

Virtual network peering

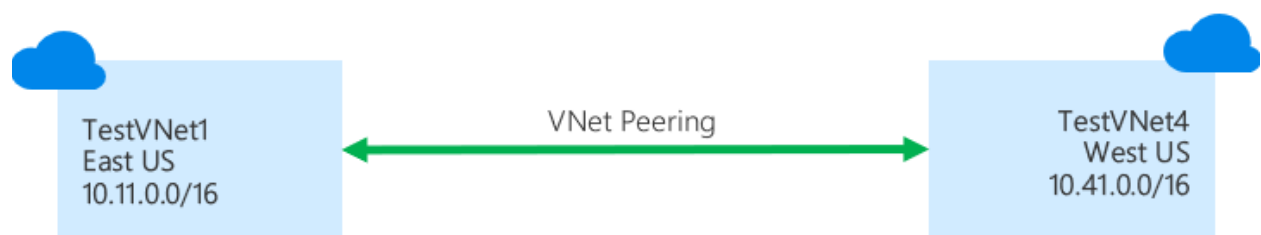
Virtual network peering enables you to seamlessly connect two or more Virtual Networks in Azure. The virtual networks appear as one for connectivity purposes. The traffic between virtual machines in peered virtual networks uses the Microsoft backbone infrastructure. Like traffic between virtual machines in the same network, traffic is routed through Microsoft's private network only.

Azure supports the following types of peering:

- Virtual network peering: Connect virtual networks within the same Azure region.
- Global virtual network peering: Connecting virtual networks across Azure regions.

The benefits of using virtual network peering, whether local or global, include:

- A low-latency, high-bandwidth connection between resources in different virtual networks.
- The ability for resources in one virtual network to communicate with resources in a different virtual network.
- The ability to transfer data between virtual networks across Azure subscriptions, Azure Active Directory tenants, deployment models, and Azure regions.
- The ability to peer virtual networks created through the Azure Resource Manager.
- The ability to peer a virtual network created through Resource Manager to one created through the classic deployment model. To learn more about Azure deployment models.
- No downtime to resources in either virtual network when creating the peering, or after the peering is created.



VNet peering enables you to seamlessly connect Azure virtual networks. Once peered, the VNets appear as one, for connectivity purposes. The traffic between virtual machines in the peered virtual networks is routed through the Microsoft backbone infrastructure, much like traffic is routed between virtual

machines in the same VNet, through private IP addresses only. No public internet is involved. You can peer VNets across Azure regions, too – all with a single click in the Azure Portal.

1. VNet peering - connecting VNets within the same Azure region
2. Global VNet peering - connecting VNets across Azure regions

Create virtual networks

1. On the Azure portal, select **Create a resource**.
2. Select **Networking**, and then select **Virtual network**.
3. On the **Basics** tab, enter or select the following information and accept the defaults for the remaining settings:

Setting	Value
Subscription	Select your subscription.
Resource group	Select Create new and enter <i>myResourceGroup</i> .
Region	Select East US .
Name	myVirtualNetwork1

4. On the **IP Addresses** tab, enter 10.0.0.0/16 for the **Address Space** field. Click the **Add subnet** button below and enter *Subnet1* for **Subnet Name** and 10.0.0.0/24 for **Subnet Address range**.
5. Select **Review + Create** and then select **Create**.
6. Complete steps 1-5 again, with the following changes:

Setting	Value
Name	myVirtualNetwork2
Address space	10.1.0.0/16
Resource group	Select Use existing and then select myResourceGroup .
Subnet name	Subnet2
Subnet Address range	10.1.0.0/24

[Home](#) > [All resources](#) > [New](#) >

Virtual Network

Microsoft



Virtual Network

Microsoft

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[Create](#)

[Overview](#) [Plans](#) [Usage Information + Support](#)

Create a logically isolated section in Microsoft Azure with this networking service. You can securely connect it to your on-premises datacenter or a single client machine using an IPsec connection. Virtual Networks make it easy for you to take advantage of the scalable, on-demand infrastructure of Azure while providing connectivity to data and applications on-premises, including systems running on Windows Server, mainframes, and UNIX.

Use Virtual Network to:

- Extend your datacenter
- Build distributed applications
- Remotely debug your applications

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Create virtual network

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

Azure Virtual Network (VNet) is the fundamental building block for your private network in Azure. VNet enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the internet, and on-premises networks. VNet is similar to a traditional network that you'd operate in your own data center, but brings with it additional benefits of Azure's infrastructure such as scale, availability, and isolation. [Learn more about virtual network](#)

Project details

Subscription * 

Resource group * 

[Create new](#)

Instance details

Name *

Region *

[Review + create](#)

[< Previous](#)

[Next : IP Addresses >](#)

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Create virtual network

Basics IP Addresses Security Tags Review + create

The virtual network's address space, specified as one or more address prefixes in CIDR notation (e.g. 192.168.1.0/24).

IPv4 address space

10.1.0.0/16 10.1.0.0 - 10.1.255.255 (65536 addresses) 

☐ Add IPv6 address space ⓘ

The subnet's address range in CIDR notation (e.g. 192.168.1.0/24). It must be contained by the address space of the virtual network.

 Add subnet  Remove subnet

<input type="checkbox"/> Subnet name	Subnet address range
<input type="checkbox"/> default	10.1.0.0/24

Review + create

< Previous

Next : Security >

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Create virtual network now

Similarly create another virtual network

Create virtual network

Basics IP Addresses Security Tags Review + create

Azure Virtual Network (VNet) is the fundamental building block for your private network in Azure. VNet enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the internet, and on-premises networks. VNet is similar to a traditional network that you'd operate in your own data center, but brings with it additional benefits of Azure's infrastructure such as scale, availability, and isolation. [Learn more about virtual network](#)

Project details

Subscription * ⓘ

Resource group * ⓘ

[Create new](#)

Instance details

Name *

Region *

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Create virtual network

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

The virtual network's address space, specified as one or more address prefixes in CIDR notation (e.g. 192.168.1.0/24).

IPv4 address space

10.2.0.0/16 10.2.0.0 - 10.2.255.255 (65536 addresses)



☐ Add IPv6 address space ⓘ

The subnet's address range in CIDR notation (e.g. 192.168.1.0/24). It must be contained by the address space of the virtual network.

[+ Add subnet](#) [Remove subnet](#)

☐ Subnet name

Subnet address range

☐ default

10.2.0.0/24

[Review + create](#)

[< Previous](#)

[Next : Security >](#)

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Now both virtual networks has been created

[+ Add](#) [Manage view](#) [Refresh](#) [Export to CSV](#)

Filter by name...

Subscription == all

Resource

Showing 1 to 2 of 2 records.

☐ Name ↑↓

☐ vnet1

☐ vnet2

Now go to vnet1 → goto peering →

Home > vnet1

vnet1 | Peerings

Virtual network

Search (Ctrl+/) < + Add Refresh

Filter by name...

Name	Peering status	Peer	Gateway transit
No results.			

Tags

Diagnose and solve problems

Settings

- Address space
- Connected devices
- Subnets
- DDoS protection
- Firewall
- Security
- DNS servers
- Peerings**
- Service endpoints
- Private endpoints
- Properties

Home > vnet1 >

Add peering

vnet1

i For peering to work, a peering link must be created from vnet1 to vnet2 as well as from vnet2 to vnet1.

Name of the peering from vnet1 to vnet2 *

vnet1-to-vnet2-peering ✓

Peer details

Virtual network deployment model ⓘ

☒ Resource manager ☐ Classic

☐ I know my resource ID ⓘ

Subscription * ⓘ

[Redacted] ▼

Virtual network *

vnet2 ([Redacted]) ▼

Name of the peering from vnet2 to vnet1 *

vnet1-to-vnet2-peering ✓

OK

In vnet 1 you need to select vnet2 network (above screenshot)

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

Home > vnet1

vnet1 | Peerings

Virtual network

Search (Ctrl+/) << + Add Refresh

Filter by name...

Name	Peering status	Peer	Gateway transit
vnet1-to-vnet2-peering	Connected	vnet2	Disabled

Tags

Diagnose and solve problems

Settings

- Address space
- Connected devices
- Subnets
- DDoS protection
- Firewall
- Security
- DNS servers
- Peerings**
- Service endpoints
- Private endpoints
- Properties

Create VM 1 in vnet1

Create vm2 in vnet2

+ Add Reservations Edit columns Refresh Try preview

Try the new virtual machine resource browser! This experience is faster and has improved columns such as maintenance status.

Subscriptions:

Filter by name... All resource groups All types

2 items

<input type="checkbox"/> Name ↑↓	Type ↑↓	Status
<input type="checkbox"/> vnet1vm1	Virtual machine	Running
<input type="checkbox"/> vnet4vm2	Virtual machine	Running

From vnet1 vm1 now am able to ping VNET2VM2 machine

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

Home > vnet4vm2 >

vnet4vm2 | Serial console

Virtual machine

Search (Ctrl+)

Tags

Diagnose and solve problems

Settings

- Networking
- Connect
- Disks
- Size
- Security
- Advisor recommendations
- Extensions
- Continuous delivery
- Availability + scaling
- Configuration
- Identity

```
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.

bvijaycom@vnet4vm2:~$ ping
Usage: ping [-aAbBdDfhInOqrRUvV64] [-c count] [-i interval] [-I interface]
        [-m mark] [-M pmtudisc_option] [-l preload] [-p pattern] [-Q tos]
        [-s packetsize] [-S sndbuf] [-t ttl] [-T timestamp_option]
        [-w deadline] [-W timeout] [hop1 ...] destination
Usage: ping -6 [-aAbBdDfhInOqrRUvV] [-c count] [-i interval] [-I interface]
        [-l preload] [-m mark] [-M pmtudisc_option]
        [-N nodeinfo_option] [-p pattern] [-Q tclass] [-s packetsize]
        [-S sndbuf] [-t ttl] [-T timestamp_option] [-w deadline]
        [-W timeout] destination
bvijaycom@vnet4vm2:~$ ping 10.1.0.4
PING 10.1.0.4 (10.1.0.4) 56(84) bytes of data.
64 bytes from 10.1.0.4: icmp_seq=1 ttl=64 time=2.13 ms
64 bytes from 10.1.0.4: icmp_seq=2 ttl=64 time=1.31 ms
64 bytes from 10.1.0.4: icmp_seq=3 ttl=64 time=1.06 ms
64 bytes from 10.1.0.4: icmp_seq=4 ttl=64 time=0.953 ms
64 bytes from 10.1.0.4: icmp_seq=5 ttl=64 time=0.845 ms
```


From vnet2 vm2 now am able to ping VNET1VM1 machine

Home > vnet1vm1 >

vnet1vm1 | Serial console


Virtual machine

Search (Ctrl+/)


 Connection monitor


Automation


 Tasks


 Export template

Support + troubleshooting

 Resource health


 Boot diagnostics


 Performance diagnostics (Prev...


 Reset password

 Redeploy

 Ubuntu Advantage support pl...

 Serial console

 Connection troubleshoot

 New support request

? Feedback    

```
System load: 0.08      Processes:    106
Usage of /:  4.4% of 28.90GB Users logged in: 0
Memory usage: 65%      IP address for eth0: 10.1.0.4
Swap usage:  0%
```

```
0 packages can be updated.
0 updates are security updates.
```

```
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.
```

```
bvijaycom@vnet1vm1:~$ ping 10.2.0.4
PING 10.2.0.4 (10.2.0.4) 56(84) bytes of data.
64 bytes from 10.2.0.4: icmp_seq=1 ttl=64 time=2.29 ms
64 bytes from 10.2.0.4: icmp_seq=2 ttl=64 time=0.857 ms
64 bytes from 10.2.0.4: icmp_seq=3 ttl=64 time=1.61 ms
64 bytes from 10.2.0.4: icmp_seq=4 ttl=64 time=1.51 ms
^
```