Lab Answer Key: Module 2: Microsoft Azure management tools

Lab: Using Microsoft Azure management tools

Exercise 1: Using the Azure PowerShell modules

Task 1: Install the Azure PowerShell modules

1. On MIA-CL1, start Microsoft Internet Explorer, and then browse to **http://azure.microsoft.com/en-us/downloads/ <http://azure.microsoft.com/en-us/downloads/>** .
2. On the **Downloads** page, in the **Command-line tools** section, locate **PowerShell**.
3. Below **Windows PowerShell**, click **Windows install**.
4. When prompted with **Do you want to run or save WindowsAzurePowerShellGet.3f.3f.3fnew.exe**, click **Run**. This launches the Web Platform Installer (Web PI) 5.0.
5. If prompted by User Account Control, click **Yes**.
6. In the **Web Platform Installer 5.0** window, on the **Microsoft Azure PowerShell** page, click **Install**.
7. In the **Web Platform Installer 5.0** dialog box, click **I Accept**.
8. When the installation is complete, click **Finish**. Leave the **Web Platform Installer 5.0** window open.

   > **Note:** You have the option to install other software related to Microsoft Azure.

Task 2: Connect to your Azure subscription

1. On MIA-CL1, click Start , click **All apps**, scroll down in the list of apps to the **Windows PowerShell** folder, click the **Windows PowerShell** folder, and then right-click **Windows PowerShell ISE**. On the shortcut menu, click **More**, and then click **Run as administrator**.
2. If prompted by User Account Control, click **Yes**.

3. In the **PowerShell ISE** window, in the console pane, type the following command, and then press Enter:

```
Get-Module -ListAvailable
```

> **Note:** The output contains a list of several AzureRM.* modules, the Azure PowerShell module, and the Azure.Storage module.

4. In the **PowerShell ISE** window, in the console pane, type the following command to sign in to your Azure subscription, and then press Enter:

```
Add-AzureRmAccount
```

5. When prompted in the **Sign in to your account** dialog box, in the **Email or phone** box, type the name of the Microsoft account that is either the Service Administrator or a Co-Administrator of your Azure subscription.
6. In the **Password** box, type the corresponding password, and then click **Sign in**.

> **Note:** The cmdlet returns the list of subscriptions associated with your Microsoft account.

Task 3: Use Azure PowerShell cmdlets

1. Back in the **PowerShell ISE** window, in the console pane, type the following cmdlet to retrieve the same list of subscriptions associated with your Microsoft account, and then press Enter:

```
Get-AzureRmSubscription
```

2. Copy the value of the **SubscriptionId** property displayed in the output of the preceding cmdlet by selecting it and then pressing Ctrl+C.
3. Type the following cmdlet, paste the copied entry after the *SubscriptionId* parameter, and then press Enter:

```
Select-AzureRmSubscription -SubscriptionId <Value of the SubscriptionId property>
```

> **Note:** If you had multiple subscriptions, you would use the preceding cmdlet to specify the Azure subscription you want to work with in the current PowerShell session.

4. To retrieve the types of Azure Resource Manager resources you can create in your subscription, in the console pane, type the following cmdlet, and then press Enter:

```
Get-AzureRmResourceProvider
```

> **Note:** The cmdlet lists each Azure Resource Provider, its registration state (the provider must be registered before you can use it), and the list of resource types you can create by referencing it.

5. To identify the list of resources that are implemented by the Microsoft.Compute provider (which includes Azure Virtual Machines), in the console pane, type the following cmdlet, and then press Enter:

```
Get-AzureRmResourceProvider -ProviderNamespace Microsoft.Compute
```

6. To identify the list of resources that are implemented by the Microsoft.Compute provider in the Eastern United States, in the console pane, type the following cmdlet, and then press Enter:

```
Get-AzureRmResourceProvider -ProviderNamespace Microsoft.Compute -Location 'East US'
```

7. Close the Windows PowerShell ISE.
8. Leave Internet Explorer open.

> **Result**: After you complete this exercise, you will have successfully installed and used the Azure PowerShell modules.

Exercise 2: Using the Azure CLI

Task 1: Install the Azure CLI

1. On MIA-CL1, switch to the **Web Platform Installer 5.0** window.

> **Note:** If you accidentally closed the **Web Platform Installer 5.0** window, switch to Start, click the down arrow, and then click **Web Platform Installer 5.0.**

2. In the **Web Platform Installer 5.0** window, click the **Products** tab. In the list of products, next to **Microsoft Azure Cross-platform Command Line Tools**, click **Add**, and then click **Install**.

3. In the **Web Platform Installer 5.0** dialog box, on the **PREREQUISITES** tab, click **I Accept**.
4. When the installation has completed, click **Finish**.
5. In the **Web Platform Installer 5.0** window, click **Exit**.

Task 2: Connect to your Azure subscription by using the Azure CLI

1. On MIA-CL1, click **Start**, click **All apps**, scroll toward the list of apps, click **Windows System**, right-click **Command Prompt**, click **More** on the drop down menu, and then click **Run as administrator**.
2. If prompted by User Account Control, click **Yes**.
3. In the **Administrator: Command Prompt** window, type the following command, and then press Enter:

```
azure
```

4. If prompted for whether to enable data collection, type **n**, and then press Enter.
5. A summary of the most-common Azure CLI commands displays.
6. At the command prompt, type the following command, and then press Enter:

```
azure login
```

7. A prompt displays, stating **To sign-in, use a web browser to open the page https://aka.ms/devicelogin <https://aka.ms/devicelogin>. Enter the code** *XXXXXXXXX* **to authenticate**, where *XXXXXXXXX* is a random string of characters.
8. On MIA-CL1, switch to Internet Explorer (or start Internet Explorer if it is not currently open), and then browse to **https://aka.ms/devicelogin <https://aka.ms/devicelogin>**.
9. On the **Device Login** page, type the code specified in the message in the step 7.
10. Once you type in the code, you should see the Microsoft Azure CLI listed on the same page listed as the **Application publisher**, and click **Continue**.
11. Click on the name of the Microsoft account that is either the Service Administrator or a Co-Administrator of your Azure subscription.
12. On the **Sign in to your account page,** in the **Email or phone** box type the name of the Microsoft account that is either the Service Administrator or a Co-Administrator of your Azure subscription.

13. In the **Password** box, type the corresponding password, and then click **Sign in**.

> **Note:** At this point, the **Windows Azure Cross-platform Command Line Interface** page is visible, confirming that **You have signed in to the Windows Azure Cross-platform Command Line Interface on your device. You may now close the window**.

14. Close the **Internet Explorer** window as instructed.

15. Back in the **Administrator: Command Prompt** window, note the message confirming that your subscription was added to the current session. The following line also displays:

```
info: login command OK
```

16. In case of an error, repeat the steps 6 through 15.

Task 3: Manage your Azure subscription by using the Azure CLI

1. To switch to the Resource Manager mode, at the command prompt, type the following command, and then press Enter:

```
azure config mode arm
```

2. List your subscriptions by typing the following command at the command prompt and then pressing Enter:

```
azure account list
```

3. Copy the value of the **Id** property displayed in the output of the preceding command by selecting it and then pressing Ctrl+C.

4. Type the following command, paste the copied entry after the *SubscriptionId* parameter, and then press Enter:

```
azure account set <Value of the SubscriptionId property>
```

> **Note:** If you had multiple subscriptions, you would use the preceding command to specify the Azure subscription you want to work with in the current PowerShell session.

5. To retrieve the types of Azure Resource Manager providers available in your subscription, at the command prompt, type the following command, and then press Enter:

```
azure provider list
```

> **Note:** The output of the command contains each Azure Resource Provider available in your subscription and its registration state (the provider must be registered before you can use it).

6. To list all the Azure datacenters, at the command prompt, type the following command, and then press Enter:

```
azure location list
```

7. To identify the list of resources that are implemented by the Microsoft.Compute provider (which includes Azure Virtual Machines) along with the list of locations where they are available, at the command prompt, type the following command, and then press Enter:

```
azure provider show Microsoft.Compute
```

8. Close the **Administrator: Command Prompt** window.
9. Close the **Internet Explorer** window.

Task 4: 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 will have installed and used the Azure CLI tools.

or inferred. Microsoft makes no warranties, express or implied, with respect to the information provided here.