Jupyter Notebook

Category

Only available on Visualization Node.

Description

Jupyter notebook was born out of IPython project. It is great for doing data visualization and manipulation, with a simple, direct and multifunctional web interface. On Dalma, it is best suit for preprocessing or postprocessing without copying data back and forth to your local workstation.

Official Website


Licensing Terms and Conditions

Revised BSD license. http://jupyter.org/about.html

Usage

Follow the steps below to use Jupyter Notebook. To make the most out of the Jupyter, this guide will start Jupyter server on Visualization node. With that you will open a client session locally.

1. Request a visualization session and connect to the visualization node as instructed here. Visualization Nodes

2. (To be changed) On visualization node, open a terminal and run the following command to activate conda environment with Jupyter. Alternatively, use your own Python environment with Jupyter.

   ```
   export PATH=/scratch/wei/miniconda2/bin/:$PATH
   source activate /scratch/gh50/conda-env/p27-cslc/
   ```

3. Now you can start the Jupyter Notebook server by running this in the visualization terminal. Notice the vglrun command. It is mandatory for anything using OpenGL (UV-CDAT and etc).

   ```
   vglrun jupyter notebook --no-browser --port=8889
   ```

The output should look like this.
[I 11:30:33.166 NotebookApp] Writing notebook server cookie secret to /run/user/2668389/jupyter/notebook_cookie_secret
[I 11:30:38.889 NotebookApp] Serving notebooks from local directory: /home/gh50/Desktop
[I 11:30:38.889 NotebookApp] 0 active kernels
[I 11:30:38.889 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).

4. Back to your workstation. Open a terminal. Start a SSH Tunnel to the visualization node by running this command. Replace "gh50" to your actual NetID and hpcviz1.abudhabi.nyu.edu to your actual visualization host.

```bash
ssh -N -f -L 127.0.0.1:8888:127.0.0.1:8889 gh50@hpcviz1.abudhabi.nyu.edu
```

5. Open a browser in your local workstation. Enter this as the URL. Now you are free to create Jupyter Notebook and run Python interactively.

```
localhost:8888
```

6. Once you are done, go back to the terminal on visualization node and press Ctrl+c to stop the Jupyter Notebook server.

**FAQ**