Lab 04 - Create a virtual network

In this walkthrough, we will create a virtual network, deploy two virtual machines onto that virtual network and then configure them to allow one virtual machine to ping the other within that virtual network.

Task 1: Create a virtual network

In this task, we will create a virtual network.

1. Open your choice of web browser and sign in to the **Azure portal** by navigating to [**https://portal.azure.com**](urn:gd:lg:a:send-vm-keys) and entering the following Azure Credentials:
   * Username: **alumnoXX@juanquijanodemos.onmicrosoft.com**
   * Password: AzurePa55w0rd1234
2. On **Stay signed in?** select **Yes**.
3. From the **All services** blade, search for and select [**Virtual networks**](urn:gd:lg:a:send-vm-keys), and then click **+ Create**.
4. On the **Basics** tab, fill in the following information (leave the defaults for everything else):

| **Setting** | **Value** |
| --- | --- |
| Subscription | **Aula01** |
| Resource Group | **RGalumnoXX** |
| Name | [**vnet1**](urn:gd:lg:a:send-vm-keys) |
| Region | **northeurope** |

1. Click the **Review + create** button. Ensure the validation passes. Then hit **Create** to deploy the resource.

Task 2: Create two virtual machines

In this task, we will create two virtual machines in the virtual network.

1. From the **All services** blade, search for and select [**Virtual machines**](urn:gd:lg:a:send-vm-keys) and then click **+ Create**, from the drop down select **Azure Virtual Machine**.
2. On the **Basics** tab, fill in the following information (leave the defaults for everything else):

| **Setting** | **Value** |
| --- | --- |
| Subscription | **Aula01** |
| Resource group | **RGalumnoXX** |
| Virtual machine name | [**vm1**](urn:gd:lg:a:send-vm-keys) |
| Region | **northeurope** |
| Image | **Windows Server 2022 Datacenter - Gen2** |
| Username | [**azureuser**](urn:gd:lg:a:send-vm-keys) |
| Password | [**A**zurePa55w0rd](urn:gd:lg:a:send-vm-keys) |
| Public inbound ports | Select **Allow selected ports** |
| Selected inbound ports | **RDP (3389)** |

1. On the **Networking** tab, make sure the virtual machine is placed in the **vnet1** virtual network.

You **may** encounter an error message stating you cannot add this machine to the default subnet. You will need to remove the default and create your own.

1. Under **Subnet**, select **Manage subnet configuration**, select the **default** subnet, then select **Delete** and confirm deletion by selecting **Yes**. Click **+ Subnet** and create a subnet with the following information and click **Add**.

| **Setting** | **Value** |
| --- | --- |
| Name | [**Subnet**](urn:gd:lg:a:send-vm-keys) |
| Subnet address range | **10.0.0.0/24** |

1. Navigate back to the **Create a virtual machine** screen via the breadcrumb path along the top of the screen.
2. Click **Review + create**. After the Validation passes, click **Create**. Deployment times can vary but it can generally take between three to six minutes to deploy.
3. Monitor your deployment, but continue on to the next step.
4. Create a second virtual machine by repeating steps **1 to 3** above. Make sure that the virtual machine is in the same virtual network and subnet, and is using a new public IP address:

| **Setting** | **Value** |
| --- | --- |
| Resource group | **RGalumnoXX** |
| Virtual machine name | [**vm2**](urn:gd:lg:a:send-vm-keys) |
| Virtual network | **vnet1** |
| Public IP | **vm2-ip** |

1. Navigate back to the **Virtual machines** home page and wait for both virtual machines to deploy successfully and their status' to read **Running**.

Task 3: Test the connection

In this task, we will try to test whether the virtual machines can communicate (ping) each other. If not we will install a rule to allow an ICMP connection. Usually ICMP connections are automatically blocked.

1. Select the **vm1** virtual machine in **Virtual machines**. Open its **Overview** blade, and confirm its **Status** is **Running**. You may need to **Refresh** the page.
2. On the **Overview** blade, select **Connect**.

**Note**: The following directions tell you how to connect to your VM from a Windows computer.

1. On the **vm1 | Connect** blade, click **Select** under **Native RDP**. In the pane that appears, click to download the RDP file in step 3. Select **Keep** in the **Downloads** pop-up box if prompted.
2. Open the downloaded RDP file and click **Connect** when prompted.
3. In the **Windows Security** window, type the username [**azureuser**](urn:gd:lg:a:send-vm-keys) and password [**AzurePa55w0rd**](urn:gd:lg:a:send-vm-keys) and then click **OK**.
4. You may receive a certificate warning during the sign-in process. Click **Yes** to create the connection and connect to your deployed VM. You should connect successfully. Close the Windows Server and Dashboard windows that pop up. You should see a Blue Windows background. You are now in your virtual machine.
5. In **both** newly created virtual machines, connect via RDP and disable both the public and private firewall by opening the **Start** menu > **Settings** and typing [**Windows Firewall**](urn:gd:lg:a:send-vm-keys). In the results, select **Firewall & network protection**.
6. Open up PowerShell on the VM1 virtual machine by clicking the **Start** button, and in Search type [**PowerShell**](urn:gd:lg:a:send-vm-keys), right click on **Windows PowerShell** to **Run as administrator**
7. In Powershell, try to ping vm2 by typing:
8. ping vm2
9. You should be successful. You have pinged VM2 from VM1.

**Congratulations!** You have configured and deployed two virtual machines in a virtual network, and then you were able to connect them.