

# Lab Answer Key: Module 5: Creating and configuring virtual networks

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## Lab: Create a virtual network

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### Exercise 1: Creating a virtual network

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#### Task 1: Create a virtual network by using Azure Portal

1. From MIA-CL1, start Internet Explorer, go to <http://portal.azure.com> **<http://portal.azure.com>**, and then, when prompted, sign in by using the Microsoft account that is either the Service Administrator or Co-Administrator of your Azure subscription.
2. In the **Hub** vertical menu on the left side of the portal page, click **New**.
3. On the **New** blade, click **Networking**.
4. On the **Networking** blade, click **Virtual Network**.
5. On the **Virtual Network** blade, ensure that **Resource Manager** appears in the **Select a deployment model** drop-down list, and then click **Create**.
6. On the **Create virtual network** blade, specify the following settings, and then click **Create**:

- Name: **labVNet**
- Address space: **10.3.0.0/20**
- Subnet name: **Subnet1**
- Subnet address range: **10.3.0.0/24**
- Subscription: *Your Azure subscription*
- Resource group: **Create new**
- New resource group name: **labVNetRG**
- Location: Azure data center closest to the location of your classroom
- Pin to dashboard: Select the check box.

**Note:** Ignore any messages about overlapping address spaces that might appear when you type the value in the **Address space** text box.

1. Leave Internet Explorer with the Azure portal interface open. You will use it in the next exercise of this lab.

**Result:** After completing this exercise, you should have created a new Azure virtual network by using the Azure portal.

## Exercise 2: Verifying virtual network functionality

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### Task 1: Deploy Azure virtual machines into an existing virtual network

1. In Internet Explorer, go to the Azure portal, and then in the **Hub** vertical menu on the left side of the portal page, click **New**.
2. On the **New** blade, click **Virtual Machines**.
3. On the **Virtual Machines** blade, click **Windows Server 2012 R2Datacenter**.

4. On the **Windows Server 2012 R2Datacenter** blade, ensure that **Resource Manager** appears in the **Select a deployment model** drop-down list, and then click **Create**. This opens the **Create virtual machine** blade and the **Basics** blade to its right.
5. On the **Basics** blade, specify the following settings, and then click **OK**:
  - Name: **labvnetvm1**
  - VM disk type: **HDD**
  - User name: **Student**
  - Password: **Pa\$\$w0rd1234**
  - Subscription: *your Azure subscription*
  - Resource group:: **labVNetRG**
  - Location: The Azure data center closest to the classroom location This opens the **Choose a size** blade.
6. On the **Choose a size** blade, click **View all**.
7. On the **Choose a size** blade, click **D1 Standard**, and then click **Select**. Clicking **Select** opens the **Settings** blade.
8. On the **Settings** blade, specify the following settings, and then click **OK**:

- Disk type: **Standard**
- Storage account: Accept the default value (this will create a new storage account).
- Virtual network: **labVNet**
- Subnet: **Subnet1 (10.0.0.0/24)**
- Public IP address: **(new) labvnetvm1**
- Network security group: **(new) labvnetvm1**
- Extensions: **No extensions**
- Diagnostics: **Disabled**
- Availability set: **None**

9. On the **Summary** blade that has opened, note the **Validation passed** message, and then click **OK** again. Note the **Deployment started** message in the notification area at the top of the page and proceed directly to the next step without waiting for the deployment to complete.
10. In the Azure portal, in the **Hub** vertical menu on the left side of the portal page, click **New**.
11. On the **New** blade, click **Virtual Machines**.
12. On the **Virtual Machines** blade, click **Windows Server 2012 R2Datacenter**.
13. On the **Windows Server 2012 R2Datacenter** blade, ensure that **Resource Manager** appears in the **Select a deployment model** drop-down list, and then click **Create**. This opens the **Create virtual machine** blade and the **Basics** blade to its right.
14. On the **Basics** blade, specify the following settings, and then click **OK**:

- Name: **labvnetvm2**
- VM disk type: **HDD**
- User name: **Student**
- Password: **Pa\$\$w0rd1234**
- Subscription: *your Azure subscription*
- Resource group: **labVNetRG**
- Location: The Azure data center closest to the classroom location On the **Choose a size** blade that has opened, click **View all**.

15. On the **Choose a size** blade, click **D1 Standard**, and then click **Select**. Clicking **Select** opens the **Settings** blade.

16. On the **Select** settings blade, specify the following settings, and then click **OK**:

- Disk type: **Standard**
- Storage account: Accept the default value.
- Virtual network: **labVNet**
- Subnet: **Subnet1 (10.3.0.0/24)**
- Public IP address: **(new) labvnetvm2**
- Network security group: **(new) labvnetvm2**
- Extensions: **No extensions**
- Diagnostics: **Disabled**
- Availability set: **None**

17. On the **Summary** blade that has opened, note the **Validation passed** message, click **OK**, and then note the **Deployment started** message in the notification area at the top of the page.

18. Wait for both deployments to complete before proceeding to the next task. Leave Internet Explorer with the Azure portal interface open.

## Task 2: Test Virtual network connectivity

1. In Internet Explorer, go to the Azure portal, and then in the **Hub** menu, click **Virtual machines**.
2. On the **Virtual machines** blade, click **labvnetvm2**. This opens the **labvnetvm2** blade and its **Settings** blade.
3. On the **Settings** blade, click **Properties**. On the **Properties** blade, note the IP address listed directly under the **PRIVATE IP ADDRESS** label. This is the private IP address of **labvnetvm2**.
4. Scroll back to the **Virtual machines** blade, and then on the **Virtual machines** blade, click **labvnetvm1**. This opens the **labvnetvm1** blade and its **Settings** blade.
5. On the **labvnetvm1** blade, click **Connect**.
6. When prompted whether to open or save the .rdp file, click **Open**.
7. In the **Remote Desktop Connection** window, click **Connect**.
8. In the **Windows Security** dialog box specify the following details, and then click **OK**:
  - User name: **Student**
  - Password: **Pa\$\$w0rd1234**
9. In the **Remote Desktop Connection** window, click **Yes**, and then wait until the connection is successfully established.
10. In the RDP session to the **labvnetvm1** virtual machine, right-click the Windows logo in the lower-left corner, and then click **Command Prompt (Admin)**.
11. In the **Administrator: Command Prompt** window, type the following command (where 10.0.0.x is the private IP address of **labvnetvm2**, which you identified in step 3 of this task), and then press Enter:

```
mstsc /admin /h:768 /w:1024 /v:10.0.0.x
```
12. When prompted for credentials, in the **Windows Security** dialog box specify the following and then click **OK**:

- User name: **Student**
- Password: **Pa\$\$w0rd1234**

13. In the **Remote Desktop Connection** window, click **Yes**, verify that you have successfully connected to the **labvnetvm2** virtual machine by using its private IP address, and then close the Remote Desktop session to **labvnetvm1**
14. In the Azure portal, on the **labvnetvm1** blade, click **Stop**. When prompted whether to stop this virtual machine, click **Yes**.
15. In the Azure portal, in the Hub menu, click **Virtual machines**.
16. On the **Virtual machines** blade, click **labvnetvm2**. This opens the **labvnetvm2** blade and the **Settings** blade.
17. On the **labvnetvm2** blade, click **Stop**. When prompted whether to stop this virtual machine, click **Yes**.
18. Close all open windows on MIA-CL1.

### Task 3: Prepare for the next module

When you are finished with the lab, do not revert the virtual machines. Please keep all of the VMs running. The VMs in their current state are required for the next module.

**Result:** After completing this exercise, you should have: Deployed two Azure virtual machines into an existing Azure virtual network by using the Azure portal. Verify direct network connectivity between the two virtual machines on the same Azure virtual network.

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