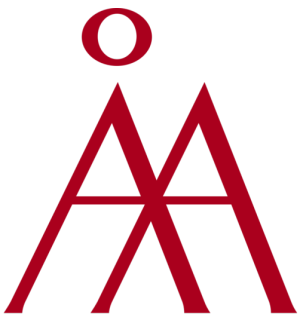

Åbo Akademi University

Cloud Computing

Assignment 1

Filipe Felício (2004623)

April 9, 2021

Launching an AWS VM

Login on the AWS console

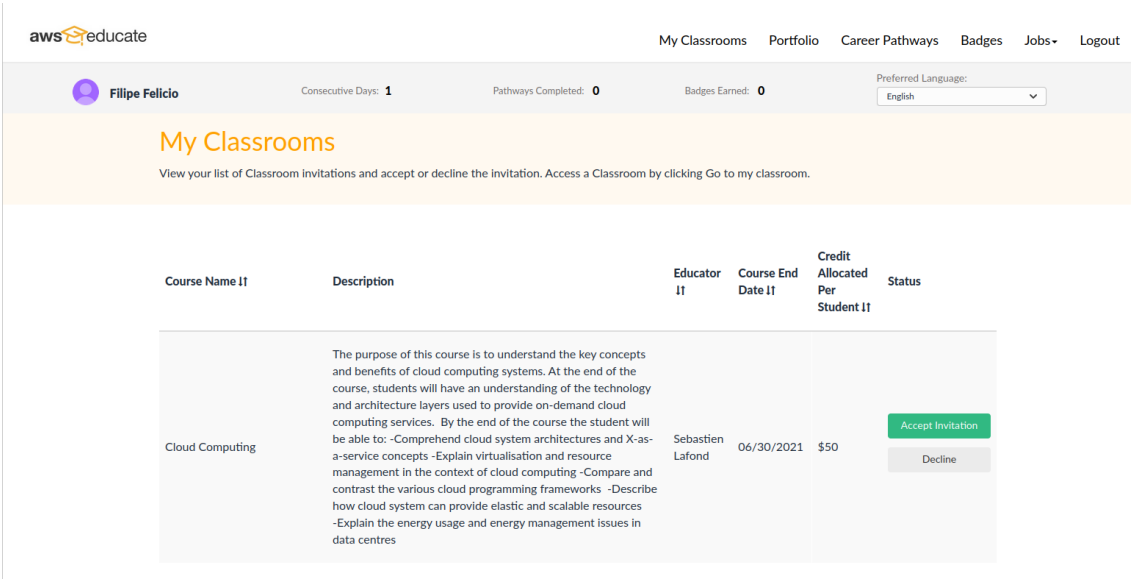

Figure 1: Login on the AWS console

Launch an instance (Virtual machine - VM) via the console

First I had to choose the Amazon Machine Image, in this case the Amazon Linux 2 AMI (HVM).

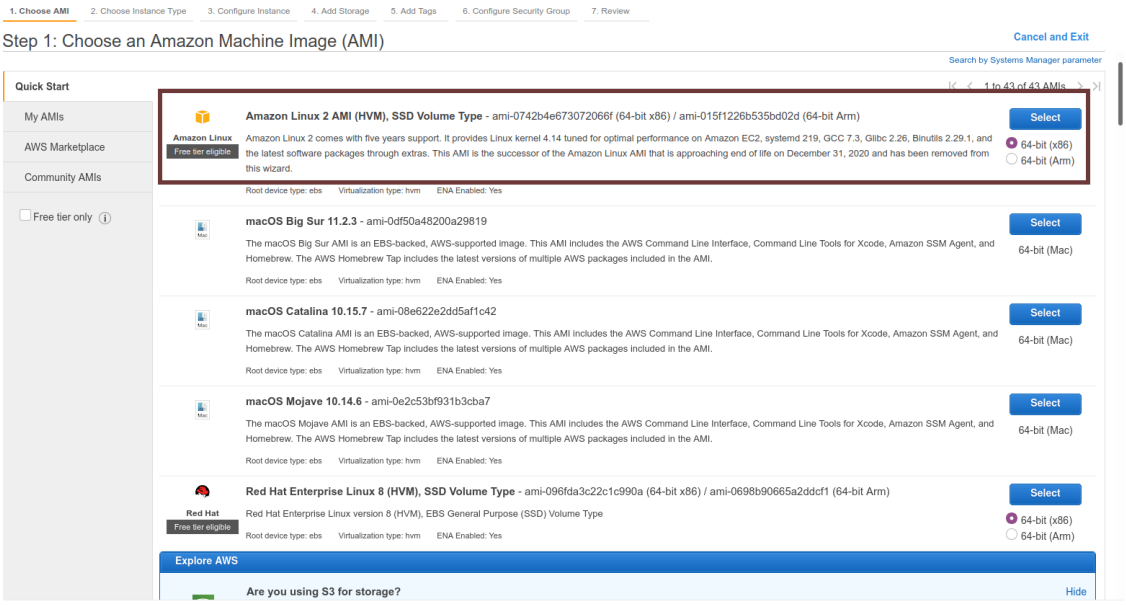

Figure 2: Choosing the AMI

Then I picked the t2.nano as my instance type.

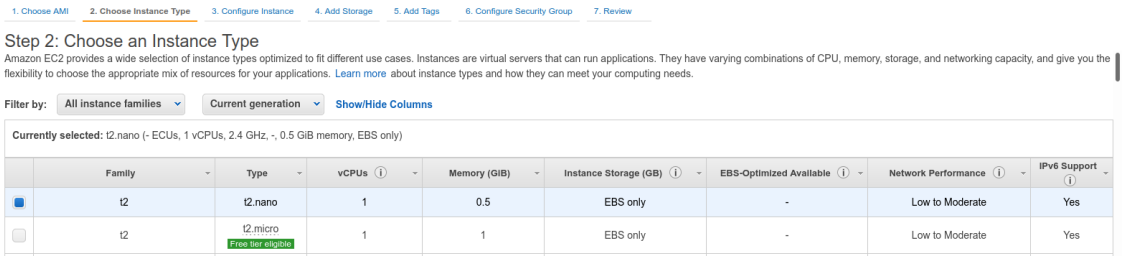

Figure 3: Selecting Type Instance

After I configured the instance details, in this case I left the default values.

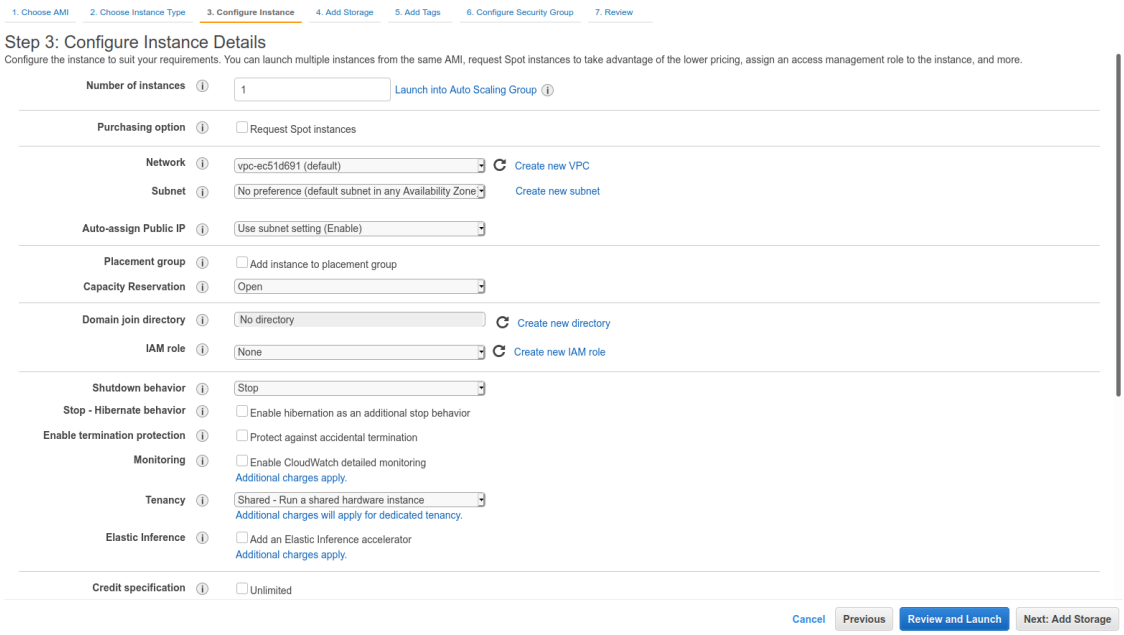

Figure 4: Configuring the Instance Details

Later I added Storage, here I also left the default values.

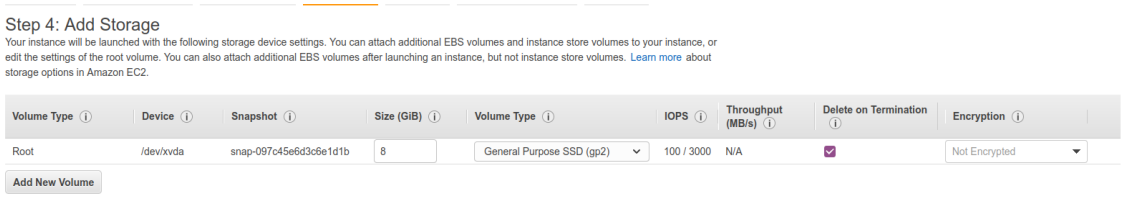

Figure 5: Adding Storage

Then it came the step of adding tags, here I did not add one.

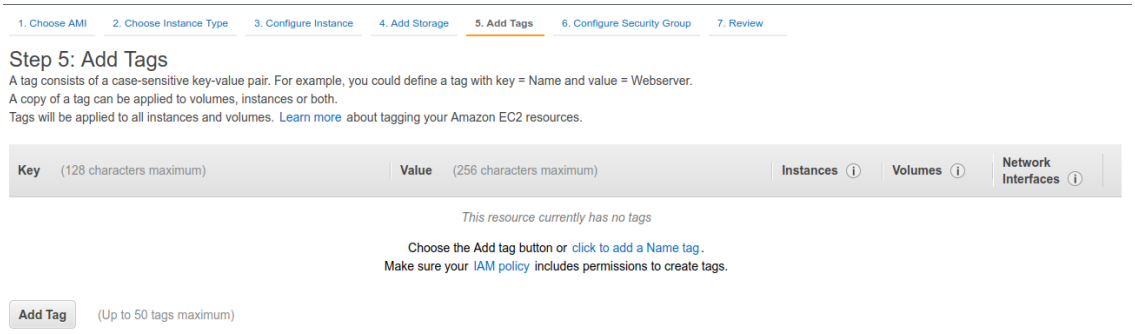

Figure 6: Adding Tags

After I configured the security group, here I changed the name of the security group to "Default" and added and HTTP Rule.

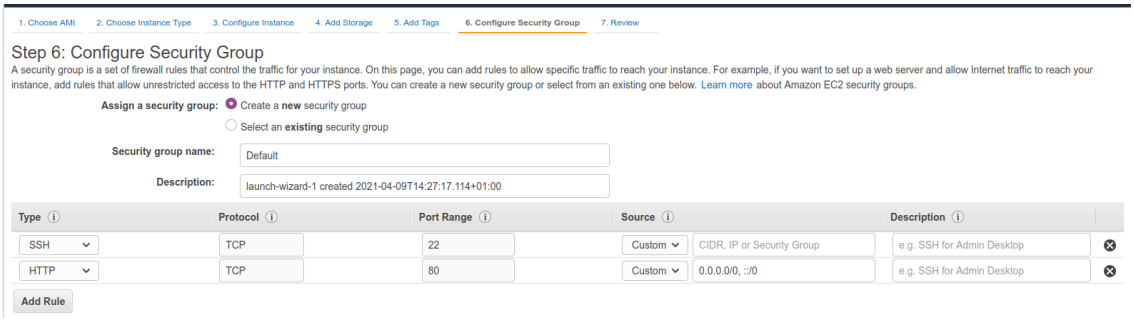

Figure 7: Configuring the security group

Finally, I Review my Instance Launch

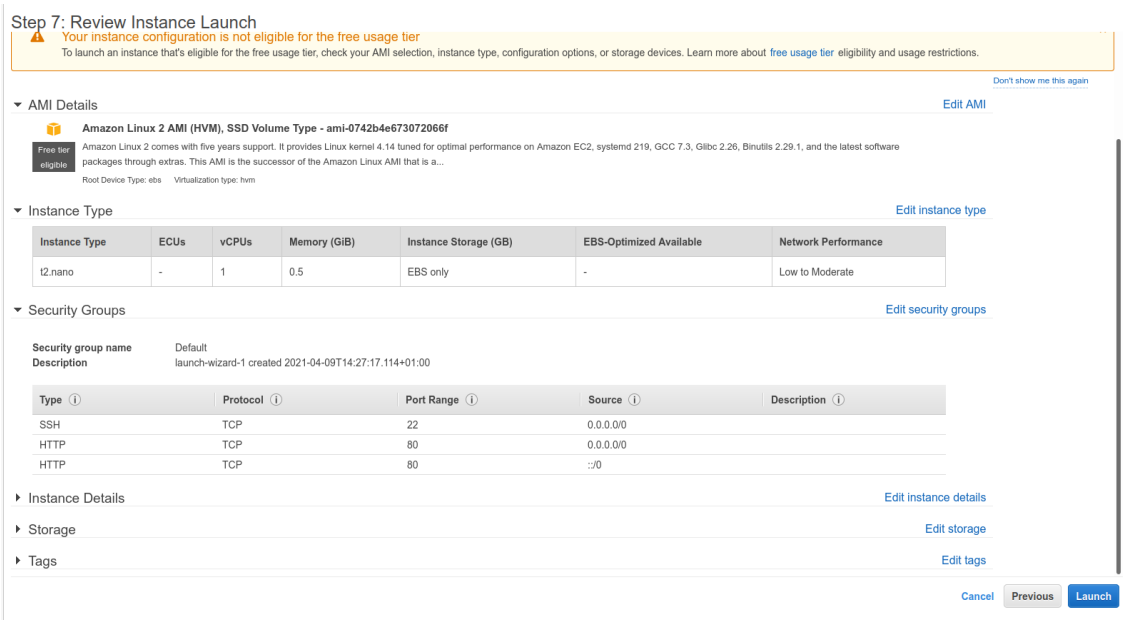

Figure 8: Reviewing the Instance Launch

Afterwards I had to create a new key pair.

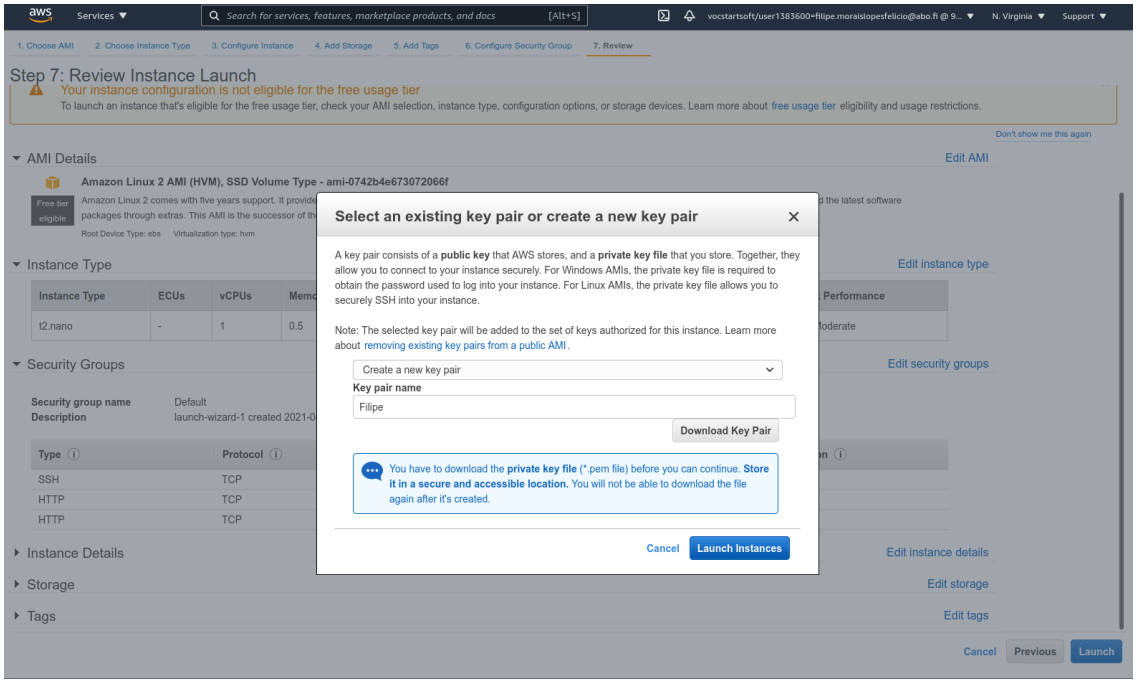

Figure 9: Creating a new key pair

Then I selected the newly created key pair.

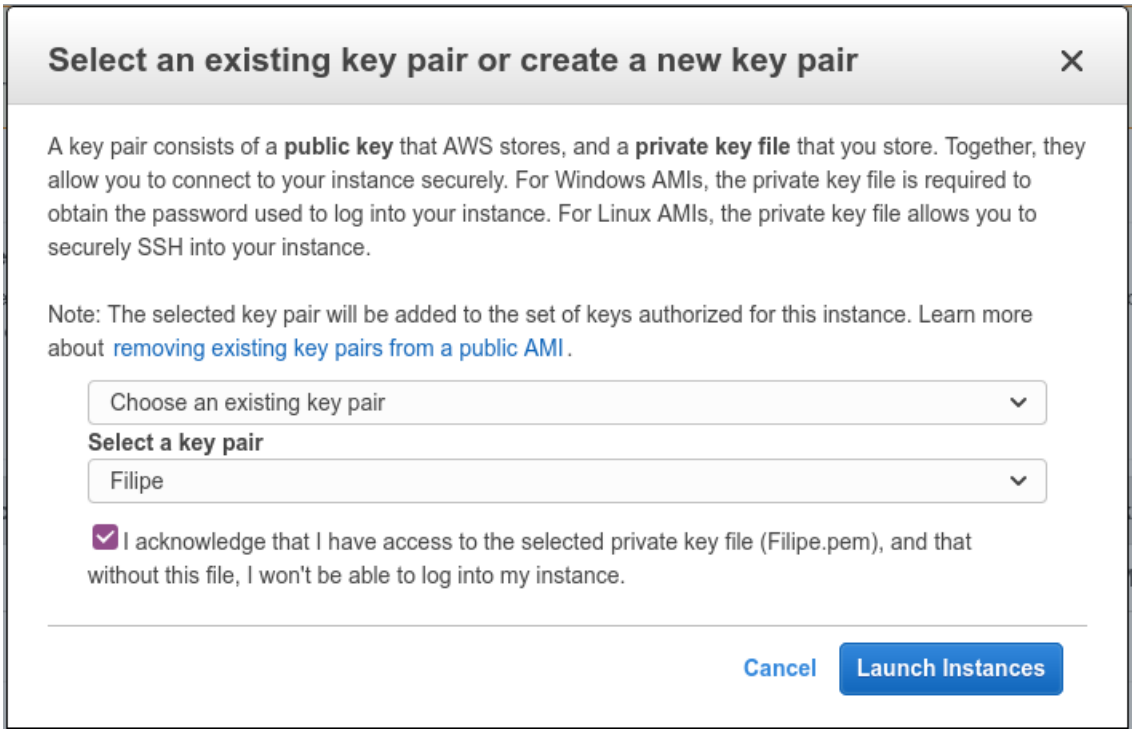

Figure 10: Selecting the key pair

Because the name "Default" was giving me errors, I decided to leave it as default.

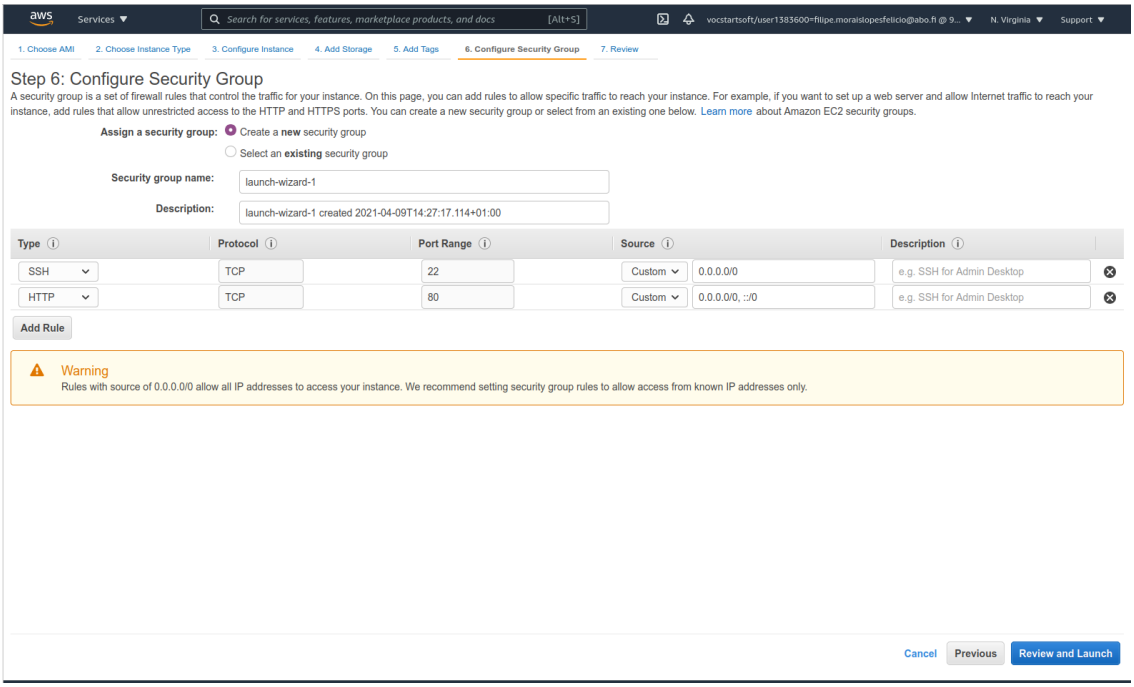

Figure 11: Re-configuring the Security Group

I was then able to launch the instance.

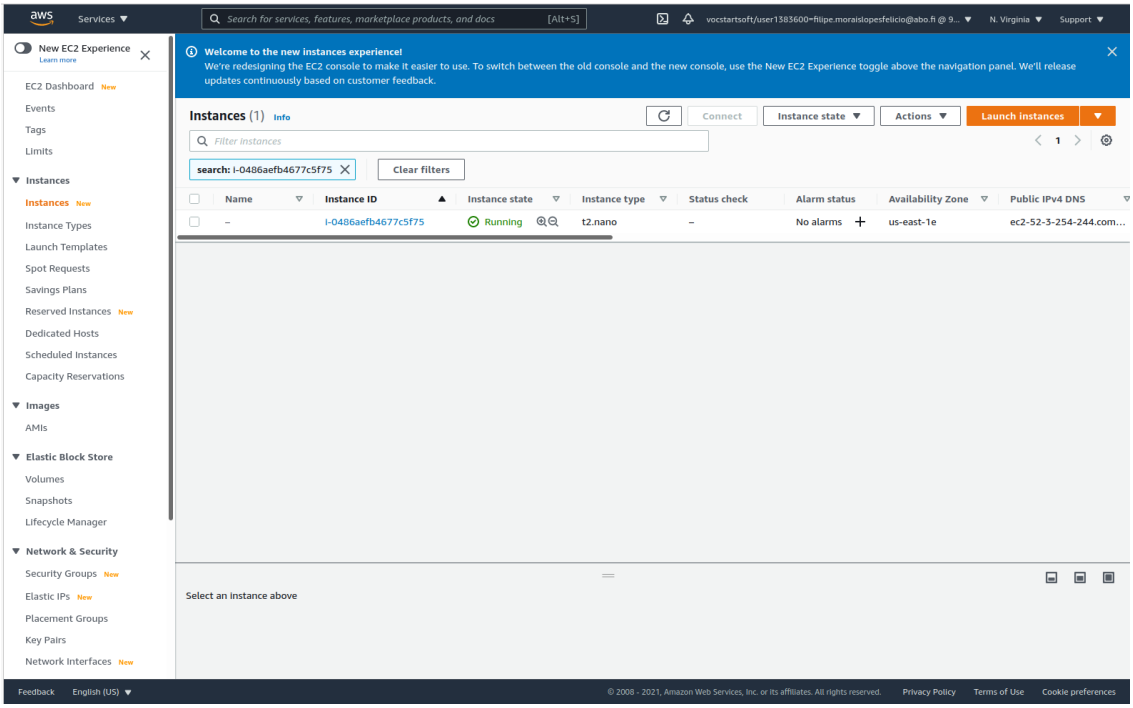

Figure 12: Launching the Instance

Using SSH and your key file, connect to your remote VM from your local machine.

First I check the information to connect to the instance.

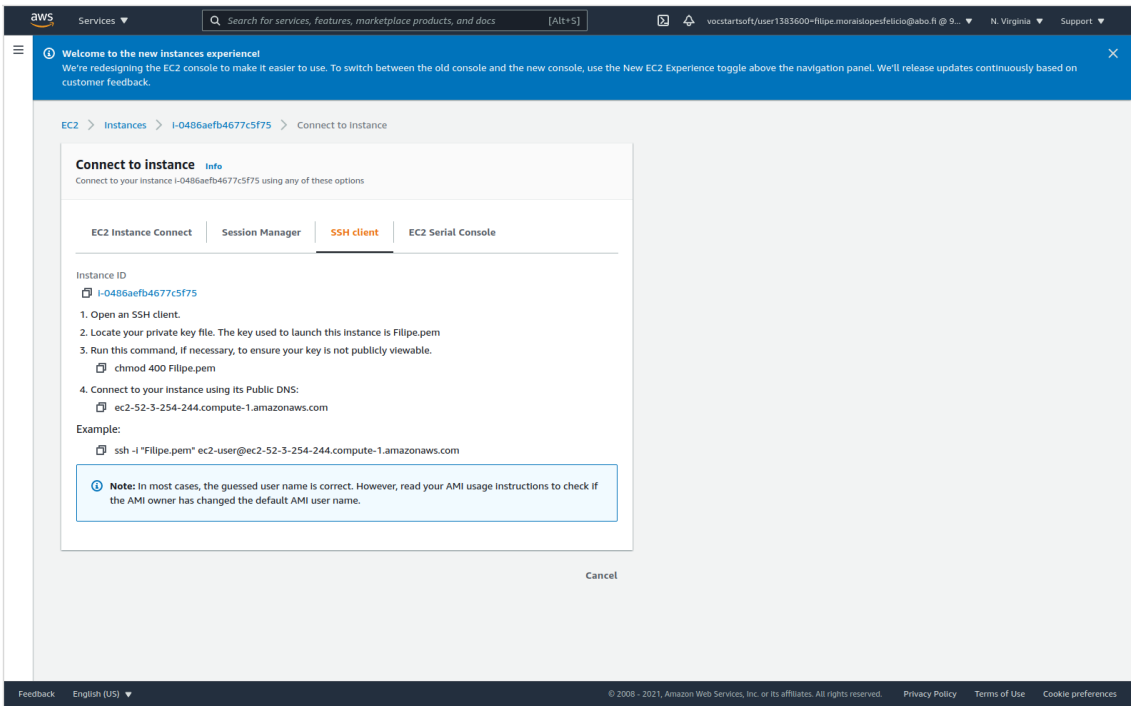

Figure 13: Checking the information to connect to the instance

Then using the following command I connected to the remote Virtual Machine from my local machine.

```
$ ssh -i "Filipe.pem" ec2-user@ec2-52-3-254-244.compute-1.amazonaws.com
```

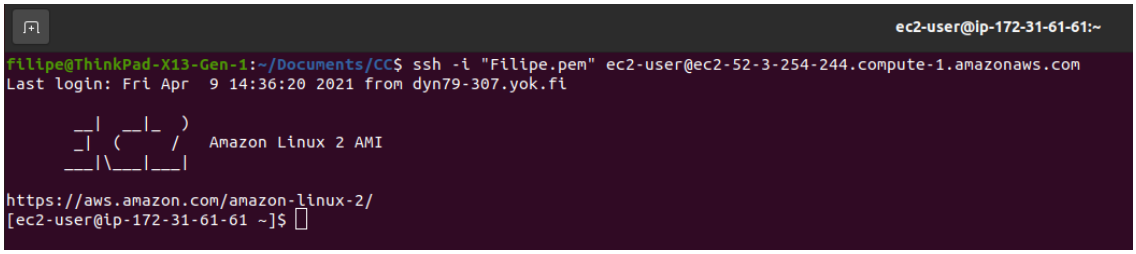

Figure 14: Connecting to the remote VM from my local machine

Check and report the following information

To answer the first four questions I used the following command:

```
$ cat /proc/cpuinfo
```

1. **What is the model name of your CPUs?**
   Intel(R) Xeon(R) CPU E5-2676 v3 @ 2.40GHz

2. **What is the cache size?**
   30720 KB

3. **What is the clock frequency of your CPU(s)?**
   2400.290 MHz

4. **What is the CPU vendor?**
   GenuineIntel

Figure 15: Checking VM info

To answer the final question, I used this command:

```
$ sudo dmidecode
```

5. **What is the name of the hypervisor vendor?**
   Xen

Figure 16: Checking VM info

Still from your VM, execute the following command line:

```
$ curl "ec2-18-156-136-12.eu-central-1.compute.amazonaws.com/logs.php?name=
  filipe_felicio" > log.dat
```

Figure 17: Running the given command

Download the created log.dat file on your computer

For this step I used the following command:

```
$ sudo scp -i "Filipe.pem" ec2-user@ec2-52-3-254-244.compute-1.amazonaws.com:log.dat .
```

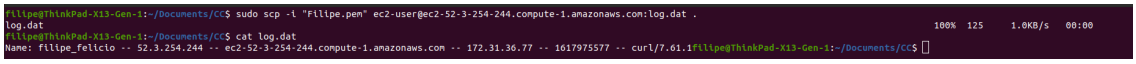

Figure 18: Downloading the created log.dat file on my computer

Content of my log.dat file

For this step I used the following command:

```
$ cat log.dat
```

That showed me the following output:

```
Name: filipe_felicio -- 52.3.254.244 -- ec2-52-3-254-244.compute-1.amazonaws.com -- 172.31.36.77 -- 1617975577 -- curl/7.61.1
```

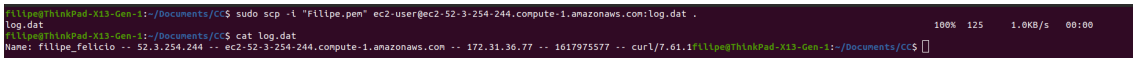

Figure 19: Viewing the content of the log.dat file on my computer

Terminate the Virtual Machine

Finally, I terminated the Virtual Machine.

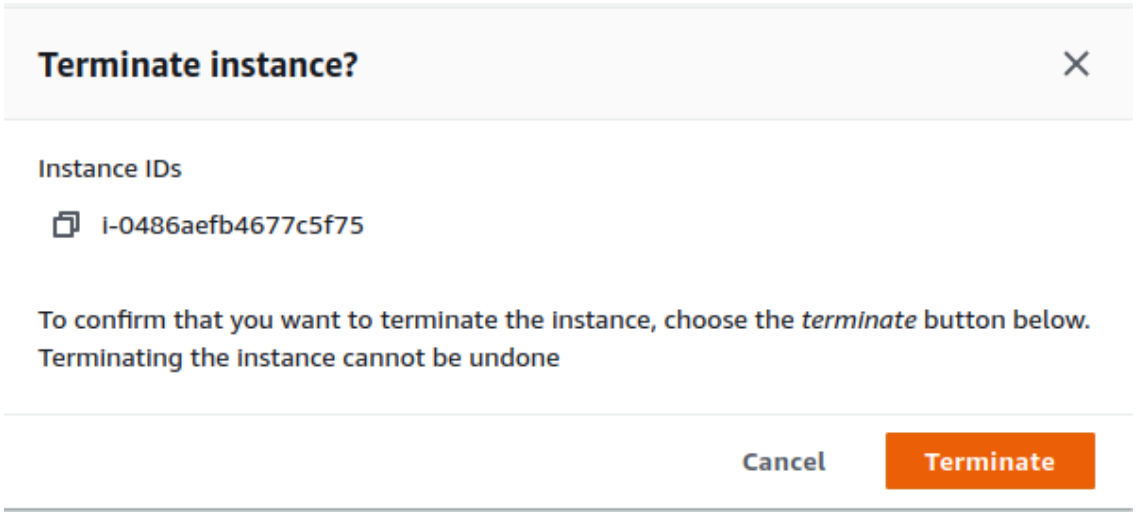

Figure 20: Terminating the Virtual Machine

Report

What would happen if you lose the private key provided when you instantiated your VM?

If I lost the selected private key file "Filipe.pem" I would not be able to log into the instantiated VM.

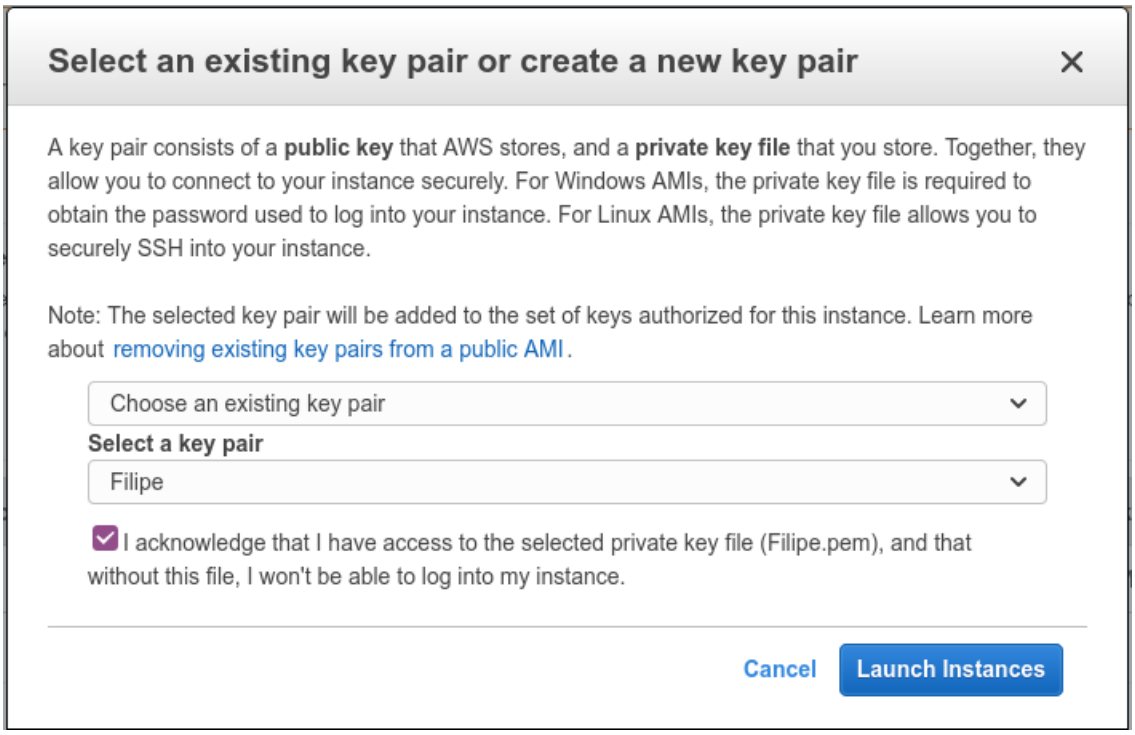

Figure 21: Selecting the key pair

Do you have any idea where was the physical server on which your VM was running?

The Location was US East (N.Virginia).

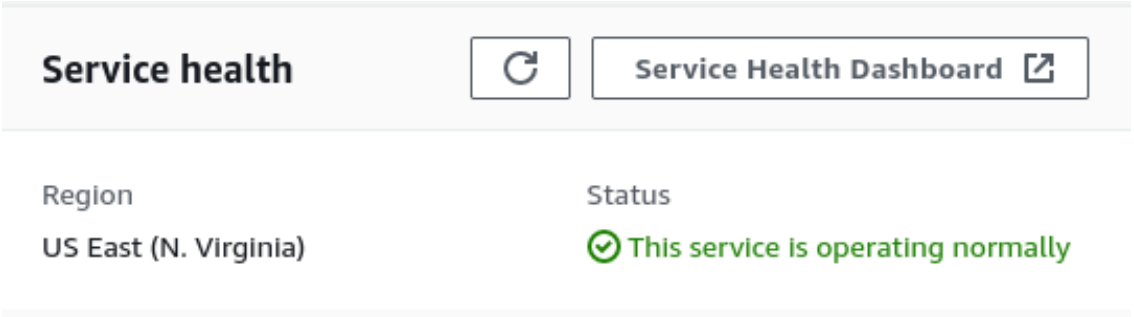

Figure 22: Physical Server Location

How long was the "waiting time" (approximately) between requesting a VM and having it up and running?

Approximately 20 seconds.

Conclusion

This assignment allow me to learn something complete new, as a Linux *aficionado*, I was familiar with the concept of Virtual Machines running in my local machine but never had the experience

of setting up a connection between my local machine and remote VM in the other side of the globe using AWS (I have done a connection with a university machine, back in my home institution in Portugal). Nothing surprised me and with the assignment guidelines and my academic background nothing was difficult. It was really satisfying, on my professional life I have been developing a web product where me and my team have the question on weather to choose a NAV Server in the company or a Cloud Service such as AWS to deploy my Databases and this first experience was very valuable.