**Quickstart: Create a virtual network using the Azure portal**

* ‎A virtual network enables Azure resources, like virtual machines (VMs), to communicate privately with each other, and with the internet. In this quickstart, you learn how to create a virtual network. After creating a virtual network, you deploy two VMs into the virtual network. You then connect to the VMs from the internet, and communicate privately between the two VMs.

If you don't have an Azure subscription, create a [free account](https://azure.microsoft.com/free/?WT.mc_id=A261C142F) now.

**Sign in to Azure**

Sign in to the [Azure portal](https://portal.azure.com/).

**Create a virtual network**

1. On the upper-left side of the screen, select **Create a resource** > **Networking** > **Virtual network**.
2. In **Create virtual network**, enter or select this information:

| **Setting** | **Value** |
| --- | --- |
| Name | Enter *myVirtualNetwork*. |
| Address space | Enter *10.1.0.0/16*. |
| Subscription | Select your subscription. |
| Resource group | Select **Create new**, enter *myResourceGroup*, then select **OK**. |
| Location | Select **East US**. |
| Subnet - Name | Enter *myVirtualSubnet*. |
| Subnet - Address range | Enter *10.1.0.0/24*. |

1. Leave the rest of the defaults and select **Create**.

**Create virtual machines**

Create two VMs in the virtual network:

**Create the first VM**

1. On the upper-left side of the screen, select **Create a resource** > **Compute** > **Windows Server 2016 Datacenter**.
2. In **Create a virtual machine - Basics**, enter or select this information:

| **Setting** | **Value** |
| --- | --- |
| **PROJECT DETAILS** |  |
| Subscription | Select your subscription. |
| Resource group | Select **MyResourceGroup**. You created it in the last section. |
| **INSTANCE DETAILS** |  |
| Virtual machine name | Enter *myVm1*. |
| Region | Select **East US**. |
| Availability options | Leave the default **No infrastructure redundancy required**. |
| Image | Leave the default **Windows Server 2016 Datacenter**. |
| Size | Leave the default **Standard DS1 v2**. |
| **ADMINISTRATOR ACCOUNT** |  |
| Username | Enter a user name of your choosing. |
| Password | Enter a password of your choosing. The password must be at least 12 characters long and meet the [defined complexity requirements](https://docs.microsoft.com/en-us/azure/virtual-machines/windows/faq?toc=%2fazure%2fvirtual-network%2ftoc.json#what-are-the-password-requirements-when-creating-a-vm). |
| Confirm Password | Reenter password. |
| **INBOUND PORT RULES** |  |
| Public inbound ports | Leave the default **None**. |
| **SAVE MONEY** |  |
| Already have a Windows license? | Leave the default **No**. |

1. Select **Next : Disks**.
2. In **Create a virtual machine - Disks**, leave the defaults and select **Next : Networking**.
3. In **Create a virtual machine - Networking**, select this information:

| **Setting** | **Value** |
| --- | --- |
| Virtual network | Leave the default **myVirtualNetwork**. |
| Subnet | Leave the default **myVirtualSubnet (10.1.0.0/24)**. |
| Public IP | Leave the default **(new) myVm-ip**. |
| Network security ports | Select **Allow selected ports**. |
| Select inbound ports | Select **HTTP** and **RDP**. |

1. Select **Next : Management**.
2. In **Create a virtual machine - Management**, for **Diagnostics storage account**, select **Create New**.
3. In **Create storage account**, enter or select this information:

| **Setting** | **Value** |
| --- | --- |
| Name | Enter *myvmstorageaccount*. |
| Account kind | Leave the default **Storage (general purpose v1)**. |
| Performance | Leave the default **Standard**. |
| Replication | Leave the default **Locally-redundant storage (LRS)**. |

1. Select **OK**
2. Select **Review + create**. You're taken to the **Review + create** page and Azure validates your configuration.
3. When you see that **Validation passed**, select **Create**.

**Create the second VM**

1. Complete steps 1 and 9 from above.

Note

In step 2, for the **Virtual machine name**, enter *myVm2*.

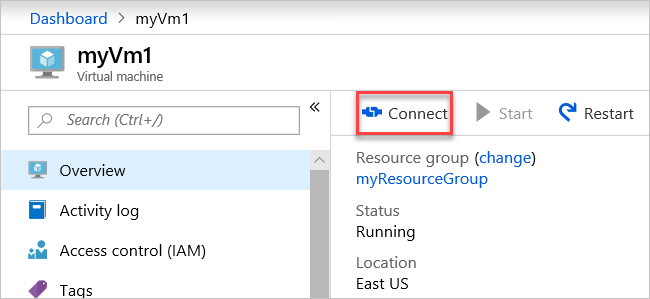
In step 7, for **Diagnosis storage account**, make sure you select **myvmstorageaccount**.

1. Select **Review + create**. You're taken to the **Review + create** page and Azure validates your configuration.
2. When you see that **Validation passed**, select **Create**.

**Connect to a VM from the internet**

After you've created *myVm1*, connect to it over the internet.

1. In the portal's search bar, enter *myVm1*.
2. Select the **Connect** button.



After selecting the **Connect** button, **Connect to virtual machine** opens.

1. Select **Download RDP File**. Azure creates a Remote Desktop Protocol (*.rdp*) file and downloads it to your computer.
2. Open the downloaded *.rdp* file.
   1. If prompted, select **Connect**.
   2. Enter the user name and password you specified when creating the VM.

Note

You may need to select **More choices** > **Use a different account**, to specify the credentials you entered when you created the VM.

1. Select **OK**.
2. You may receive a certificate warning during the sign in process. If you receive a certificate warning, select **Yes** or **Continue**.
3. Once the VM desktop appears, minimize it to go back to your local desktop.

**Communicate between VMs**

1. In the Remote Desktop of *myVm1*, open PowerShell.
2. Enter ping myVm2.

You'll get back something like this message:

PowerShell Copy

Pinging myVm2.0v0zze1s0uiedpvtxz5z0r0cxg.bx.internal.clouda

Request timed out.

Request timed out.

Request timed out.

Request timed out.

Ping statistics for 10.1.0.5:

Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

The ping fails, because ping uses the Internet Control Message Protocol (ICMP). By default, ICMP isn't allowed through the Windows firewall.

1. To allow *myVm2* to ping *myVm1* in a later step, enter this command:

PowerShell Copy

New-NetFirewallRule –DisplayName “Allow ICMPv4-In” –Protocol ICMPv4

That command allows ICMP inbound through the Windows firewall:

1. Close the remote desktop connection to *myVm1*.
2. Complete the steps in [Connect to a VM from the internet](https://docs.microsoft.com/en-us/azure/virtual-network/quick-create-portal#connect-to-a-vm-from-the-internet) again, but connect to *myVm2*.
3. From a command prompt, enter ping myvm1.

You'll get back something like this message:

PowerShell Copy

Pinging myVm1.0v0zze1s0uiedpvtxz5z0r0cxg.bx.internal.cloudapp.net [10.1.0.4] with 32 bytes of data:

Reply from 10.1.0.4: bytes=32 time=1ms TTL=128

Reply from 10.1.0.4: bytes=32 time<1ms TTL=128

Reply from 10.1.0.4: bytes=32 time<1ms TTL=128

Reply from 10.1.0.4: bytes=32 time<1ms TTL=128

Ping statistics for 10.1.0.4:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 1ms, Average = 0ms

You receive replies from *myVm1*, because you allowed ICMP through the Windows firewall on the *myVm1* VM in a previous step.

1. Close the remote desktop connection to *myVm2*.

**Clean up resources**

When you're done with the virtual network, and the VMs, delete the resource group and all of the resources it contains:

1. Enter *myResourceGroup* in the **Search** box at the top of the portal.
2. When you see **myResourceGroup** in the search results, select it.
3. Select **Delete resource group**.
4. Enter *myResourceGroup* for **TYPE THE RESOURCE GROUP NAME** and select **Delete**.