How to install OpenFST on Google Cloud

This tutorial will cover the installation of OpenFST on Google Cloud. If you are not able to install OpenFST on your machine, we recommend using a Google Cloud Virtual Machine (VM). This will be a linux server you can SSH into. New Google Cloud accounts will receive $300 in free credit, which will be more than what this assignment requires.

1. If you do not have a Google account, create a Google account. You will not be able to use your Andrew CMU account.
2. Go to the Google Cloud Console (`https://cloud.google.com/free/`)
3. Click on "Get started for free" and sign in with your Google account. Enter your information and your credit card. You will not be charged unless you use more than the $300 limit.
4. After entering your information, click on "Start your free trial".
5. Click on the "Compute Engine" menu on the left side.

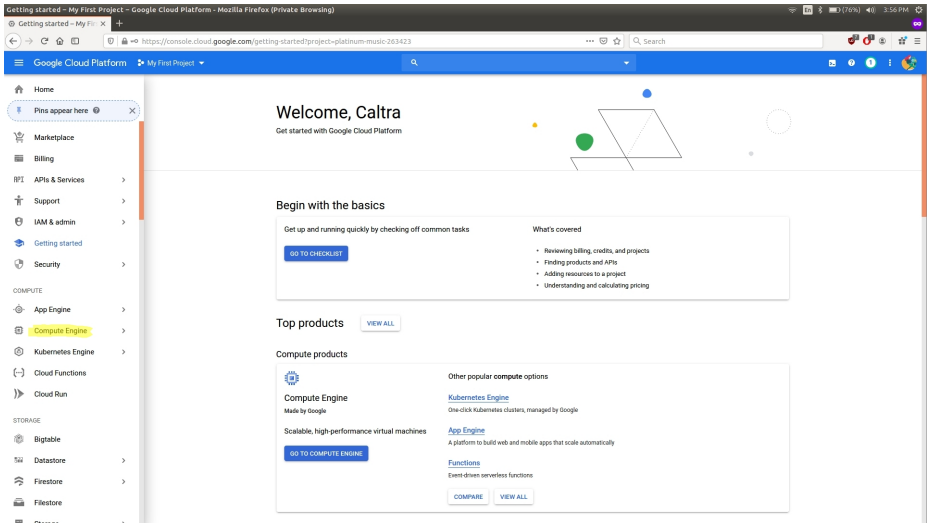

Figure 1: Google cloud main menu. Compute Engine is highlighted on the left.

6. The compute menu may take some time to load. Click on "Create".

7. When creating the VM, use the default machines but change the "Boot disk" to Ubuntu 18 and in the "Firewall section" allow HTTP and HTTPs access. Follow the settings below.

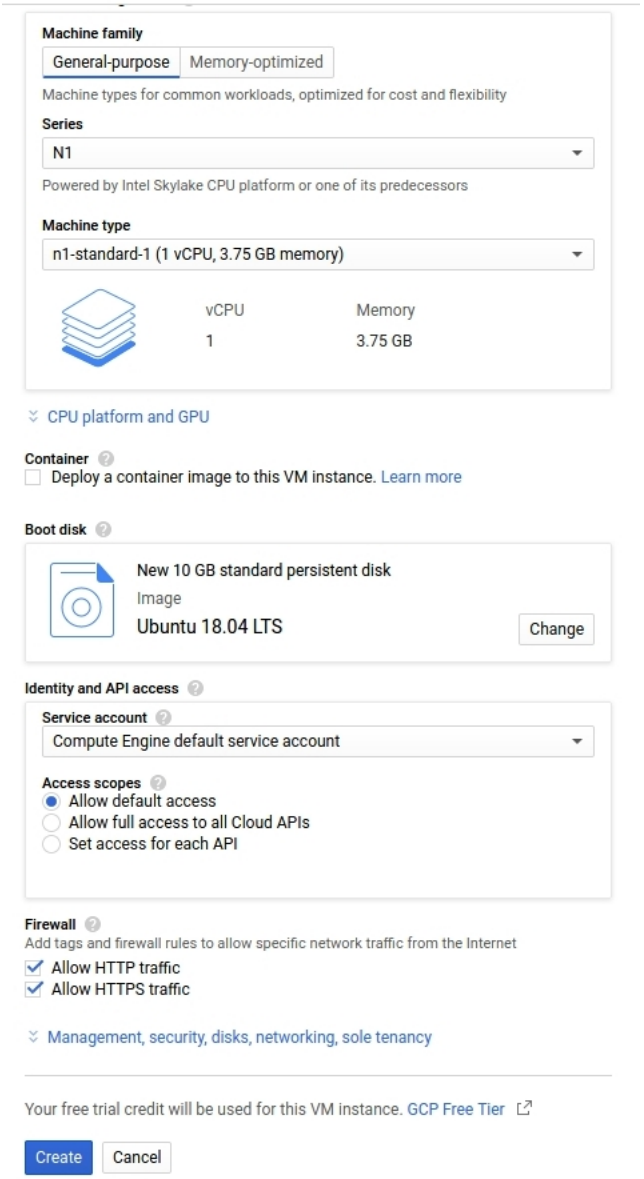

Figure 2: Settings to create a VM

8. You should then be able to see the VM you have created. Click the SSH button on the right hand side to SSH into your server via your browser.

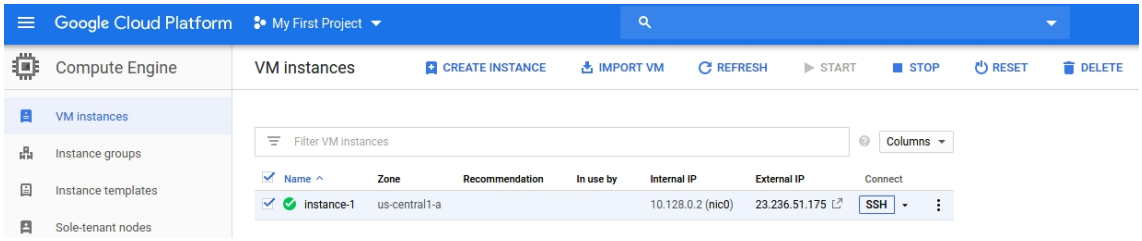

Figure 3: SSH into your VM

9. Once you SSH into the VM, click on the gear on the top right and click "Upload file". Upload the `ubuntu-install.sh` installation script from your assignment directory.

   Warning: Do not run the install script on your local machine unless you understand what the script is doing. It will change some environmental variables.

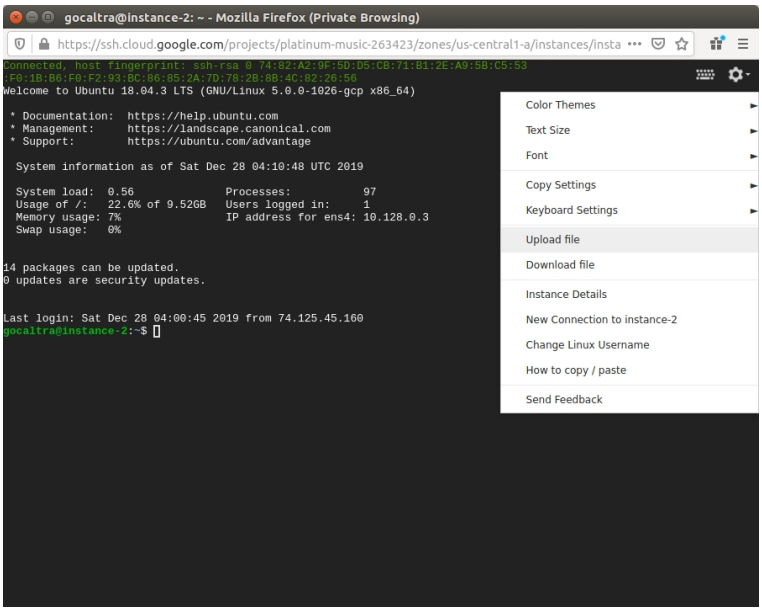

Figure 4: Upload the installation script

10. Run the installation script with the command: `sudo bash ubuntu-install.sh`.

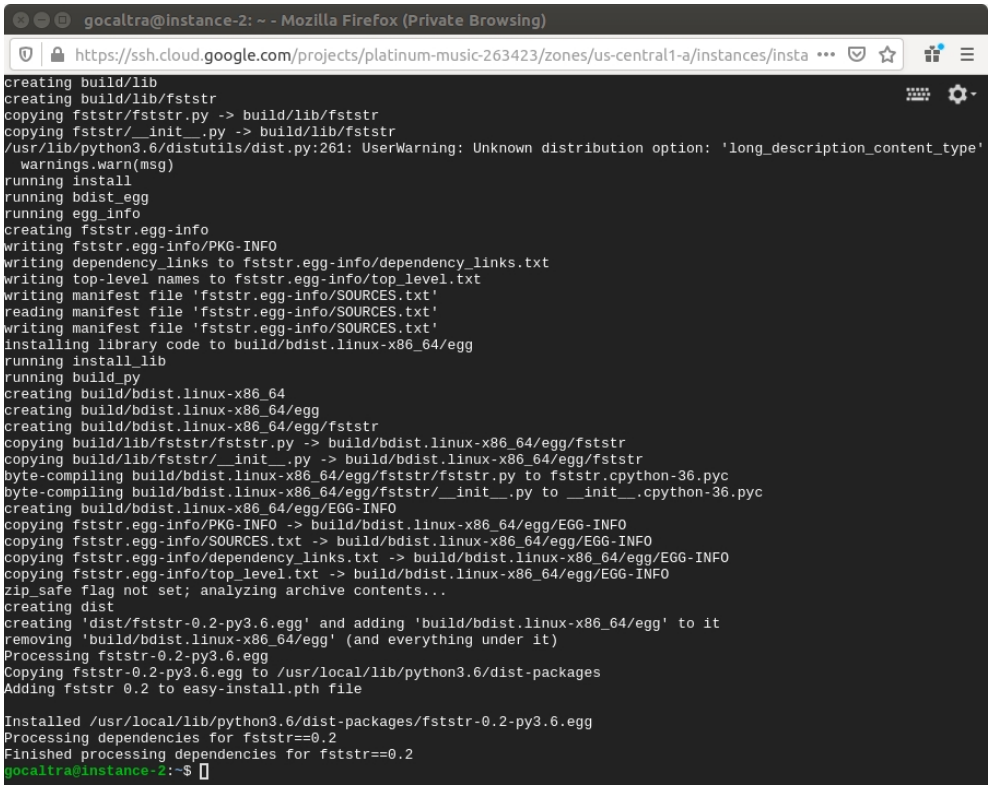

Figure 5: This is what it should stay with installation completed.

11. Test your OpenFST installation by running the sample e-insertion FST in fststr with the command:
`cd fststr/examples/FSTs/; python3 e-insertion.py`

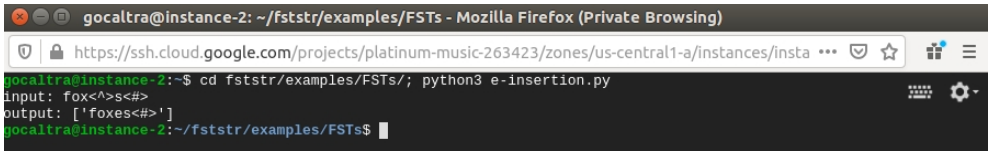

Figure 6: This is the expected result of the FST.

12. Yay! You have installed OpenFST! Come to office hours if you need help with any of the steps.