**Module 12: Azure Services**

**Exercise 1: Create Azure AD Domain Services**

#### Task 1: Create Azure AD Domain Services

1. In the Azure portal, search for and select **Azure AD Domain Services** and, on the **Azure AD Domain Services** blade, click **+ Create**.
2. On the **Basics** **tab of the Create Azure AD Domain Services**, specify the following settings:

|  |  |
| --- | --- |
| **Setting** | **Value** |
| Subscription | **the name of the Azure subscription you will be using in this lab** |
| Resource group | **az104-12b-rg01** |
| DNS domain name | **contoso.com** |
| Region | **select one of the regions that support availability zones and where you can provision Azure virtual machines** |
| SKU | **Enterprise** |
| Forest type | **User** |

1. Click **Next**, on the **Networking** tab of the **Create Azure AD Domain Services** blade, click **Create new**.
2. On the **Create virtual network** blade, specify the following settings (leave others with their default values):

|  |  |
| --- | --- |
| **Setting** | **Value** |
| Name | **aadds-vnet** |
| Address range | **10.0.16.0/20** |
| Subnet name | **aadds-subnet** |
| Subnet range | **10.0.16.0/24** |

1. Click **Next**, on the **Administration** tab keep the default values and the click **Next**.
2. On the **Synchronization** tab, keep the default values and then click **Next**.
3. On the **Security Settings** tab, keep the default values and then click **Next**.
4. On the **Tags** tab, keep the default values and then click **Next**.
5. On the **Review + create** tab click **Create**.
6. On the **You should know…** click **Ok**.

**Note**: Wait until the above process finish, it should take about 35 minutes.

1. When the above process finished click **Go to Resources**.
2. The **contoso.com** overview tab shows that the managed domain is currently **Deploying**. You can't configure the managed domain until it's fully provisioned.

**Note**: Wait until the above process finish, it should take about 15 minutes.

1. When the managed domain is fully provisioned, the **Overview** tab shows the domain status as **Running**.
2. On **Support + Troubleshooting** blade click **Configuration diagnostics** and the click **Run**.
3. On **Diagnostics for the Azure AD Domain Services** watch the warning related with **DNS records**, expand it and then click **Fix.**
4. On **DNS Records,** check the Issues founded and then, click **Fix**.
5. On **Settings** blade click **Properties** – **IP addresses** take note the two **IP addresses** assigned to DCs.
6. On **Settings** blade click **Properties** – Admin group click **AAD DC Administrators**.
7. On **Manage** blade click **Members** and then add an AAD Global Administrator account.

#### Task 2: Sync Azure AD Global Administrator account with Azure AD DS admin account.

1. In the Azure portal, search for and select **Azure Active Directory** and, on the **AAD** blade, click **Users**.
2. On **Users** blade select the AAD global administrator account.
3. On Administrator account blade click **Reset Password**.
4. On **Reset password** blade click **Reset Password** and the copy the temporary password created.
5. From any Internet browser open an **In-private** windows and then connect to the Azure Portal using de **Administrator** account.
6. On login session **Update password**, type the temporary password noted on Step 4, then type the new password.

#### Task 3: Deploy an Azure virtual machine by using the Azure portal

In this task, you will deploy Azure virtual machine by using the Azure portal.

1. In the Azure portal, search for and select **Virtual machines** and, on the **Virtual machines** blade, click **+ Create**.
2. On the **Basics** tab of the **Create a virtual machine** blade, specify the following settings (leave others with their default values):

|  |  |
| --- | --- |
| **Setting** | **Value** |
| Subscription | **the name of the Azure subscription you will be using in this lab** |
| Resource group | **the name of a new resource group az104-12b-rg02** |
| Virtual machine name | **az104-12b-vm0** |
| Region | **select one of the regions that support availability zones and where you can provision Azure virtual machines** |
| Availability options | **Availability zone** |
| Availability zone | **1** |
| Security type | **Standard** |
| Image | **Windows Server 2019 Datacenter - Gen1** |
| Azure Spot instance | **No** |
| Size | **Standard D2s v3** |
| Username | **Student** |
| Password | **Pa55w.rd1234** |
| Public inbound ports | **Allow selected ports, 3389 (RDP)** |
| Already have a Windows Server license | **No** |

1. Click **Next: Disks >** and, on the **Disks** tab of the **Create a virtual machine** blade, specify the following settings (leave others with their default values):

|  |  |
| --- | --- |
| **Setting** | **Value** |
| OS disk type | **Standard HDD** |
| Enable Ultra Disk compatibility | **No** |

1. Click **Next: Networking >** and, on the **Networking** tab of the **Create a virtual machine** blade, click **Create new** below the **Virtual network** textbox.
2. On the **Create virtual network** blade, specify the following settings (leave others with their default values):

|  |  |
| --- | --- |
| **Setting** | **Value** |
| Name | **az104-12b-rg02-vnet** |
| Address range | **10.1.0.0/20** |
| Subnet name | **subnet0** |
| Subnet range | **10.1.0.0/24** |

1. Click **OK** and, back on the **Networking** tab of the **Create a virtual machine** blade, specify the following settings (leave others with their default values):

|  |  |
| --- | --- |
| **Setting** | **Value** |
| Public IP | **az104-12b-vm0-ip** |
| NIC network security group | **Basic** |
| Public Inbound ports | **Allow selected ports, RDP (3389)** |
| Accelerated networking | **Off** |
| Place this virtual machine behind an existing load balancing solution? | **No** |

1. Click **Next: Management >** and, on the **Management** tab of the **Create a virtual machine** blade, specify the following settings (leave others with their default values):

|  |  |
| --- | --- |
| **Setting** | **Value** |
| Boot diagnostics | **On** |
| Diagnostics storage account | **the default value** |

1. Click **Next: Advanced >**, on the **Advanced** tab of the **Create a virtual machine** blade, review the available settings without modifying any of them, and click **Review + Create**.
2. On the **Review + Create** blade, click **Create**.

#### Task 4: Configure virtual network peering

1. In the Azure portal, search for and select **Virtual networks**.
2. In the list of virtual networks, click **aadds-vnet**.
3. On the **aadds-vnet** virtual network blade, in the **Settings** section, click **Peerings** and then click **+ Add**.
4. Add a peering with the following settings (leave others with their default values):

|  |  |
| --- | --- |
| **Setting** | **Value** |
| Peering link name | **aadds-vnet\_to\_az104-12b-rg02-vnet** |
| Peering link name | **az104-12b-rg02-vnet\_to\_aadds-vnet** |
| Virtual network deployment model | **Resource manager** |
| Virtual network | **az104-12b-rg02-vnet** |
| Traffic to remote virtual network | **Allow** |
| Traffic forwarded from remote virtual network | **Allow** |
| Virtual network gateway or Route Server | **None** |

**Note**: This step establishes one local Peerings - one from aadds-vnet to az104-12b-rg02-vnet

#### Task 5: Configure DNS server for az104-12b-rg02-vnet

1. In the Azure portal, search for and select **Virtual networks**.
2. On the **Virtual networks** blade click on **az104-12b-rg02-vnet**.
3. On **Settings** blade, click **DNS Server** select **Custom** and then, type the IP Address assigned to the Domain Controllers, click **Save**.
4. Restart the VM named **az104-12b-vm0.**

#### Task 6: Add Computer to Domain contoso.com

1. In the Azure portal, search for and select **Virtual machines,** click on **az104-12b-vm0**.
2. Connect RDP session to **az104-12b-vm0**.
3. On VM named **az104-12b-vm0** open CMD console and then, type **ipconfig /all**.
4. On CMD console check that the DNS servers assigned are the same assigned to virtual network named **az104-12b-rg02-vnet**.
5. Add computer to domain using the following settings:

|  |  |
| --- | --- |
| **Setting** | **Value** |
| Domain | **contoso.com** |
| User name | **The AAD Global Administrator account** |
| Password | **Password updated on Task 2** |

1. Restart computer
2. Login with AAD Global Administrator account.
3. On Star Menu run **Windows PowerShell** console as **Administrator** and the type the below command to add tools to manage the domain named **contoso.com**:

Install-WindowsFeature -Name GPMC,RSAT-AD-PowerShell,RSAT-ad-admincenter,RSAT-ADDS-Tools,RSAT-DNS-Server

#### Clean up resources

1. List all resource groups created throughout the labs of this module by running the following command:

*Get-AzResourceGroup -Name 'az104-12\*'*

1. Delete all resource groups you created throughout the labs of this module by running the following command:

*Get-AzResourceGroup -Name 'az104-12\*' | Remove-AzResourceGroup -Force -AsJob*

**Note**: The command executes asynchronously (as determined by the -AsJob parameter), so while you will be able to run another PowerShell command immediately afterwards within the same PowerShell session, it will take a few minutes before the resource groups are actually removed.