

## **Lab – Azure Virtual Network**

### **Azure Virtual Network**

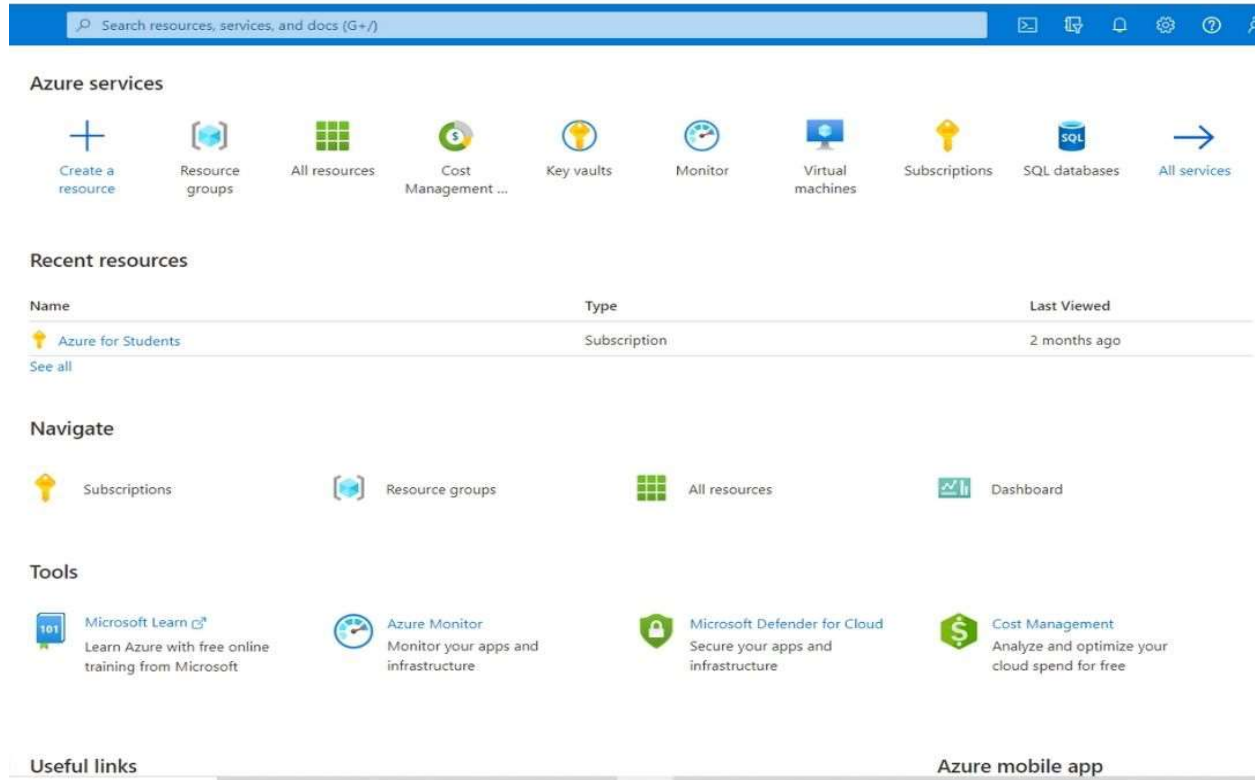
It is a representation of the on-premises network on the cloud. It helps us logically isolate the Azure cloud network dedicated to our subscription. It helps us to manage and provision virtual private networks in Azure, link the virtual networks with other virtual networks in Azure, or with on-premises IT infrastructure and networks that help us create hybrid or cross-premises solutions.

Each virtual network that we create has its own Classless Inter-Domain Routing (CIDR) block and can be linked with other virtual and on-premises networks of the CIDR blocks that do not overlap. We also have control of DNS server settings and segmentation of the virtual networks into the subnets.

### **Steps to Creating Virtual Networks**

We can create new virtual networks at any time or add virtual networks whenever we create a virtual machine. We have to define the address space and at least one subnet when creating the virtual network.

**Step 1:** Navigate to your Azure portal.



**Step 2:** Click on the **create resource** option. You will be listed with different resources that can be deployed on Azure.

Microsoft Azure

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## Create a resource

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**Step 3:** Type in a **virtual network** in the search bar. Click on create option.

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★ 4.5 (6 Azure ratings)

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Virtual network

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Deploy with Resource Manager (change to Classic)

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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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**Step 4:** You will be prompted to fill in details about the virtual network we wish to create.

**Step 5:** In the **basics**, **tab** fill in the required details

- **Subscription:** The subscription in which you wish to create the virtual network.
- **Resource Group:** Choose the resource group where you wish to create the virtual network.  
You can create a new resource by clicking on create a new option.
- **Name:** Enter the name of your virtual network.
- **Region:** Choose the region for your virtual network.

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## Create virtual network

Basics

IP Addresses

Security

Tags

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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 \*

Azure

Resource group \*

(New) hv

Create new

### Instance details

Name \*

vn1

Region \*

Central India

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Next : IP Addresses >

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**Step 6:** Click on the **Next: IP Addresses** button. In the IP Addresses tab enter the following details

- **IPv4 address space:** Enter the IPV4 address range in CIDR notation (e.g. 192.208.9.0/32).
- **Subnet:** Create a subnet for your virtual network. There should be at least one subnet.

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## Create virtual network

Basics

IP Addresses


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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

10.0.0.0/16 10.0.0.0 - 10.0.255.255 (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	NAT gateway
<input type="checkbox"/> default	10.0.0.0/24	-

 Use of a NAT gateway is recommended for outbound internet access from a subnet. You can deploy a NAT gateway and assign it to a subnet after you create the virtual network. [Learn more](#) 

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**Step 7:** Click on ‘Next ‘: **Security tab** and choose the security settings you wish for your virtual network.

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## Create virtual network ...

Basics

IP Addresses

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BastionHost ⓘ

☒ Disable

☐ Enable

DDoS Protection Standard ⓘ

☒ Disable

☐ Enable

Firewall ⓘ

☒ Disable

☐ Enable

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**Step 8:** Click on the **review + create** option. Wait for all the validations to pass.

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✓ Validation passed

Basics

IP Addresses

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Basics

Subscription

Azure

Resource group

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Name

Region

Central India

IP addresses

Address space

10.0.0.0/16

Subnet

default (10.0.0.0/24)

Tags

None

Security

BastionHost

Disabled

Create

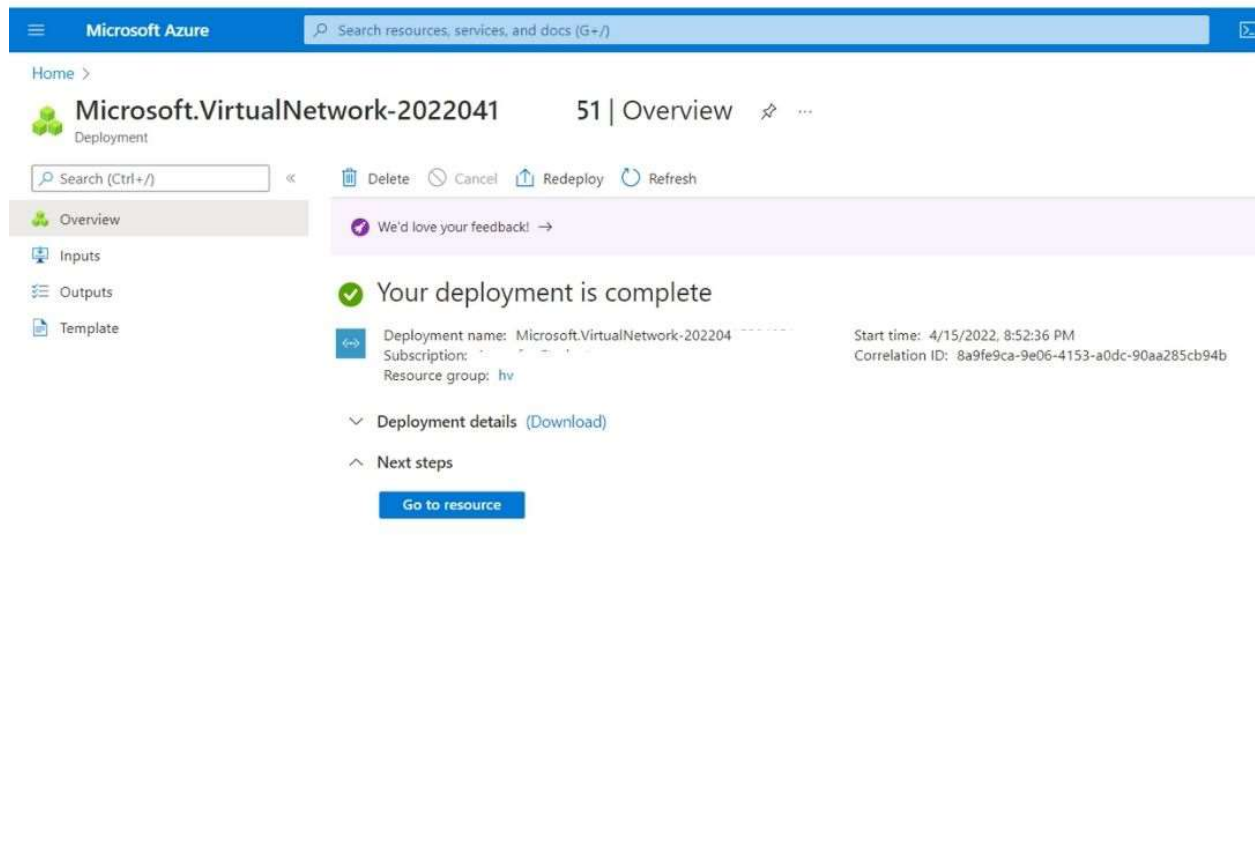
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**Step 9:** Click on **create** option to create your virtual network.





This is how we can create an Azure virtual network. It serves as the fundamental building block for our private network in Azure. The virtual network is similar to a traditional network that we operate in our data centers with additional benefits of cloud infrastructure like scalability, isolation, and availability.

Azure IP addressing is critical in ensuring that all the resources are accessible. Private IP addresses are used to communicate between resources in Azure while public IP addresses are used to access Azure resources directly through the internet.