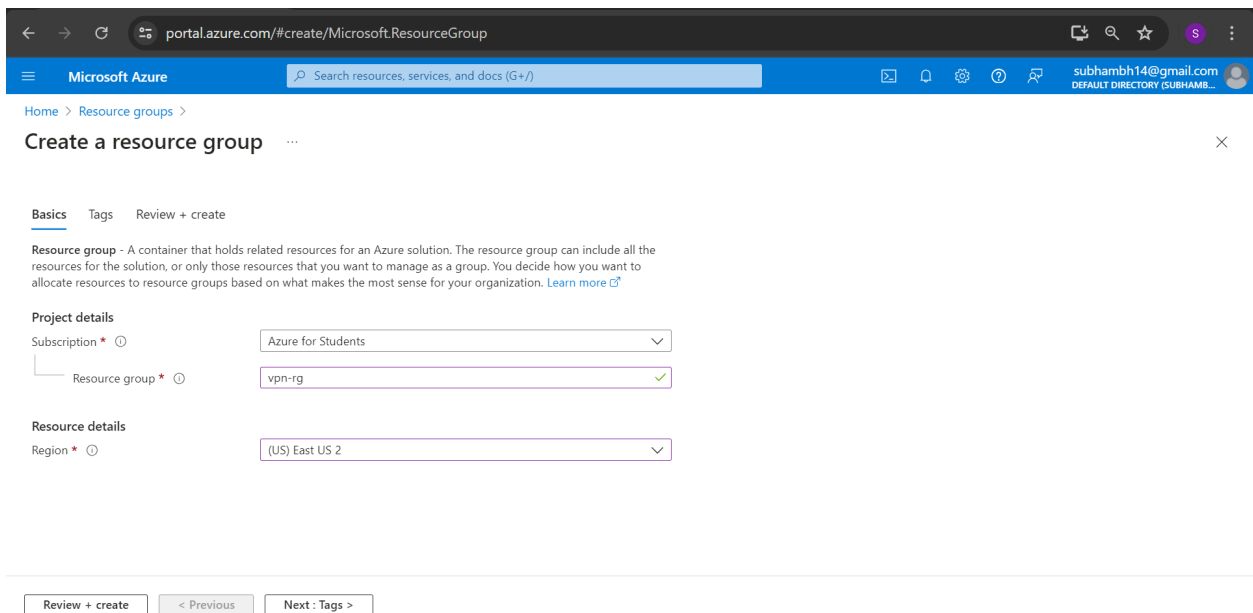


P2S

It demonstrates setting up a Point-to-Site (P2S) VPN connection in Azure, allowing secure communication between a client device and an Azure Virtual Network (VNet) via a VPN Gateway.



The screenshot shows the 'Create a resource group' page in the Azure portal. The browser address bar displays 'portal.azure.com/#create/Microsoft.ResourceGroup'. The page header includes the Microsoft Azure logo, a search bar, and user information for 'subhambh14@gmail.com'. The breadcrumb trail is 'Home > Resource groups >'. The main heading is 'Create a resource group'. Below this are tabs for 'Basics', 'Tags', and 'Review + create'. A descriptive paragraph explains that a resource group is a container for related resources. The 'Project details' section contains two dropdown menus: 'Subscription' (set to 'Azure for Students') and 'Resource group' (set to 'vpn-rg'). The 'Resource details' section contains one dropdown menu: 'Region' (set to '(US) East US 2'). At the bottom, there are three buttons: 'Review + create', '< Previous', and 'Next : Tags >'.

portal.azure.com/#create/Microsoft.ResourceGroup

Microsoft Azure

Search resources, services, and docs (G+)

subhambh14@gmail.com
DEFAULT DIRECTORY (SUBHAMB...

Home > 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](#)

Project details

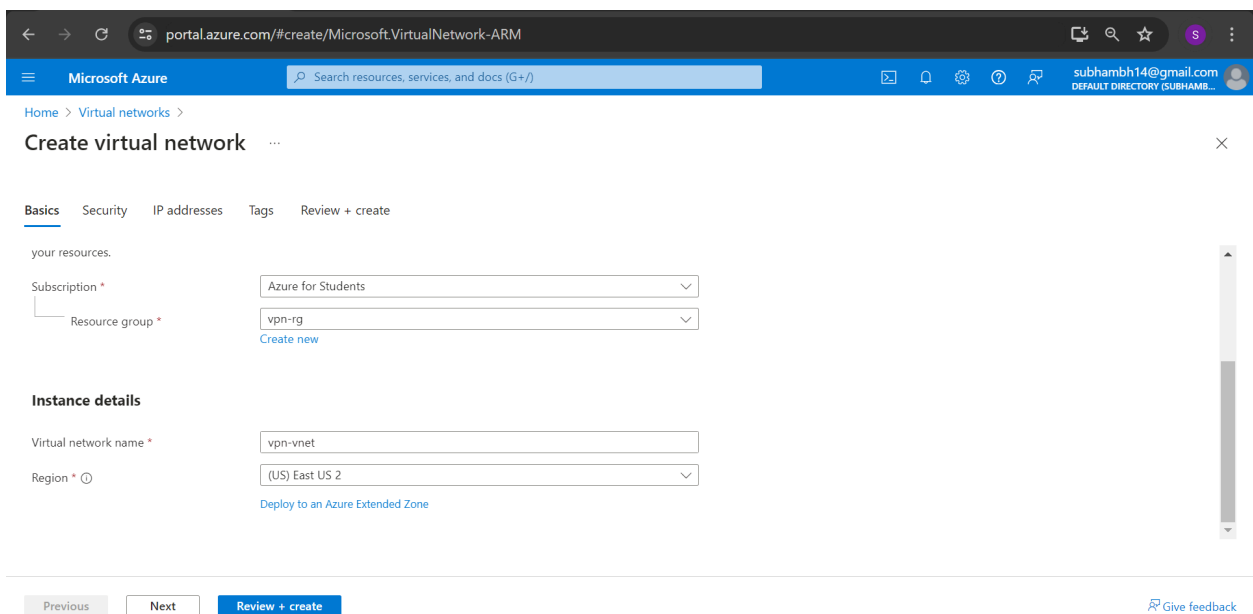
Subscription * Azure for Students

Resource group * vpn-rg

Resource details

Region * (US) East US 2

Review + create < Previous Next : Tags >



The screenshot shows the 'Create virtual network' page in the Azure portal. The browser address bar displays 'portal.azure.com/#create/Microsoft.VirtualNetwork-ARM'. The page header is identical to the previous screenshot. The breadcrumb trail is 'Home > Virtual networks >'. The main heading is 'Create virtual network'. Below this are tabs for 'Basics', 'Security', 'IP addresses', 'Tags', and 'Review + create'. A section titled 'your resources.' contains two dropdown menus: 'Subscription' (set to 'Azure for Students') and 'Resource group' (set to 'vpn-rg'), with a 'Create new' link below the resource group dropdown. The 'Instance details' section contains two dropdown menus: 'Virtual network name' (set to 'vpn-vnet') and 'Region' (set to '(US) East US 2'), with a 'Deploy to an Azure Extended Zone' link below the region dropdown. At the bottom, there are three buttons: 'Previous', 'Next', and 'Review + create'. A 'Give feedback' link is located in the bottom right corner.

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

Microsoft Azure

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DEFAULT DIRECTORY (SUBHAMB...

Home > Virtual networks >

Create virtual network

Basics Security IP addresses Tags Review + create

your resources.

Subscription * Azure for Students

Resource group * vpn-rg
[Create new](#)

Instance details

Virtual network name * vpn-vnet

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

Previous Next Review + create

[Give feedback](#)

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

Microsoft Azure

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DEFAULT DIRECTORY (SUBHAMB...

Home > Virtual networks >

Create virtual network

Basics Security **IP addresses** Tags Review + create

Add IPv4 address space

11.0.0.0/16
11.0.0.0 /16
11.0.0.0 - 11.0.255.255 65,536 addresses
+ Add a subnet

| Subnets | IP address range | Size |
|---------|---------------------|-----------------|
| default | 11.0.0.0 - 11.0.255 | /24 (256 addres |

Previous Next **Review + create**

Edit subnet

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

Subnet purpose

Name

IPv4

Include an IPv4 address space ☒

IPv4 address range

Starting address

Size

Subnet address range

IPv6

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

Save Cancel [Give feedback](#)

portal.azure.com/#view/HubsExtension/DeploymentDetailsBlade/~/_/overview/id/%2Fsubscriptions%2Fca5224c7-5754-4288-91aa-9ba029f295...

Microsoft Azure

Search resources, services, and docs (G+)

subhambh14@gmail.com
DEFAULT DIRECTORY (SUBHAMB...

Home >

vpn-vnet-1720174963986 | Overview

Deployment

Search x << Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

Your deployment is complete

Deployment name : vpn-vnet-1720174963986 Start time : 7/5/2024, 3:53:01 PM
Subscription : Azure for Students Correlation ID : d7fe6b88-a3bd-4f7e-bb9e-ade9716dd...
Resource group : vpn-rg

> Deployment details

> Next steps

Go to resource

Give feedback
[Tell us about your experience with deployment](#)

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Get notified to stay within your budget and prevent unexpected charges on your bill.
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Azure experts are service provider partners

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

Microsoft Azure

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DEFAULT DIRECTORY (SUBHAMB...

Home > Virtual machines >

Create a virtual machine

This subscription may not be eligible to deploy VMs of certain sizes in certain regions.

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription *

Azure for Students

Resource group *

vpn-rg

Create new

Instance details

Virtual machine name *

db-server

Region *

(US) East US 2

Availability options

No infrastructure redundancy required

< Previous

Next : Disks >

Review + create

Give feedback

portal.azure.com/#@subhambh14gmail.onmicrosoft.com/resource/subscriptions/ca5224c7-5754-4288-91aa-9ba029f2951e/resourcegr...

Microsoft Azure

Search resources, services, and docs (G+)

subhambh14@gmail.com
DEFAULT DIRECTORY (SUBHAMB...

Home > CreateVm-canonical.0001-com-ubuntu-server-focal-2-20240705155443 | Overview >

db-server

Virtual machine

Search

Connect Start Restart Stop Hibernate Capture Delete Refresh Open in mobile Feedback CLI / PS

db-server virtual machine agent status is not ready. Troubleshoot the issue →

Essentials

Resource group (move) : vpn-rg

Status : Running

Location : East US 2

Subscription (move) : Azure for Students

Subscription ID : ca5224c7-5754-4288-91aa-9ba029f2951e

Operating system : Linux

Size : Standard DS1 v2 (1 vcpu, 3.5 GiB memory)

Public IP address : -

Virtual network/subnet : vpn-vnet/db-subnet

DNS name : -

Health state : -

Time created : 7/5/2024, 10:27 AM UTC

Tags (edit) : Add tags

JSON View

Properties

Monitoring

Capabilities (7)

Recommendations

Tutorials

Virtual machine

Computer name : db-server

Networking

Public IP address : -

portal.azure.com/#@subhambh14gmail.onmicrosoft.com/resource/subscriptions/ca5224c7-5754-4288-91aa-9ba029f2951e/resourcecgr... subhambh14@gmail.com

Microsoft Azure Search resources, services, and docs (G+)

Home > CreateVm-canonical.0001-com-ubuntu-server-focal-2-20240705155443 | Overview > db-server

db-server | Connect

Virtual machine

Search Refresh Troubleshoot More Options Feedback

Connecting using Private IP address | 11.0.1.4

Admin username: azureuser
Port (change): 22 Check access
Just-in-time policy: Unsupported by plan

Recommended

SSH using Azure CLI

Quickly connect in browser. Supports Microsoft Entra ID authentication. Private key not required.

Most common

Native SSH

No additional software needed. Private key required for connection. Best for those with existing SSH tools.

Private IP address (11.0.1.4)

Overview Activity log Access control (IAM) Tags Diagnose and solve problems Connect Bastion Networking Settings Disks Extensions + applications Operating system Configuration

/drives/c/Users/SUBHAM/Downloads

Terminal Sessions View X server Tools Games Settings Macros Help

Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

Quick connect... 1 /drives/c/Users/SUBHAM/Downloads

• MobaXterm Personal Edition v24.1 •
(X server, SSH client and network tools)

- ▶ Your computer drives are accessible through the /drives path
- ▶ Your DISPLAY is set to 192.168.04.157:0.0
- ▶ When using SSH, your remote DISPLAY is automatically forwarded
- ▶ Each command status is specified by a special symbol (✓ or ✗)

• Important:
This is MobaXterm Personal Edition. The Professional edition allows you to customize MobaXterm for your company: you can add your own logo, your parameters, your welcome message and generate either an MSI installation package or a portable executable. We can also modify MobaXterm or develop the plugins you need. For more information: <https://mobaxterm.mobatek.net/download.html>

```
/drives/c/Users/SUBHAM/Downloads  
05/07/2024 15:56.58 ssh -i db-server_key.pem azureuser@11.0.1.4  
05/07/2024 15:58.56 /drives/c/Users/SUBHAM/Downloads
```

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portal.azure.com/#@subhambh14gmail.onmicrosoft.com/resource/subscriptions/ca5224c7-5754-4288-91aa-9ba029f2951e/resourceGr...

Microsoft Azure Search resources, services, and docs (G+)

subhambh14@gmail.com DEFAULT DIRECTORY (SUBHAMBH14)

Home > Virtual networks > vpn-vnet

vpn-vnet | Subnets

Virtual network

Search

+ Subnet + Gateway subnet Refresh Manage users Delete

Search subnets

| Name ↑↓ | IPv4 ↑↓ | IPv6 ↑↓ | Available IPs ↑↓ | Delegated to ↑↓ | Security group ↑↓ | Route table ↑↓ |
|-----------|-------------|---------|------------------|-----------------|-------------------|----------------|
| db-subnet | 11.0.1.0/24 | - | 250 | - | - | - |

Give feedback

portal.azure.com/#@subhambh14gmail.onmicrosoft.com/resource/subscriptions/ca5224c7-5754-4288-91aa-9ba029f2951e/resourceGr...

Microsoft Azure Search resources, services, and docs (G+)

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Home > Virtual networks > vpn-vnet

vpn-vnet | Subnets

Virtual network

Search

+ Subnet + Gateway subnet

Search subnets

| Name ↑↓ | IPv4 ↑↓ |
|-----------|-------------|
| db-subnet | 11.0.1.0/24 |

Add a subnet

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

Subnet purpose Virtual Network Gateway

Name GatewaySubnet

IPv4

Include an IPv4 address space ☒

IPv4 address range 11.0.0.0/16

Starting address 11.0.0.0

Size /24 (256 addresses)

Subnet address range 11.0.0.0 - 11.0.0.255

IPv6

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

Add Cancel

Give feedback

portal.azure.com/#@subhambh14gmail.onmicrosoft.com/resource/subscriptions/ca5224c7-5754-4288-91aa-9ba029f2951e/resourceGr...

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Home > Virtual networks > vpn-vnet

vpn-vnet | Subnets

Virtual network

Search

+ Subnet + Gateway subnet Refresh Manage users Delete

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Address space
Connected devices
Subnets
Bastion
DDoS protection
Firewall
Microsoft Defender for Cloud
Network manager

Search subnets

| Name ↑↓ | IPv4 ↑↓ | IPv6 ↑↓ | Available IPs ↑↓ | Delegated to ↑↓ | Security group ↑↓ | Route table ↑↓ |
|---------------|-------------|---------|----------------------------|-----------------|-------------------|----------------|
| db-subnet | 11.0.1.0/24 | - | 250 | - | - | - |
| GatewaySubnet | 11.0.0.0/24 | - | availability dependent ... | - | - | - |

Give feedback

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

Microsoft Azure Search resources, services, and docs (G+)

subhambh14@gmail.com DEFAULT DIRECTORY (SUBHAMB...

Home > Virtual network gateways >

Create virtual network gateway

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 for Students

Resource group ⓘ Select a virtual network to get resource group

Instance details

Name * my-vnet-gwy ✓

Region * East US 2
[Deploy to an edge zone ⓘ](#)

Gateway type * ⓘ ☒ VPN ☐ ExpressRoute

SKU * ⓘ VpnGw1

Generation ⓘ Generation1

Virtual network * ⓘ

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

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

Microsoft Azure

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

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Home > Virtual network gateways >

Create virtual network gateway

Public IP address * ⓘ

Create new

Use existing

Public IP address name *

ip-1 ✓

Public IP address SKU

Standard

Assignment

Dynamic

Static

Enable active-active mode * ⓘ

Enabled

Disabled

SECOND PUBLIC IP ADDRESS

SECOND PUBLIC IP ADDRESS * ⓘ

Create new

Use existing

Public IP address name *

ip-2 ✓

Public IP address SKU

Standard

Configure BGP * ⓘ

Enabled

Disabled

Azure recommends using a validated VPN device with your virtual network gateway. To view a list of validated devices and

Review + create

Previous

Next : Tags >

Download a template for automation

portal.azure.com/#view/HubsExtension/DeploymentDetailsBlade/~/_/overview/id/%2Fsubscriptions%2Fca5224c7-5754-4288-91aa-9ba02...

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DEFAULT DIRECTORY (SUBHAMB...

Home >

Microsoft.VirtualNetworkGateway-20240705160047 | Overview

Deployment

Search

Delete

Cancel

Redeploy

Download

Refresh

Overview

Inputs

Outputs

Template

Deployment is in progress

Deployment name : Microsoft.VirtualNetworkGateway-20240705160047

Subscription : Azure for Students

Resource group : vpn-rg

Start time : 7/5/2024, 4:02:55 PM

Correlation ID : 5277d83e-8dfe-45d4-a082-1560023a149e

Deployment details

| Resource | Type | Status |
|-------------|-------------------------|---------|
| my-vnet-gwy | Virtual network gateway | Created |
| ip-1 | Public IP address | OK |
| ip-2 | Public IP address | OK |

Give feedback

Notifications

More events in the activity log →

Dismiss all

Deployment in progress...

Running

Deployment to resource group 'vpn-rg' is in progress.

2 minutes ago

Saved subnet

Successfully saved subnet 'GatewaySubnet'.

5 minutes ago

Deployment succeeded

Deployment 'CreateVm-canonical.0001-com-ubuntu-server-focal-2-20240705155443' to resource group 'vpn-rg' was successful.

Go to resource

Pin to dashboard

8 minutes ago

Deployment succeeded

Deployment 'vpn-vnet-1720174963986' to resource group 'vpn-rg' was successful.

Go to resource

Pin to dashboard

```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\SUBHAM> $params = @{
>>     Type = 'Custom'
>>     Subject = 'CN=P2SRootCert'
>>     KeySpec = 'Signature'
>>     KeyExportPolicy = 'Exportable'
>>     KeyUsage = 'CertSign'
>>     KeyUsageProperty = 'Sign'
>>     KeyLength = 2048
>>     HashAlgorithm = 'sha256'
>>     NotAfter = (Get-Date).AddMonths(24)
>>     CertStoreLocation = 'Cert:\CurrentUser\My'
>> }
PS C:\Users\SUBHAM> $cert = New-SelfSignedCertificate @params
PS C:\Users\SUBHAM>
```

```
Windows PowerShell

>>     HashAlgorithm = 'sha256'
>>     NotAfter = (Get-Date).AddMonths(24)
>>     CertStoreLocation = 'Cert:\CurrentUser\My'
>> }
PS C:\Users\SUBHAM> $cert = New-SelfSignedCertificate @params
PS C:\Users\SUBHAM> $params = @{
>>     Type = 'Custom'
>>     Subject = 'CN=P2SChildCert'
>>     DnsName = 'P2SChildCert'
>>     KeySpec = 'Signature'
>>     KeyExportPolicy = 'Exportable'
>>     KeyLength = 2048
>>     HashAlgorithm = 'sha256'
>>     NotAfter = (Get-Date).AddMonths(18)
>>     CertStoreLocation = 'Cert:\CurrentUser\My'
>>     Signer = $cert
>>     TextExtension = @(
>>         '2.5.29.37={text}1.3.6.1.5.5.7.3.2')
>>     }
PS C:\Users\SUBHAM>     New-SelfSignedCertificate @params

PSParentPath: Microsoft.PowerShell.Security\Certificate::CurrentUser\My

Thumbprint                               Subject
-----
70DC5450F4D1107319BC7373A25B0246AF1ECFB3  CN=P2SChildCert

PS C:\Users\SUBHAM>
```


portal.azure.com/#view/HubsExtension/DeploymentDetailsBlade/~/overview/id/%2Fsubscriptions%2Fca5224c7-5754-4288-91aa-9ba02...

Microsoft Azure Search resources, services, and docs (G+)

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DEFAULT DIRECTORY (SUBHAMB...

Home >

Microsoft.VirtualNetworkGateway-20240705160047 | Overview

Deployment

Search

Delete Cancel Redeploy Download Refresh

Overview

- Inputs
- Outputs
- Template

Your deployment is complete

Deployment name : Microsoft.VirtualNetworkGateway-20240705160047
Subscription : [Azure for Students](#)
Resource group : vpn-rg
Start time : 7/5/2024, 4:02:55 PM
Correlation ID : 5277d83e-8dfe-45d4-a082-1560023a149e

> Deployment details

> Next steps

[Go to resource](#)

Give feedback
Tell us about your experience with deployment

Notifications

More events in the activity log → Dismiss all

- Deployment succeeded**
Deployment 'Microsoft.VirtualNetworkGateway-20240705160047' to resource group 'vpn-rg' was successful.
[Go to resource](#) [Pin to dashboard](#)
2 minutes ago
- Saved subnet**
Successfully saved subnet 'GatewaySubnet'.
32 minutes ago
- Deployment succeeded**
Deployment 'CreateVm-canonical.0001-com-ubuntu-server-focal-2-20240705155443' to resource group 'vpn-rg' was successful.
[Go to resource](#) [Pin to dashboard](#)
35 minutes ago
- Deployment succeeded**
Deployment 'vpn-vnet-1720174963986' to resource group 'vpn-rg' was successful.

portal.azure.com/#@subhambh14gmail.onmicrosoft.com/resource/subscriptions/ca5224c7-5754-4288-91aa-9ba029f2951e/resourceGr...

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DEFAULT DIRECTORY (SUBHAMB...

Home > Microsoft.VirtualNetworkGateway-20240705160047 | Overview > my-vnet-gwy

my-vnet-gwy | Point-to-site configuration

Virtual network gateway

Search Save Discard Delete Download VPN client

Overview

- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Settings
 - Configuration
 - Connections
 - Point-to-site configuration**
 - Maintenance
 - Properties
 - Locks
- Monitoring
- Automation

Point-to-site is not configured
[Configure now](#)

portal.azure.com/#@subhambh14gmail.onmicrosoft.com/resource/subscriptions/ca5224c7-5754-4288-91aa-9ba029f2951e/resourceGr...

Microsoft Azure

Search resources, services, and docs (G+)

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DEFAULT DIRECTORY (SUBHAMB...

Home > Microsoft.VirtualNetworkGateway-20240705160047 | Overview > my-vnet-gwy

my-vnet-gwy | Point-to-site configuration

Virtual network gateway

Search

Save Discard Delete Download VPN client

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Settings
 - Configuration
 - Connections
 - Point-to-site configuration**
 - Maintenance
 - Properties
 - Locks
- Monitoring
- Automation

Address pool *

172.25.100.0/24

Tunnel type

SSTP (SSL)

Authentication type

Azure certificate

Public IP address for User VPN configuration

A third public IP address is required to use a User VPN configuration with an availability zone SKU gateway in active-active mode.

Public IP address *

Create new Use existing

ip-3

Configure public IP address

portal.azure.com/#@subhambh14gmail.onmicrosoft.com/resource/subscriptions/ca5224c7-5754-4288-91aa-9ba029f2951e/resourceGr...

Microsoft Azure

Search resources, services, and docs (G+)

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DEFAULT DIRECTORY (SUBHAMB...

Home > Microsoft.VirtualNetworkGateway-20240705160047 | Overview > my-vnet-gwy

my-vnet-gwy | Point-to-site configuration

Virtual network gateway

Search

Save Discard Delete Download VPN client

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Settings
 - Configuration
 - Connections
 - Point-to-site configuration**
 - Maintenance
 - Properties
 - Locks
- Monitoring
- Automation

Standard

Assignment

Dynamic Static

Root certificates

| Name | Public certificate data |
|------------|-------------------------|
| azure_root | MIIlC5zCCAc+gAwIBAgI... |
| | |

Revoked certificates

| Name | Thumbprint |
|------|------------|
| | |

Additional routes to advertise

Notifications

More events in the activity log → Dismiss all

- Deployment succeeded**
Deployment 'Microsoft.Network-20240705163713' to resource group 'vpn-rg' was successful.
Pin to dashboard Go to resource group
11 minutes ago
- Deployment succeeded**
Deployment 'Microsoft.VirtualNetworkGateway-20240705160047' to resource group 'vpn-rg' was successful.
Go to resource Pin to dashboard
43 minutes ago
- Saved subnet**
Successfully saved subnet 'GatewaySubnet'.
an hour ago
- Deployment succeeded**
Deployment 'CreateVm-canonical.0001-com-ubuntu-server-focal-2-202407051655443' to resource group 'vpn-rg' was successful.

