Setup Student Lab

Steps to set up an Azure Virtual Machine (VM) required for the Lab activities.

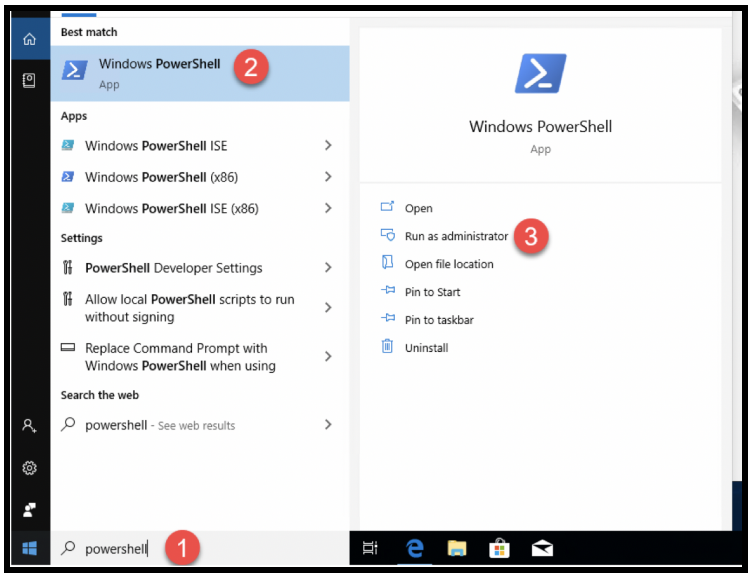
Pre-requisites

1. A Windows 10 computer
2. **Azure subscription:** If you don't have an Azure subscription, create a free account before you begin.
3. An Azure PowerShell script file named `Initialize-Udacity.CYBERND##.LabVM#.ps1` obtained from your Udacity classroom.

Follow the steps below on your Windows 10 computer.

Step 0. PowerShell script execution policy

1. Start Windows PowerShell as Administrator.
   Search Bar > Type **'PowerShell'** > **right-click** and select **'Run as Administrator'**



2. Run the following commands in the PowerShell prompt to set and verify the execution policy:

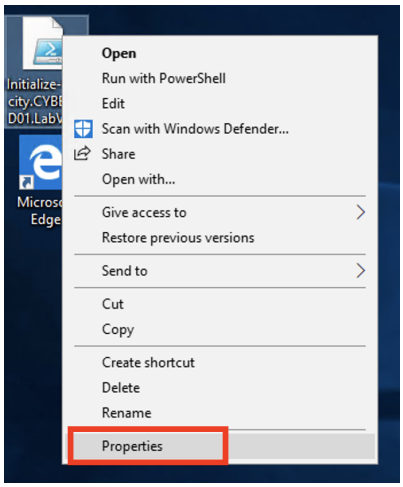
```
Set-ExecutionPolicy RemoteSigned -Force

Get-ExecutionPolicy

Exit
```

Step 1. Implementation

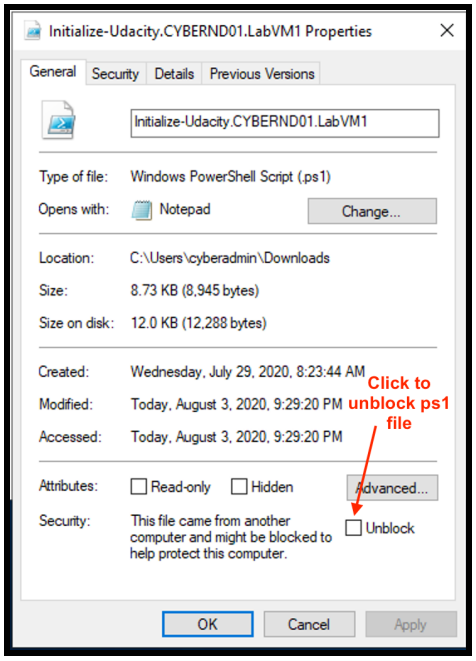
1. Download the `Initialize-Udacity.CYBERND##.LabVM#.ps1` file from the Udacity classroom. It will be downloaded as a Zip file, so you will have to extract the zip file contents.

   Note: You will receive multiple `.ps1` files in the course. Bee careful with the names and file extensions.

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. The "Unblock" box will disappear after users give permission to run the file. This is just a one-time process.



4. Start Windows PowerShell as Administrator, and **navigate to the folder** where you have the `.ps1` file available. We recommend having a separate folder, where you can put all your `.ps1` files altogether.

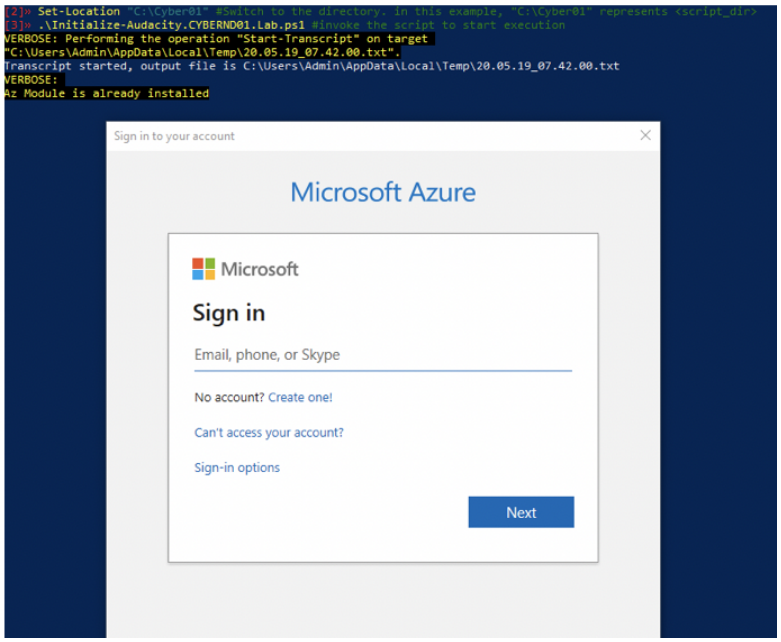
5. Change the file permissions and run the file using the commands below:

```
chmod +x Initialize-Udacity.CYBERND##.LabVM#.ps1
.\Initialize-Udacity.CYBERND##.LabVM#.ps1
```

Step 2. Detailed Script Execution Steps

The script performs the following actions:

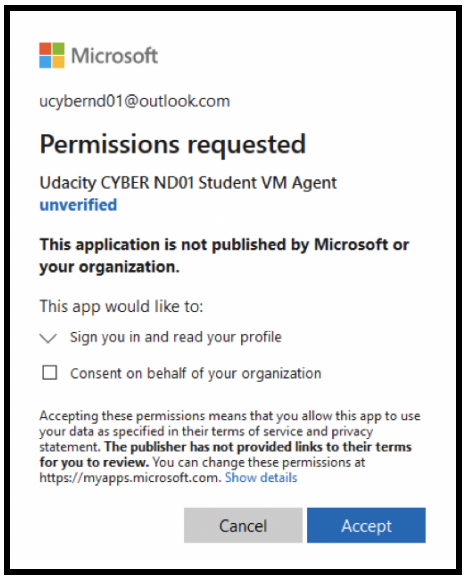
1. The script **installs the Azure PowerShell module**, if not already existent, **enter Y** to install. It may take 10 min to install the Azure PowerShell module. Please be patient.
2. Once the installation completed, please log into your Azure subscription and proceed



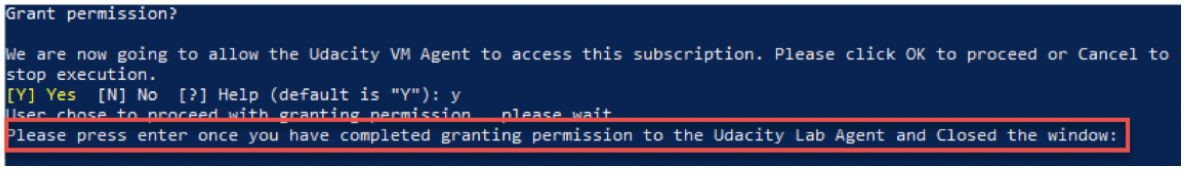
3. **Creates a Resource Group:** The Udacity Lab resource group is initialized, then permission requested. **Enter Y** to proceed. It may take a while to connect.

```
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
```

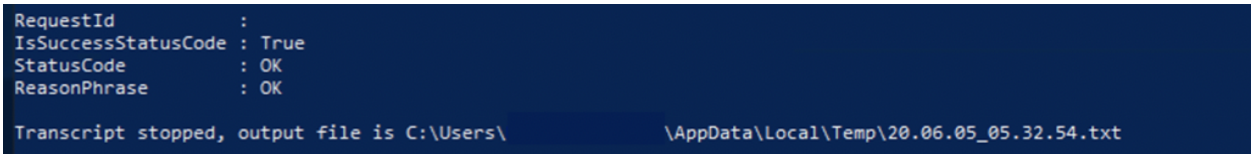
4. **Grants the Udacity App access to the resource group:** A browser will open with the permission granting page. Log-in to your Azure subscription, grant access by clicking **'Accept',** and close the browser.



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



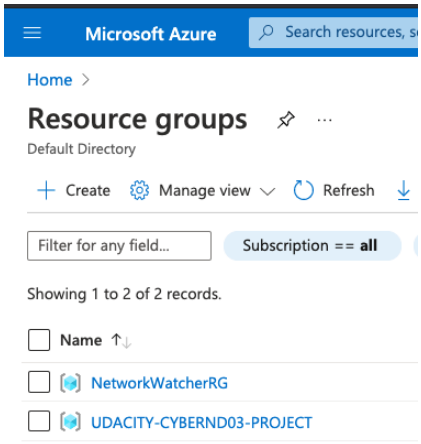
6. **Creates a VM:** At this stage, the virtual machine creation starts. It may take a few minutes to complete the creation. Please be patient. Upon completion, the following message appears:



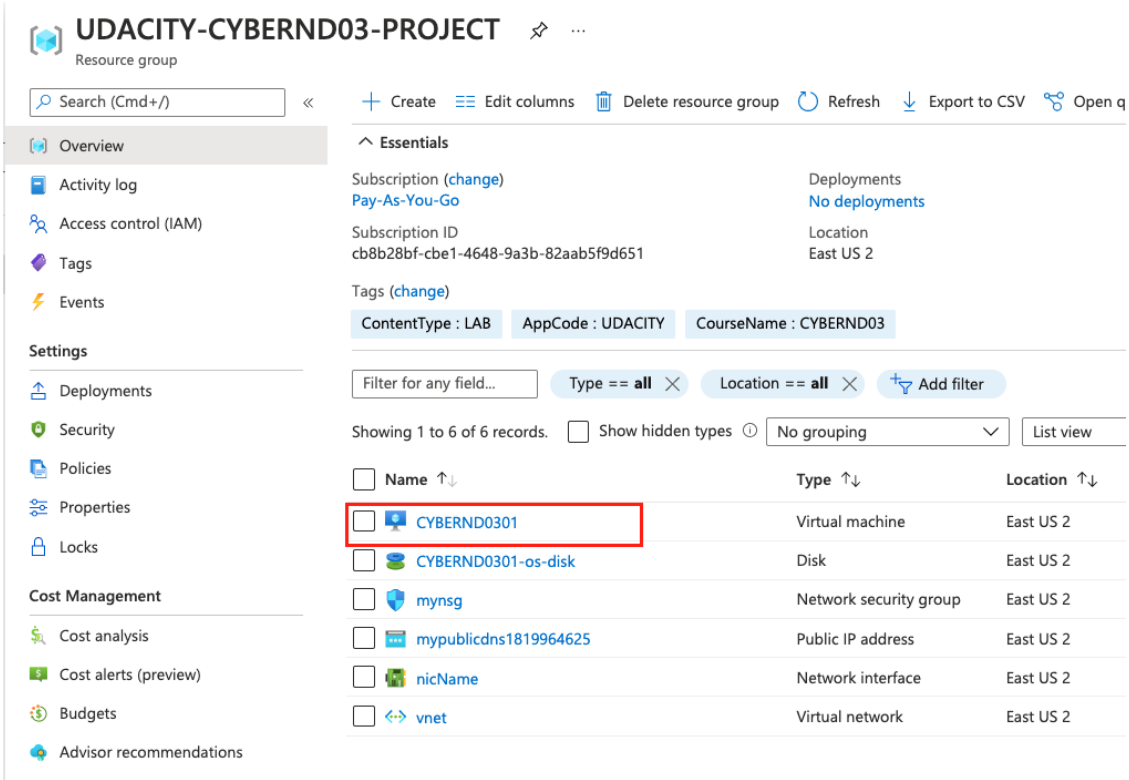
Important: Save a copy of the transcript file for troubleshooting purposes if required.

Step 3. Connect to VM via RDP

1. Go back to the Azure portal, and check the **Resource Groups**. You will see the newly created Resource Group, as shown in the example snapshot below:

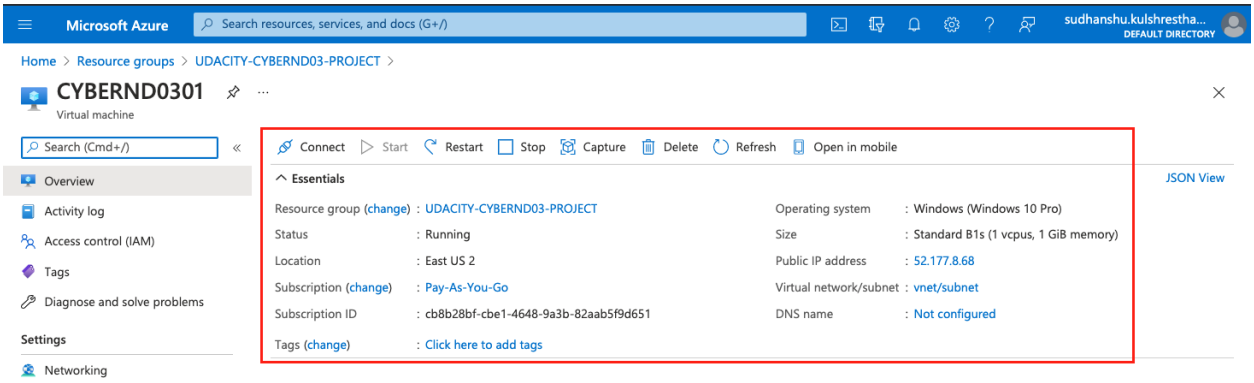


The UDACITY-CYBERND03-PROJECT resource group

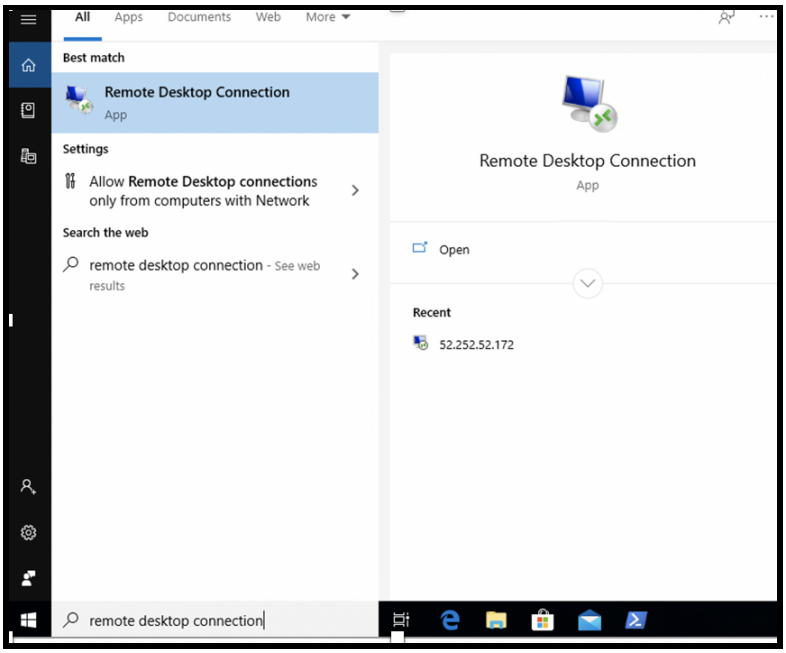


Resources in the UDACITY-CYBERND03-PROJECT resource group

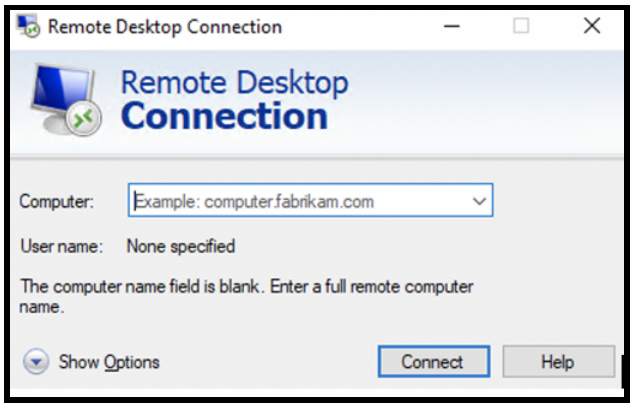
2. Navigate to the Azure **Virtual Machine** dashboard. Click on the VM to whom you want to connect remotely. Ensure that the VM is in running state. You will need the **Public IP address** of that running VM.



3. In your local Windows 10 computer, search and open the "**Remote desktop connection"**.



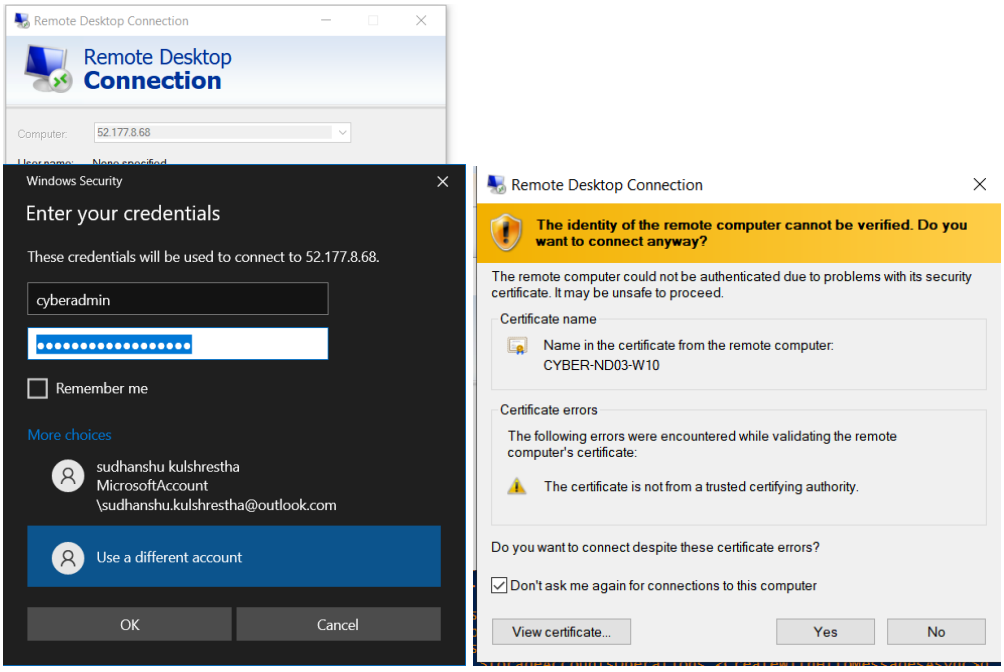
4. Enter the Public IP address of the VM, and click **Connect**



5. Use the **username** and **password** *provided in the classroom* to log in.

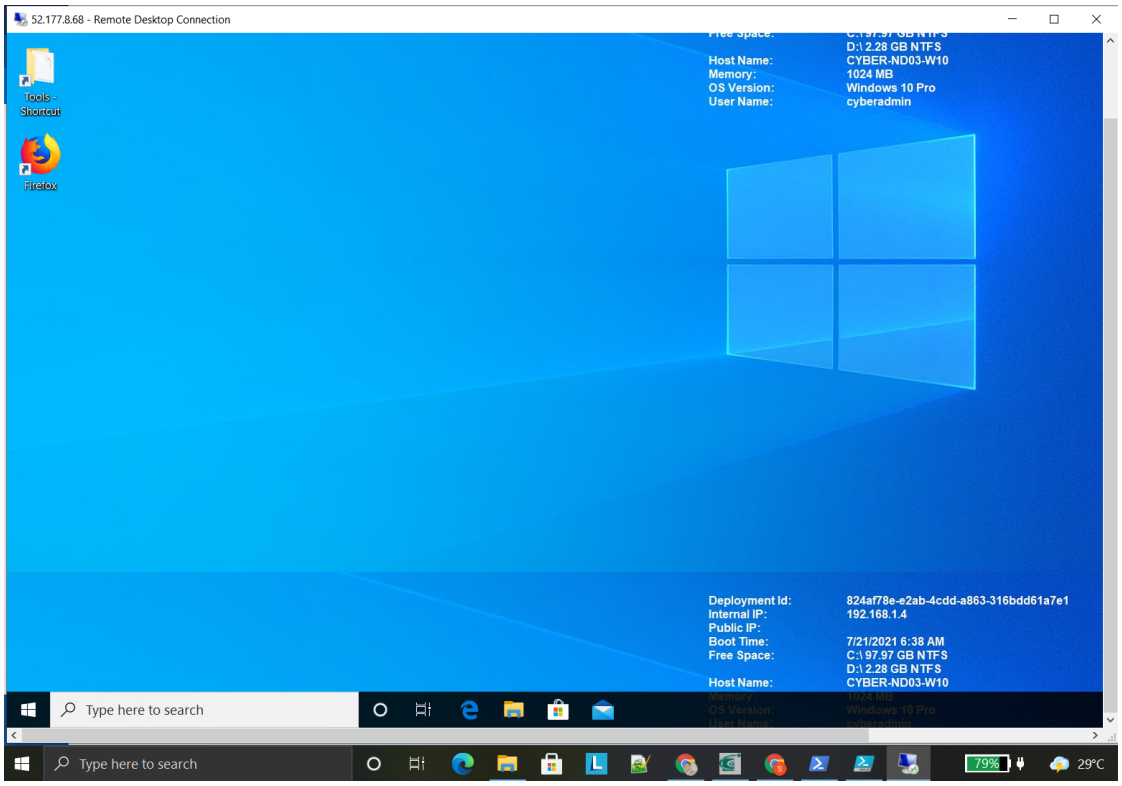
```
Username: cyberadmin
Password: @UdacityLearning#1
```

Note: The credentials for Cloud Lab VMs are different, and shown inside the Cloud Labs itself.



6. You will receive a warning. Click **Yes** to continue.

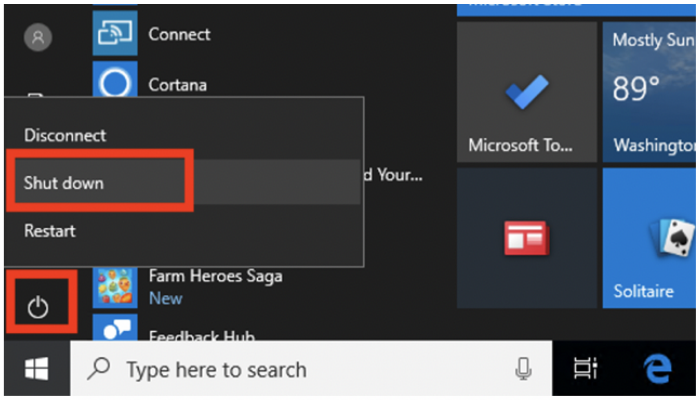
Congratulations, you have set up and connected to your lab VM via RDP.


52.177.8.68 - Remote Desktop Connection
Tools - Shortcut
Firefox
Host Name: CYBER-ND03-W10
Memory: 1024 MB
OS Version: Windows 10 Pro
User Name: cyberadmin
Deployment Id: 824af78e-e2ab-4cdd-a863-316bdd61a7e1
Internal IP: 192.168.1.4
Public IP:
Boot Time: 7/21/2021 6:38 AM
Free Space: C:\ 97.97 GB NTFS
D:\ 2.28 GB NTFS
Type here to search
79%
29°C

Step 4. Clean up

IMPORTANT: Always remember to shut down ALL of the virtual machines when not in use to avoid charges!

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

Make sure the status is **Stopped.**