CSE 332: Data Abstractions

Google Compute Engine & Eclipse

This handout will help you set up Google Compute Engine and Eclipse for the Chess project.

(1) Setting up Eclipse/Terminal

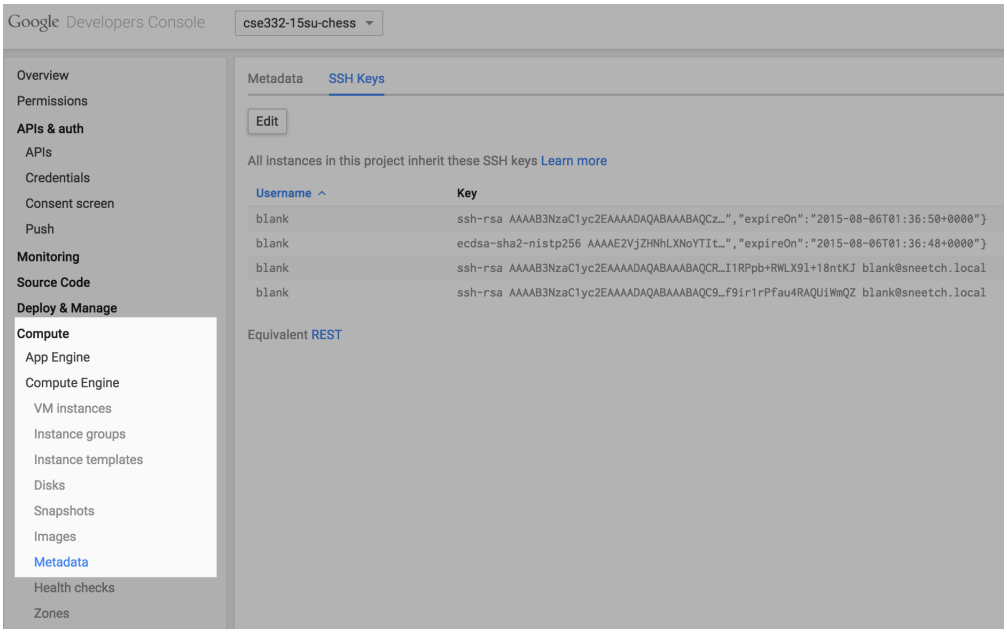
This project, you will use Google Compute Engine to access more computing power than normal. As such, you will need to install a file transfer/terminal program. If you already have one you like, feel free to use it. Otherwise, read these instructions on how to get a terminal inside Eclipse.

RSE: Remote System Explorer

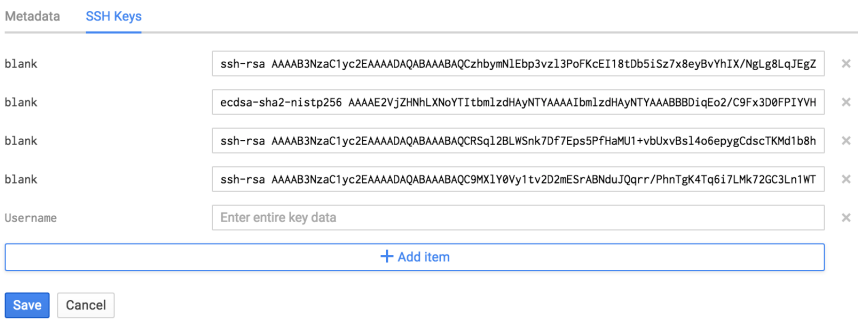
RSE is an Eclipse plugin that will allow you to easily transfer files to a Google Compute Engine instance. To install `RSE`, EGit, go to the `Help > Install new Software` menu and enter the url `http://download.eclipse.org/tm/updates/4.0`. Then, follow the dialog steps to install the plugin.

(2) Setting up Google Compute Engine

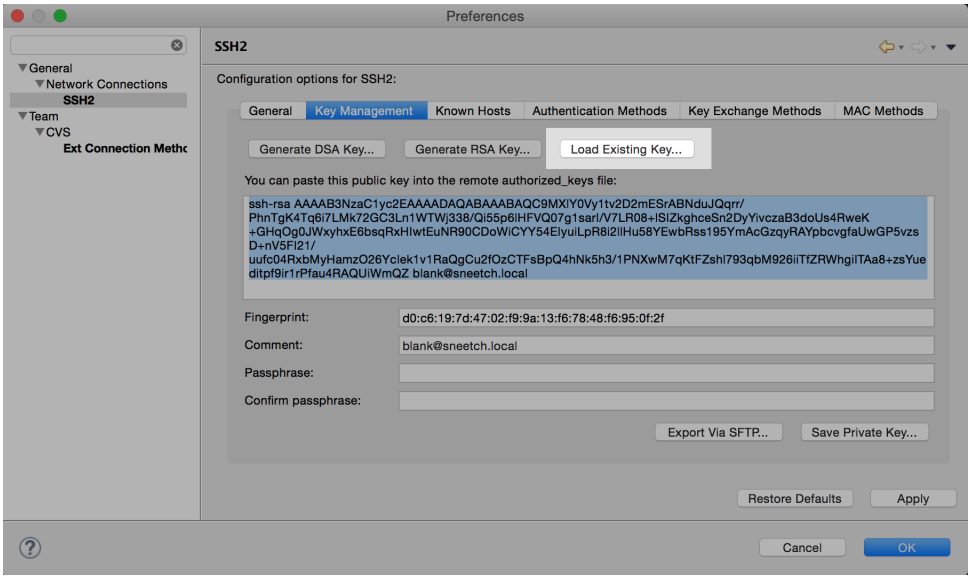
Additionally, you will need to create instances using Google Compute Engine. You should receive an e-mail inviting you to a project. Once you accept the invitation, you will need to add your *private key* to the project. In the Google Developers Console, click: `Compute > Compute Engine > Metadata`.



Then, at the top of the page that opens up, there will be an `SSH Keys` button. Click it and click `Edit`.

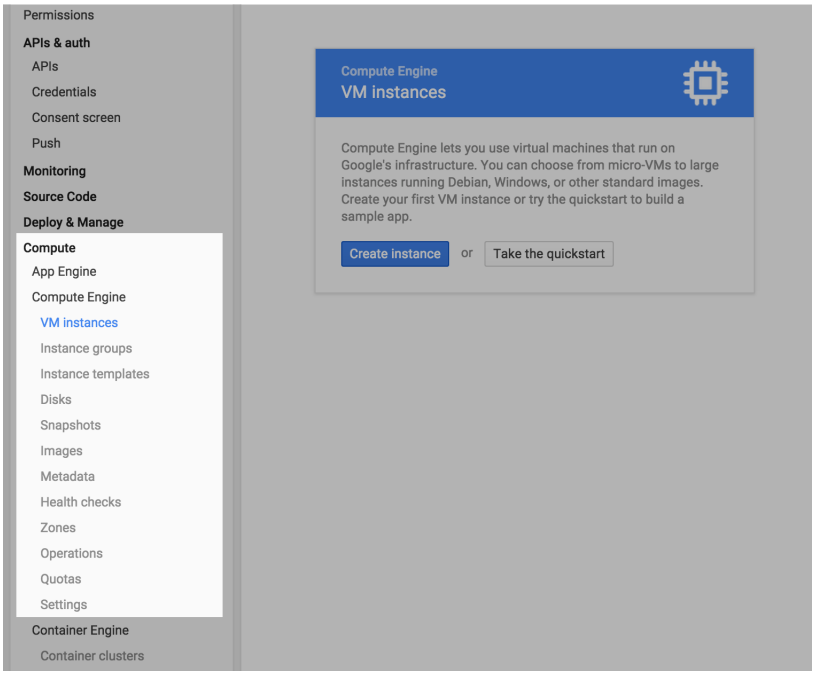


Now, go to Eclipse. Go to Preferences and type in "ssh". Click SSH2, Key Management, and then Load Existing Key. Choose whatever key you are using for gitlab (or a new one, if you like), and copy the contents to the box in Google Developers Console. Then, hit save.



(3) Creating An Instance

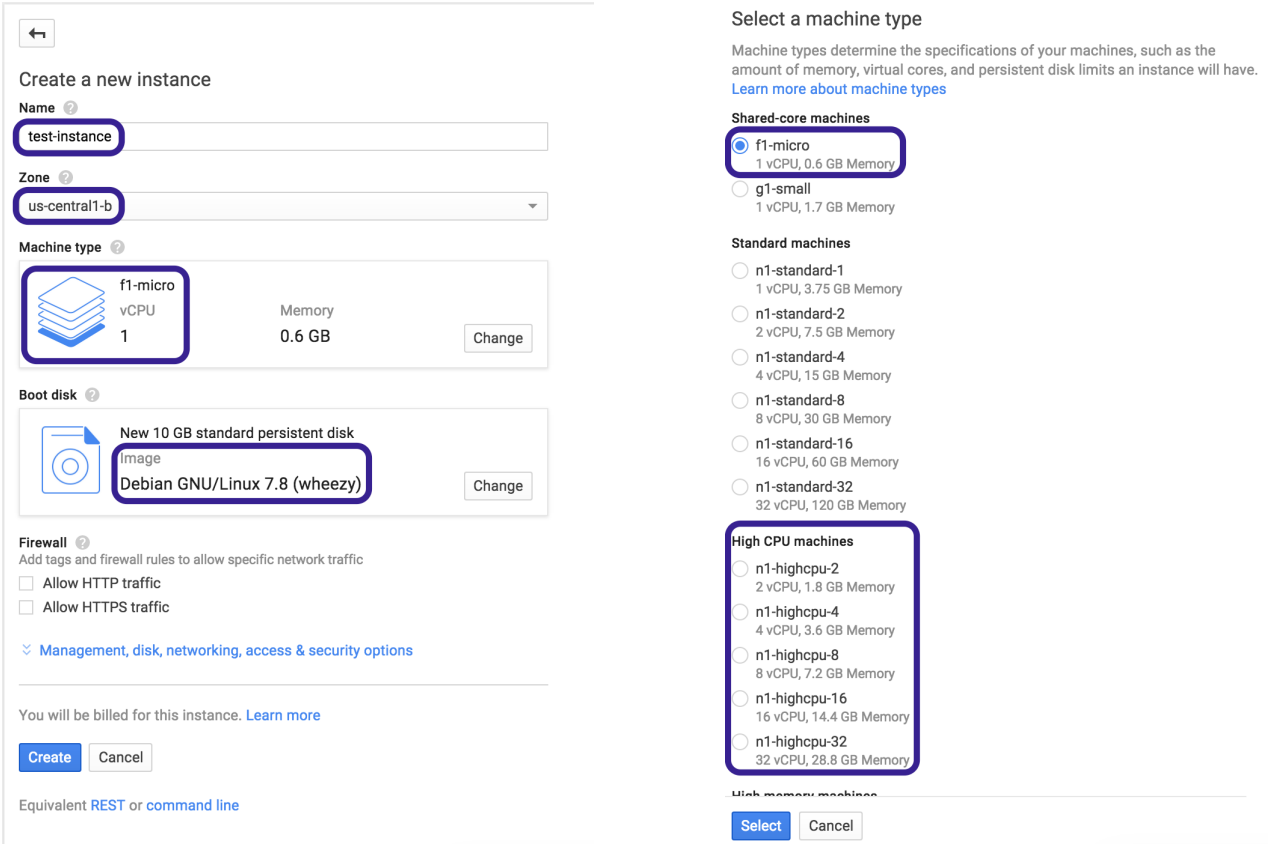
Now, your Eclipse and instances on Google Compute Engine should be able to communicate. To test this out, let's try spinning up an instance. Click on VM Instances and click the Create button.



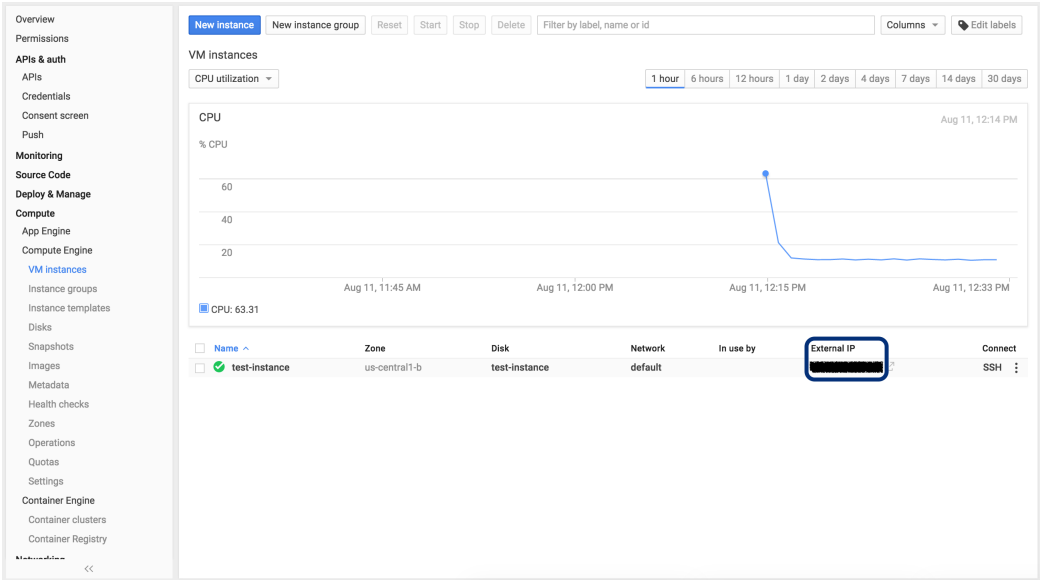
When creating an instance, you will have a choice of several options. You *can* choose anything you like, but we recommend the following choices. In particular, if you are creating a "test instance", we recommned you use f1-micro.

- Zone: `us-central1-b`
- Machine Type:
  - For a test instance: `f1-micro`
  - For a real instance: `n1-highcpu-32`
- Image: Debian GNU/Linux 7.8

If you insist on using a Windows Image, you're on your own.



Once your instance boots, you will be able to `ssh` into it using its External IP Address which is listed on the main instances page:



(4) Connecting To An Instance

Now that you have the IP Address, you are ready to use your instance! Go to Eclipse. Go to `Window > Open Perspective > Other...`. Choose `Remote System Explorer` from the list. Right-click in the `Remote Systems` Pane and choose `New Connection`. Make sure `SSH Only` is selected and click `Next`. Put the External IP Address in the `Host name` field and click `Finish`. Now, right-click on the new entry and choose `Connect`. In the prompt that shows up **DO NOT TYPE IN A PASSWORD**; just hit next.

You're now connected to your instance!

Once you connect to your instance, you should copy/paste the following command into the terminal:

```
source <(curl -s https://courses.cs.washington.edu/courses/cse332/15su/homework/p3/gce/setup-instance.sh)
```