# Module 11: Implementing Azure-based management and automation

# Lab: Implementing Automation

### Scenario

Adatum Corporation wishes to minimize administrative overhead as much as possible, especially for tasks that involve management of VMs. For this reason, as part of Adatum’s evaluation of Microsoft Azure, you have been asked to configure an Automation account and use its features to automate the most common VM management tasks.

### Objectives

After completing this lab, you will be able to:

* Configure Automation accounts.
* Create runbooks.

### Lab Setup

Estimated Time: 40 minutes

Virtual Machine: **20533E-MIA-CL1**

User Name: **Student**

Password: **Pa55w.rd**

Before starting this lab, ensure that you have performed the "Preparing the Azure environment" demonstration tasks at the beginning of the first lesson in this module and that the **Setup-Azure** script has completed.

## Exercise 1: Configuring Automation accounts

### Scenario

Administrators at Adatum Corporation spend considerable time managing VMs. You want to increase administrator productivity by using Automation to manage VMs.

The main tasks for this exercise are as follows:

1. Create an Automation account
2. Create and review Automation assets

#### Task 1: Create an Automation account

1. Ensure that you are signed in to MIA-CL1 as **Student** with the password **Pa55w.rd**, and that the setup script you ran in the previous demonstration to prepare the environment has completed.
2. Start Microsoft Edge and sign in to the Azure portal by using the Microsoft account that is the Service Administrator of your Azure subscription. If necessary, in the Azure portal, switch to the Azure Active Directory tenant associated with the Azure subscription that you chose when running the provisioning script at the beginning of this module.
3. From the **Virtual machines** blade, note that **20533E1101-vm0** and **20533E1101-vm1** virtual machines are currently running.
4. Create a new Azure Automation account with the following settings:

* Name: **AutomationAccount-20533E11**
* Subscription: the name of your Azure subscription
* Resource group: ensure that the **Create new** option is selected and type **20533E1102-LabRG** in the text box
* Location: the same Azure region that you chose when running **Add-20533EEnvironment** script at the beginning of this module or, if not available, another region close to it
* Create Azure Run As account: **Yes**

1. Wait for the Automation account to be provisioned. This should take less than a minute.

#### Task 2: Create and review Automation assets

1. In the Azure portal, from the **AutomationAccount-20533E11** blade, create the following Azure Automation non-encrypted string variables

* Name: **VM0**
* Description: **the first VM**
* Type: **String**
* Value: **20533E1101-vm0**
* Encrypted: **No**
* Name: **VM1**
* Description: **the second VM**
* Type: **String**
* Value: **20533E1101-vm1**
* Encrypted: **No**
* Name: **ResourceGroup**
* Description: **VM resource group**
* Type: **String**
* Value: **20533E1101-LabRG**
* Encrypted: **No**

1. In the same Automation account, create the following Schedule asset:

* Name: **EndOfDay**
* Description: **End of day**
* Starts: tomorrow's date at **6:00:00 PM** with the time zone of the Azure region containing the Automation account
* Recurrence: **Recurring**
* Recur every: **1 Day**
* Set expiration: **No**

1. In the list of assets, note two precreated connections **AzureClassicRunAsConnection** and **AzureRunAsConnection**. They were created automatically during provisioning of the Automation account since you selected the option to create the Azure Run As account.

**Result**: After completing this exercise, you should have configured a new Azure Automation account, created Automation variable assets and Automation schedule asset, and reviewed the precreated Azure Automation connection assets

## Exercise 2: Creating and executing runbooks

### Scenario

As part of your tests of the new Automation features, you will stop an Azure VM by using an Automation runbook.

The main tasks for this exercise are as follows:

1. Import a runbook
2. Publish and execute a runbook
3. Remove the lab environment

#### Task 1: Import a runbook

1. From the Azure portal, import the PowerShell workflow script **F:\Labfiles\Lab11\Starter\Stop-20533E1101VMs.ps1** into your Automation account.
2. Review the content of the runbook.

#### Task 2: Publish and execute a runbook

1. Publish the **Stop-AzureVMs-Workflow** runbook.
2. Start the newly published runbook.
3. View the progress of the runbook execution. Wait until the job completes.
4. From the Azure portal, verify that the of **20533E1101-vm0** and **20533E1101-vm1** virtual machines have been stopped.

#### Task 3: Remove the lab environment

1. On MIA-CL1, close all open windows without saving any files.
2. Start **Windows PowerShell** as Administrator and, from the **Administrator: Windows PowerShell** window, run **Remove-20533EEnvironment**.
3. When prompted, sign in by using the Microsoft account that is the Service Administrator of your Azure subscription.
4. If you have multiple Azure subscriptions, select the one you want the script to target.
5. If prompted, specify the current lab number.
6. When prompted for confirmation, type **y**.
7. Start Microsoft Edge, browse to the Azure portal, and sign in by using the Microsoft account that is the Service Administrator of your Azure subscription.
8. In the Azure portal, reset the dashboard to the default state.
9. Close all open windows.

**Result**: After completing this exercise, you should have imported, published, and executed a PowerShell workflow-based runbook that deploys two virtual machines in parallel.

**Question** What mechanism did you use to authenticate when accessing the Azure subscription when running the Azure Automation runbook in the lab?

**Question** What should you consider when testing the execution of an Automation runbook?

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