

## 在服务器和超算集群上使用 jupyter notebook

一、在服务器(登录节点)上使用 jupyter notebook (只可配置环境,不可计算)

1. 登录节点 10.15.22.191
2. 安装 anaconda
3. 创建 python 环境, 假设 python 环境名称为 jn

```
conda create -n jn python=3.9
```

```
[sunss@hpc-login-gpu01 ~]$ conda create -n jn python=3.9  
Collecting package metadata (current_repodata.json): done  
Solving environment: \
```

conda env list 查看环境创建成功

```
[sunss@hpc-login-gpu01 ~]$ conda env list  
# conda environments:  
#  
base /public/home/sunss/anaconda2  
HLA /public/home/sunss/anaconda2/envs/R.3.5  
PYGAMD /public/home/sunss/anaconda3  
jn /public/home/sunss/anaconda3/envs/jn  
py39 /public/home/sunss/anaconda3/envs/py39  
py3q /public/home/sunss/anaconda3/envs/py3q  
python /public/home/sunss/anaconda3/envs/python  
torch /public/home/sunss/anaconda3/envs/torch
```

4. source activate jn 激活环境

```
[sunss@hpc-login-gpu01 ~]$ source activate jn  
(jn) █
```

5. conda install nb\_conda 安装 jupyter notebook

```
(jn) conda install nb_conda  
Collecting package metadata (current_repodata.json): done  
Solving environment: \
```

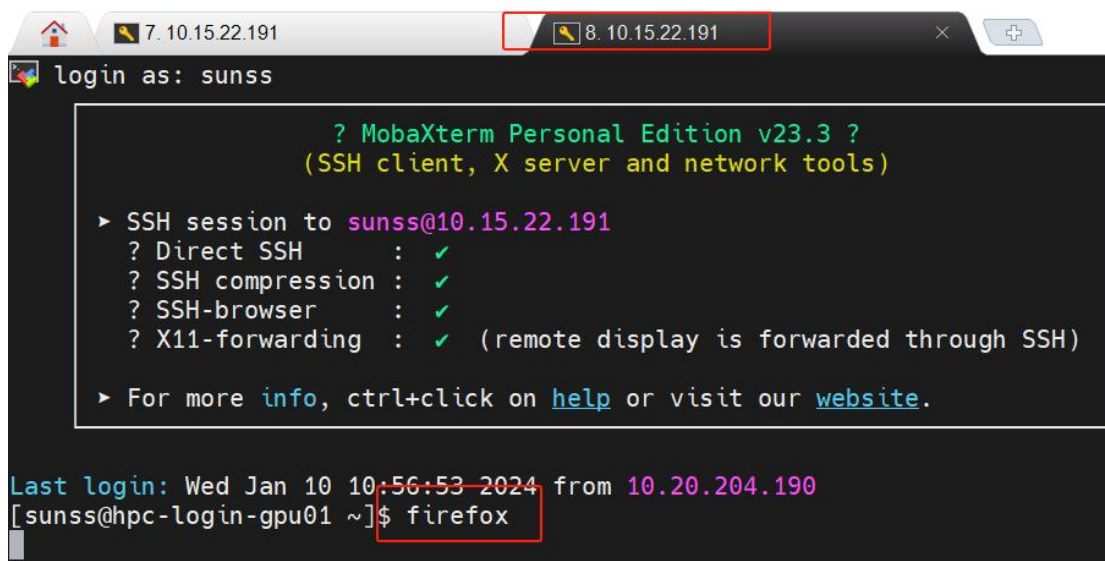
6. jupyter notebook 安装完成后, 直接启动 jupyter notebook

```
(jn) jupyter notebook  
[W 11:11:44.178 NotebookApp] Co
```

7. 会显示出网址

```
ot recommended.  
[I 11:11:45.346 NotebookApp] JupyterLab extension loaded from /public/home/sunss/anaconda3/lib/python3.7/site-packages/jupyterlab  
[I 11:11:45.346 NotebookApp] JupyterLab application directory is /public/home/sunss/anaconda3/share/jupyter/lab  
[I 11:11:45.349 NotebookApp] Serving notebooks from local directory: /public/home/sunss  
[I 11:11:45.349 NotebookApp] The Jupyter Notebook is running at:  
[I 11:11:45.349 NotebookApp] http://hpc-login-gpu01:8888/  
[I 11:11:45.349 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).  
[I 11:12:39.582 NotebookApp] 302 GET / (10.15.34.191) 0.60ms
```

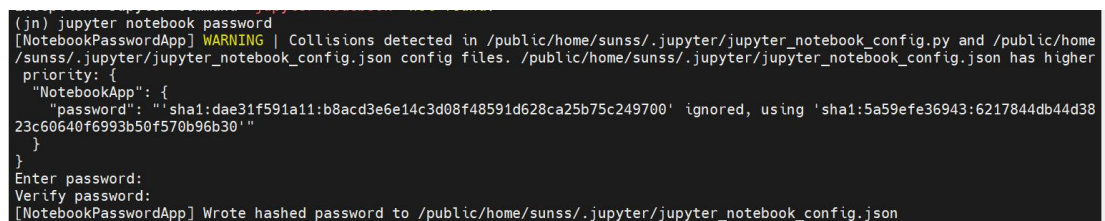
8. 另登录 10.15.22.191, 输入 firefox, 打开浏览器



9. 浏览器中输入该网址，即可打开



注：如输入网址后，显示需要密码，control + C，取消后，输入 jupyter notebook password，设置密码，输入两遍密码后，重新启动 jupyter notebook



## 二、在超算集群计算节点上使用 jupyter notebook (torque 交互式)

以 10.15.22.191 登录节点为例

1. home 路径下安装 anconda，创建 python 环境，安装 jupyter notebook，假设 python 环境名称为 jn
2. 登录节点申请交互计算节点  
`qsub -I -N jn -l nodes=1:ppn=1 -l walltime=10:0 -q slst_pub`
3. 申请到计算节点之后，激活 conda 环境  
`source activate jn`
4. 激活环境后，输入 jupyter notebook，启动 jupyter notebook

```
[sunss@hpc-login-gpu01 ~]$ qsub -I -N jn -l nodes=1:ppn=1 -l walltime=10:0 -q slst_pub
qsub: waiting for job 7442355.node1 to start
qsub: job 7442355.node1 ready

[sunss@cryoem-node35 ~]$ source activate jn
(jn) jupyter notebook
```

5. 出现网址:

```
[sunss@cryoem-node35 ~]$ source activate jn
(jn) jupyter notebook
[W 11:28:39.940 NotebookApp] Collisions detected in /public/home/sunss/.jupyter/jupyter_notebook_config.py and /public/home/sunss/.jupyter/jupyter_notebook_config.json config files. /public/home/sunss/.jupyter/jupyter_notebook_config.json has higher priority: {
  "NotebookApp": {
    "password": "'sha1:dae31f591a11:b8acd3e6e14c3d08f48591d628ca25b75c249700' ignored, using 'sha1:5a59efe36943:6217844db44d3823c60640f6993b50f570b96b30'"
  }
}
[W 11:28:40.239 NotebookApp] WARNING: The notebook server is listening on all IP addresses and not using encryption. This is not recommended.
[I 11:28:40.276 NotebookApp] JupyterLab extension loaded from /public/home/sunss/anaconda3/lib/python3.7/site-packages/jupyterlab
[I 11:28:40.276 NotebookApp] JupyterLab application directory is /public/home/sunss/anaconda3/share/jupyter/lab
[I 11:28:40.279 NotebookApp] Serving notebooks from local directory: /public/home/sunss
[I 11:28:40.279 NotebookApp] The Jupyter Notebook is running at:
[I 11:28:40.279 NotebookApp] http://cryoem-node35:8888/
[I 11:28:40.279 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
```

6. 另登录节点 10.15.22.191, 输入 firefox

```
login as: sunss

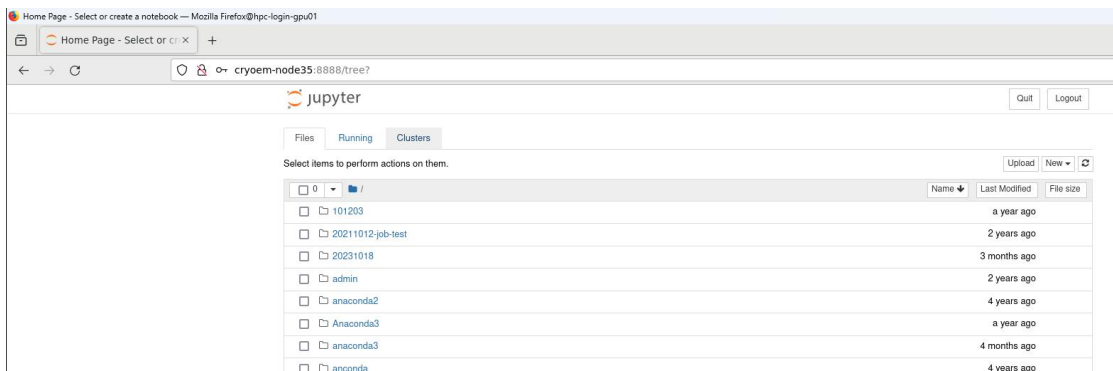
? MobaXterm Personal Edition v23.3 ?
(SSH client, X server and network tools)

> SSH session to sunss@10.15.22.191
? Direct SSH : ✓
? SSH compression : ✓
? SSH-browser : ✓
? X11-forwarding : ✓ (remote display is forwarded through SSH)

> For more info, ctrl+click on help or visit our website.

Last login: Wed Jan 10 11:12:08 2024 from 10.20.204.190
[sunss@hpc-login-gpu01 ~]$
[sunss@hpc-login-gpu01 ~]$ firefox
```

7. 打开火狐浏览器, 输入该网址



8. 注: 如输入网址后, 显示需要密码, control + C, 取消后, 输入 jupyter notebook password, 设置密码, 输入两遍密码后, 重新启动 jupyter notebook

```
(jn) jupyter notebook password
[NotebookPasswordApp] WARNING | Collisions detected in /public/home/sunss/.jupyter/jupyter_notebook_config.py and /public/home/sunss/.jupyter/jupyter_notebook_config.json config files. /public/home/sunss/.jupyter/jupyter_notebook_config.json has higher priority: {
  "NotebookApp": {
    "password": "'sha1:dae31f591a11:b8acd3e6e14c3d08f48591d628ca25b75c249700' ignored, using 'sha1:5a59efe36943:6217844db44d3823c60640f6993b50f570b96b30'"
  }
}
Enter password:
Verify password:
[NotebookPasswordApp] Wrote hashed password to /public/home/sunss/.jupyter/jupyter_notebook_config.json
```