Tuneling Jupyter Server

Do you want to use the powerful Dittlab-Backend machine for running your jupyter notebooks?
Follow these simple steps to make it happen!!!
Compiled from the following sources:
[1] https://jupyter-notebook.readthedocs.io/en/stable/public_server.html (https://jupyter-notebook.readthedocs.io/en/stable/public_server.html)
[2] https://ljvmiranda921.github.io/notebook/2018/01/31/running-a-jupyter-notebook/ (https://ljvmiranda921.github.io/notebook/2018/01/31/running-a-jupyter-notebook/)

Set up jupyter notebook server

Ref: https://jupyter-notebook.readthedocs.io/en/stable/public_server.html (https://jupyter-notebook.readthedocs.io/en/stable/public_server.html)

1. Login to Dittlab-Backend machine
2. Create a password for your notebook server

    ```
    $ jupyter notebook password
    ```

    > $ jupyter notebook password
    > Enter password: **
    > **Verify password: ****
    > [NotebookPasswordApp] Wrote hashed password to
    > /Users/you/.jupyter/jupyter_notebook_config.json

3. Create certificates (prikey.key, pubkey.pem) to secure your remote connection

    ```
    $ openssl req -x509 -nodes -days 365 -newkey rsa:2048 -k
    eyout prikey.key -out pubkey.pem
    ```

4. Configure your jupyter server:

- (Recommend: From your home directory) Run the following command to generate a config file

    ```
    $ jupyter notebook --generate-config
    ```

    This will create a hidden .jupyter folder with jupyter_notebook_config.py file.

- In that file, look for these fields and modify accordingly

```
#Set options for certfile, ip, password, and toggle off
#browser auto-opening
c.NotebookApp.certfile =
u'/absolute/path/to/your/certificate/pubkey.pem' (see Step 3)
c.NotebookApp.keyfile =
u'/absolute/path/to/your/certificate/prikey.key' (see Step 3)
#Set ip to '0.0.0.0' to bind on all interfaces (ips) for the public server
c.NotebookApp.ip = '0.0.0.0'
c.NotebookApp.password = u'sha1:bcd259ccf...' (see Step 2)
c.NotebookApp.open_browser = False
#It is a good idea to set a known, fixed port for server access
c.NotebookApp.port = 9999
```

Note: take a port number that is not currently used by others

5. Start jupyter notebook

```
jupyter notebook
```

Tunel in

Ref: https://ljvmiranda921.github.io/notebook/2018/01/31/running-a-jupyter-notebook/ (https://ljvmiranda921.github.io/notebook/2018/01/31/running-a-jupyter-notebook/)

1. From your computer
2. Run the following to tunel your local port (e.g. 5001) to the server port (set above as 9999) via ssh protocol

```
ssh –N –L localhost:5001:localhost:9999 username@dittlab-backend.tudelft.nl
```

3. In your browser, visit https://localhost:5001 (https://localhost:5001). You will be queried a password to access your jupyter server

ENJOY