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.

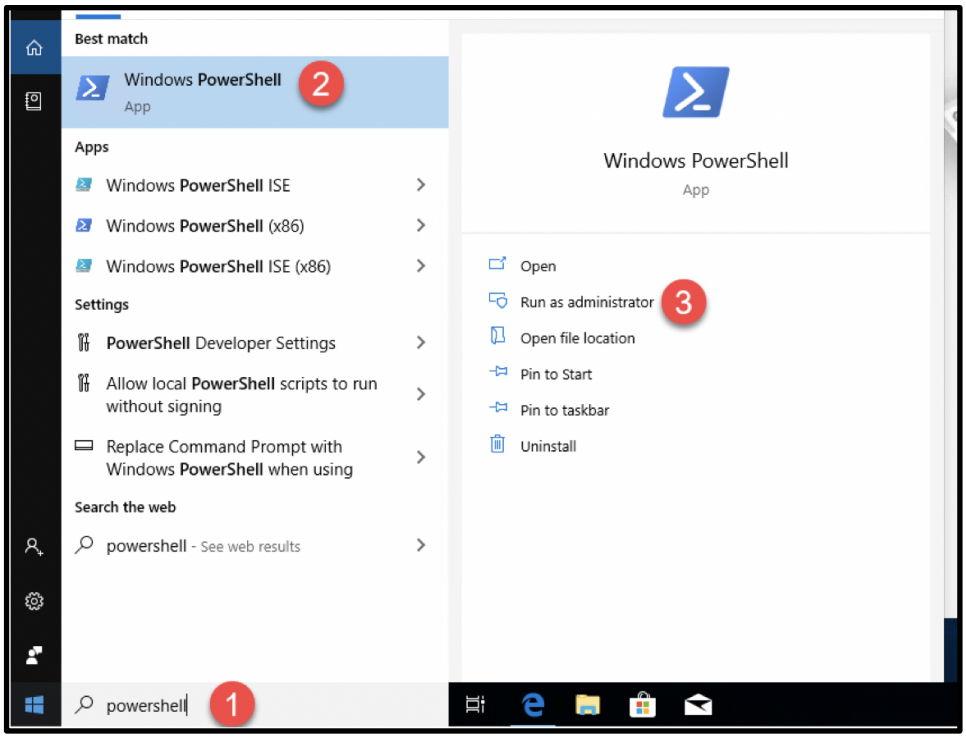
Pre-requisites

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

1. An Azure subscription. If you don't have an Azure subscription, create a free account 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")
2. 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**.

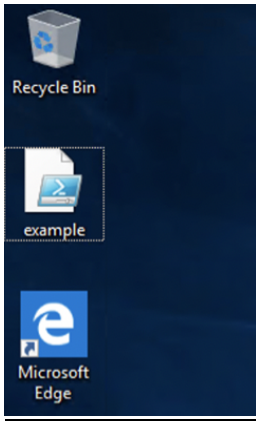
Type Exit and Press **Enter** or **Return.**

Example:

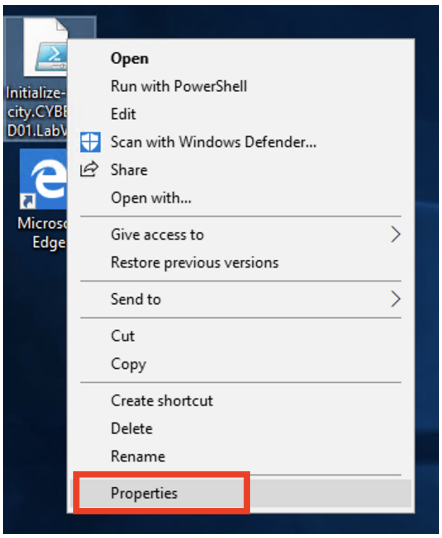
```
[5]» Set-ExecutionPolicy RemoteSigned -Force
[6]» Get-ExecutionPolicy
RemoteSigned
[7]» Exit
```

Step 1. Implementation

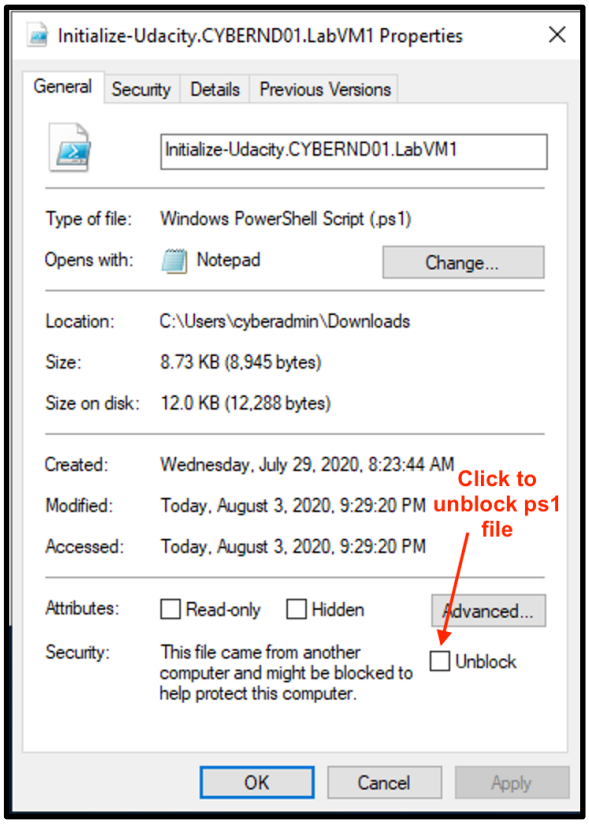
1. You can find the PowerShell script either in the Resources Tab of the Udacity Classroom or linked on the page you'll need it for as a ZIP file. Once you download the ZIP file and uncompress it, copy the PowerShell script (**.ps1** file) and place it on the **desktop** of the JumpBox VM you created. 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**



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>



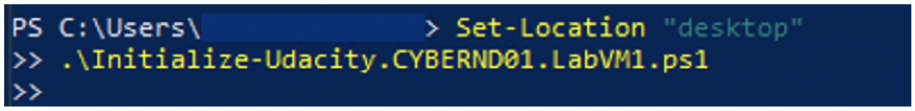
4. Start Windows PowerShell as Administrator: Search Bar > Type **'PowerShell'** > right-click and select **'Run as Administrator'**
5. Type the following 2 commands to launch execution.

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:

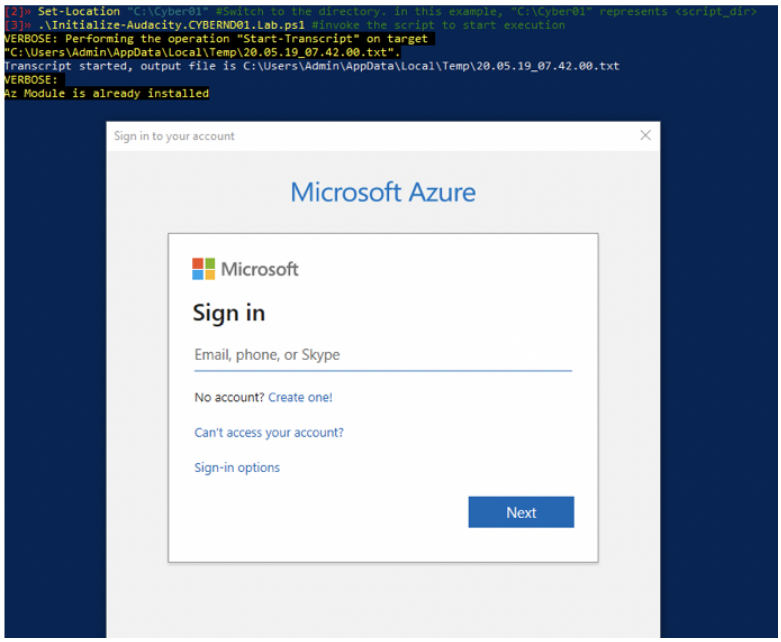


The script performs the following actions:

- 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

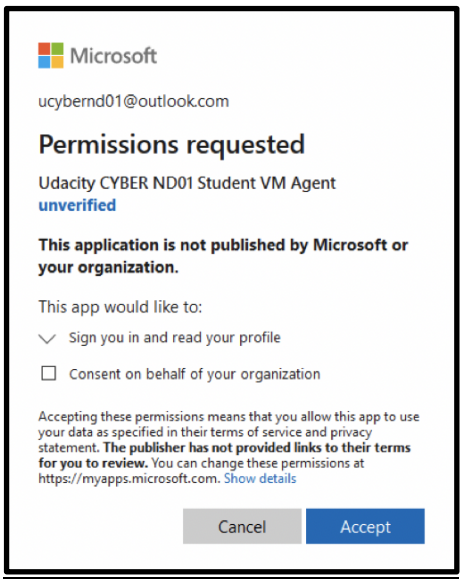
1. The script installs the Azure PowerShell module, if not already existent, **enter Y** to install. It may take 10 min to install the Azure PowerShell module. Please be patient.
2. Once the installation completed, please log into your Azure subscription and proceed



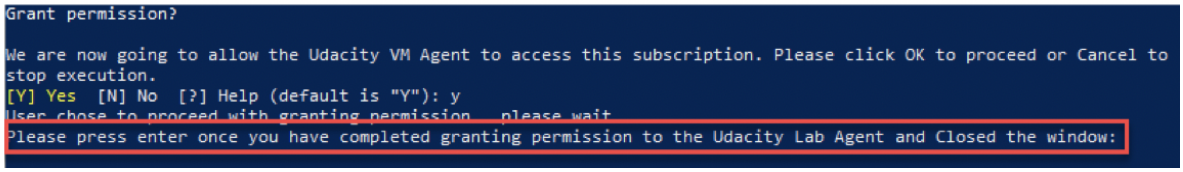
3. The Udacity Lab resource group is initialized, then permission requested. **Enter Y** to proceed. It may take a while to connect.

```
Initializing resource group 'UDACITY-CYBERND01-LAB' in Azure region 'East US2'
Resource group already exists

Grant permission?

We are now going to allow the Udacity VM Agent to access this subscription. Please click OK to proceed or Cancel to
stop execution.
[Y] Yes  [N] No  [?] Help (default is "Y"): y
```

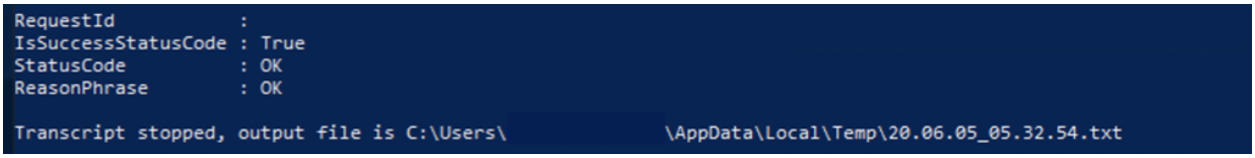
4. A browser will open with the permission granting page. Log-in to your Azure subscription, grant access by clicking **'Accept',** and close the browser. Note: a browser will ALWAYS pop up but the permission granting page may or may not show up.



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



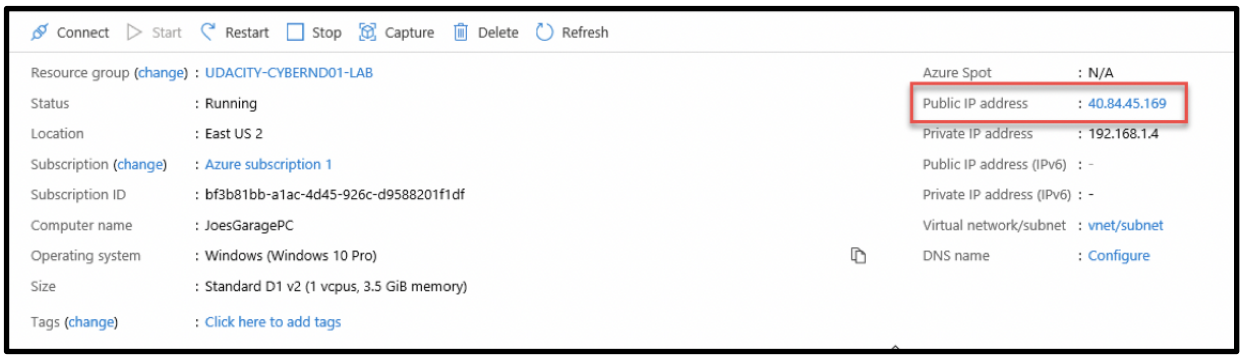
At this stage, the virtual machine creation starts. It may take a few minutes to complete the creation. Please be patient. Upon completion, the following message appears:



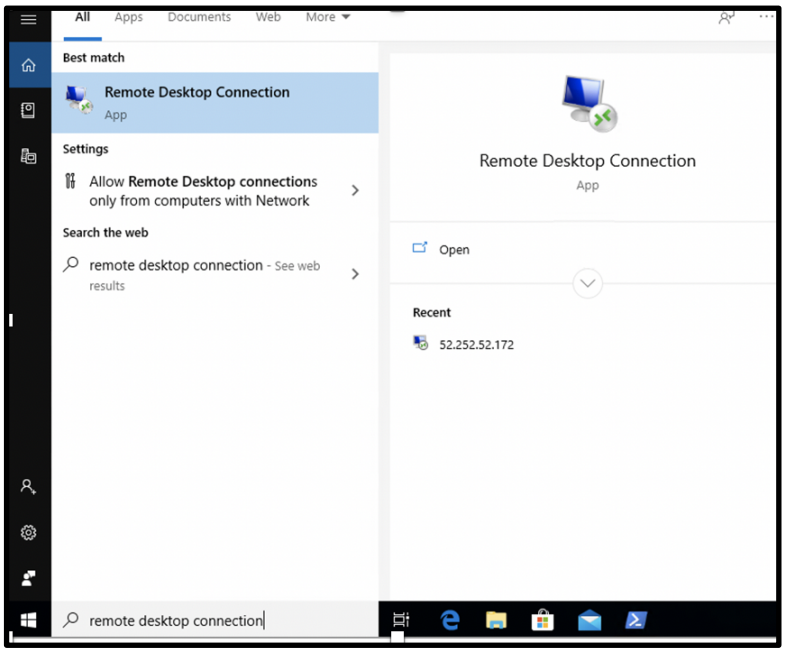
Important: Save a copy of the transcript file for troubleshooting purposes if required.

Step 3. Get remote control of the Lab VM

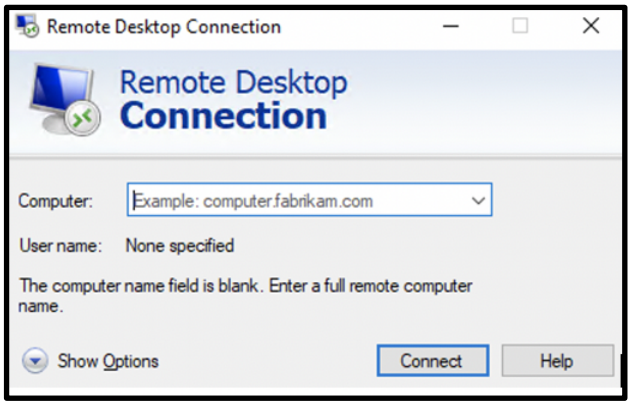
1. Go back to the **Virtual machine** page. Click on the lab VM that you want to get remote control of. *Note: You might need to log out and log back in or refresh the browser for the lab VM to show up.* You should go from seeing only your JumpBox VM to also seeing the VM for the script that you just 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*



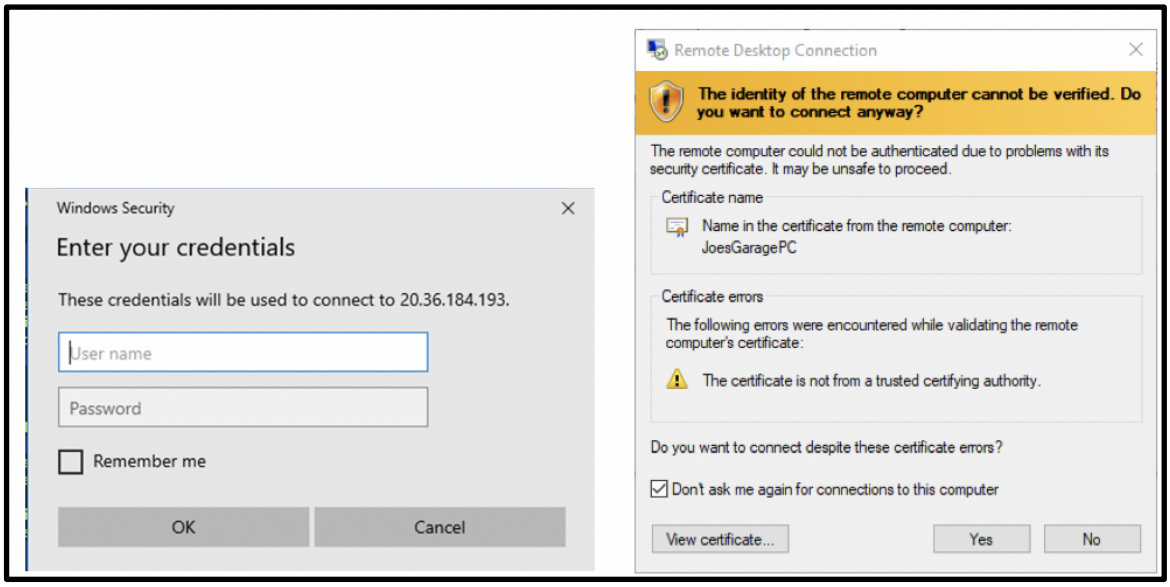
2. Go back to JumpBox, type, and select "**remote desktop connection"** in the windows search bar



3. Enter the IP address and click **Connect**



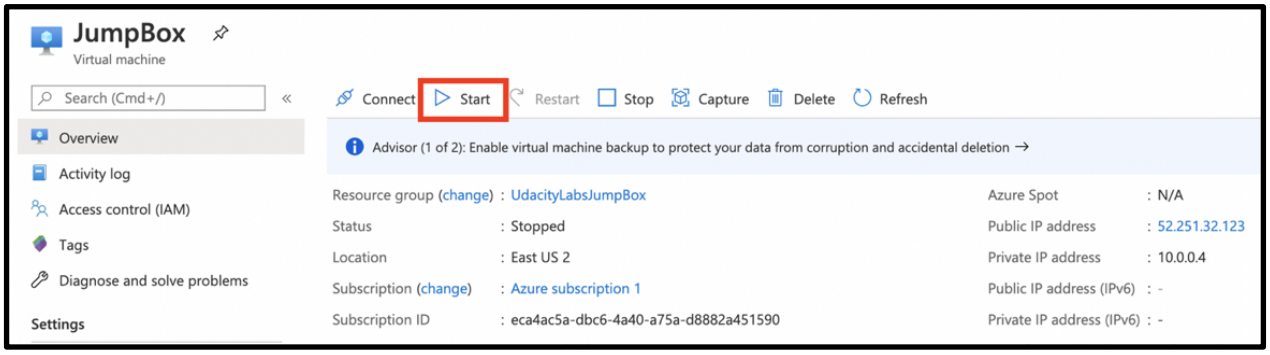
4. Use the **username** and **password** *provided in the classroom* to log in. You will receive a warning. Click **Yes** to continue.



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

Step 4. Return to lab VM

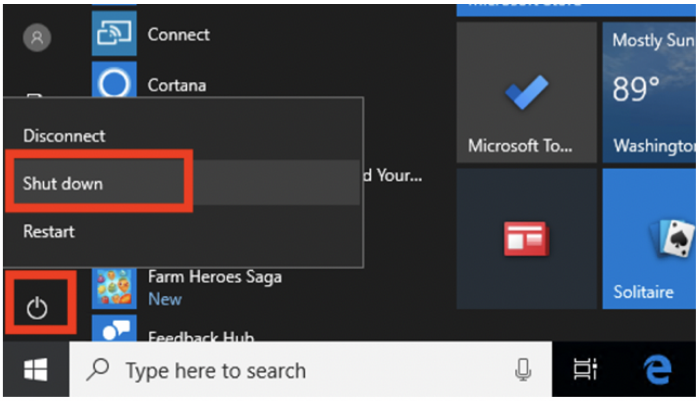
1. If you want to return to Lab, go to the **Virtual machine** page in the Azure portal. Make sure **both** the JumpBox *and* the lab VM are **running**. You can start them by clicking the "**Start**" button on the **overview page.**



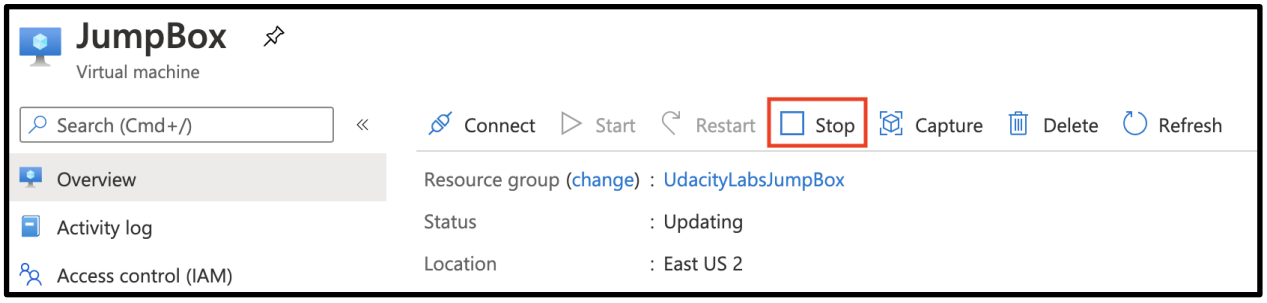
2. Connect and log into to **JumpBox** (shown by Step 4 in "Create the JumpBox")
3. Follow **step 3** in this document to get remote control of the Lab VM

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.

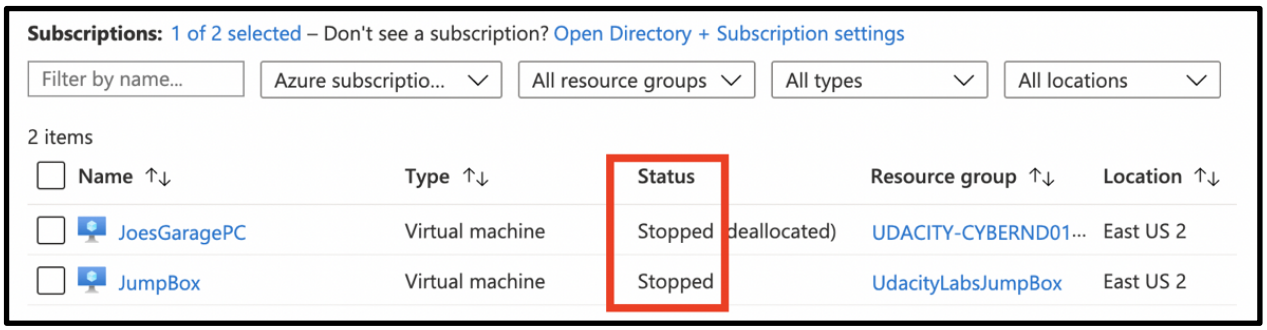


Click the Power icon and click "shut down" inside the VM



Click the Stop button on the VM overview page

Make sure the status is **Stopped.**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Filter by name...
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