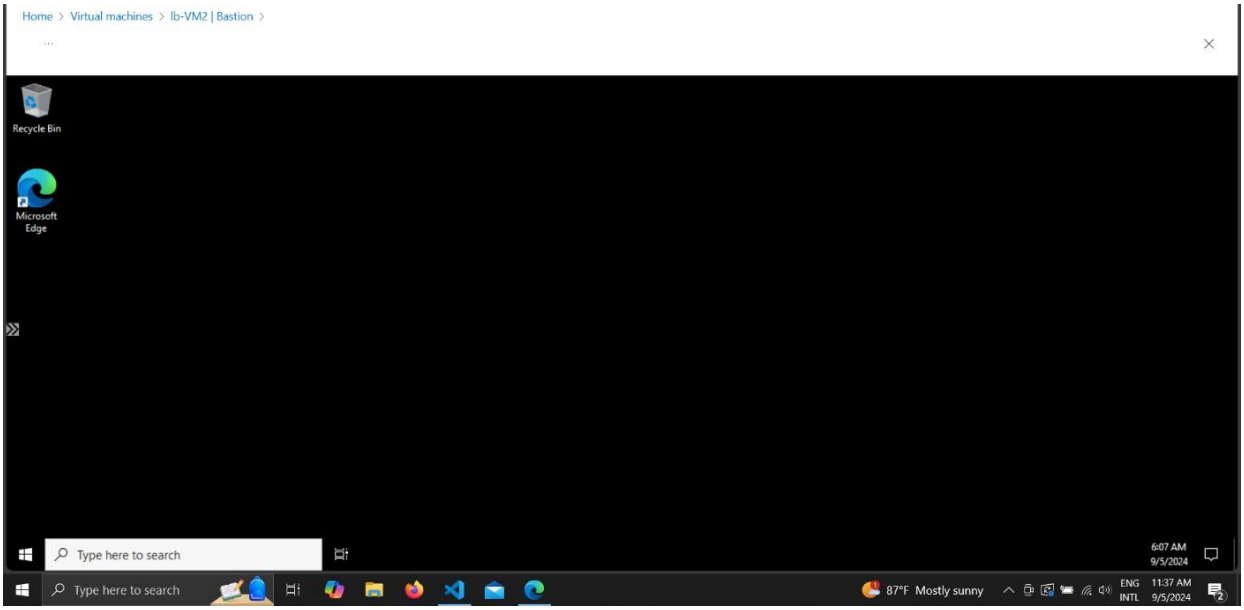
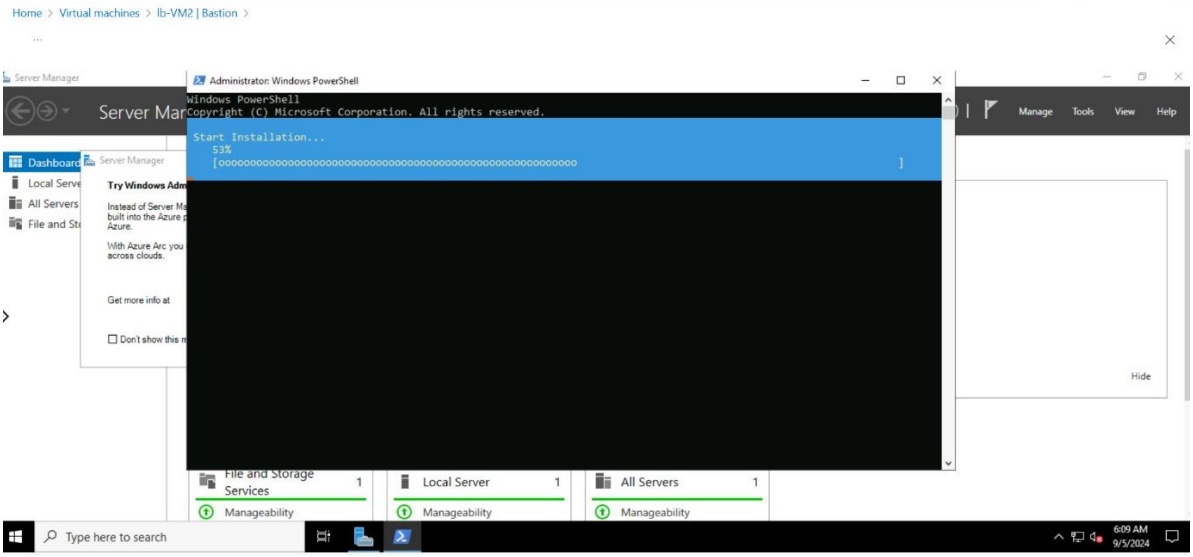
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
PS C:\Users\Sachini> Install-WindowsFeature -name Web-Server -IncludeManagmentTools
Install-WindowsFeature : A parameter cannot be found that matches parameter name 'IncludeManagmentTools'.
At line:1 char:41
+ Install-WindowsFeature -name Web-Server -IncludeManagmentTools
+ CategoryInfo : InvalidArgument: (:) [Install-WindowsFeature], ParameterBindingException
+ FullyQualifiedErrorId : NamedParameterNotFound,Microsoft.Windows.ServerManager.Commands.AddWindowsFeatureCommand
PS C:\Users\Sachini> Install-WindowsFeature -name Web-Server -IncludeManagementTools
Success Restart Needed Exit Code Feature Result
True No Success {Common HTTP Features, Default Document, D...
PS C:\Users\Sachini>
Server Manager
Manage Tools View Help
File and Storage Services 1
Local Server 1
All Servers 1
Manageability
Type here to search
6:00 AM
9/5/2024


Home > Virtual machines > lb-VM1 | Bastion >
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
PS C:\Users\Sachini> Install-WindowsFeature -name Web-Server -IncludeManagmentTools
Install-WindowsFeature : A parameter cannot be found that matches parameter name 'IncludeManagmentTools'.
At line:1 char:41
+ Install-WindowsFeature -name Web-Server -IncludeManagmentTools
+ CategoryInfo : InvalidArgument: (:) [Install-WindowsFeature], ParameterBindingException
+ FullyQualifiedErrorId : NamedParameterNotFound,Microsoft.Windows.ServerManager.Commands.AddWindowsFeatureCommand
PS C:\Users\Sachini> Install-WindowsFeature -name Web-Server -IncludeManagementTools
Success Restart Needed Exit Code Feature Result
True No Success {Common HTTP Features, Default Document, D...
PS C:\Users\Sachini> Remove-Item c:\inetpub\wwwroot\iisstart.htm
Server Manager
Manage Tools View Help
File and Storage Services 1
Local Server 1
All Servers 1
Manageability
Type here to search
6:02 AM
9/5/2024


Home > Virtual machines > lb-VM1 | Bastion >
Administrator: Windows PowerShell
Install-WindowsFeature : A parameter cannot be found that matches parameter name 'IncludeManagmentTools'.
At line:1 char:41
+ Install-WindowsFeature -name Web-Server -IncludeManagmentTools
+ CategoryInfo : InvalidArgument: (:) [Install-WindowsFeature], ParameterBindingException
+ FullyQualifiedErrorId : NamedParameterNotFound,Microsoft.Windows.ServerManager.Commands.AddWindowsFeatureCommand
PS C:\Users\Sachini> Install-WindowsFeature -name Web-Server -IncludeManagementTools
Success Restart Needed Exit Code Feature Result
True No Success {Common HTTP Features, Default Document, D...
PS C:\Users\Sachini> Remove-Item c:\inetpub\wwwroot\iisstart.htm
PS C:\Users\Sachini> Add-Content -path "c:\inetpub\wwwroot\iisstart.htm" -Value $("Hello World from "+ $env:computername
Server Manager
Manage
Tools
View
Help
Hide
File and Storage Services
Local Server
All Servers
Manageability
Type here to search
6:05 AM
9/5/2024


Home > Virtual machines >
Virtual machines
Sri Lanka Institute of Information Technology (slit...
Create
Switch to classic
Filter for any field...
Name
lb-VM1
lb-VM2
Page 1 of 1
lb-VM2
Virtual machine
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Connect
Connect
Bastion
Windows Admin Center
Networking
Settings
Disks
Extensions + applications
Operating system
Configuration
Advisor recommendations
Properties
Connect
Start
Restart
Stop
Hibernate
Capture
Delete
Refresh
Open in mobile
Connect
Connect via Bastion
JSON View
Resource group (move)
load-balancer-rg
Status
Running
Location
Korea Central (Zone 2)
Subscription (move)
Azure for Students
Subscription ID
111bd270-ef01-4c6a-a788-af8fefdd3035
Availability zone
2
Operating system
Windows (Windows Server 2022 Datacenter Azure Edition)
Size
Standard D2s v3 (2 vcpus, 8 GiB memory)
Public IP address
20.249.195.101
Virtual network/subnet
lb-vnet/backend-subnet
DNS name
Not configured
Health state
Time created
9/5/2024, 5:51 AM UTC
Tags (edit)
Add tags
Properties
Monitoring
Capabilities (8)
Recommendations
Tutorials
Virtual machine
Computer name
lb-VM2
Operating system
Windows (Windows Server 2022 Datacenter Azure Edition)
Networking
Public IP address
20.249.195.101 ( Load balancer load-balancer )
Public IP address (IPv6) -


Home > Virtual machines > lb-VM2 | Bastion >
Recycle Bin
Microsoft Edge
Type here to search
6:07 AM
9/5/2024
Type here to search
87°F Mostly sunny
ENG
INTL
11:37 AM
9/5/2024


Home > Virtual machines > lb-VM2 | Bastion >
Server Manager
Administrator: Windows PowerShell
Windows PowerShell
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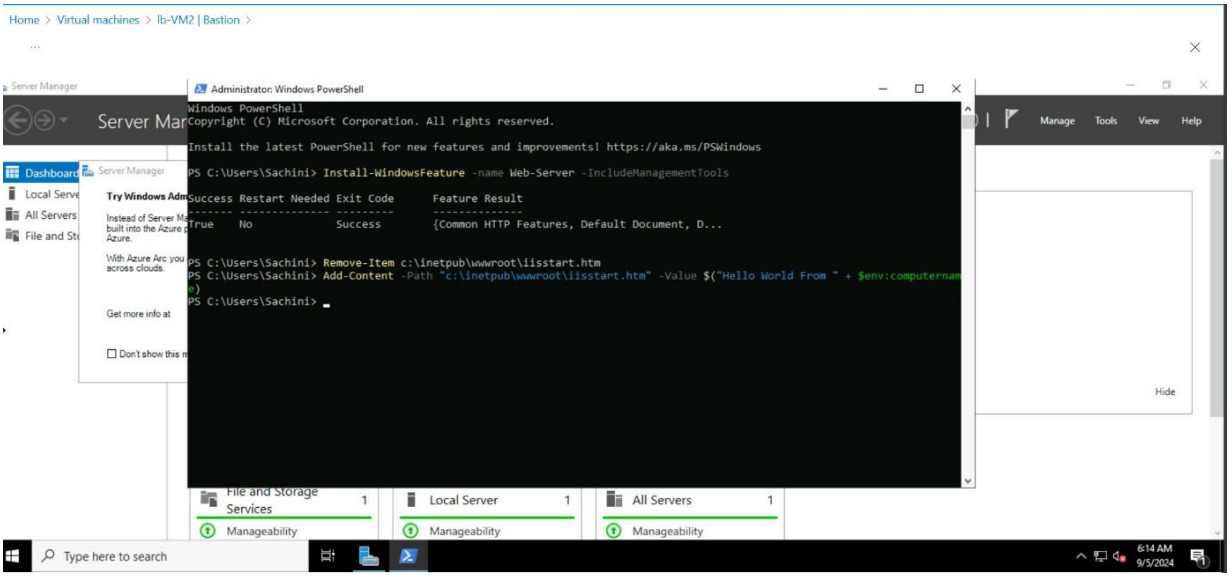
Start Installation...
53%
Manage
Tools
View
Help
Dashboard
Local Serve
All Servers
Try Windows Adm
Get more info at
Hide
File and Storage Services
Local Server
All Servers
Manageability
Type here to search
6:09 AM
9/5/2024


Home > Virtual machines > lb-VM2 | Bastion >
Administrator: Windows PowerShell
Windows PowerShell
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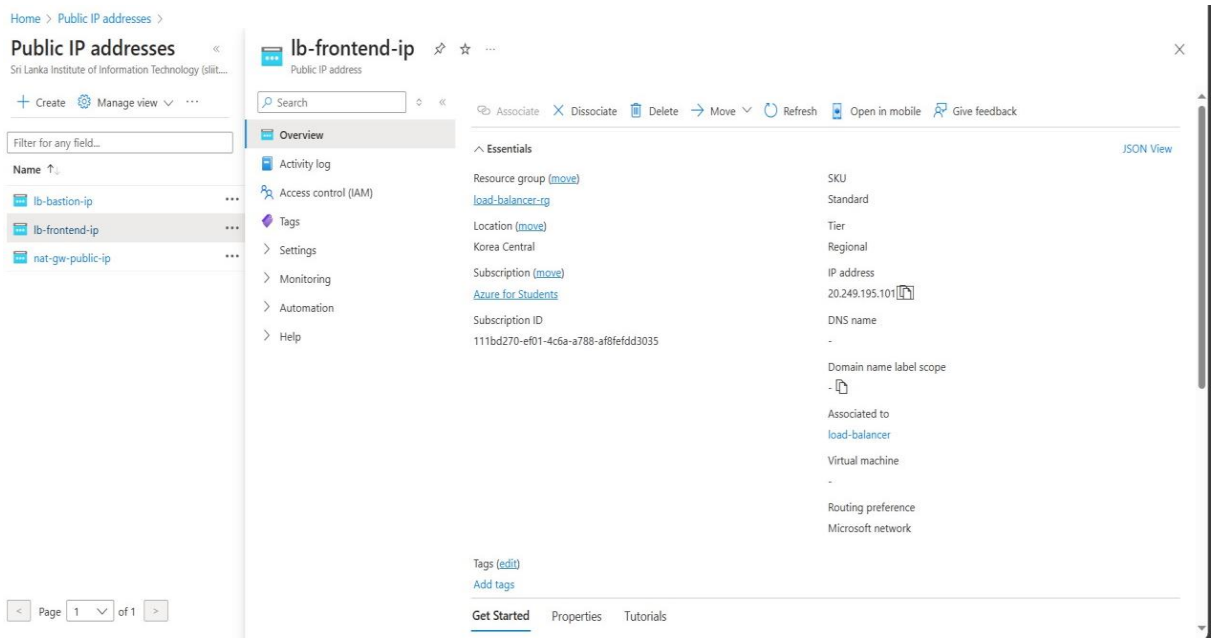
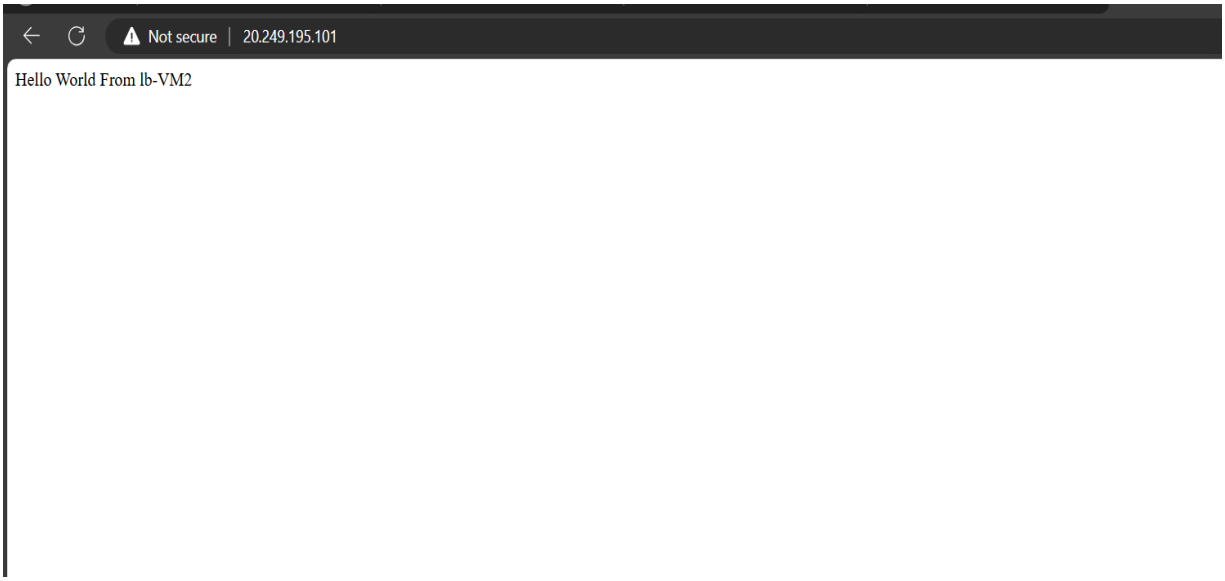
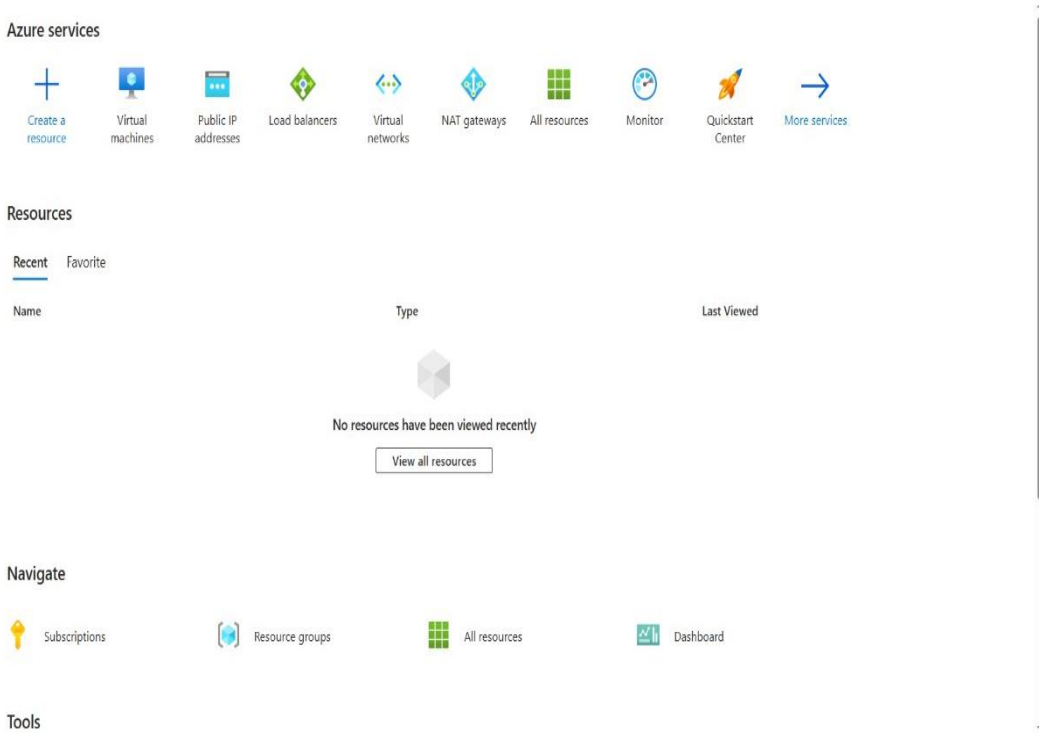
PS C:\Users\Sachini> Install-WindowsFeature -name Web-Server -IncludeManagementTools
Success Restart Needed Exit Code Feature Result
True No Success {Common HTTP Features, Default Document, D...
PS C:\Users\Sachini> Remove-Item c:\inetpub\wwwroot\iisstart.htm
PS C:\Users\Sachini> Add-Content -Path "c:\inetpub\wwwroot\iisstart.htm" -Value $("Hello World From " + $env:computername)
PS C:\Users\Sachini>
File and Storage Services
Local Server
All Servers
Manageability
Type here to search


Home > Public IP addresses >
Public IP addresses
lb-frontend-ip
Public IP address
Create
Manage view
Filter for any field...
Name
lb-bastion-ip
lb-frontend-ip
nat-gw-public-ip
Search
Overview
Activity log
Access control (IAM)
Tags
Settings
Monitoring
Automation
Help
Associate
Dissociate
Delete
Move
Refresh
Open in mobile
Give feedback
Essentials
JSON View
Resource group (move)
load-balancer-rg
Location (move)
Korea Central
Subscription (move)
Azure for Students
Subscription ID
111bd270-ef01-4c6a-a788-af8fefdd3035
SKU
Standard
Tier
Regional
IP address
20.249.195.101
DNS name
-
Domain name label scope
-
Associated to
load-balancer
Virtual machine
-
Routing preference
Microsoft network
Tags (edit)
Add tags
Get Started
Properties
Tutorials
Page 1 of 1


Not secure | 20.249.195.101
Hello World From lb-VM2


Azure services
Create a resource
Virtual machines
Public IP addresses
Load balancers
Virtual networks
NAT gateways
All resources
Monitor
Quickstart Center
More services
Resources
Recent
Favorite
Name
Type
Last Viewed
No resources have been viewed recently
View all resources
Navigate
Subscriptions
Resource groups
All resources
Dashboard
Tools