COMS W4115: Google Cloud VM

Overview

We have allocated Google Cloud (GCloud) credits to provide for one VM per group. After selecting a partner and messaging your UNI's to the instructor/TA's, you will be assigned a $200 GCloud coupon which will be sent by email soon.

Setup

One team member must follow the setup instructions below and then share access of the VM to your partner after creation.

1. Follow initial instructions to redeem class coupon here: http://www.cs.columbia.edu/crf/cloud-cs/

2. Create a "project" for the class (name your project such as coms4115 etc.). This will likely have to be created within the "columbia" organization.

3. Navigate to "Compute Engine" (while in the context of the new project) and create a virtual machine to match the specification given in Figure 1 on the following page (you may select your own name). The most notable changes are:

   - Leave region/zone to `us-central1` and `us-central1-a`.
   - Machine type: `n1-standard-4`.
   - Click "change" under boot disk to select `Ubuntu 18.04 LTS` and type to add 200 GB persistent disk (HDD).
   - Leave the remaining options to default. This should be: Compute Engine Default Service Account, Allow default access, and unchecked boxes for Allow HTTP/HTTPS traffic.

4. After creation, ssh into the machine via the "ssh" button next to the instance in Compute Engine, or add your ssh keys to login with your own terminal. More information on access can be found here: https://cloud.google.com/compute/docs/instances/connecting-to-instance More information about sharing access to other user can be found here https://cloud.google.com/compute/docs/access/

Usage

You must shut down your instance when not in use
There are not enough credits to keep the server running continuously. Ensure it is shut down when not in use so that the credits don't run dry too quickly. There should be enough credits for about 850 hours of compute time.

After setup, continue to homework 1. You will need to use the Gold linker for building LLVM/Clang with the 15 GB of memory on the machine. This is `-DLLVM_USE_LINKER=gold`. The program `htop` is useful for monitoring.

Name ⍰

plt-vm-1

Region ⍰   **Zone** ⍰

us-central1 (Iowa) ▾   us-central1-a ▾

Machine configuration ⍰

> **Machine family**
>
> | General-purpose | Memory-optimized |
>
> Machine types for common workloads, optimized for cost and flexibility
>
> **Generation**
>
> First ▾
>
> Powered by Skylake CPU platform or one of its predecessors
>
> **Machine type**
>
> n1-standard-4 (4 vCPU, 15 GB memory) ▾
>
> vCPU   Memory
>
> 4   15 GB

⌄ CPU platform and GPU

Container ⍰
☐ Deploy a container image to this VM instance. Learn more

Boot disk ⍰

> New 200 GB standard persistent disk
>
> Image
>
> Ubuntu 18.04 LTS | Change |

Identity and API access ⍰

> **Service account** ⍰
>
> Compute Engine default service account ▾

$105.09 monthly estimate

That's about $0.144 hourly

Pay for what you use: No upfront

⌄ Details

Figure 1: Virtual Machine Settings