



Lab 11: Create a VM with the CLI

At the end of each lab, any resources you created in your account will be preserved. Some Azure resources, such as VM instances, may be automatically shut down, while other resources, such as storage services will be left running. Keep in mind that some Azure features cannot be stopped and can still incur charges (i.e. Azure Bastion). To minimize your costs, delete all resources and recreate them as needed to test your work during a session.

The screenshot shows the 'Azure for Students' subscription page. The left sidebar contains navigation links: Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Security, and Events. The main content area has a top bar with a search box and action links: Upgrade, Cancel subscription, Rename, Change directory, Transfer billing ownership, and Feedback. Below this is a warning banner about checking remaining credit. The 'Essentials' section displays subscription details in a table.

Essentials	
Subscription ID	[Redacted]
Subscription name	: Azure for Students
Directory	: Seneca (seneca.onmicrosoft.com)
Current billing period	: 9/13/2021-10/12/2021
My role	: Account admin
Currency	: CAD
Offer	: Azure for Students
Status	: Active
Offer ID	: MS-AZR-0170P
Secure score	: Not available

Reference: [AZ-900T0X-MICROSOFTAZUREFUNDAMENTALS](#)

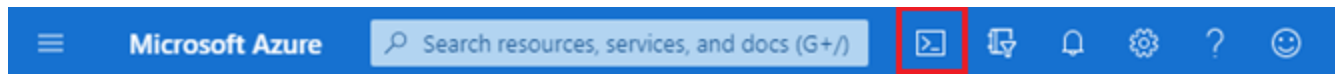
11 - Create a VM with the CLI

In this walk-through, we will configure the Cloud Shell, use Azure CLI to create a resource group and virtual machine, and review Azure Advisor recommendations.

Task 1: Configure the Cloud Shell (10 min)

In this task, we will configure Cloud Shell.

1. Sign in to the [Azure portal](#).
2. From the Azure portal, open the **Azure Cloud Shell** by clicking on the icon in the top right of the Azure Portal.



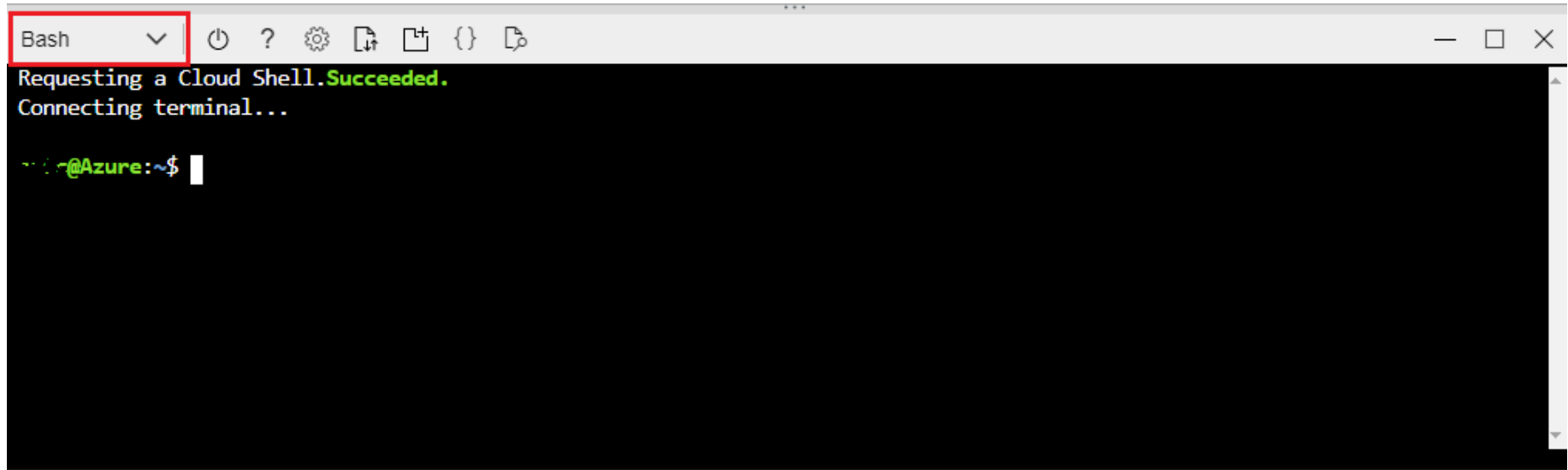
3. If you have previously used the Cloud Shell, proceed to the next task.
4. When prompted to select either **Bash** or **PowerShell**, select **Bash**.
5. When prompted, click **Create storage**, and wait for the Azure Cloud Shell to initialize.

Task 2: Create a resource group and a virtual machine

*** Due to the Azure policy which denies the provisioning of Premium SSD disks, please use the portal to create the VM ***

In this task, we will use Azure CLI to create a resource group and a virtual machine.

1. Ensure **Bash** is selected in the upper-left drop-down menu of the Cloud Shell pane (and if not, select it).



2. In the Bash session, within the Cloud Shell pane, create a new resource group.

CodeCopy

```
az group create --name myRGCLI --location EastUS
```

3. Verify the resource group was created.

CodeCopy

```
az group list --output table
```

4. Create a new virtual machine. Make sure that each line except for the last one is followed by the backslash (\) character. If you type the whole command on the same line, do not use any backslash characters.


CodeCopy

```
az vm create \  
--name <studentID>VMCLI \  
--resource-group myRGCLI \  
--image UbuntuLTS \  
--location EastUS \  
--admin-username azureuser \  
--admin-password Pa$$w0rd1234
```

Note: If you are using the command line on a Windows computer, replace the backslash (\) character with the caret (^) character.

Note: The command will take 2 to 3 minutes to complete. The command will create a virtual machine and various resources associated with it such as storage, networking and security resources. Do not continue to the next step until the virtual machine deployment is complete.

5. When the command finishes running, in the browser window, close the Cloud Shell pane.
6. In the Azure portal, search for **Virtual machines** and verify that **myVMCLI** is running.

Home > Virtual machines						
Virtual machines						
Microsoft						
+ Add 🕒 Reservations ☰ Edit columns 🔄 Refresh 🔖 Assign tags ▶ Start ↺ Restart ■ Stop 🗑 Delete						
1 items						
<input type="checkbox"/>	Name ↑↓	Type ↑↓	Private IP address	Resource group ↑↓	Location ↑↓	Status
<input type="checkbox"/>	 myVMCLI	Virtual machine	10.0.0.4	myRGCLI	East US	Running

Task 3: Execute commmands in the Cloud Shell

In this task, we will practice executing CLI commands from the Cloud Shell.

1. From the Azure portal, open the **Azure Cloud Shell** by clicking on the icon in the top right of the Azure Portal.
2. Ensure **Bash** is selected in the upper-left drop-down menu of the Cloud Shell pane.
3. Retrieve information about the virtual machine you provisioned, including name, resource group, location, and status. Notice the PowerState is **running**.

CodeCopy

```
az vm show --resource-group myRGCLI --name myVMCLI --show-details --output table
```

4. Stop the virtual machine. Notice the message that billing continues until the virtual machine is deallocated.

CodeCopy

```
az vm stop --resource-group myRGCLI --name myVMCLI
```

5. Verify your virtual machine status. The PowerState should now be **stopped**.

CodeCopy

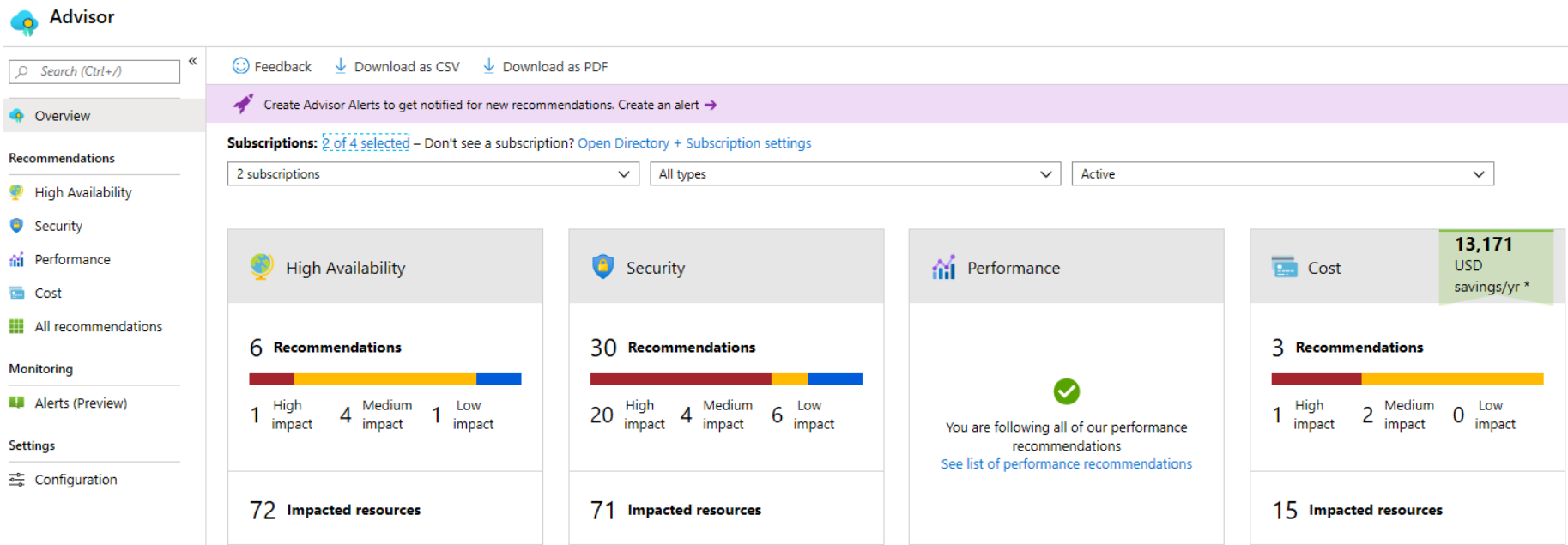
```
az vm show --resource-group myRGCLI --name myVMCLI --show-details --output table
```

Task 4: Review Azure Advisor Recommendations

In this task, we will review Azure Advisor recommendations.

Note: If you have completed the previous lab (Create a VM with PowerShell), then you have already performed this task.

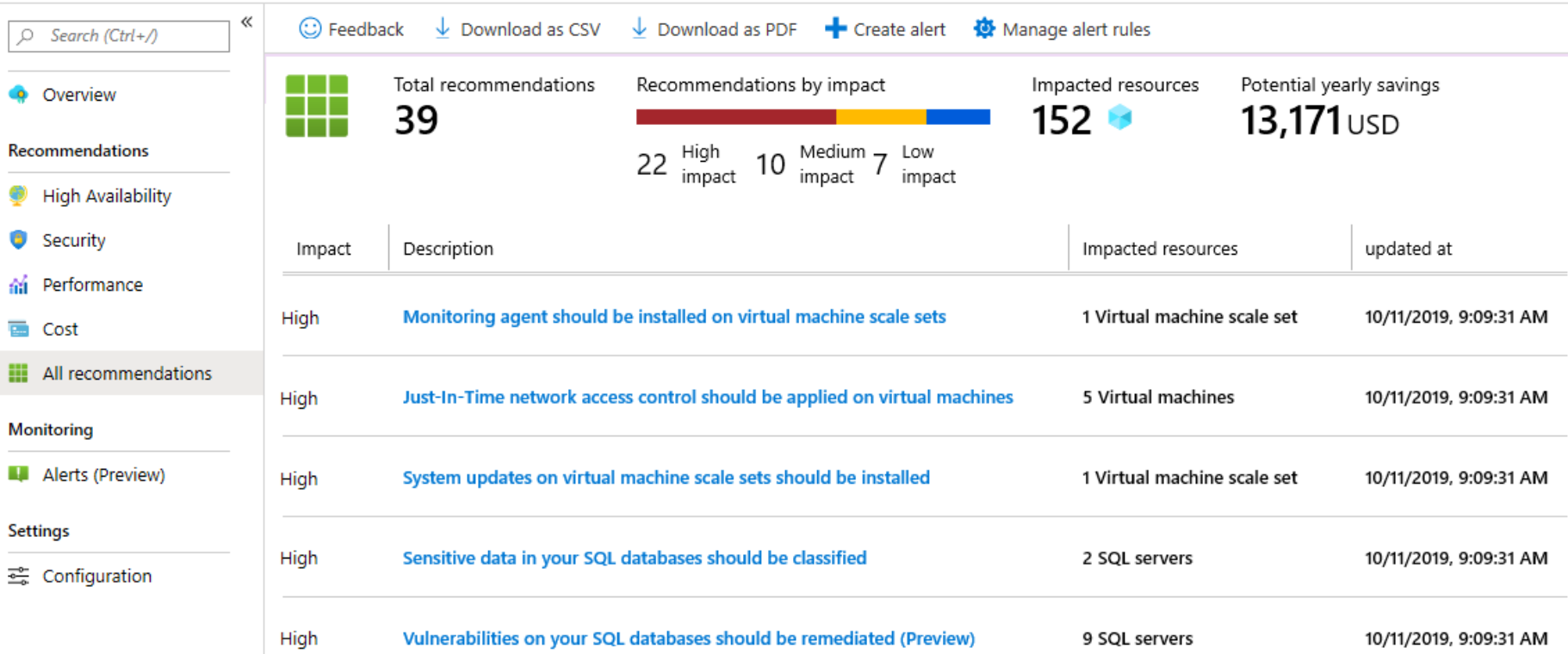
1. From the **All services** blade, search for and select **Advisor**.
2. On the **Advisor** blade, select **Overview**. Notice recommendations are grouped by High Availability, Security, Performance, and Cost.



3. Select **All recommendations** and take time to view each recommendation and suggested actions.

Note: Depending on your resources, your recommendations will be different.

Advisor - All recommendations



- Notice that you can download the recommendations as a CSV or PDF file.
- Notice that you can create alerts.
- If you have time, continue to experiment with Azure CLI.

Congratulations! You have configured Cloud Shell, created a virtual machine using Azure CLI, practiced with Azure CLI commands, and viewed Advisor recommendations.

Note: To avoid additional costs, you can remove all resources in the resource group. Search for resource groups, click your resource group, and then delete the resources within the resource group. **DO NOT DELETE YOUR RESOURCE GROUP.**

Submission Requirements

Submit a screenshot with the following information:

Screenshot #1:

- Azure CLI and Portal listing of the virtual machine's status as deallocated
- The Azure Portal with your login ID

The screenshot displays the Microsoft Azure portal interface for a virtual machine named **dtrinh1VMCLI**. The VM is in the **Stopped** state, located in the **East US** region, under the **myRGCLI** resource group. The operating system is **Linux**, and the size is **Standard DS1 v2 (1 vcpu, 3.5 GiB memory)**. The public IP address is **40.76.209.234**.

Below the portal view, a terminal window shows the command `az vm show --resource-group myRGCLI --name dtrinh1VMCLI --show-details --output table` being executed. The output table confirms the VM's status as **stopped**.

Name	ResourceGroup	PowerState	PublicIps	Fqdns	Location	Zones
dtrinh1VMCLI	myRGCLI	VM stopped	40.76.209.234		eastus	

Screenshot #2:

- Successful deletion of resources within resource group. **DO NOT DELETE YOUR RESOURCE GROUP!**

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information for 'dtrinh1@myseneca.ca'. The main content area is titled 'Resource groups' and shows the 'myRG' resource group. The left sidebar contains a list of resource group settings: Overview, Activity log, Access control (IAM), Tags, Resource visualizer, Events, Deployments, Security, Policies, Properties, and Locks. The 'Overview' tab is selected, displaying the following information:

- Subscription (Move):** Azure for Students
- Subscription ID:** 3e6685e5-073e-4397-8a34-b9022c3952d9
- Deployments:** No deployments
- Location:** East US

Below this information, there are tabs for 'Resources' and 'Recommendations'. The 'Resources' tab is active, showing a table with columns 'Name', 'Type', and 'Location'. The table is currently empty, and the status bar at the bottom indicates 'Showing 0 to 0 of 0 records'.