Module 9: Automating Integration with Azure Resources

Lab: Automating the Creation of Azure Assets using PowerShell a xPlat CLI

Exercise 1: Use xPlat CLI to Create and Manage and Azure Web App

Task 1: Preparing the xPlat CLI Environment

1. Open the **Microsoft Web Platform Installer** application.
2. In the **Web Platform Installer** dialog, click the **Products** tab.
3. Locate the **Microsoft Azure Cross-platform Command Line Tools** option.
4. Click the **Add** button to the right of **Microsoft Azure Cross-platform Command Line Tools** option.
5. Click the **Install** button.
6. You will be prompted with a list of pre-requisite applications. Click the **I Accept** button.
7. Wait for the installation process to complete, then click **Finish**.
8. On the Start screen, click the down arrow to view all the applications, and then click **Command Prompt**.
9. Switch to the **Command Prompt** window.
10. To validate that the **azure** CLI command is available, type the following command in the console, and then press Enter:

    ```
    azure --help
    ```

11. Type **Y** to indicate that you approve of the data collection process.
12. To switch to the **ARM** mode for the CLI, type the following command in the console, and then press Enter:

    ```
    azure config mode arm
    ```

Task 2: Login to Your Azure Subscription Using Interactive Login

1. To begin the interactive login process, type the following command in the console, and then press Enter:

    ```
    azure login
    ```

2. Take a note of the code provided by the CLI command tool:

    > **Note:** The code is displayed in the command prompt. For example, you may see: `Enter the code A2U763CQ9 to authenticate` . In this example, th
    > `A2U763CQ9` .

3. On the Start screen, click the **Internet Explorer** tile.
4. Go to *(**https://aka.ms/devicelogin <https://aka.ms/devicelogin>**)*.
5. In the code dialog box, type in the code you recorded earlier.
6. If the code is correct, the page will refresh automatically and render the name of the application requesting access to your Azure subscription (**Micr**
7. Click the **Continue** button.
8. In the email address dialog box, type the email address of your Microsoft account.
9. In the password dialog box, type the password for your Microsoft account.

10. Click **Sign In**.

> **Note:** If you were successful, you will see the message *"You have signed in to the Microsoft Azure Cross-platform Command Line Interface appli device"*. The code has a timeout so it is possible to not login quickly enough using the Device Login page. If this happens, simply repeat this task.

11. Return to the **Command Prompt** application.
12. To view your account details, type the following command in the console, and then press Enter:

```
azure account show
```

> **Note:** If you have multiple Azure subscriptions, you can use **azure account set [subscription-name]** to select the appropriate subscription. If yo about your subscription's name, you can simply use **azure account list**. If your Azure subscription is provided by a Learning Partner, it might be generated account without any details. In such a case, this command will return an empty result.

> **Results:** After completing this exercise, you will have set up a development environment to use xPlat CLI for Azure service automation.

Task 3: Create a new Website instance by using xPlat CLI

1. To create a new Resource Group, type the following command in the console by providing the name **rga20532**, the **West US** location and then pres

```
azure group create --name rga20532 --location "West US"
```

> **Note:** You might get an error message notifying you that your Website's name is not unique. If this occurs, select a new name until your Website

2. To view a list of your Resource Groups, type the following command in the console, and then press Enter:

```
azure group list
```

3. To create a new Web App Resource, type the following command in the console by providing the unique name selected for your Web App, the **East** then press Enter:

```
azure resource create --name [Unique Name] --resource-type "Microsoft.Web/Sites" --api-version "2014-06-01" --location "East US" --resource
```

> **Note:** You might get an error message notifying you that your Website's name is not unique. If this occurs, select a new name until your Website

4. To view a list of Resources in the **rga20532** Resource Group, type the following command in the console, and then press Enter:

```
azure resource list --resource-group rga20532
```

5. To get the details for your new Website, type the following command in the console by providing the unique name selected for your Website, and th

```
azure resource show --name [Unique Name] --resource-type "Microsoft.Web/Sites" --resource-group rga20532 --api-version "2014-06-01" --json
```

6. Record the **defaultHostName** value from the list of key-value pairs that are generated by the previous command.

> **Note:** this hostname property will look similar to this: `"defaultHostName": "websitepiaxfa4veu6lw.azurewebsites.net"`.

7. Record the **sku** value from the list of key-value pairs that are generated by the previous command.

> **Note:** this hostname property will look similar to this: `"sku": "Shared"`.

8. To view the new Website in Internet Explorer, type the following command in the console, and then press Enter:

```
explorer "http://[Host Name]"
```

9. Verify that the new Website is running.
10. Close Internet Explorer.
11. Switch to the **Command Prompt** console window.

Task 4: Remove a Website instance by using xPlat CLI

1. To remove your new Web App, type the following command in the console by providing the unique name selected for your Website, and then press

```
azure resource delete --name [Unique Name] --resource-type "Microsoft.Web/Sites" --resource-group rga20532 --api-version "2014-06-01"
```

2. Type **Y** to indicate that you want to remove the Web App, and then press Enter.
3. To remove your new Resource Group, type the following command in the console by providing the name **rga20532**, and then press Enter:

```
azure group delete --name rga20532
```

4. Type **Y** to indicate that you want to remove the Resource Group, and then press Enter.
5. To verify that your Resource Group has been removed, type the following command in the console by providing the name **rga20532**, and then press should be a failure:

```
azure group show --name rga20532
```

> **Results:** After completing this exercise, you will have used xPlat CLI to manage instances of an Azure service.

Exercise 2: Use PowerShell to Create and Manage a Resource Group

Task 1: Open the Azure PowerShell Console

1. On the Start screen, click the down arrow to view all the applications, and then click **Windows PowerShell**.
2. Switch to the **Windows PowerShell** window.

Task 2: Authenticate to Azure Resource Manager Using PowerShell

1. To switch modules, type the following command in the console, and then press Enter:

```
Login-AzureRmAccount
```

2. In the **Sign in to your account** dialog box, perform the following steps:

   a. Enter the email address of your Microsoft account.

   b. Enter the password for your Microsoft account.

   c. Click **Sign In**.

3. To view your current Azure PowerShell session context type the following command in the console, and then press Enter:

```
Get-AzureRmContext
```

> **Note:** If you have multiple Azure subscriptions, you can use **Select-AzureRmSubscription** to select the appropriate subscription.

Task 3: Create a resource group by using PowerShell

1. To create a new instance of a resource group from the template, type the following command in the console, and then press Enter:

```
New-AzureRmResourceGroup -Name rgb20532 -Location "West US"
```

2. To provide the parameters for the template, type the following command in the console, and then perform the following steps:

```
New-AzureRmResourceGroupDeployment -ResourceGroupName rgb20532 -TemplateFile "F:\Mod09\Labfiles\azuredeploy.json"
```

   f. For the **administratorLogin** prompt, provide the value **testuser**, and then press Enter.

g. For the **administratorLoginPassword** prompt, provide the value **TestPa$$w0rd**, and press Enter.

> **Note:** Wait for the provisioning process to complete. Status messages will be displayed periodically and the final message with the details will be provisioning is complete.

3. To get the details of your new resource group, type the following command in the console by providing the unique name selected for your Website, a Enter:

```
Get-AzureRmResourceGroup –ResourceGroupName rgb20532
```

4. To get the details of your new Website, type the following command in the console by providing the unique name selected for your Website, and the

```
(Get-AzureRmResource -IsCollection -ResourceGroupName rgb20532 -ResourceType "Microsoft.Web/sites" -ApiVersion 2015-08-01).Properties
```

5. Record the value of the **hostNames** property from the JSON data generated by the previous command.

> **Note:** this hostname property will look similar to this: `DefaultHostName : websitepiaxfa4veu6lw.azurewebsites.net .`

6. To view the new Website in Internet Explorer, type the following command in the console, and then press Enter:

```
explorer “http://[Host Name]”
```

7. Verify that the new Website is running.
8. Close Internet Explorer.
9. Switch to the **Windows PowerShell** console window.

Task 4: Remove the resource group by using PowerShell

1. To remove your new resource group, type the following command in the console, and then press Enter:

```
Remove-AzureRmResourceGroup –Name rgb20532
```

2. Type **Y** to indicate that you want to remove the Website, and then press Enter.

> **Note:** Because removing a resource group involves removing multiple resources, this process can take 5 to 15 minutes on average.

3. Close the **Windows PowerShell** console window.

> **Results:** After completing this exercise, you will have used Azure to interact with the Resource Manager, resource groups, and resource group templ