Quickstart: Create a virtual network using the Azure portal

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W tym artykule

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 now.

Sign in to Azure

Sign in to the Azure portal.

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*.

Setting	Value
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*.

3. 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**.

Setting	Value
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.
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**.

3. Select **Next : Disks**.

4. In **Create a virtual machine - Disks**, leave the defaults and select **Next : Networking**.

5. 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**.

Setting	Value
Select inbound ports	Select **HTTP** and **RDP**.

6. Select **Next : Management**.
7. In **Create a virtual machine - Management**, for **Diagnostics storage account**, select **Create New**.
8. 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)**.

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

Create the second VM

1. Complete steps 1 and 9 from above.

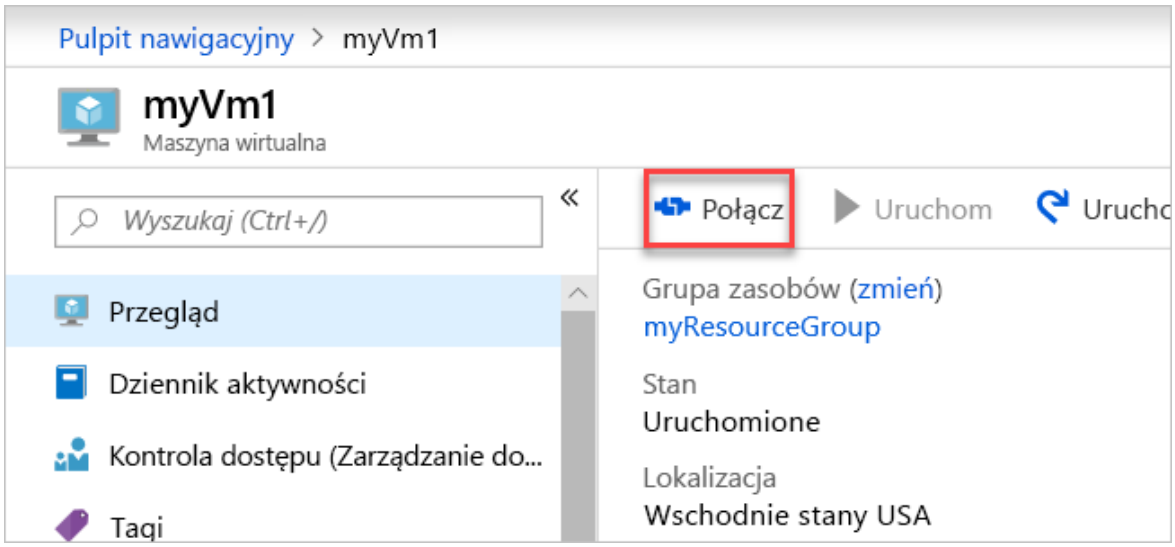
> **Uwaga**
>
> In step 2, for the **Virtual machine name**, enter *myVm2*.
>
> In step 7, for **Diagnosis storage account**, make sure you select **myvmstorageaccount**.

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**.

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.

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

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

5. Select **OK**.
6. You may receive a certificate warning during the sign in process. If you receive a certificate warning, select **Yes** or **Continue**.
7. 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 Kopiuj

   ```
   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.

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

   PowerShell Kopiuj

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

   That command allows ICMP inbound through the Windows firewall:

4. Close the remote desktop connection to *myVm1*.

5. Complete the steps in Connect to a VM from the internet again, but connect to *myVm2*.

6. From a command prompt, enter `ping myvm1`.

   You'll get back something like this message:

   PowerShell Kopiuj

   ```
   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.

7. 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**.

Next steps

In this quickstart, you created a default virtual network and two VMs. You connected to one VM from the internet, and communicated privately between the two VMs. To learn more about virtual network settings, see Manage a virtual network.

By default, Azure allows unrestricted private communication between VMs. Conversely, it only allows inbound remote desktop connections to Windows VMs from the internet. To learn more about configuring different types of VM network communications, go to the Filter network traffic tutorial.