IPython Notebooks on Odyssey

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ACI-REF

IPython notebook

Extension of the IPython console to a web-based platform for shared code and documentation.

Pre-installed with Anaconda

`ipython notebook` starts a server on localhost: 8888 that can be viewed with a browser

IPython notebook on Odyssey

1. Pick a port and setup port forwarding

2. Load the appropriate python module

    Setup a password (optional)

    Setup a certificate for https (optional)

3. Launch the notebook server

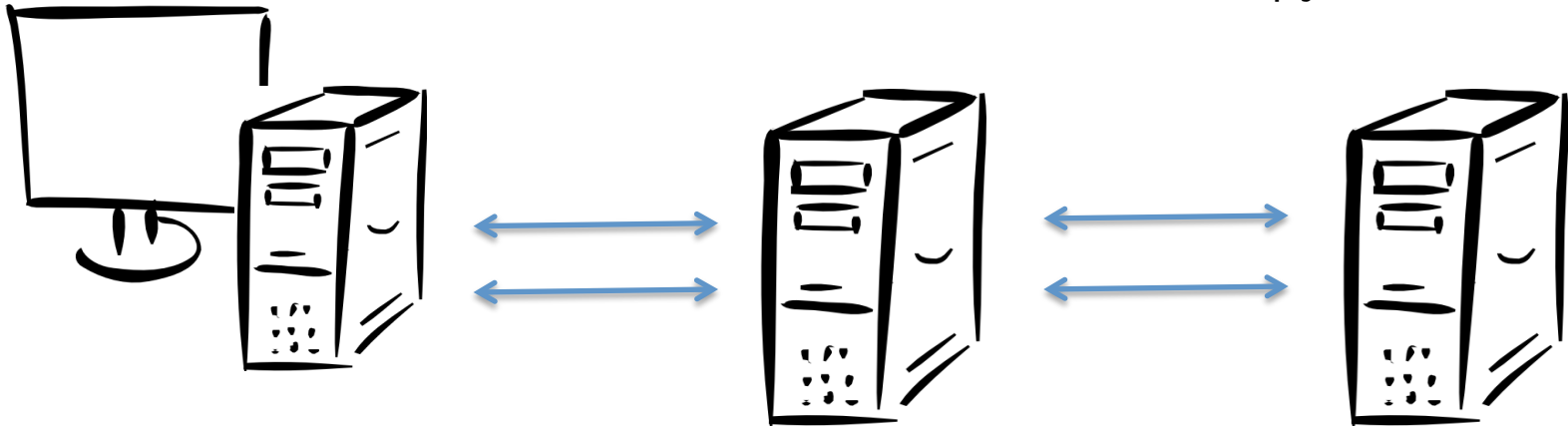4. View web page in a browser

Screencast available at
http://informatics.fas.harvard.edu/port-forwarding-on-odyssey-nodes/

IPython notebook port forwarding

`> srun --tunnel`   `> ipython notebook`

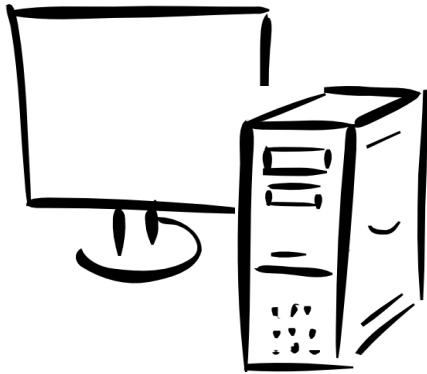`http://localhost:8888`

Submit
Host
(rclogin)

Compute
Host

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IPython notebook port forwarding

```
> srun --tunnel    > ipython notebook
```

NX Client

Submit
Host
(rcnx01)

Compute
Host

Pick a port and setup port forwarding

IPython serves to port 8888 by default

Port conflicts can occur on shared systems like rcloginXX and rcnx01

--port option allows you to select other ports

```
ipython notebook --port 8899
```

Load the appropriate module

IPython is installed with the default Odyssey python

```
$ source new-modules.sh
$ module load python
$ which ipython
/n/sw/fasrcsw/apps/Core/Anaconda/1.9.2-fasrc01/x/
bin/ipython
```

Setup a password (optional)

Create a profile

```
ipython profile create ajk
```

Generate a password hash using IPython's passwd() function

Set the hash to the Notebookapp.password config value.

In `$HOME/.ipython/profile_ajk/ipython_notebook_config.py`
`c.NotebookApp.password = u'sha1:143b9c77…2d582a5e3d'`

Setup a password (optional)

Setup a certificate (optional)

A self-signed certificate will allow you to use https and avoid passing your password in the clear

```
openssl req -x509 -nodes -days 365 -newkey
rsa:1024 -keyout ipython.pem -out ipython.pem

ipython notebook certfile=ipython.pem
```

Launch the IPython notebook server

Load any additional modules, if needed, before you start the server

A self-signed certificate will allow you to use https and avoid passing your password in the clear

```
ipython --port=8899 --profile=ajk --
certfile=ipython.pem notebook
```