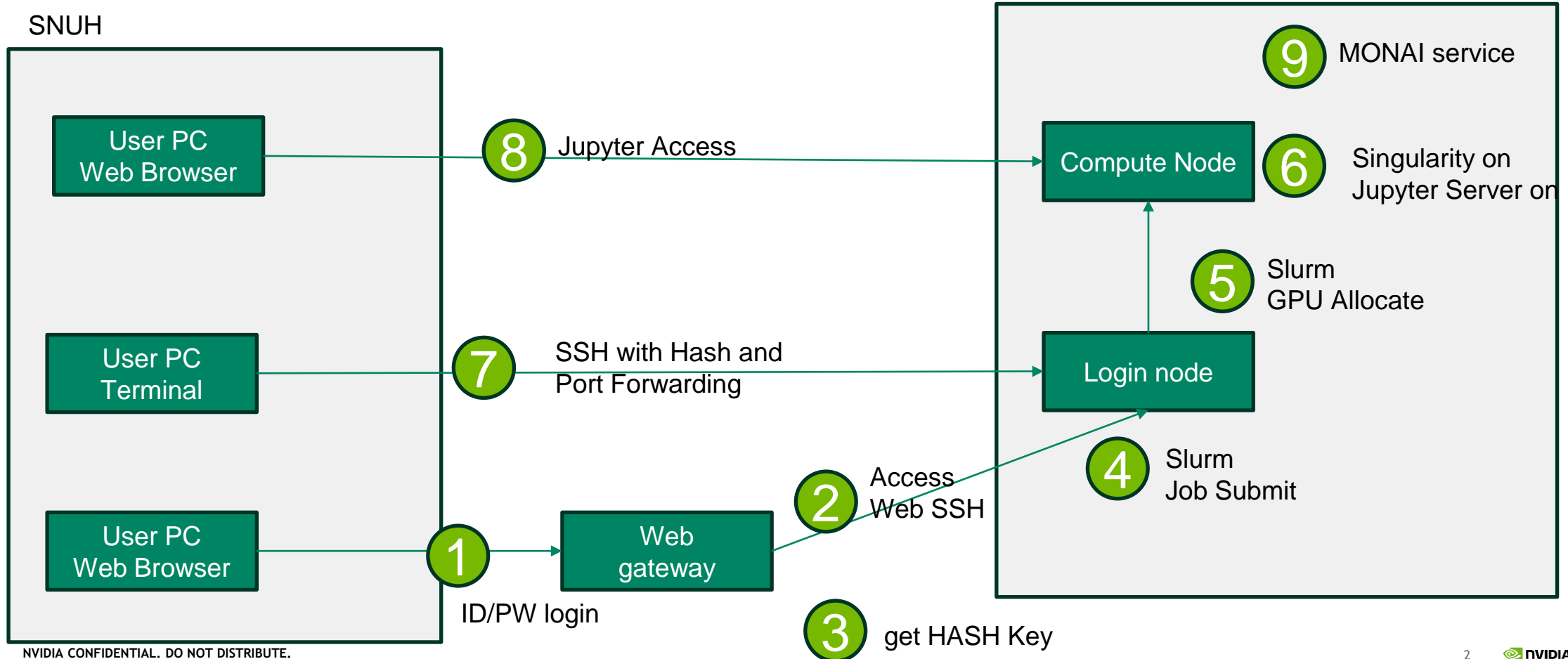




Server Access Guide

GPU Bootcamps user instructions

Architecture to Access Server

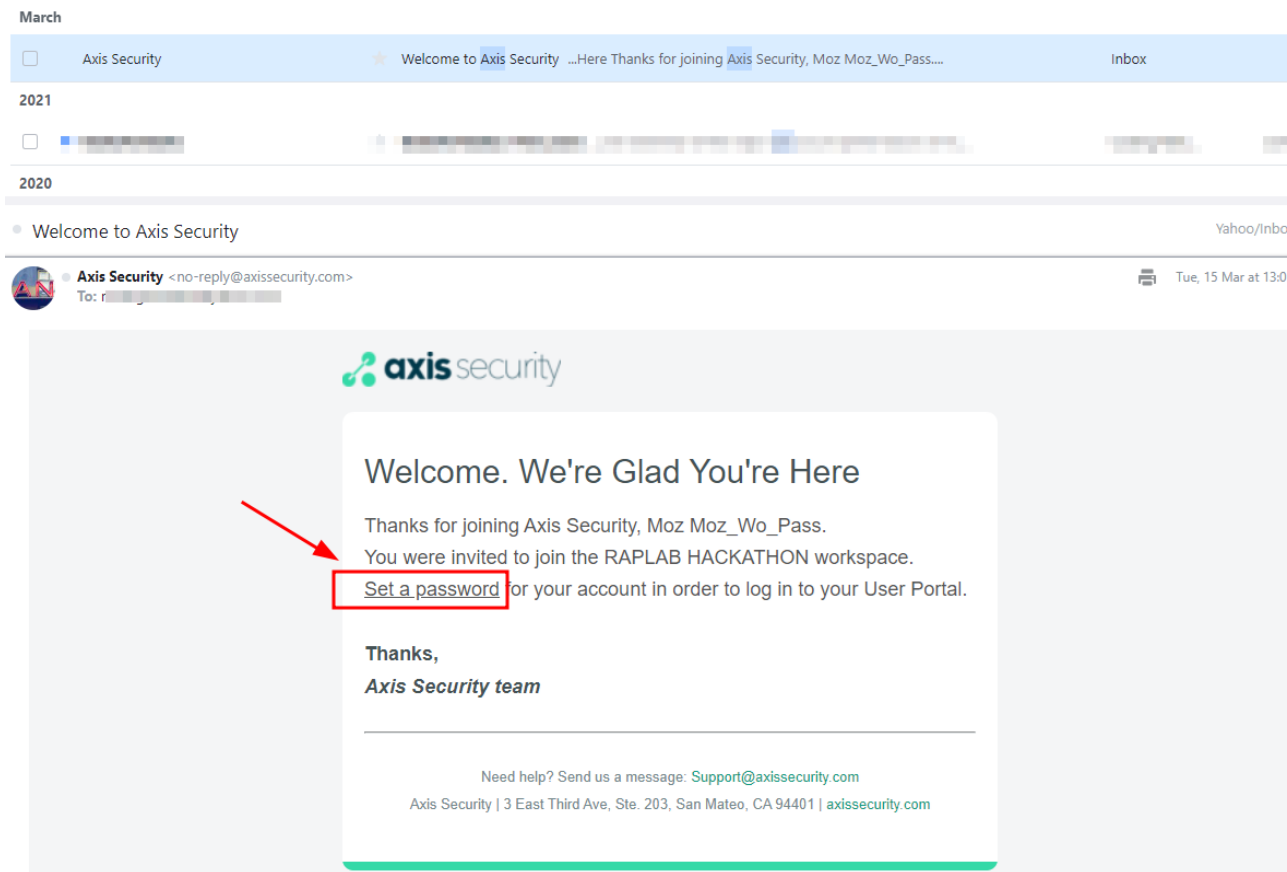


The background is a dark blue gradient with a complex network of thin, light green lines crisscrossing across the frame. At various points where these lines intersect, there are small, bright green circular dots, some of which have a slight glow or halo effect. The overall aesthetic is technological and digital.

**STEP 1 - Activate
your Axis account**

Activate your Axis account

Activate your account using the email you received from Axis. All you need to do is to set a password via the link inside the email.



The background of the slide is a dark, almost black, field filled with a complex network of thin, light green lines. These lines connect various points, creating a web-like structure. At several of these connection points, there are small, bright green circular nodes. Some of these nodes have a slight glow or halo effect. The overall impression is one of a digital or networked environment, possibly representing a cloud infrastructure or a secure communication channel.

STEP 2 - Connect to Web SSH terminal

Connecting to the Cluster

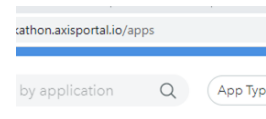
1

ID/PW login

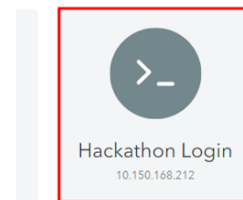
→ Login to Axis with your credentials

- ◆ Link : <https://axis-raplabhackathon.axisportal.io/apps>
- ◆ Use Chrome browser or make sure your browser does not block pop ups

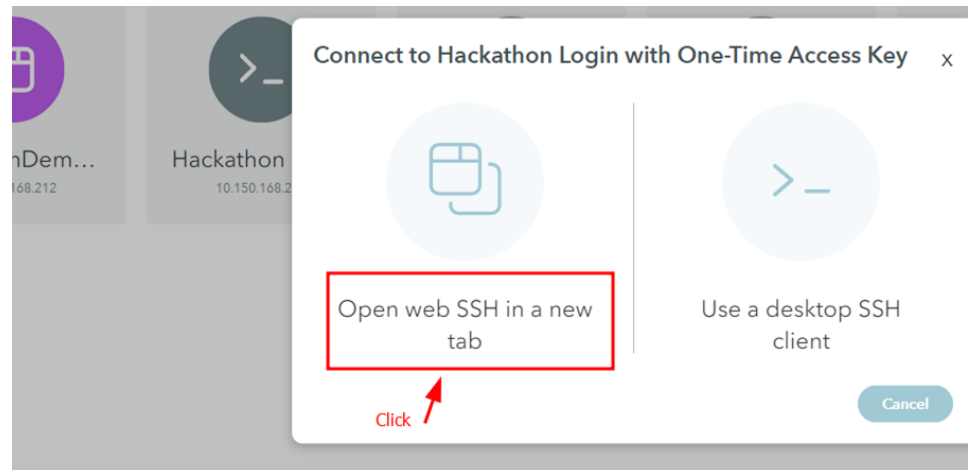
Connecting to the Cluster



→ Click on the “Hackathon Login” app



→ Click on the “Open web SSH in a new tab”



2

Access
Web SSH

Be patient ..

Connecting 10.150.168.212:22

Connected to Axis. Waiting for response...

```
axis-raplabhackathon.axisportal.io/SshClient
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.4.0-100-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Tue 12 Apr 2022 03:27:31 PM UTC

System load:  0.33           Users logged in:      4
Usage of /:   41.2% of 3.44TB IPv4 address for docker0: 172.17.0.1
Memory usage: 6%           IPv4 address for ens10f0: 10.150.168.212
Swap usage:   0%           IPv4 address for ens2f1:  10.0.224.247
Processes:   1022

 * Super-optimized for small spaces - read how we shrank the memory
   footprint of MicroK8s to make it the smallest full K8s around.

https://ubuntu.com/blog/microk8s-memory-optimisation

2 updates can be applied immediately.
1 of these updates is a standard security update.
To see these additional updates run: apt list --upgradable

*** System restart required ***
Last login: Tue Apr 12 15:27:05 2022 from 10.150.169.21

Open OnDemand
Username: mozhgank
Password: Wi7lie5z

mozhgank@rl-cpu-r82-u02:~$
mozhgank@rl-cpu-r82-u02:~$
mozhgank@rl-cpu-r82-u02:~$
```



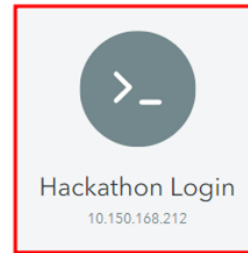

STEP 3 - Copying the Hash Key

3 get HASH Key

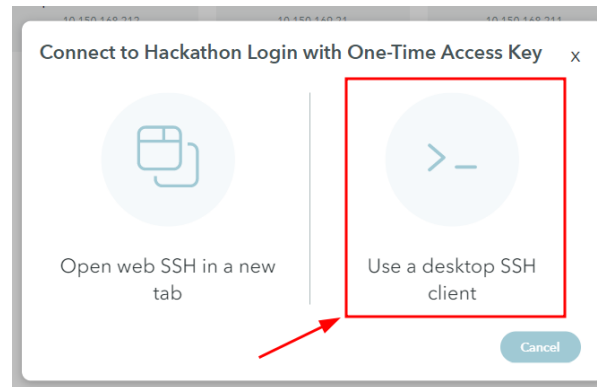
Hash Key Copy

STEP 1) Go back to [Axis login page](#).

→ Click on the “Server Login” app



→ Click on “Use a desktop SSH client”

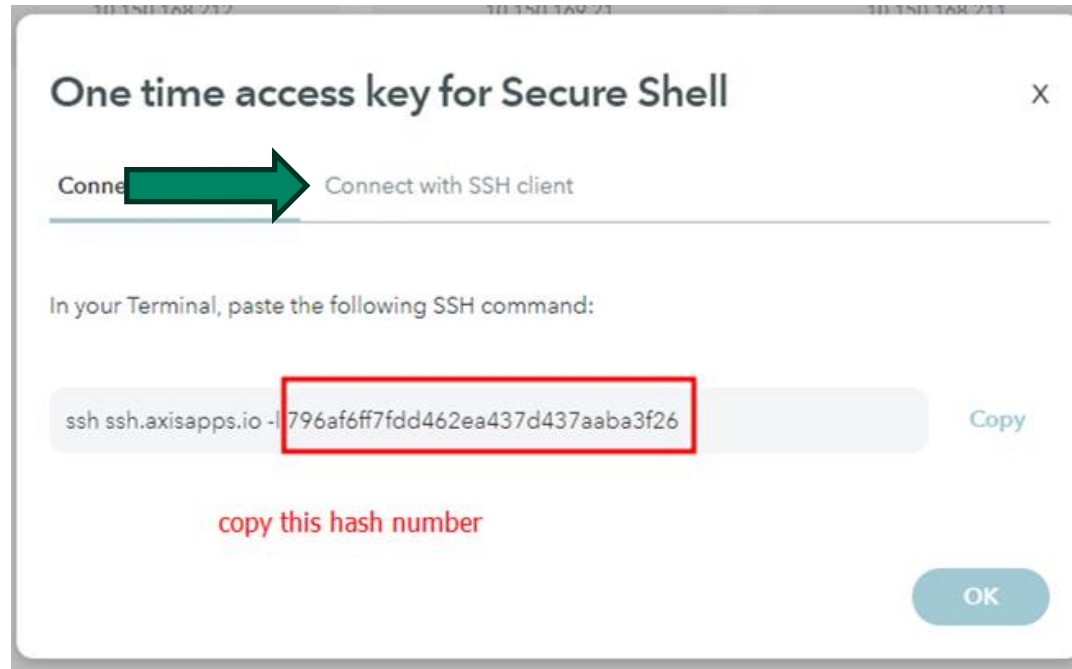


For copying HASH Key

3 get HASH Key

Hash Key Copy

→ Now, make a copy of the hash number for the next step:





Step 4: Launch Job with slurm



Slurm Command

check current jobs

```
$ squeue --user $USER
```

cancel all jobs for user

```
$ scancel --user $USER
```

cancel the job with jobid

```
$ scancel 1234
```

```
$ sbatch script.sh
```

Current Server Policy

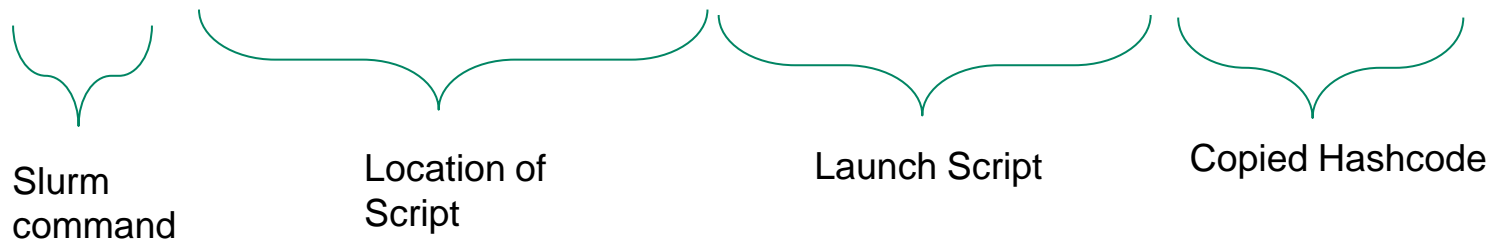
Only 1 job per user is allowed
Other jobs would be pending jobs

Single job allocate 1 MIG GPU and 4 CPU cores with 4 HRs

Connect to the CURIOSITY with Port forwarding

Step 1: On the terminal Replace the below command with the “hash number” copied as per Slide 7.
Then run it by pasting it on the terminal:

```
sbatch /bootcamp_workspaces/hryu/monai_launch_script {hash number}
```



Double check the exact location of script

```
pharatk@rl-cpu-r82-u02:~$ sbatch /mnt/shared/bootcamps/rapids_launch_script g786jkljsjdfsfd87878
```



An abstract network diagram with a dark background. It features several bright green nodes of varying sizes, connected by thin, glowing green lines. The lines crisscross the frame, creating a complex web of connections. Some nodes are larger and more prominent, while others are smaller and less distinct. The overall effect is a sense of dynamic connectivity and data flow.

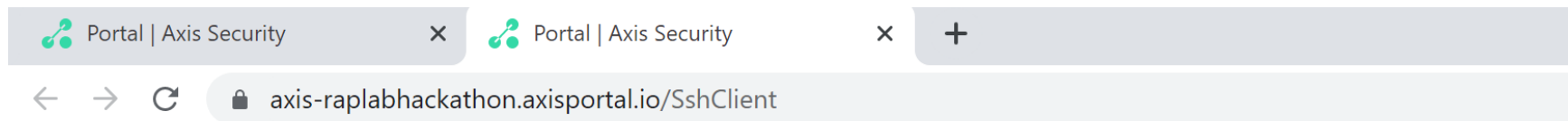
Step 5: SSH port forwarding

Connect to the CURIOSITY with Port forwarding

The previous step produces a file with the port forwarding details.

```
$ cat ~/port_forwarding_command
```

Copy the contents of the file.



```
bharatk@rl-cpu-r82-u02:~$ cat port_forwarding_command  
ssh -L localhost:8888:dgx03:8977 ssh.axisapps.io -l d160851ae1024291b66ad68c743669b2  
bharatk@rl-cpu-r82-u02:~$
```

Ssh
command

Port mapping

hostname

Credential Hash Key

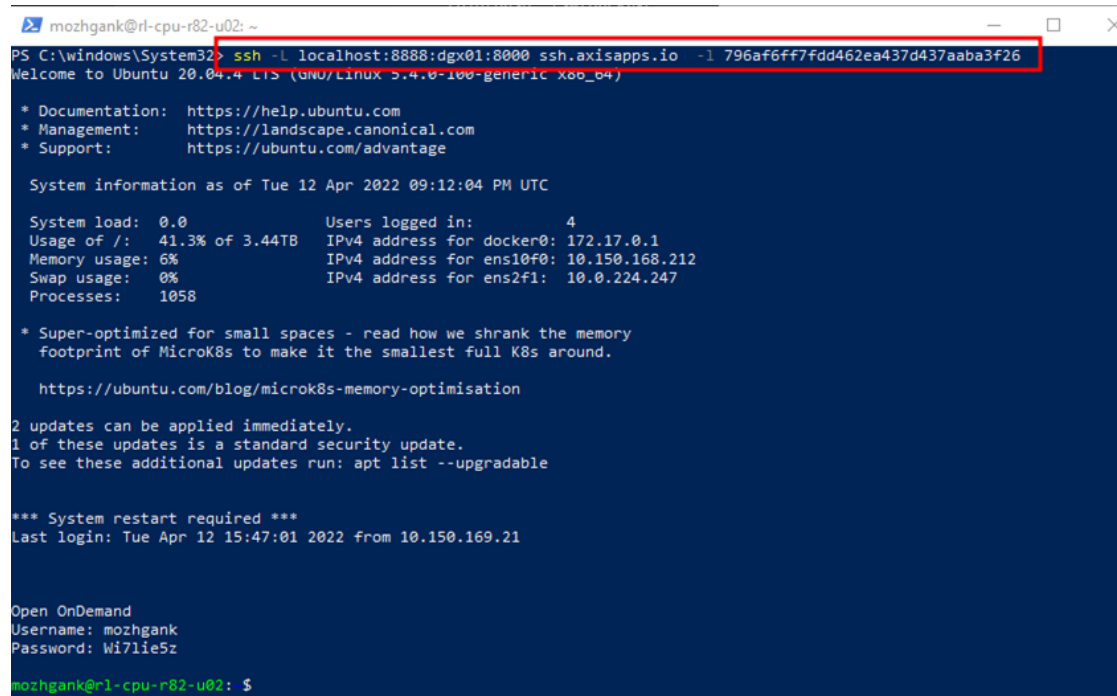
7

SSH with Hash and
Port Forwarding

Connect to the CURIOSITY with Port forwarding

Open a local new terminal on your local machine to login to the CURIOSITY with port forwarding. Replace the command with the command printed in the port_forwarding_command file in previous steps

Note: In the screenshot, port number was 8000 and the DGX number was dgx01



```
mozhgank@r1-cpu-r82-u02: ~
PS C:\windows\System32> ssh -L localhost:8888:dgx01:8000 ssh.axisapps.io -l 796af6ff7fdd462ea437d437aaba3f26
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.4.0-100-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Tue 12 Apr 2022 09:12:04 PM UTC

System load:  0.0               Users logged in:      4
Usage of /:   41.3% of 3.44TB   IPv4 address for docker0: 172.17.0.1
Memory usage: 6%              IPv4 address for ens10f0: 10.150.168.212
Swap usage:  0%               IPv4 address for ens2f1:  10.0.224.247
Processes:   1058


 * Super-optimized for small spaces - read how we shrank the memory
   footprint of MicroK8s to make it the smallest full K8s around.
   https://ubuntu.com/blog/microk8s-memory-optimisation

2 updates can be applied immediately.
1 of these updates is a standard security update.
To see these additional updates run: apt list --upgradable

*** System restart required ***
Last login: Tue Apr 12 15:47:01 2022 from 10.150.169.21

Open OnDemand
Username: mozhgank
Password: Wi7lie5z

mozhgank@r1-cpu-r82-u02: $
```

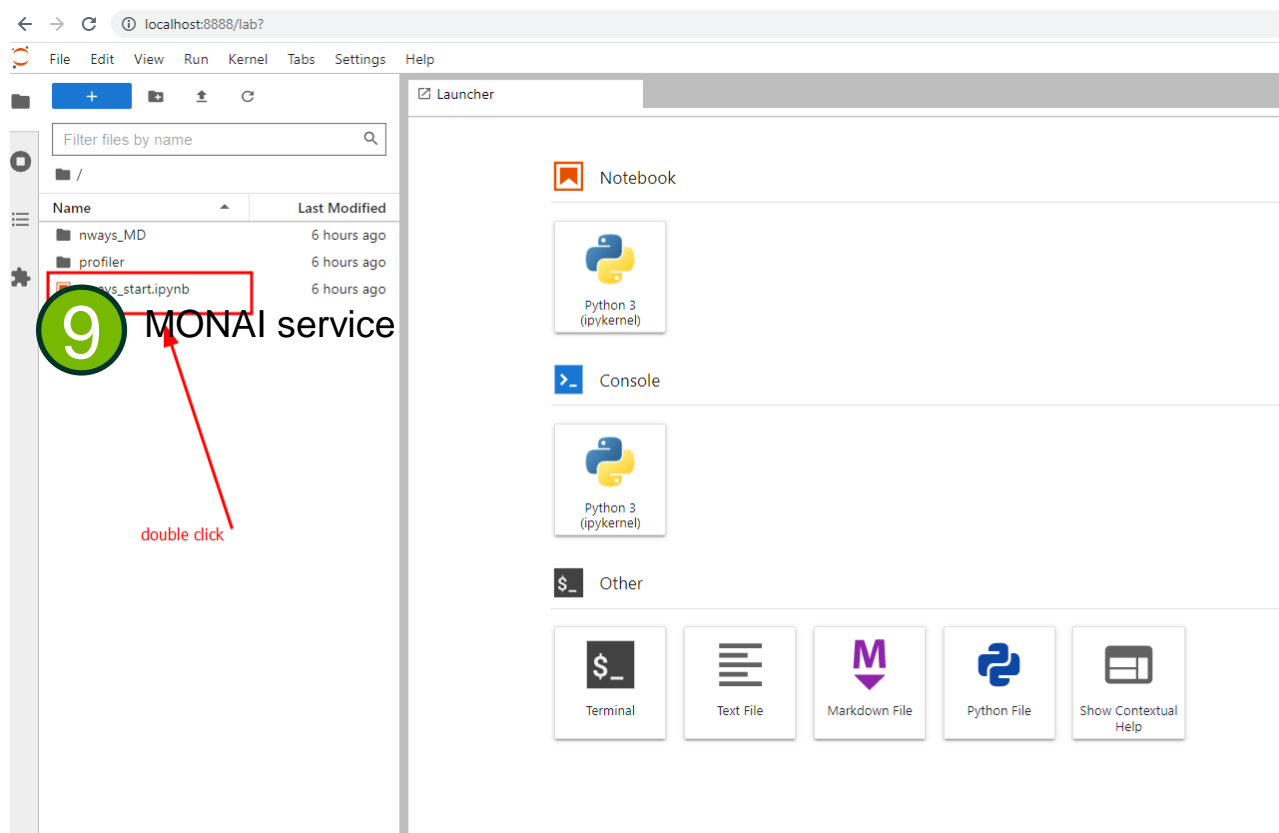


**Step 6: Running the
notebooks via the
browser**

Running the notebooks via the browser

Now, open your browser at <http://localhost:8888> and double click on start_here.ipynb

To terminate the notebook, close the browser, type **control-c** on the first terminal that is on your browser tab and exit the second terminal or exist all terminals together.



Copy required data

On terminal Check the data copy script

```
$ ls ~/copy_data_monai.sh
```

Launch Copy the contents of the file.

```
$ bash ~/copy_data_monai.sh
```

It will takes few minutes to copy 14GB datasets

BYOM

```
$ docker pull hryu01/pytorch:monai_2301_v3
```

```
$ singularity build --sandbox my_img.sif docker://hryu01/pytorch:monai_2301_v3
```

```
$ Singularity run --nv --bind /mnt/workspace:/workspace my_img.sif bash -c "cd /workspace && jupyter lab clean && jupyter lab --ip=0.0.0.0 --port $PORT --NotebookApp.token='monai' "
```

