Setup Student Lab

This document outlines the steps to follow to set up the Windows 10 Azure virtual machine (VM thereafter) required for the Lab activities.

Pre-requisites

For an optimal experience, the following are required for the setup:

- An Azure subscription. If you don't have an Azure subscription, create a <u>free account</u> before you begin. The account created at this stage does not have to be the same as the account used to create the JumpBox.
- 2. The completion of the steps described in "Create the JumpBox".

Step 0. Update the execution policy for PowerShell scripts.

- 1. Connect and log into the JumpBox (shown by Step 4 in "Create the JumpBox")
- Start Windows PowerShell as Administrator: Search Bar > Type 'PowerShell' > right-click and select 'Run as Administrator'



When the PowerShell window opens:

Type Set-ExecutionPolicy RemoteSigned -Force to set the policy to RemoteSigned and Press Enter or Return. Type Get-ExecutionPolicy to verify the current settings for the execution policy and

Press Enter or Return.

Type Exit and Press Enter or Return.

Example:



Step 1. Implementation

1. You can find the PowerShell script either in the Resources Tab of the Udacity Classroom or linked on the page you'll need it for as a ZIP file. Once you download the ZIP file and uncompress it, copy the PowerShell script (.ps1 file) and place it on the desktop of the JumpBox VM you created. Note: you will receive multiple .ps1 files in the course, here using an example.ps1 as an example. Make sure that the file name includes the .ps1 extension, it may get removed when copying over - if it is removed you may manually add it.



2. Right-click on the .ps1 file and select Properties

Initialize- city.CVBE D01.LabV Microso Edge	₽ ĝ	Open Run with PowerShell Edit Scan with Windows I Share Open with Give access to Restore previous vers Send to Cut Copy Create shortcut Delete	Defender	
		Delete Rename		
	Г	Properties		

3. If you see an "**Unblock**" box, *check the box* to unblock the file. If you don't see the Unblock checkbox, you do not need to perform anything here. <u>The "Unblock" box will disappear after users give permission to run the file. (This is just a one-time process).</u>

📄 Initialize-U	dacity.CYBERND01.LabVM1 Properties	×
General Secu	rity Details Previous Versions	
	Initialize-Udacity.CYBERND01.LabVM1	
Type of file:	Windows PowerShell Script (.ps1)	
Opens with:	Notepad Change	
Location:	C:\Users\cyberadmin\Downloads	
Size:	8.73 KB (8,945 bytes)	
Size on disk:	12.0 KB (12,288 bytes)	
Created:	Wednesday, July 29, 2020, 8:23:44 AM	
Modified:	Today, August 3, 2020, 9:29:20 PM unblock p	s1
Accessed:	Today, August 3, 2020, 9:29:20 PM	
Attributes:	Read-only Hidden	
Security:	This file came from another computer and might be blocked to help protect this computer.	
	OK Cancel Apply	

- Start Windows PowerShell as Administrator: Search Bar > Type 'PowerShell' > right-click and select 'Run as Administrator'
- 5. Type the following 2 commands to launch execution.

Set-Location "desktop"

.\example.ps1

Note: in the second line: ".\example.ps1", you need to change 'example.ps1' to the **name of the .ps1 file** you obtained from the classroom.

Example: if the .ps1 file you obtained from the classroom is "Initialize-

Udacity.CYBERND01.LabVM1.ps1", you should have:

The script performs the following actions:

- Installs the Azure PowerShell module, if not already existent
- Creates a Resource Group
- Grants the Udacity App access to the resource group
- Creates an image of the LAB VM

Step 2. Detailed Script Execution Steps

- 1. The script installs the Azure PowerShell module, if not already existent, **enter Y** to install. It may take 10 min to install the Azure PowerShell module. Please be patient.
- 2. Once the installation completed, please log into your Azure subscription and proceed

Sign in to yo	ur account	×
	Microsoft Azure	
	Microsoft	
	Sign in	
	Email, phone, or Skype	
	No account? Create one!	
	Can't access your account?	
	Sign-in options	

3. The Udacity Lab resource group is initialized, then permission requested. Enter Y to

proceed. It may take a while to connect.



4. A browser will open with the permission granting page. Log-in to your Azure

subscription, grant access by clicking 'Accept', and close the browser. Note: a browser

will ALWAYS pop up but the permission granting page may or may not show up.



5. Press a key to confirm completion of the permission granting operation and proceed.



At this stage, the virtual machine creation starts. It may take a few minutes to complete

the creation. Please be patient. Upon completion, the following message appears:



Important: Save a copy of the transcript file for troubleshooting purposes if required.

Step 3. Get remote control of the Lab VM

1. Go back to the Virtual machine page. Click on the lab VM that you want to get remote control of. Note: You might need to log out and log back in or refresh the browser for the lab VM to show up. You should go from seeing only your JumpBox VM to also seeing the VM for the script that you just ran. You will need the IP address of that VM to get the remote control. Note: make sure both the lab VM and the JumpBox are RUNNING before getting the remote control

💋 Connect 🖒 Start	🕂 Restart 🔲 Stop 🔞 Capture 📋 Delete 🖒 Refresh			
Resource group (change): UDACITY-CYBERND01-LAB		Azure Spot	: N/A
Status	: Running		Public IP address	: 40.84.45.169
Location	: East US 2		Private IP address	: 192.168.1.4
Subscription (change)	: Azure subscription 1		Public IP address (IPv6)	:-
Subscription ID	: bf3b81bb-a1ac-4d45-926c-d9588201f1df		Private IP address (IPv6)	: -
Computer name	: JoesGaragePC		Virtual network/subnet	: vnet/subnet
Operating system	: Windows (Windows 10 Pro)	D	DNS name	: Configure
Size	: Standard D1 v2 (1 vcpus, 3.5 GiB memory)			
Tags (change)	: Click here to add tags			

2. Go back to JumpBox, type, and select "remote desktop connection" in the windows

search bar



3. Enter the IP address and click Connect



4. Use the **username** and **password** *provided in the classroom* to log in. You will receive a warning. Click **Yes** to continue.

	Remote Desktop Connection X
	The identity of the remote computer cannot be verified. Do you want to connect anyway?
Windows Security X	The remote computer could not be authenticated due to problems with its security certificate. It may be unsafe to proceed. Certificate name
Enter your credentials	Name in the certificate from the remote computer: JoesGaragePC
These credentials will be used to connect to 20.36.184.193. User name Password	Certificate errors The following errors were encountered while validating the remote computer's certificate: The certificate is not from a trusted certifying authority.
Remember me	Do you want to connect despite these certificate errors?
OK Cancel	View certificate Yes No

Congratulations, you have set up and have control of the lab VM.

Step 4. Return to lab VM

 If you want to return to Lab, go to the Virtual machine page in the Azure portal. Make sure both the JumpBox and the lab VM are running. You can start them by clicking the "Start" button on the overview page.

JumpBox ☆ Virtual machine				
	🖉 Connect ▷ Start	Restart Stop 🕅 Capture 📋 Delete 🖒 Refresh		
Overview	Advisor (1 of 2): Enab	ble virtual machine backup to protect your data from corruption and accidental del	etion \rightarrow	
Activity log				
⁸ Access control (IAM)	Resource group (change)	: UdacityLabsJumpBox	Azure Spot	: N/A
	Status	: Stopped	Public IP address	: 52.251.32.123
Tags	Location	: East US 2	Private IP address	: 10.0.0.4
Diagnose and solve problems	Subscription (change)	: Azure subscription 1	Public IP address (IPv6)	: -
Settings	Subscription ID	: eca4ac5a-dbc6-4a40-a75a-d8882a451590	Private IP address (IPv6)	: -

- 2. Connect and log into to JumpBox (shown by Step 4 in "Create the JumpBox")
- 3. Follow step 3 in this document to get remote control of the Lab VM

IMPORTANT: Please always remember to shut down ALL of the virtual machines when not in use to avoid charges! The status of the ALL VM should be stopped

You can shut down the VM by clicking the **Power** button and **"shut down"** inside the VM or click on the **"Stop"** button on the VM overview page.



Click the Power icon and click "shut down" inside the VM

ImpBox Virtual machine	
✓ Search (Cmd+/) «	🖉 Connect ▷ Start 🤇 Restart 🔲 Stop 🖄 Capture 볩 Delete 🖒 Refresh
• Overview	Resource group (change) : UdacityLabsJumpBox
Activity log	Status : Updating
Access control (IAM)	Location : East US 2

Click the Stop button on the VM overview page

Make sure the status is **Stopped.**

Subscriptions: 1 of 2 selected – I	Oon't see a subscription? Ope	n Directory + Subscription	settings	
Filter by name Azure	subscriptio 🗸 🛛 All res	ource groups 🗸 🛛 All ty	pes 🗸 All loca	tions 🗸
2 items				
Name ↑↓	Type \uparrow_{\downarrow}	Status	Resource group \uparrow_{\downarrow}	Location \uparrow_{\downarrow}
🔲 📮 JoesGaragePC	Virtual machine	Stopped deallocated) UDACITY-CYBERND01	East US 2
🔲 🖳 JumpBox	Virtual machine	Stopped	UdacityLabsJumpBox	East US 2