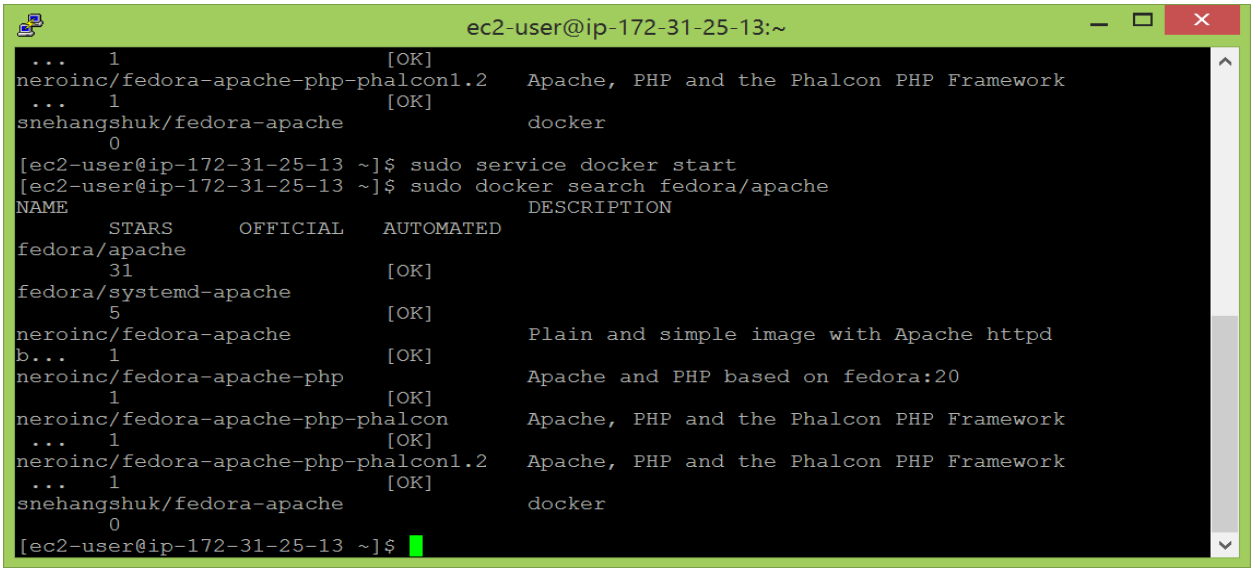
Lab #1: Docker

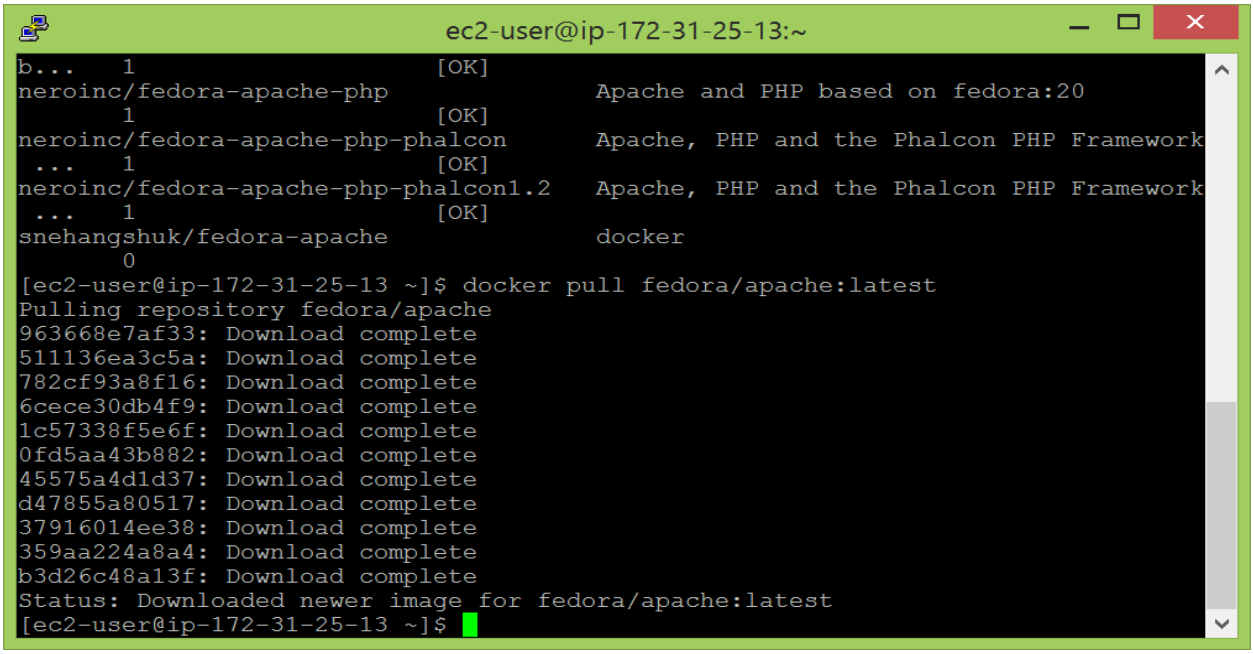
- Install putty. Using the public ip and the key, open a terminal.

- Now, install docker with:
  sudo yum –y –q install docker

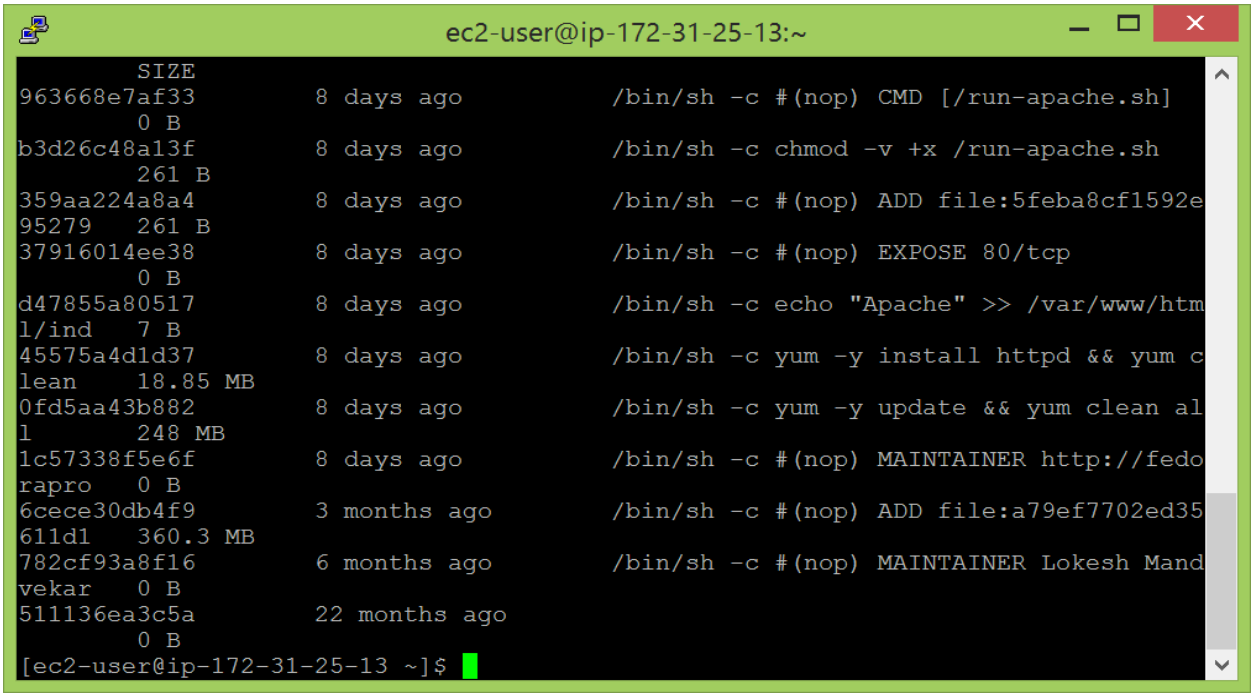
- Searching for docker images in the hub:
  sudo docker search fedora/apache



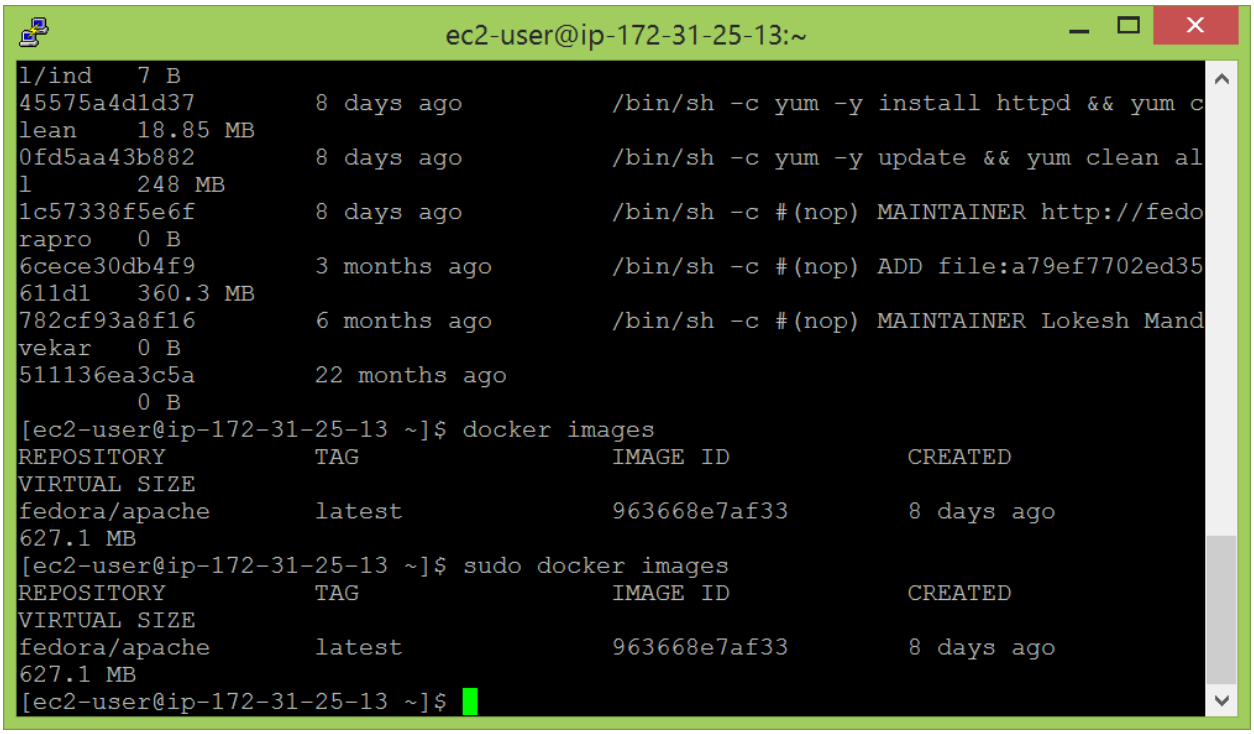
- To download all the required related software for docker:
  docker pull fedora/apache:latest



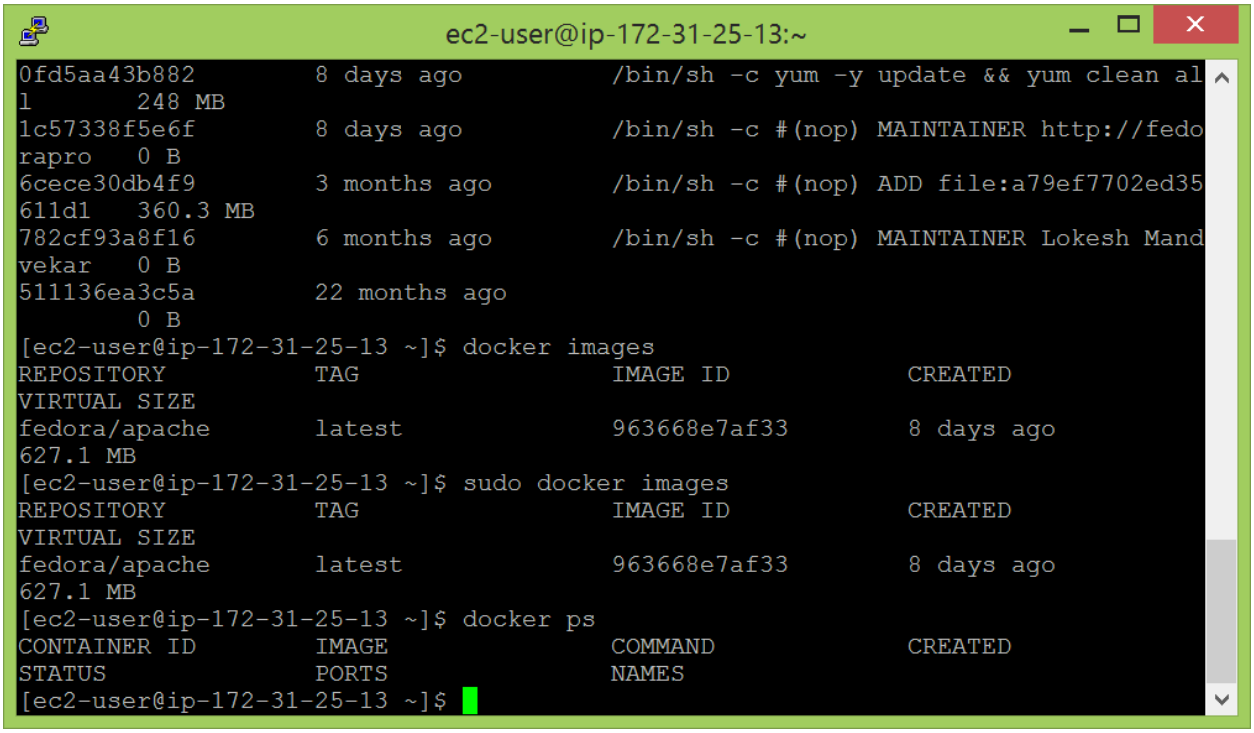
- To check the history of the downloads and the changes made:
  docker history fedora/apache



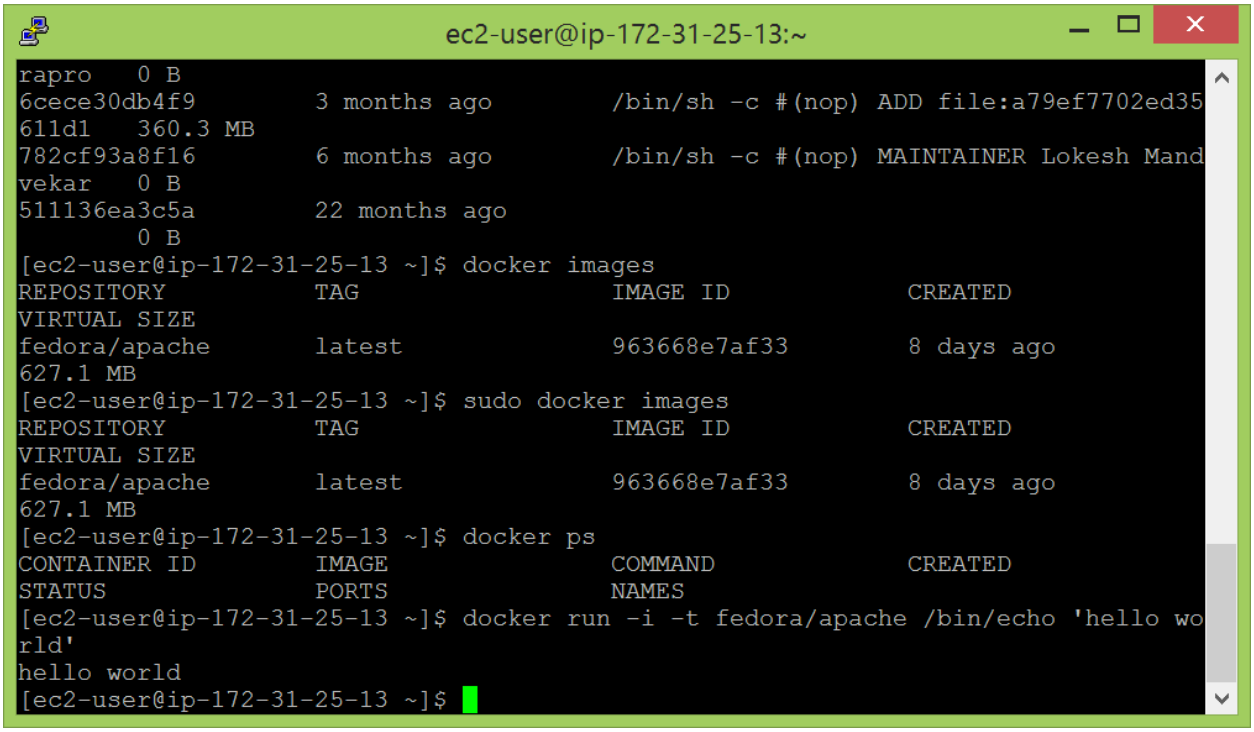
- Locally available docker images can be listed using:
  docker images



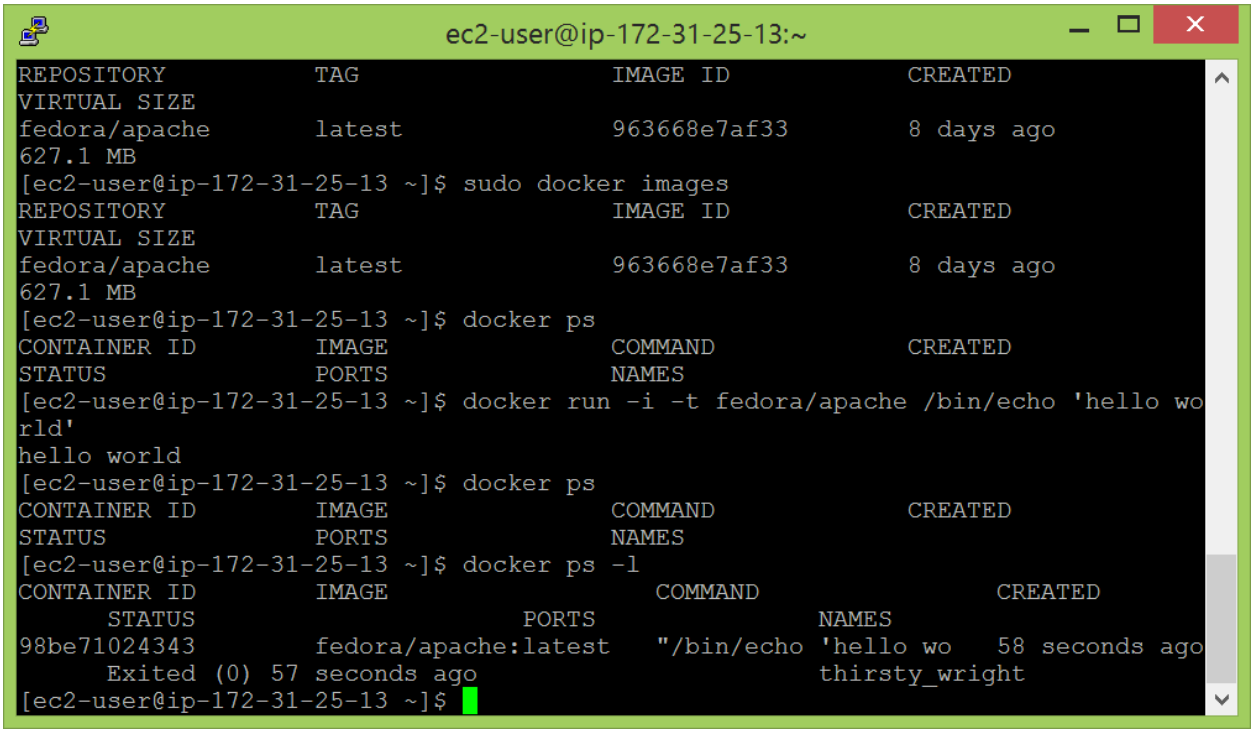
- To check the containers which are running:
  docker ps



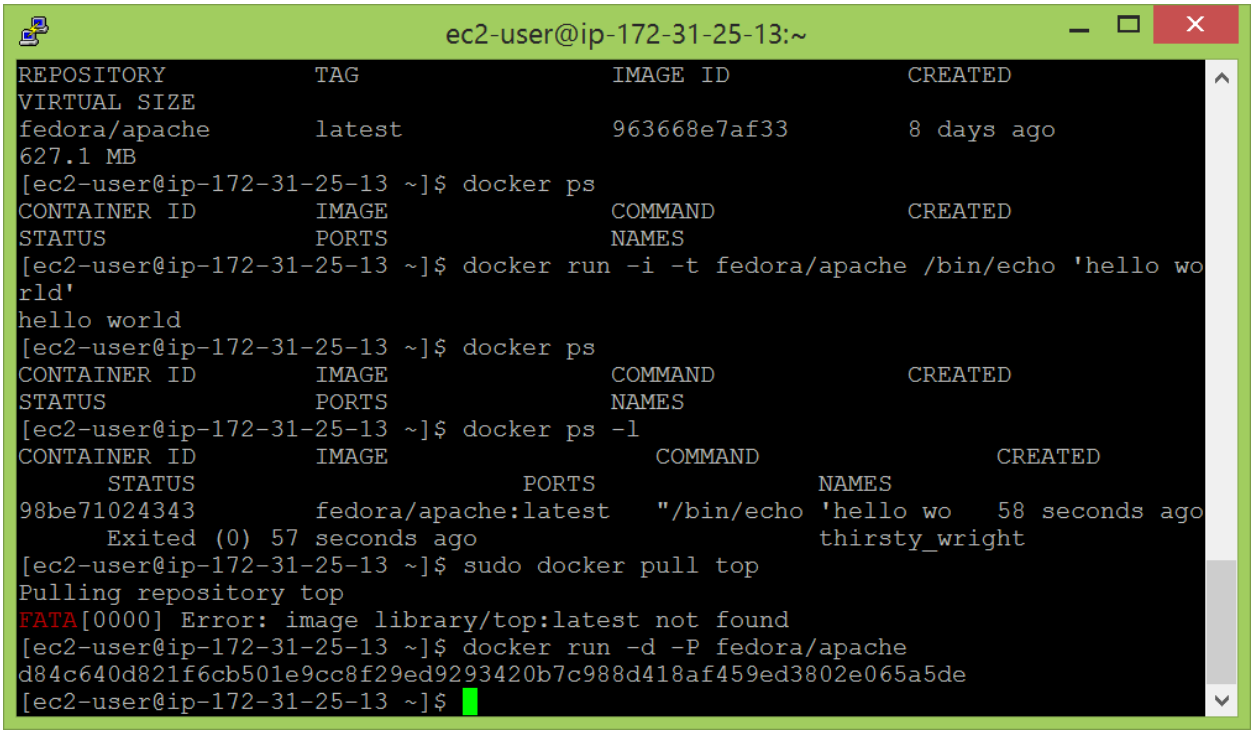
- To run the docker:
  docker run -i -t fedora/apache /bin/echo 'hello world'



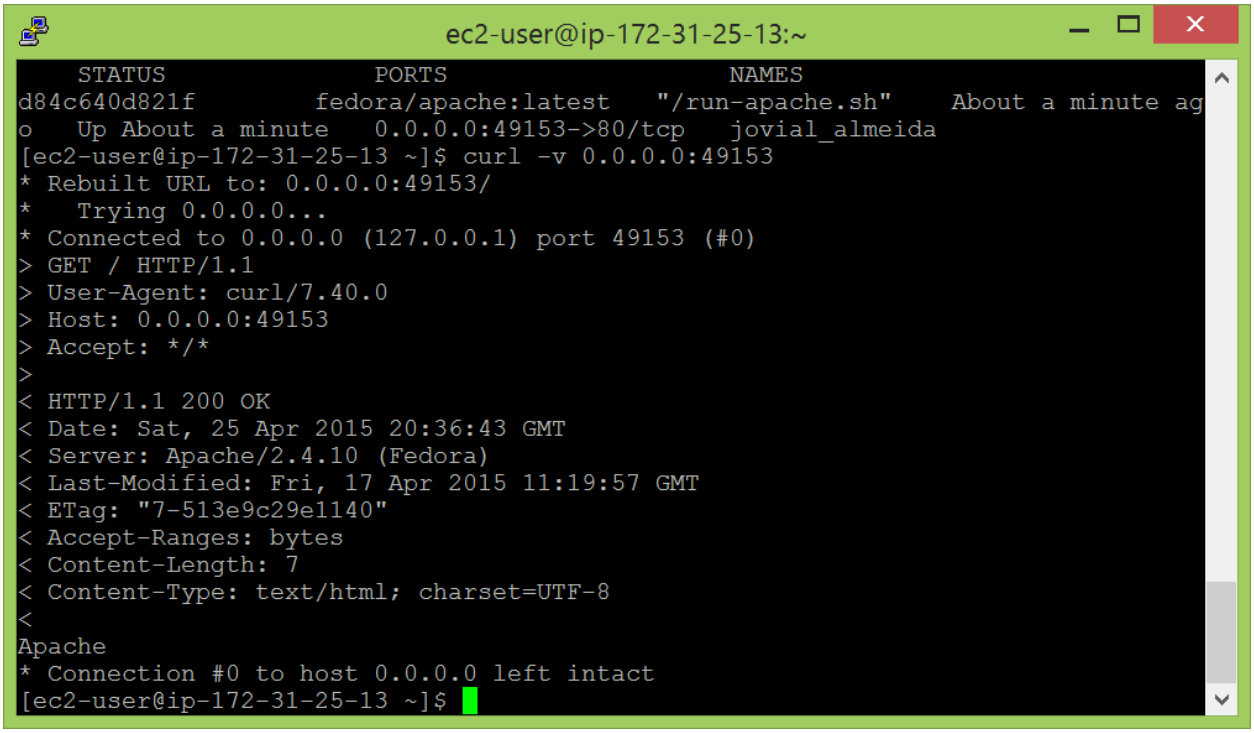
- To list all the containers which have been run last:
  docker ps –l



- An image was created by running the previous command. Now, we want to run apache service and start serving web content:
  docker run -d -P fedora/apache

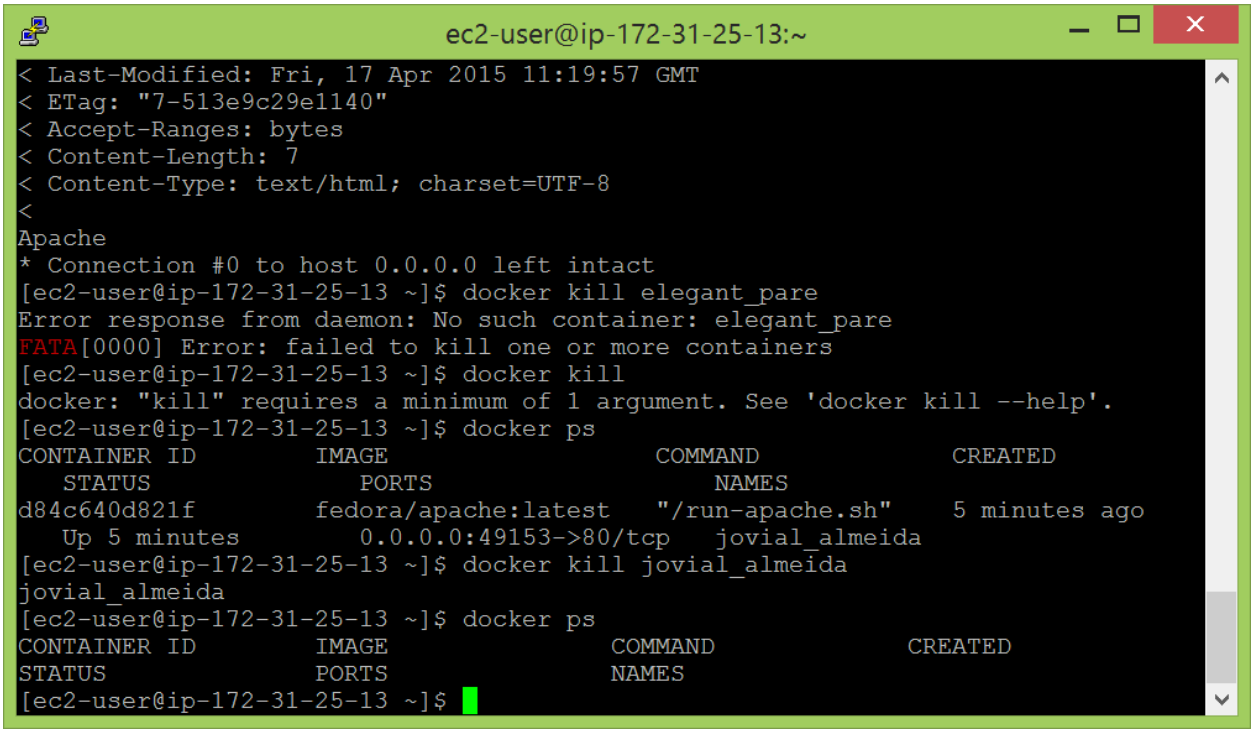


- To make sure that the connection between the input port to apache is intact:
  curl -v 0.0.0.0:49153



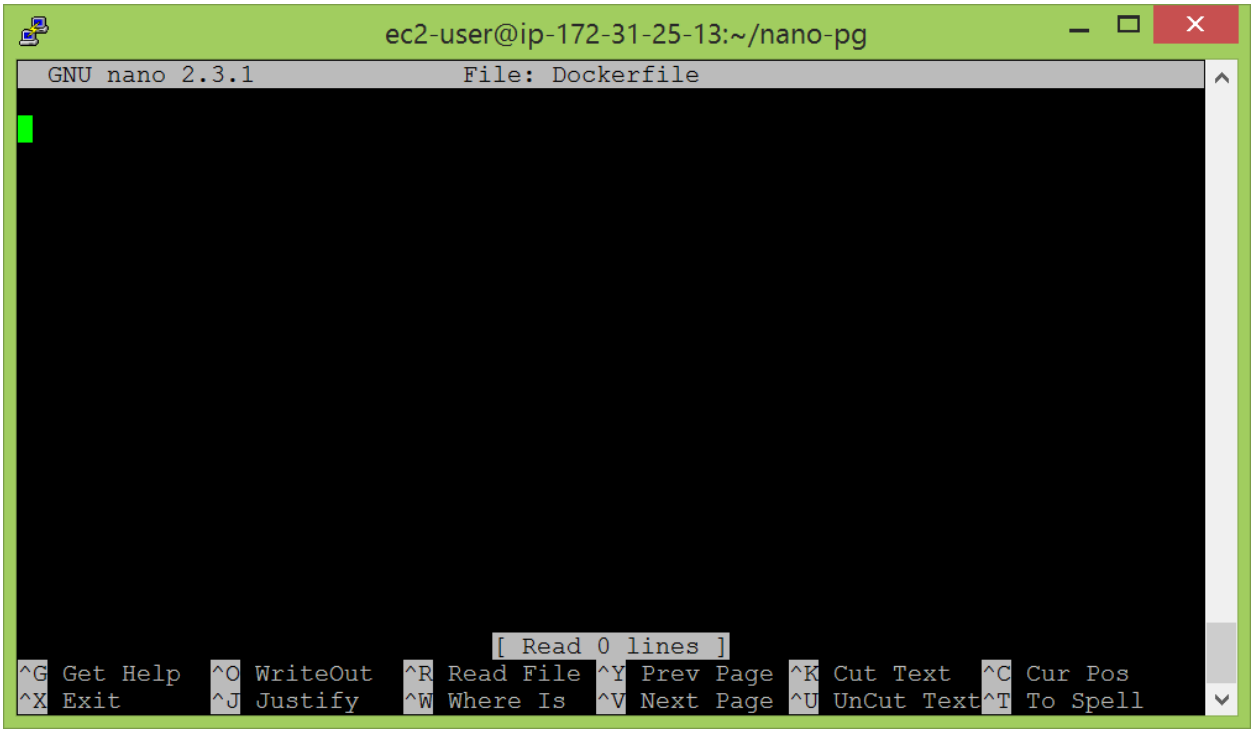
- To kill a docker image which we have started running:
  docker kill jovial_almeida

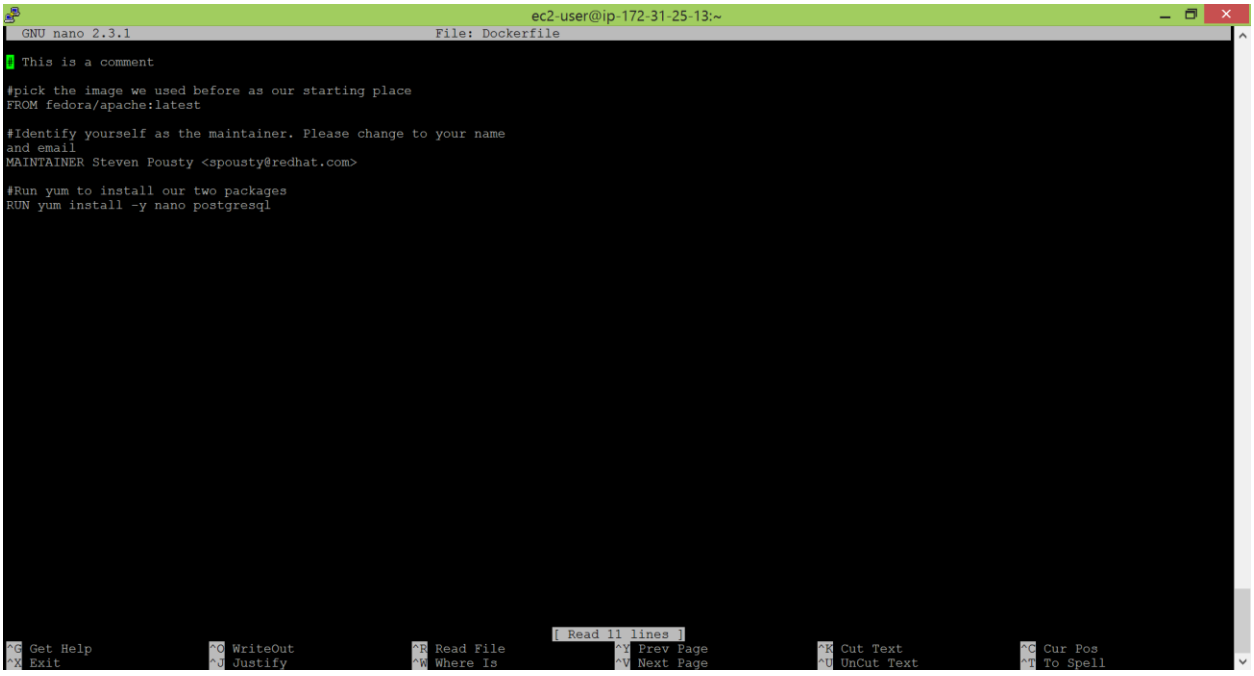
  We can also use the container ID to do the same.



- To make my own image with the docker file:

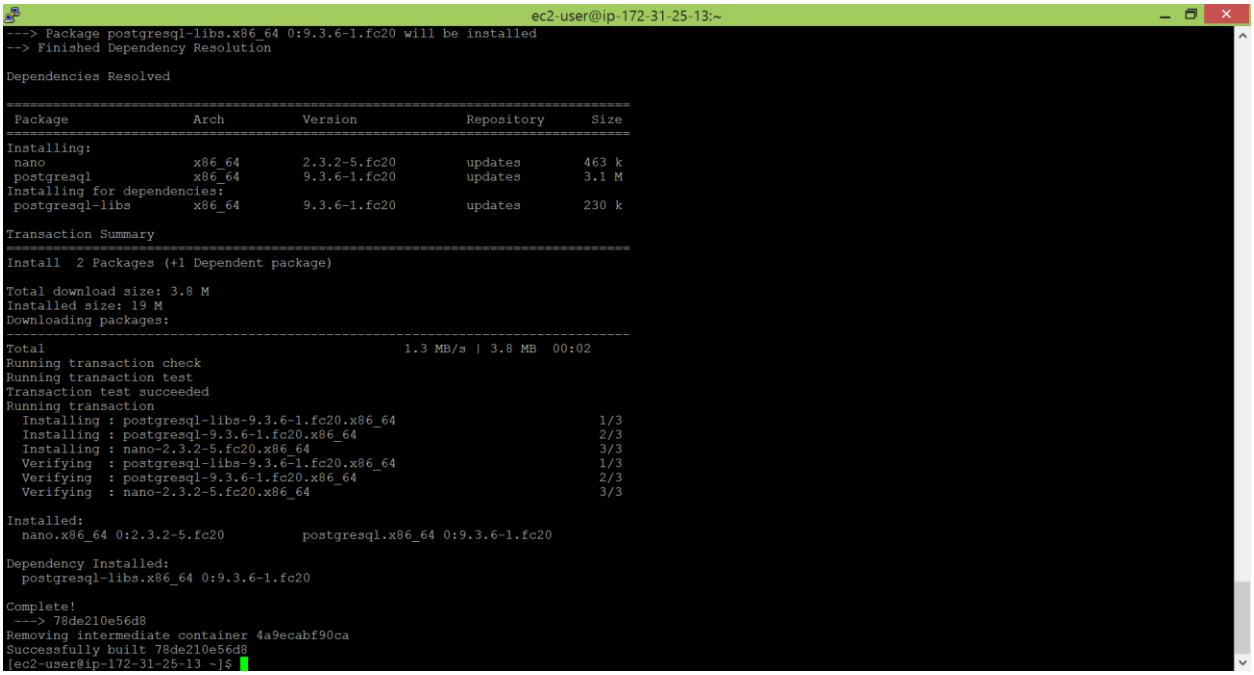
$ mkdir nano-pg
$ cd nano-pg
$ touch Dockerfile
$ nano Dockerfile



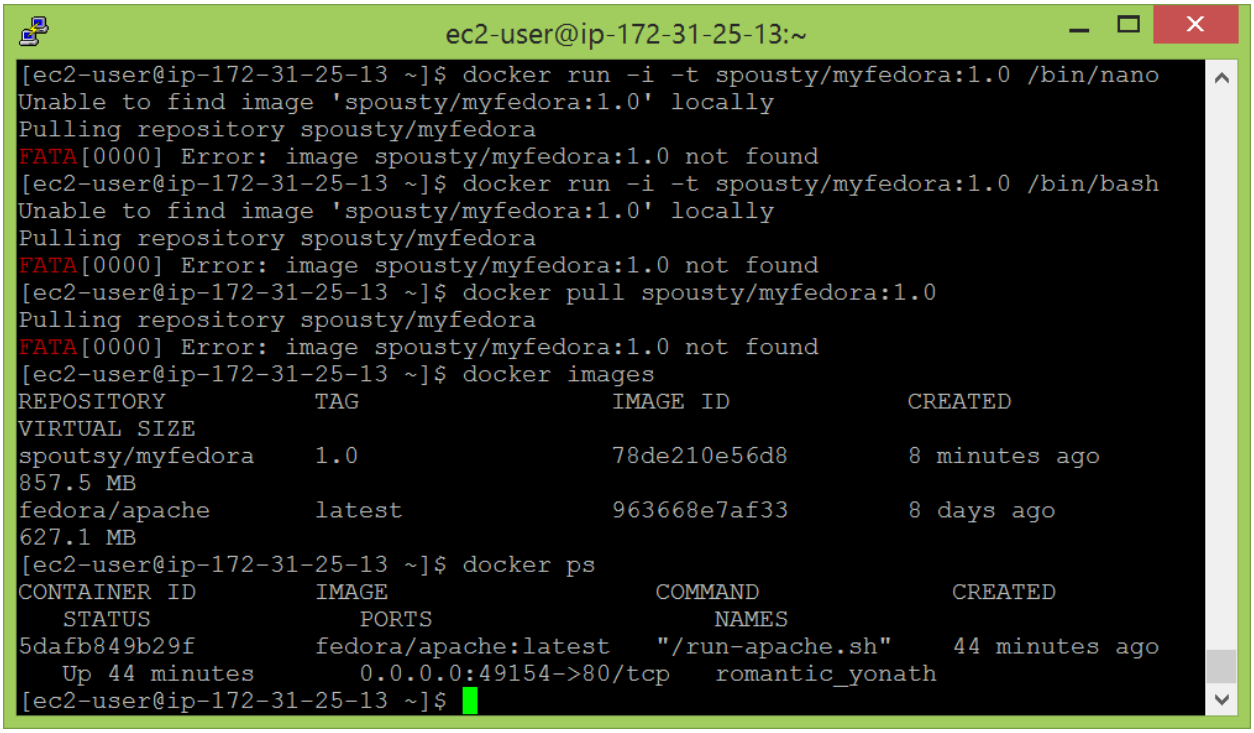


- We can make some changes in the file and customize it to create our own docker image. Then, to build the image from the file, we use:

- Usually to build an image from a file:
  docker build -t "spousty/myfedora:1.0" .



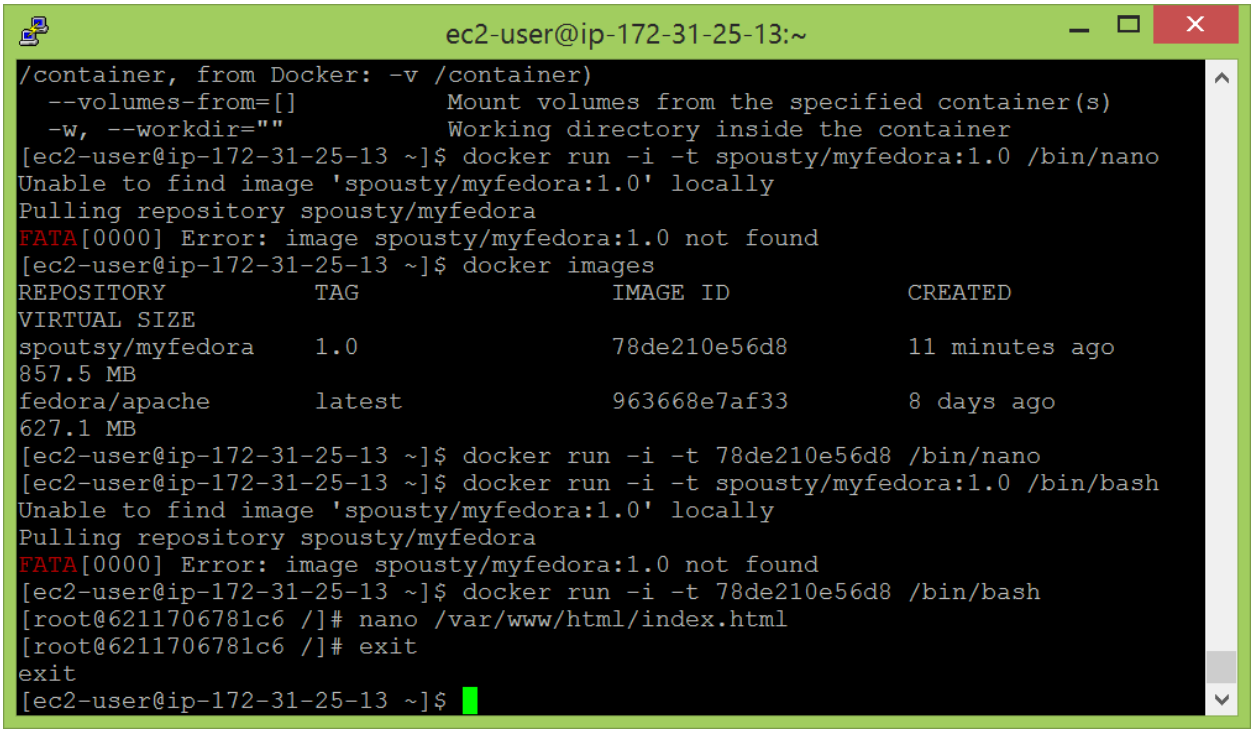
- Image is built. Now, it has to be run. So, we use:
  docker run -i -t spousty/myfedora:1.0 /bin/nano



- I used the image ID to run the image than using the name as I encountered issues with using he name of the image which can be seen in the screenshot above.

  docker run -i -t spousty/myfedora:1.0 /bin/bash

- Making own docker images by making changes in the container:
  docker run -i -t 78de210e56d8 /bin/bash



- Using nano we make changes to a file and then follow the above steps to get an image running. The changes are to be then committed.

- To enable inter container communication, the following steps are to be implemented. To spin up an image for the database, we use:

  docker run -d -P --name db training/postgres

- To make the connection:
  sudo docker run -i -t --name web --link db:postdb

- To check the environment variables:
  env |grep POSTDB

- To test the connection:
  psql -h postdb -p $POSTDB_PORT_5432_TCP_PORT –V
  psql -h postdb -p $POSTDB_PORT_5432_TCP_PORT -U docker
  docker=# \db