# Installing Docker

If you already have docker installed, you can skip to the next section

Follow the instructions at the provided links.

1. First, install the Docker engine, which contains the basic user functionality. Use the instructions “Install using the repository” and ignore “Install from a package” and “Install from a convenience script”:  
   <https://docs.docker.com/engine/install/ubuntu/>
2. To allow Docker to be run without needing to use the ‘sudo’ command, follow the instructions under “Manage Docker as non-root user” and “Configure Docker to start on boot”:  
   <https://docs.docker.com/engine/install/linux-postinstall/>
3. Then install Docker-Compose, which allows you to run docker-compose files. The Orthanc-jupyter connection requires a docker-compose file:  
   <https://docs.docker.com/compose/install/>
4. Restart your computer.
5. Test Docker is working by running the command:   
   docker run -d -p 80:80 docker/getting-started  
   When the command has finished running, open an internet browser and go to the address: <http://localhost:80>. This should take you to a tutorial page, indicating that Docker is now working. Feel free to read that page to learn more about docker, or continue with these instructions to create the Orthanc-jupyter system.

# Changing the orthanc.json file

Graphical user interface, application

Description automatically generatedYou need to set your username and password in the orthanc.json file stored locally on your device.

Inside this file are configuration settings. The two most important ones are “DicomModalities” and “RegisteredUsers”, shown below.

Text

Description automatically generated

Change the “user” and “password” fields to desired values (that only you have access to). And add the DicomModalities corresponding to the PACS servers you want to access (I have the FMC and RAH servers, Son has more I think).

# Running the docker-compose.yml file

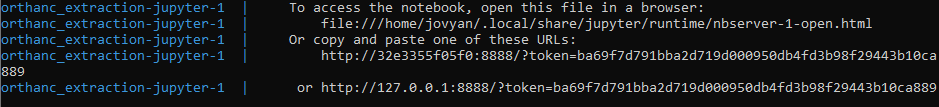
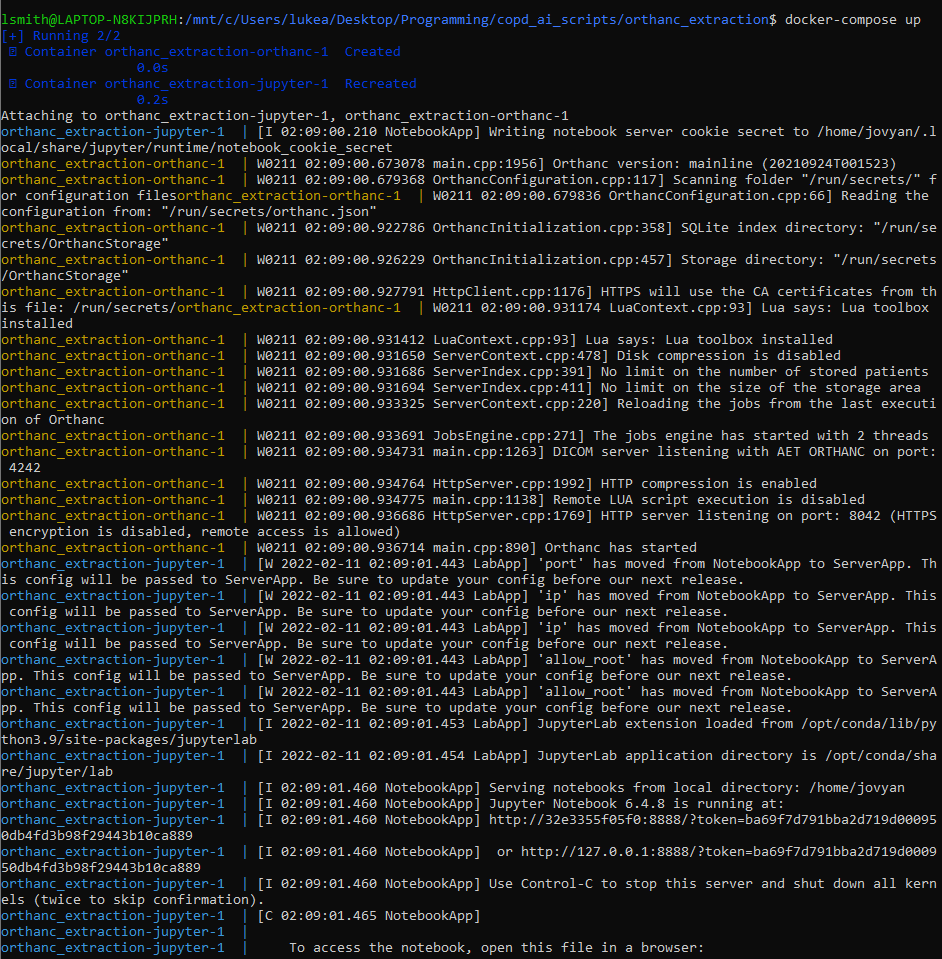
Using the linux terminal, navigate to this folder which contains the docker-compose.yml file.  


Make sure the docker-compose.yml file is here using the ‘ls’ command.  


Finally, run the command: docker-compose up

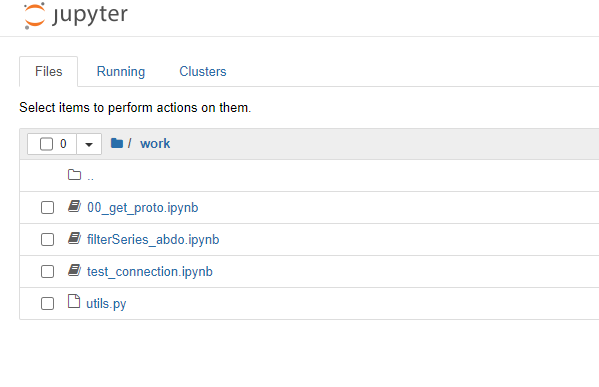
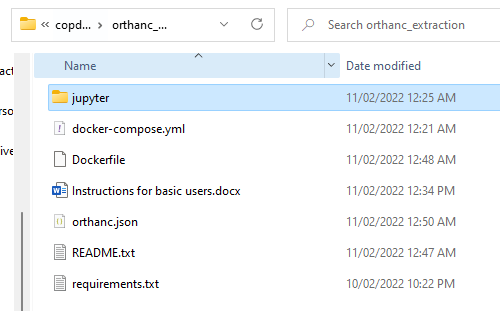
This will take a while the first time since it needs to create two containers from scratch. Once the containers are made, they will be turned on and the output will look like below. Make sure that at the end of the Orthanc-1 section, it displays the message “Orthanc has started” and at the end of the “Jupyter-1” section, it displays URLS to connect to the jupyter notebook server.

Use the bottom link ([http://127.0.0.1:8888/?token=<numbers](http://127.0.0.1:8888/?token=%3cnumbers)>) to connect to the jupyter notebook in your preferred browser (like Chrome).



Application

Description automatically generated with medium confidenceIn the notebook, you will see a ‘work’ folder. Inside it will be the files contained in the LOCAL jupyter folder.



The files in the ‘jupyter’ folder are now in the ‘work’ folder on the jupyter notebook.

Within this, I recommend running the test\_connections.ipynb notebook to make sure it all works.

Graphical user interface, text, application

Description automatically generated

The three top lines are required to set up the connection. The first line imports the Orthanc library, the second line connects the jupyter notebook to the Orthanc server we have created using docker. The third line you should change to reflect the username and password set in the orthanc.json file.