

Module 6: Assignment – 1

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Create virtual network

Basics Security IP addresses Tags Review + create

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

[Learn more.](#)

Project details

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

Subscription *

Free Trial

Resource group *

(New) vm-west

[Create new](#)

Instance details

Virtual network name *

vn-west

Region * ⓘ

(US) West US 2

[Deploy to an Azure Extended Zone](#)

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Create virtual network ...

Basics Security IP addresses Tags Review + create

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

[Learn more.](#)

Project details

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

Subscription *

Free Trial

Resource group *

(New) vm-india

[Create new](#)

Instance details

Virtual network name *

vn-south-india

Region * ⓘ

(Asia Pacific) South India

[Deploy to an Azure Extended Zone](#)

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Review + create

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

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](#)



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 * ⓘ

Free Trial



Resource group * ⓘ

vm-west

[Create new](#)

Instance details

Virtual machine name * ⓘ

vm-west-us

Region * ⓘ

(US) West US 2

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 * ⓘ

None

You can now select multiple zones. Selecting multiple zones will create one VM.

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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

Administrator account

Authentication type ⓘ

- ☒ SSH public key
☐ Password

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

Username * ⓘ

west ✓

SSH public key source

Generate new key pair ▾

SSH Key Type

- ☒ RSA SSH Format
☐ Ed25519 SSH Format

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

Key pair name *

us ✓

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.

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Virtual machines

Default Directory

+ 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 2 of 2 records.

No groupin

<input type="checkbox"/> Name ↑	Subscription ↑	Resource group ↑	Location ↑	Status ↑	Operating system ↑	Size ↑	Public IP address ↑	Disks ↑
<input type="checkbox"/> vm-south-india	Free Trial	VM-INDIA	South India	Running	Linux	Standard_B1s	13.71.92.74	1
<input type="checkbox"/> vm-west-us	Free Trial	VM-WEST	West US 2	Running	Linux	Standard_B1s	20.51.111.171	1



Add peering

vn-west

Virtual network peering enables you to seamlessly connect two or more virtual networks in Azure. This will allow resources in either virtual network to directly connect and communicate with resources in the peered virtual network.

Remote virtual network summary

Peering link name *	<input type="text" value="india-peering"/>
Virtual network deployment model ⓘ	<input checked="" type="radio"/> Resource manager <input type="radio"/> Classic
I know my resource ID ⓘ	<input type="checkbox"/>
Subscription *	<input type="text" value="Free Trial"/>
Virtual network *	<input type="text" value="vn-south-india (vm-india)"/>

Remote virtual network peering settings

Allow 'vn-south-india' to access 'vn-west' ⓘ ☒

Allow 'vn-south-india' to receive forwarded traffic from 'vn-west' ⓘ ☒

Allow gateway or route server in 'vn-south-india' to forward traffic to 'vn-west' ⓘ ☒

'vn-south-india' does not have a VPN gateway or route server. To enable this option, 'vn-south-india' needs to have a VPN gateway or route server. Learn how to create a [VPN gateway](#) or [Route Server](#)

Enable 'vn-south-india' to use 'vn-west's' remote gateway or route server ⓘ ☒

Add peering

vn-west

Allow 'vn-south-india' to receive forwarded traffic from 'vn-west' ☒

Allow gateway or route server in 'vn-south-india' to forward traffic to 'vn-west' ☒

 'vn-south-india' does not have a VPN gateway or route server. To enable this option, 'vn-south-india' needs to have a VPN gateway or route server. Learn how to create a [VPN gateway](#) or [Route Server](#)

Enable 'vn-south-india' to use 'vn-west's' remote gateway or route server ☒

Local virtual network summary


Peering link name *

Local virtual network peering settings

Allow 'vn-west' to access 'vn-south-india' ☒

Allow 'vn-west' to receive forwarded traffic from 'vn-south-india' ☒

Allow gateway or route server in 'vn-west' to forward traffic to 'vn-south-india' ☒

 'vn-west' does not have a VPN gateway or route server. To enable this option, 'vn-west' needs to have a VPN gateway or route server. Learn how to create a [VPN gateway](#) or [Route Server](#)

Enable 'vn-west' to use 'vn-south-india's' remote gateway or route server ☒

vn-west | Peerings

Virtual network

Search

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 servers

Peerings

Service endpoints

+ Add

Refresh

Export to CSV

Delete

Sync

Virtual network peering enables you to seamlessly connect two or more virtual networks in Azure. The virtual networks appear as one for connectivity purposes. [Learn more](#)

Filter by name...

Showing all 1 items

<input type="checkbox"/>	Name	Peering sync status	Peering state	Remote virtual network name
<input type="checkbox"/>	us	Fully Synchronized	Connected	vn-south-india

```
west@vm-west-us: ~  
west@vm-west-us:~$ hostname -i  
10.0.0.4  
west@vm-west-us:~$ ping 20.0.0.4  
PING 20.0.0.4 (20.0.0.4) 56(84) bytes of data.  
^C  
--- 20.0.0.4 ping statistics ---  
4 packets transmitted, 0 received, 100% packet loss, time 3106ms  
  
west@vm-west-us:~$ ping 20.0.0.4  
PING 20.0.0.4 (20.0.0.4) 56(84) bytes of data.  
64 bytes from 20.0.0.4: icmp_seq=3 ttl=64 time=193 ms  
64 bytes from 20.0.0.4: icmp_seq=4 ttl=64 time=194 ms  
64 bytes from 20.0.0.4: icmp_seq=5 ttl=64 time=194 ms  
64 bytes from 20.0.0.4: icmp_seq=6 ttl=64 time=193 ms  
64 bytes from 20.0.0.4: icmp_seq=7 ttl=64 time=193 ms  
64 bytes from 20.0.0.4: icmp_seq=8 ttl=64 time=194 ms  
64 bytes from 20.0.0.4: icmp_seq=9 ttl=64 time=193 ms  
64 bytes from 20.0.0.4: icmp_seq=10 ttl=64 time=194 ms  
64 bytes from 20.0.0.4: icmp_seq=11 ttl=64 time=194 ms  
64 bytes from 20.0.0.4: icmp_seq=12 ttl=64 time=193 ms  
64 bytes from 20.0.0.4: icmp_seq=13 ttl=64 time=193 ms  
64 bytes from 20.0.0.4: icmp_seq=14 ttl=64 time=193 ms  
64 bytes from 20.0.0.4: icmp_seq=15 ttl=64 time=194 ms  
64 bytes from 20.0.0.4: icmp_seq=16 ttl=64 time=194 ms  
64 bytes from 20.0.0.4: icmp_seq=17 ttl=64 time=193 ms  
64 bytes from 20.0.0.4: icmp_seq=18 ttl=64 time=193 ms  
64 bytes from 20.0.0.4: icmp_seq=19 ttl=64 time=193 ms  
64 bytes from 20.0.0.4: icmp_seq=20 ttl=64 time=194 ms  
64 bytes from 20.0.0.4: icmp_seq=21 ttl=64 time=193 ms  
64 bytes from 20.0.0.4: icmp_seq=22 ttl=64 time=193 ms  
64 bytes from 20.0.0.4: icmp_seq=23 ttl=64 time=193 ms  
64 bytes from 20.0.0.4: icmp_seq=24 ttl=64 time=194 ms  
64 bytes from 20.0.0.4: icmp_seq=25 ttl=64 time=193 ms
```



```
west@vm-west-us: ~
india@vm-south-india: ~

Memory usage: 27%          IPv4 address for eth0: 20.0.0.4
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 list of available updates is more than a week old.
To check for new updates run: sudo apt update

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.

india@vm-south-india:~$ ping 10.0.0.4
PING 10.0.0.4 (10.0.0.4) 56(84) bytes of data.
64 bytes from 10.0.0.4: icmp_seq=1 ttl=64 time=194 ms
64 bytes from 10.0.0.4: icmp_seq=2 ttl=64 time=194 ms
64 bytes from 10.0.0.4: icmp_seq=3 ttl=64 time=193 ms
64 bytes from 10.0.0.4: icmp_seq=4 ttl=64 time=194 ms
64 bytes from 10.0.0.4: icmp_seq=5 ttl=64 time=193 ms
64 bytes from 10.0.0.4: icmp_seq=6 ttl=64 time=193 ms
|
```