# Module 1: Introduction to Microsoft Azure

# Lab: Managing Microsoft Azure

### Scenario

A. Datum Corporation wants to expand their cloud presence by taking advantage of the benefits of Azure. You have been asked to explore and compare the available IaaS v2 features by using the Azure portals and Windows PowerShell.

### Objectives

After completing this lab, you will be able to:

* Use the Azure portals.
* Use Azure Resource Manager features via the Azure portal.
* Use Azure PowerShell.

### Lab Setup

Estimated Time: 50 minutes

Virtual machine: **20533C-MIA-CL1**

User name: **Student**

Password: **Pa$$w0rd**

Before you start this lab, ensure that you have completed the tasks in the "Preparing the environment" demonstration, which is in the first lesson of this module. Also ensure that the setup script has completed.

## Exercise 1: Using the Azure portals

### Scenario

You have been asked to explore the available browser-based Azure portals to assess how A. Datum Corporation will use them. In the Azure classic portal, you must create a co-administrator account and confirm the domain name of your subscription for use in your testing.

In the Azure portal, you must observe the organization of resources and customize the interface to make your testing environment more accessible. In the account page of the Azure portal, you must view and download your current billing data and sign up for an available preview feature that you will use later in your testing.

The main tasks for this exercise are as follows:

1. Use the Azure classic portal
2. Use the Azure portal
3. Use the account page of the Azure portal

#### Task 1: Use the Azure classic portal

1. Ensure that you are signed in to the 20533C-MIA-CL1 virtual machine as **Student** with the password **Pa$$w0rd**. You should have already run the preparation script in the "Preparing the environment" demonstration at the beginning of the module.
2. Open Internet Explorer, and then go to **https://manage.windowsazure.com**.
3. Sign in by using the email address and password you set up for this course.
4. Open the **settings** page and then the **ADMINISTRATORS** page.
5. Add a co-administrator account by using a random, unique email address ending with **@outlook.com**.
6. In Internet Explorer, navigate to the **ACTIVE DIRECTORY** page in the Azure classic portal. If the **Let's talk about Azure AD** page appears, clear all checkboxes, and then click the checkmark at the bottom of the page.
7. On the **Domains** page, note the domain name for your subscription.
8. On the **Users** page, note the two users: your user account and the co-administrator account you created earlier.

#### Task 2: Use the Azure portal

1. Go to the Azure portal at **https://portal.azure.com**.
2. Click the **Edit dashboard** option to edit the layout of the **Dashboard** page.
3. Resize the **All resources** tile to **4x6**.
4. Resize the **Service health** tile to **2x4**.
5. Click **Done customizing** to confirm the changes to the **Dashboard** page.
6. On the Hub menu, use the **More services** menu to pin the **Storage accounts** item to the Hub menu.

#### Task 3: Use the account page of the Azure portal

1. In Internet Explorer, go to the account page of the Azure portal at **https://account.windowsazure.com**.
2. Sign in by using the email address and password you set up for this course.
3. Go to the **Subscriptions** page, and then click your subscription. View the billing summary for your subscription on the page.
4. Click **Download usage details**, download the version 1 usage details for your subscription, and then view them in Notepad. Note that this is intended to simply review its content - typically to analyze it in more details, you would use Microsoft Excel or other program capable of parsing csv files.

**Result**: After completing this exercise, you will have used the Azure portals.

## Exercise 2: Using the Azure Resource Manager features in the Azure portal

### Scenario

You have been asked to create some temporary resources in Azure to test the management interface of the Azure portal. You must create a resource group in Azure, create a new storage account and a new virtual machine in the Azure portal, and then tag the resources as test resources before assigning your newly added co-administrator to the Automation Operator role in the Azure portal.

The main tasks for this exercise are as follows:

1. Create and manage a resource group
2. Create Azure resources
3. Configure tagging
4. Configure RBAC

#### Task 1: Create and manage a resource group

1. In Internet Explorer, go to **https://portal.azure.com**.
2. In the Azure portal, create a new resource group named **TestRG1** in your preferred location.

#### Task 2: Create Azure resources

* On the Azure portal page, create a new IaaS v2 storage account assigned to the **TestRG1** resource group. Use the current date and your initials to create a unique name in the format **storage***MMDDYYYYab* format.

**Note:** For example, a student named Ed Meadows might use **storage04252016em**. All alphabetical characters must be lowercase.

#### Task 3: Configure tagging

1. In the Azure portal, open the **TestRG1** resource group pane.
2. Create a tag named **project:Test**, and then assign it to the TestRG1 resource group.
3. Assign the **project:Test** tag to the **storage***DDMMYYYYab* storage account, and then pin the **project:Test** tag to the dashboard.
4. On the **Dashboard** page, view the resources that are tagged with the **project:Test** tag.

#### Task 4: Configure RBAC

* From the **Dashboard** page, add the user you created earlier in this lab as a Storage Account Contributor for the TestRG1 resource group.

**Result**: After completing this exercise, you will have used the Azure Resource Manager features in the Azure portal.

## Exercise 3: Using Azure PowerShell

### Scenario

You have been asked to investigate the capabilities of Azure PowerShell for A. Datum Corporation. You must connect to your Azure subscription by using Azure PowerShell and then use Azure PowerShell to create an IaaS v2 web app, create a new resource group named TestWebRG, and reassign the web app to the new resource group.

The main tasks for this exercise are as follows:

1. Connect Azure PowerShell to your Azure subscription
2. Manage Azure services and resource groups
3. Reset the environment

#### Task 1: Connect Azure PowerShell to your Azure subscription

1. On MIA-CL1, on the taskbar, click **Start**, type **ISE**, and then click **Windows PowerShell ISE**.
2. In the Windows PowerShell ISE, at the command prompt, type the following command, and then press Enter:

Login-AzureRMAccount

1. In the sign-in window that appears, sign in to your Azure account.
2. In the Windows PowerShell ISE window, at the command prompt, type the following cmdlet, and then press Enter:

Get-AzureRmSubscription

1. In the Windows PowerShell ISE window, at the command prompt, type the following cmdlet, and then press Enter:

Get-AzureRmResourceProvider

1. View the Azure resource providers, resource types, and the Azure regions where these resources are available.

#### Task 2: Manage Azure services and resource groups

1. In the Windows PowerShell ISE window, open the **D:0101Starter.ps1** file.
2. In the ISE, in the **#Variables** section, modify the **$locName** variable to match the Azure location that your instructor asked you to use.
3. In the ISE, in the **#Variables** section, modify the **$webappName** variable to a unique name by using the current date and your initials in the **TestWebApp***MMDDYYAB* format.
4. In the ISE, under the line that starts: **#Create a web app**, use the **New-AzureRmWebApp** cmdlet to create a new web app, using the variables in the script.
5. Type the following command, and then press Enter to view the resources in the TestRG1 resource group:

Get-AzureRmResource | Where {$\_.ResourceGroupName -eq $rgName}

1. At the PowerShell prompt, create a new resource group for the web app by using the **locname** variables.
2. In the Windows PowerShell ISE window, in the script pane, under the line that starts with **#Move the web app**, create a variable named **$resource**, and assign the results of the following cmdlet to the variable by typing the following code and pressing Enter:

Get-AzureRmResource -ResourceName $webappName -ResourceGroupName $rgName

1. In the Windows PowerShell ISE window, under the line you just created, use the **Move-AzureRmResource** cmdlet to move the web app in the **newrgname** variable. You need to use the *ResourceID* parameter with the value of **$resource.ResourceID** for the cmdlet to run successfully.
2. Select the code you created in steps 7 and 8, and then run the selection.
3. Run the following command to view the resources in the TestWebRG resource group:

Get-AzureRmResource | Where {$\_.ResourceGroupName -eq $newrgName}

#### Task 3: Reset the environment

1. Launch **Windows PowerShell** as an administrator.
2. From the Windows PowerShell prompt, run the following command:

Reset-Azure

1. When prompted (twice), sign in by using the Microsoft account associated with your Azure subscription.
2. If you have multiple Azure subscriptions, select the one you want the script to target.
3. When prompted for confirmation, type **y**.

**Note:** This script removes Azure services in your subscription. Therefore, we recommend that you use an Azure trial pass that was provisioned specifically for this course and not your own Azure account. The script resets your Azure environment so that it is ready for the next lab. The script removes all storage accounts, virtual machines, virtual networks, cloud services, and resource groups containing these resources.

**Result**: After completing this exercise, you will have used Azure PowerShell to create and manage Azure resources.

**Question** Why did you use Azure PowerShell cmdlets that contained *Rm* in the lab?

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