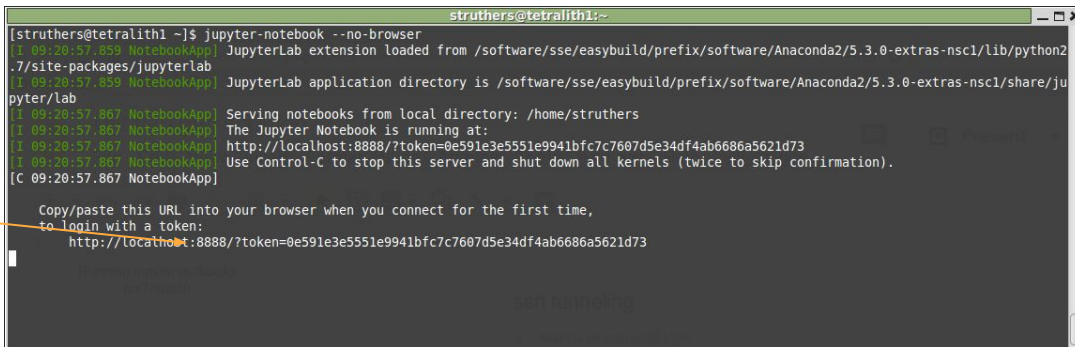


Running a notebook on a
login node: ssh tunneling

ssh tunneling (1)

1. Make a normal (ssh) login:
 - a. `ssh x_abcde@tetralith.nsc.liu.se`
2. `cd` to the workspace you want to work in, e.g.
 - a. `cd /proj/climod/shared/CESM`
3. Load the python module
 - a. `module load Python/3.7.0-anaconda-5.3.0-extras-nsc1`
4. Start a notebook with the no-browser flag
 - a. `jupyter-notebook --no-browser`

Note the port number(8888 in this case)

A terminal window titled 'struthers@tetralith1:~' showing the output of the command 'jupyter-notebook --no-browser'. The output includes several informational messages from the NotebookApp, such as 'JupyterLab extension loaded from /software/sse/easybuild/prefix/software/Anaconda2/5.3.0-extras-nsc1/lib/python2.7/site-packages/jupyterlab', 'JupyterLab application directory is /software/sse/easybuild/prefix/software/Anaconda2/5.3.0-extras-nsc1/share/jupyter/lab', 'Serving notebooks from local directory: /home/struthers', 'The Jupyter Notebook is running at:', and 'http://localhost:8888/?token=0e591e3e551e9941bfc7c7607d5e34df4ab6686a5621d73'. At the bottom, it says 'Use Control-C to stop this server and shut down all kernels (twice to skip confirmation)'. Below the terminal output, there is a text prompt: 'Copy/paste this URL into your browser when you connect for the first time, to login with a token: http://localhost:8888/?token=0e591e3e551e9941bfc7c7607d5e34df4ab6686a5621d73'. An orange arrow points from the text 'Note the port number(8888 in this case)' to the port number '8888' in the URL.

```
struthers@tetralith1:~$ jupyter-notebook --no-browser
[I 09:20:57.859 NotebookApp] JupyterLab extension loaded from /software/sse/easybuild/prefix/software/Anaconda2/5.3.0-extras-nsc1/lib/python2.7/site-packages/jupyterlab
[I 09:20:57.859 NotebookApp] JupyterLab application directory is /software/sse/easybuild/prefix/software/Anaconda2/5.3.0-extras-nsc1/share/jupyter/lab
[I 09:20:57.867 NotebookApp] Serving notebooks from local directory: /home/struthers
[I 09:20:57.867 NotebookApp] The Jupyter Notebook is running at:
[I 09:20:57.867 NotebookApp] http://localhost:8888/?token=0e591e3e551e9941bfc7c7607d5e34df4ab6686a5621d73
[I 09:20:57.867 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 09:20:57.867 NotebookApp]

Copy/paste this URL into your browser when you connect for the first time,
to login with a token:
http://localhost:8888/?token=0e591e3e551e9941bfc7c7607d5e34df4ab6686a5621d73
```

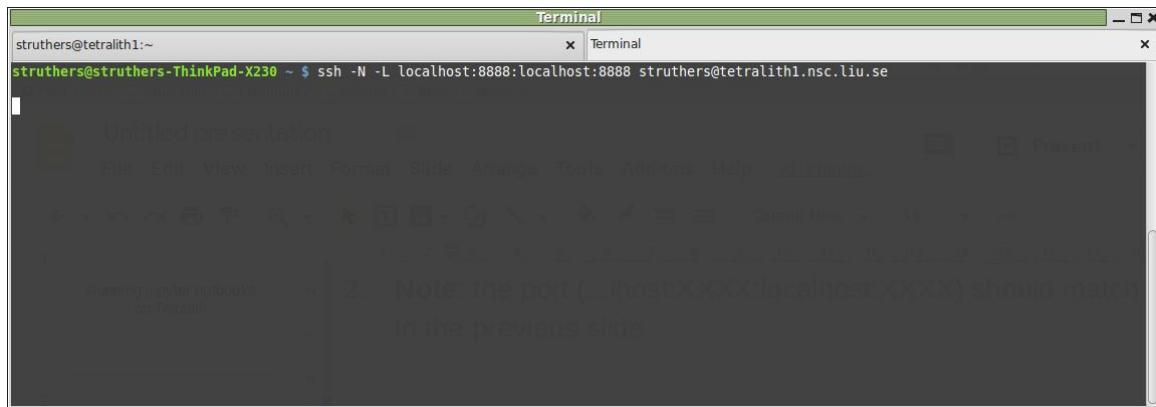
ssh tunneling (2)

1. In a second terminal, make a ssh tunnel login:

a. `ssh -N -L localhost:8888:localhost:8888
x_abcde@tetralith1.nsc.liu.se`

2. **Notes:**

- The port (...lhost:XXXX:localhost:XXXX) should match the port assigned in the previous slide
- If you are using username/password for Tetralith, you be asked for your password at this step



```
Terminal
struthers@tetralith1:~
struthers@struthers-ThinkPad-X230 ~ $ ssh -N -L localhost:8888:localhost:8888 struthers@tetralith1.nsc.liu.se
```

ssh tunneling (3)

1. Start your favorite browser on your laptop, paste the URL given by the jupyter-notebook (see slide 'ssh tunneling (1)) on Tetralith into your browser address:
 - a. `http://localhost:8888/?token=0e591e3e5551e9941bfc7c7607d5e34df4ab6686a5621d73`

