Accessing Jupyter Notebook in Local Browser on AWS with Troubleshooting

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Local computer environment: macOS Sierra version 10.12.6

This tutorial assumed that you have finished the steps on <<**[Launching & Connect to Instance with TensorFlow, Python & Anaconda on AWS](https://github.com/BryanBo-Cao/neuralnets-deeplearning/blob/master/Launching%20%26%20Connect%20to%20Instance%20with%20TensorFlow%2C%20Python%20%26%20Anaconda%20on%20AWS.pdf)**>> (https://github.com/BryanBo-Cao/neuralnets-deeplearning/blob/master/Launching%20%26%20Connect%20to%20Instance%20with%20TensorFlow%2C%20Python%20%26%20Anaconda%20on%20AWS.pdf), and an instance is already running on AWS.

When you are trying to connect to an instance on your terminal, enter

ssh -i "Art-Image.pem" -L 8000:localhost:8888 ubuntu@ec2-*.us-west-2.compute.amazonaws.com

instead of

ssh -i "Art-Image.pem" ubuntu@ec2-*.us-west-2.compute.amazonaws.com

as mentioned in
https://towardsdatascience.com/setting-up-and-using-jupyter-notebooks-on-aws-61a9648db6c5
"**-i** Specifies an alternate identification file to use for public key authentication. Basically for this tutorial, I have my key in current directory.
-L specifies that the given port on the local (client) host is to be forwarded to the given host and port on the remote side (AWS). This means that whatever is running on the second port number (i.e. 8888) on AWS will appear on the first port number (i.e. 8000) on your local computer. You should change 8888 to the port which Jupyter Notebook is running on. 99.9% of the time Jupyter will run on port 8888. Optionally change port 8000 to one of your choosing (for example, if 8000 is used by another process).
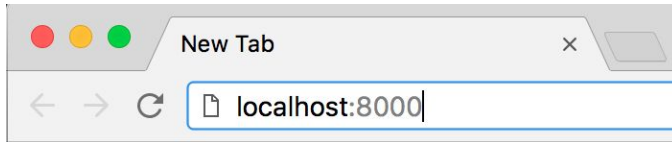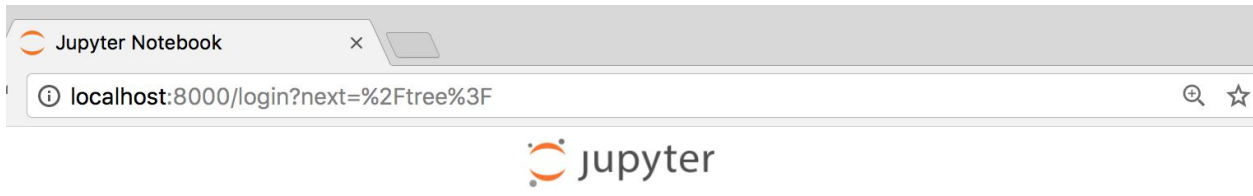"
On the terminal, enter

jupyter notebook

Open a browser and enter

localhost:8000

Then you will see:

Password or token: [   ] [Log in]

Token authentication is enabled

If no password has been configured, you need to open the notebook server with its login token in the URL, or paste it above. This requirement will be lifted if you **enable a password**.

The command:

```
jupyter notebook list
```

will show you the URLs of running servers with their tokens, which you can copy and paste into your browser. For example:

```
Currently running servers:
http://localhost:8888/?token=c8de56fa...
:: /Users/you/notebooks
```

or you can paste just the token value into the password field on this page.

See **the documentation on how to enable a password** in place of token authentication, if you would like to avoid dealing with random tokens.

Cookies are required for authenticated access to notebooks.

Copy the token on your terminal and then you should be able to log in. When you see this page below, it means everything goes well and you could start to write you deep learning code with TensorFlow:
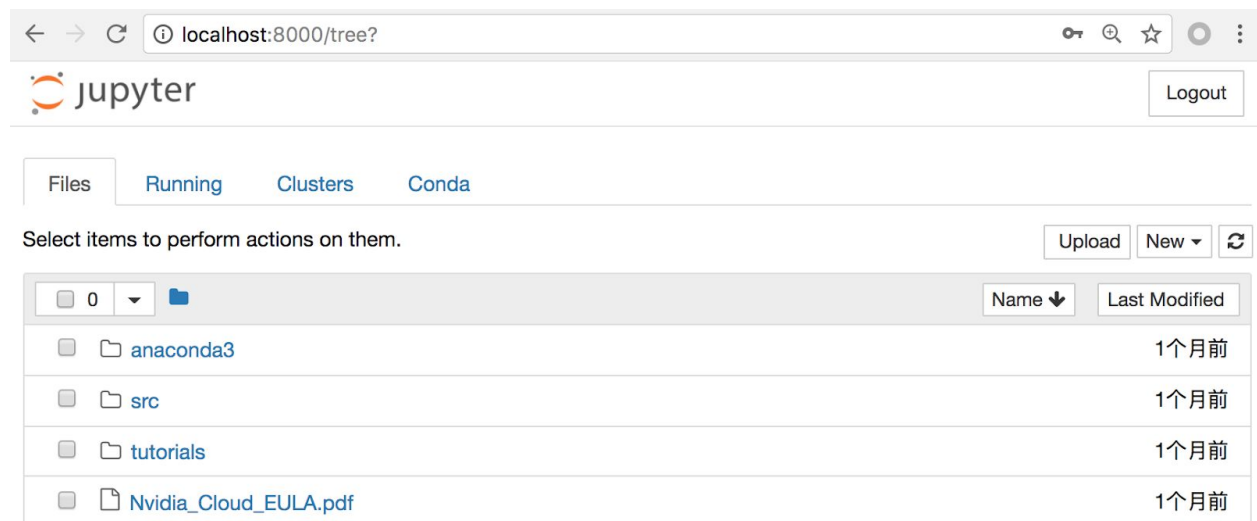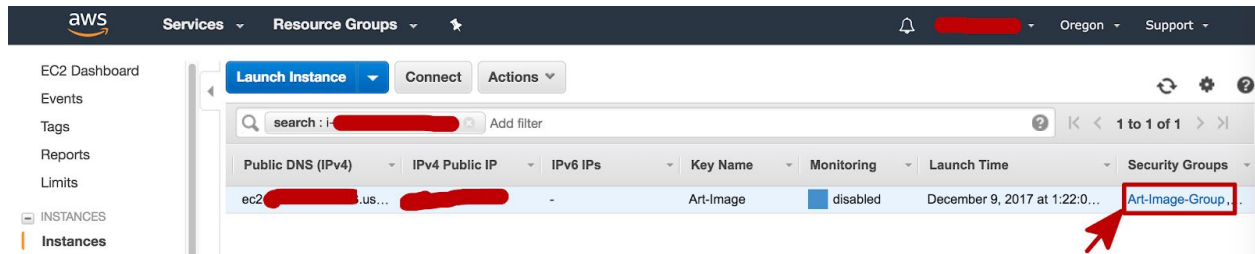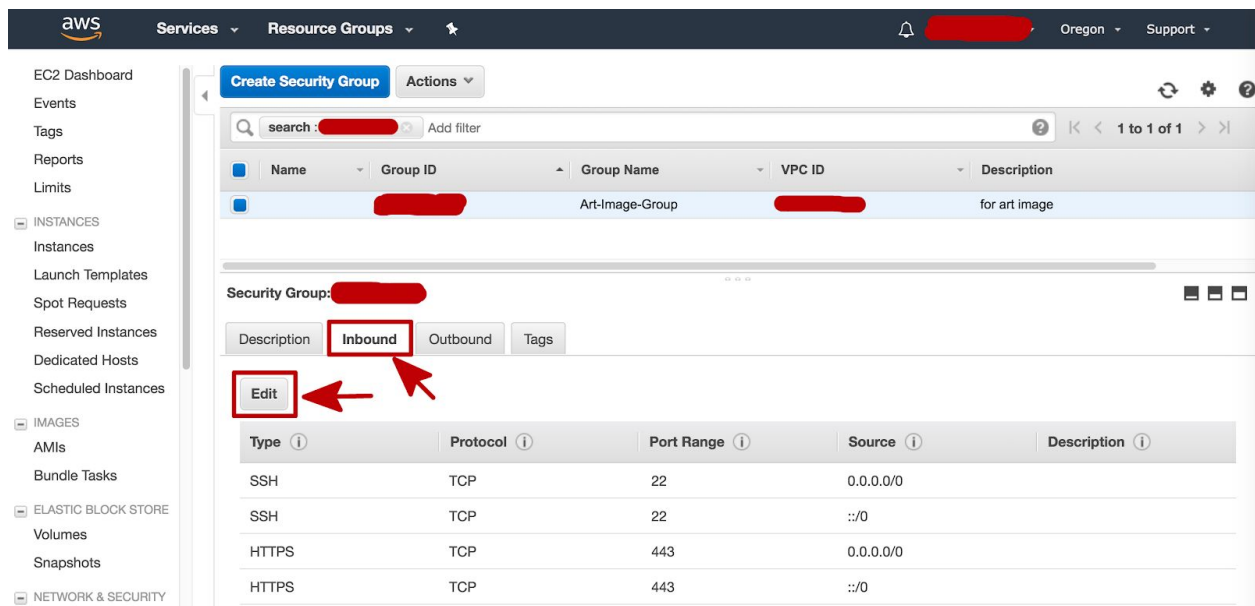

Good luck!

Troubleshooting

One thing that might need to be done is to set the Security Group.

On the instances page, scroll to the right most side and click the Security Group:

The Security Group that I am going to edit is "Art-Image-Group". Select it by clicking the square box on the left of the Security Group and then click "Inbound" and then "Edit":

Add these rules:

Type	Protocol	Port Range	Source
SSH	TCP	22	Anywhere
HTTPS	TCP	443	Anywhere

Edit inbound rules

Type ⓘ	Protocol ⓘ	Port Range ⓘ	Source ⓘ		Description ⓘ	
SSH ⇕	TCP	22	Anywhere ⇕	0.0.0.0/0, ::/0	e.g. SSH for Admin Desktop	⊗
HTTPS ⇕	TCP	443	Anywhere ⇕	0.0.0.0/0, ::/0	e.g. SSH for Admin Desktop	⊗

Add Rule

NOTE: Any edits made on existing rules will result in the edited rule being deleted and a new rule created with the new details. This will cause traffic that depends on that rule to be dropped for a very brief period of time until the new rule can be created.

Cancel **Save**

Reference:

https://www.youtube.com/watch?v=q1vVedHbkAY
https://towardsdatascience.com/setting-up-and-using-jupyter-notebooks-on-aws-61a9648db6c5