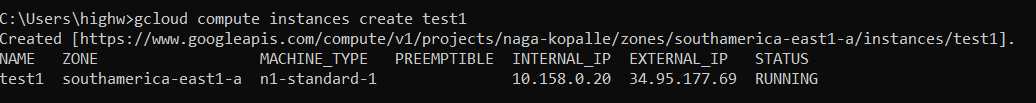
**Report**

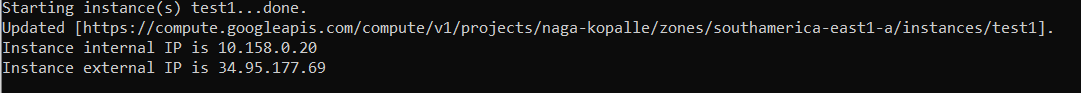
**Cloud test cases - Launching VMs, SSHing to VMs, Suspending Vms .**

**Please find the screen shots and the outputs .**

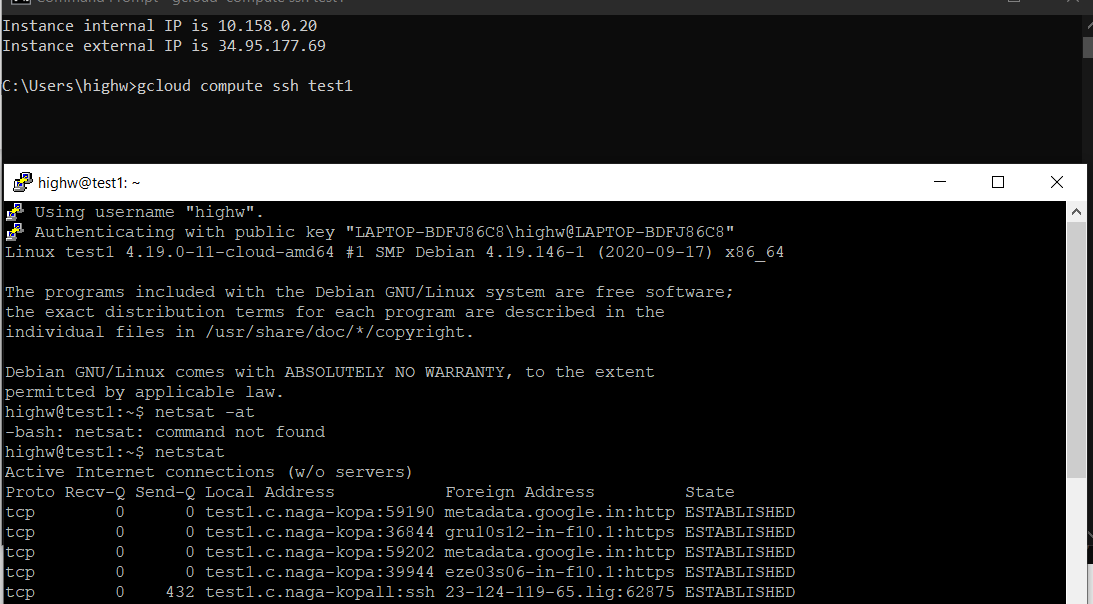
1. **Creating an instance**



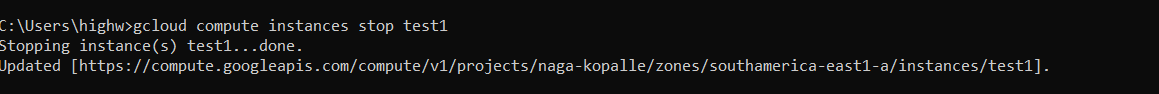
1. **Starting an instance**



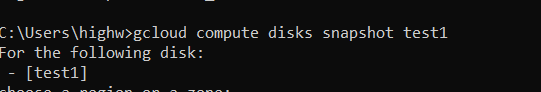
1. **SSHing into the vm instance**

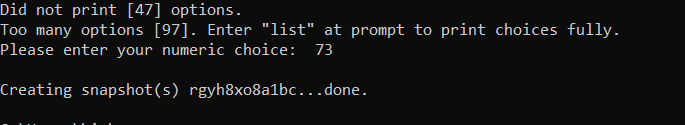


1. **Suspending an instance**

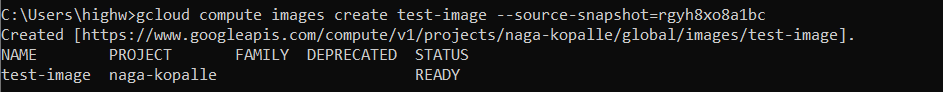


1. **Creating snapshot of disk**

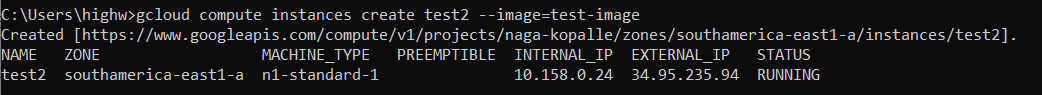




1. **Creating image from snapshot**



1. **Creating another vm instance from the image**



**Map reduce on the cloud**

**1. Firstly I have created two vms - master and keystore .**

**2. Installed all my dependencies in both vms and then created image – cloud-assign image from the snapshot of keystore disk.**

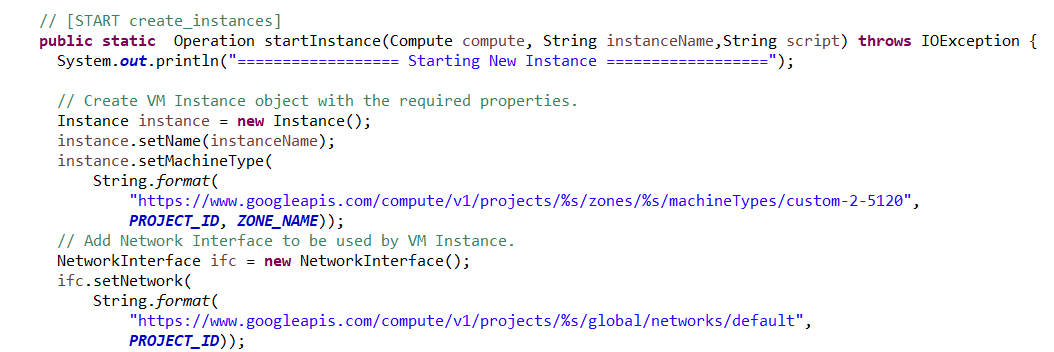
**3. I started keystore server on keystore vm and then I have started master http server on master vm .**

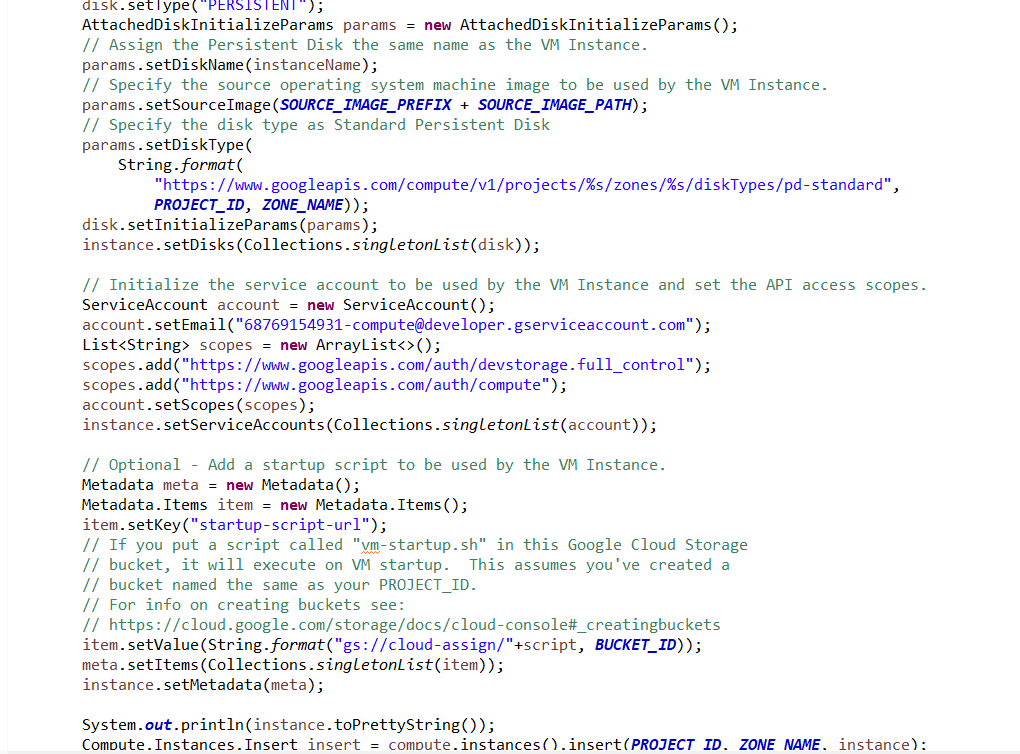
**4. This image is then used by master to spawn reducers and mappers .**

**5. I have use the JavaClient for creating and deleting new instances :**

**Below is the code snippet :**

**Creating instance : ComputeEngine.java**





**As you can see , I have specified the project id, zonename and my service account credentials , and my initial startup-script url for executing after vm start .**

**This is the out you get when you start an instance:**

**Text

Description automatically generated**

**But, for some reason the startup script isn’t running after vm has initialized, so we have manually execute our scripts on each of the vms …**

**Once we run our map tasks ,for example for 1 mapper and word count :**

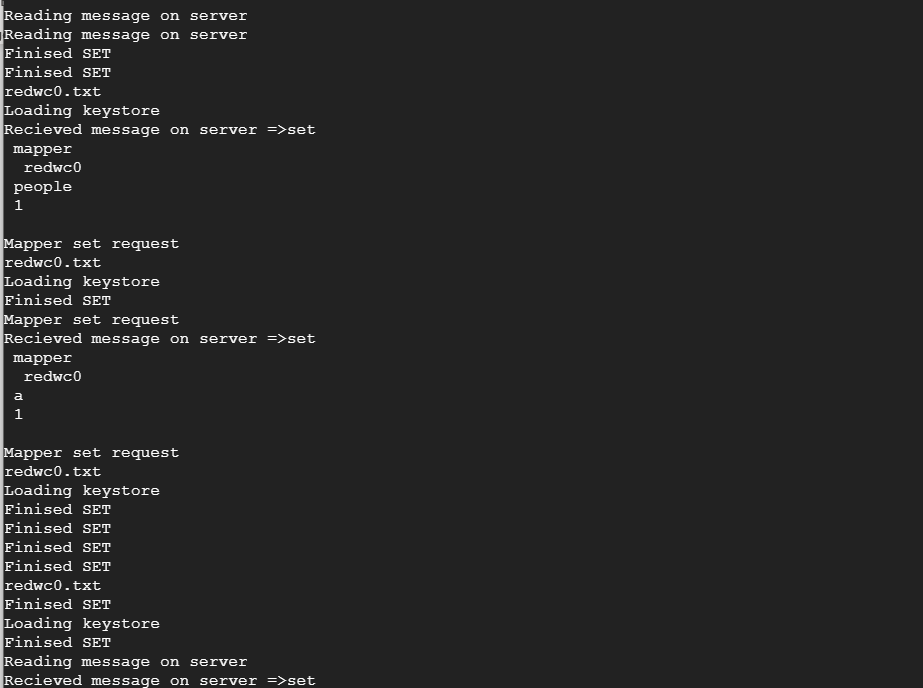
**We get the following output on mapper :**

**A close up of a logo

Description automatically generated**

**As you can see , the mapper is communicating with keyvalue store to store the data .**

**Below is the output for keyvalue store**



**Once a mapper is successfully executed , it communicates with the master , with its exit code based on which the master will either decide to just kill the current mapper vm if the mapper has successfully executed it’s task or**

**Delete the vm instance and spawn the mapper job again .The code snipped for that is here:**



**You can see the output here on the master machine:**

