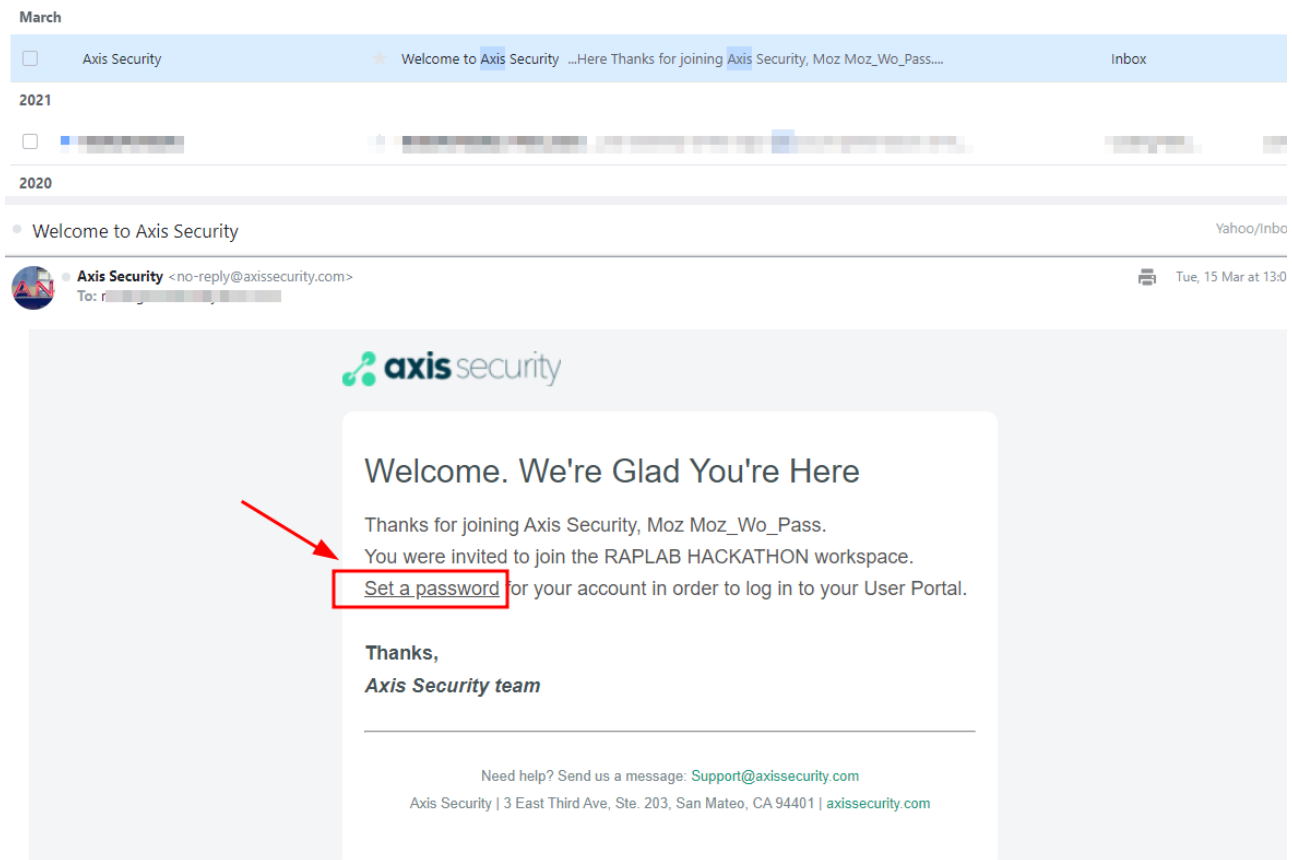
CONNECTING TO CURIOSITY CLUSTER

Bootcamps user instructions - last update: Sept 20th 2023


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.




Step 2: Connect to Axis,
Copy the “hash number”

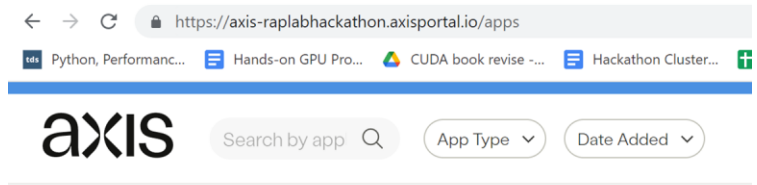
Connecting to the Cluster

➔ **Login to Axis with your credentials**

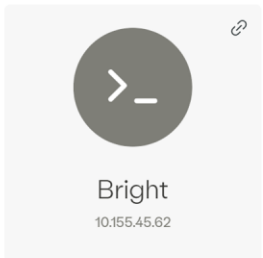
- Link : https://axis-raplabhackathon.axisportal.io/apps
- Use Chrome browser or make sure your browser does not block pop ups

Connect to CURIOSITY via Terminal

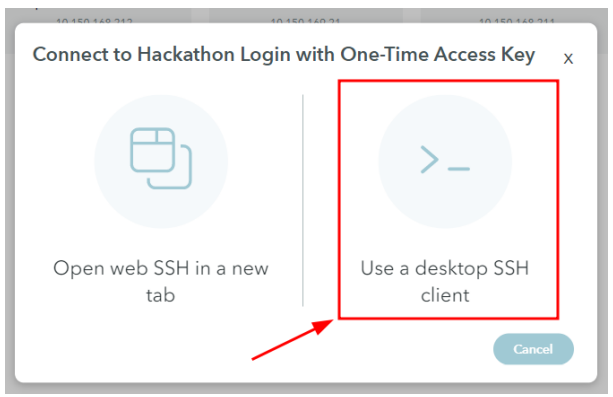
STEP 1) Go back to Axis login page.



➔ Click on the “Bright” app



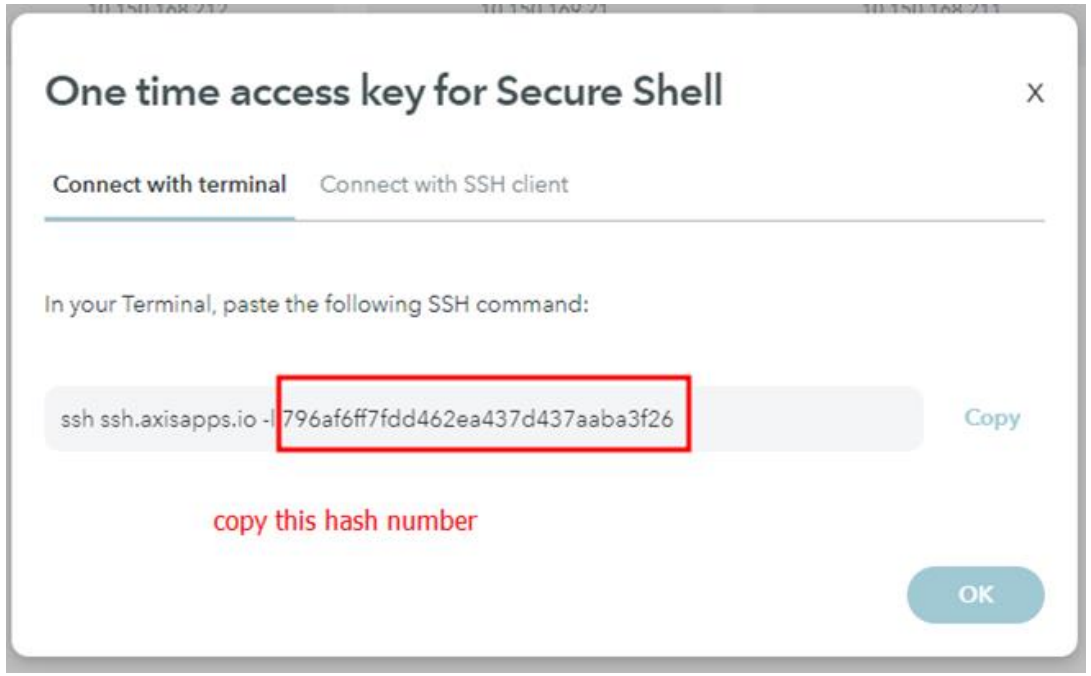
➔ Click on “Use a desktop SSH client”



Connect to CURIOSITY via Terminal

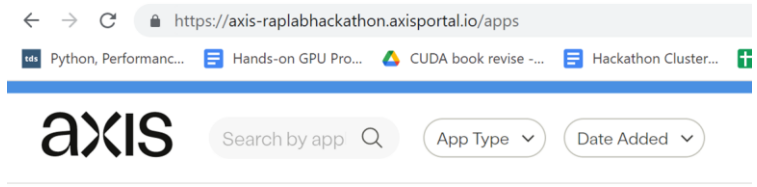
Copy AXIS Hash Number

- Now, make a copy of the hash number (notepad, text etc.) for the next step:

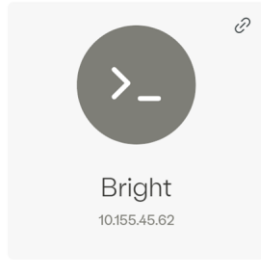


Step 3: Connecting to the cluster

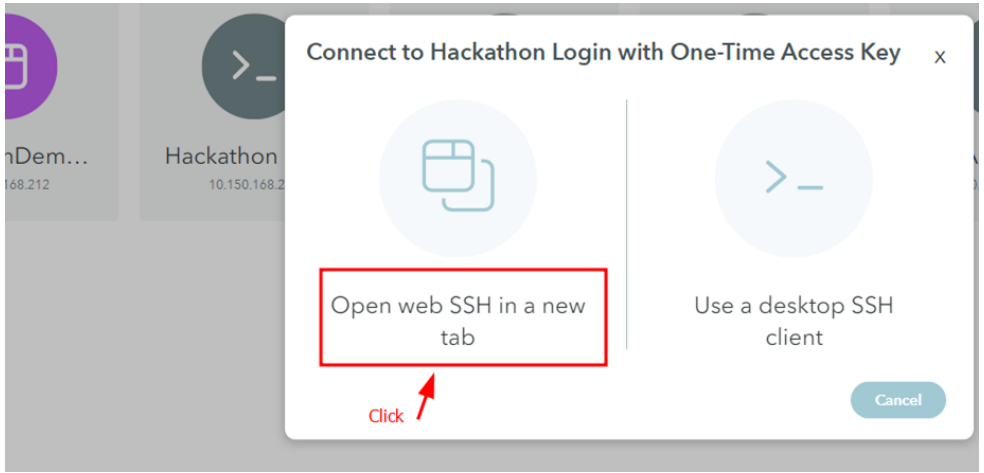
Connecting to the Cluster



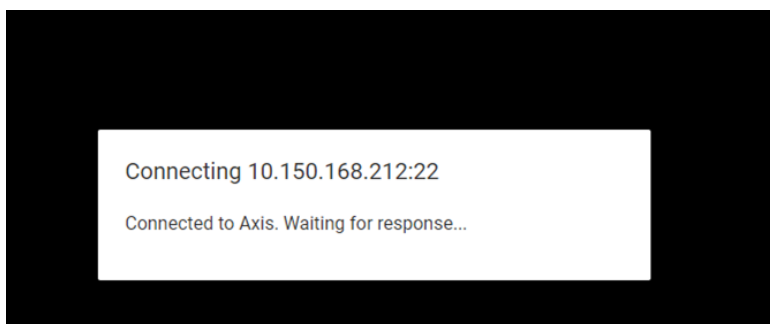
➔ Click on the “Bright” app

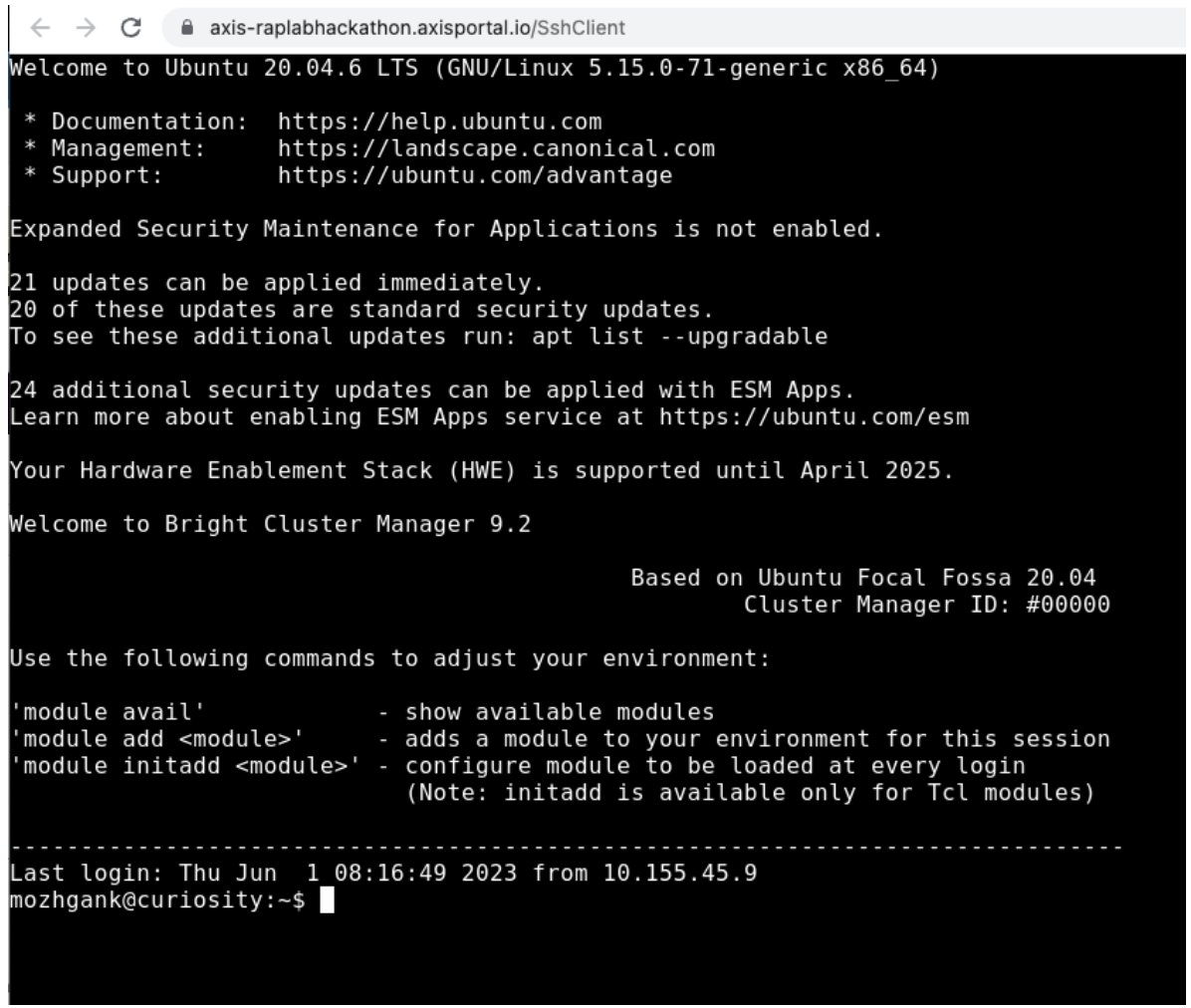


➔ Click on the “Open web SSH in a new tab”



Be patient ..


Connecting 10.150.168.212:22
Connected to Axis. Waiting for response...


axis-raplabhackathon.axisportal.io/SshClient
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.15.0-71-generic x86_64)
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/advantage
Expanded Security Maintenance for Applications is not enabled.
21 updates can be applied immediately.
20 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable
24 additional security updates can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm
Your Hardware Enablement Stack (HWE) is supported until April 2025.
Welcome to Bright Cluster Manager 9.2
Based on Ubuntu Focal Fossa 20.04
Cluster Manager ID: #00000
Use the following commands to adjust your environment:
'module avail' - show available modules
'module add <module>' - adds a module to your environment for this session
'module initadd <module>' - configure module to be loaded at every login
(Note: initadd is available only for Tcl modules)
Last login: Thu Jun 1 08:16:49 2023 from 10.155.45.9
mozhgank@curiosity:~$


Step 4: Launch the contents

Launch the lab via the script

The command will be different per lab

STEP 1) Run the below command (the command will be given by the instructor and might look different from the screenshot, please wait until your instructor gives you the correct labs path), it will create a file called "port_forwarding_command" which will take at least ~10 minutes to complete.

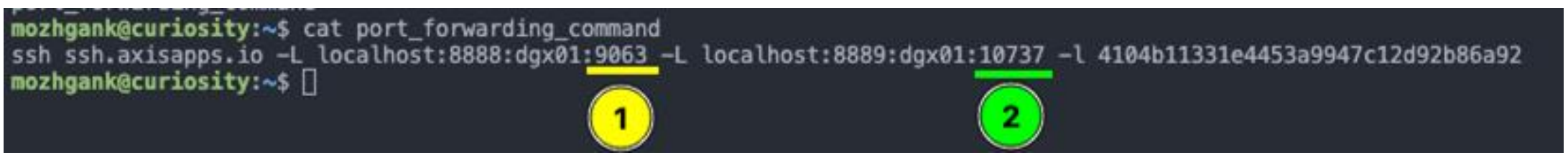
```
sbatch /bootcamp_scripts/nemo_guardrails/nemo_sbatch (AXIS HASH)
```

```
jbarthelemy@curiosity:~$ sbatch /bootcamp_scripts/nemo_guardrails/nemo_sbatch f5778d74c04744308f295238676dde76S
```

Please wait for at least 10 minutes before doing STEP 2.

STEP 2) View and copy the content of "port_forwarding_command" file.

```
cat port_forwarding_command
```

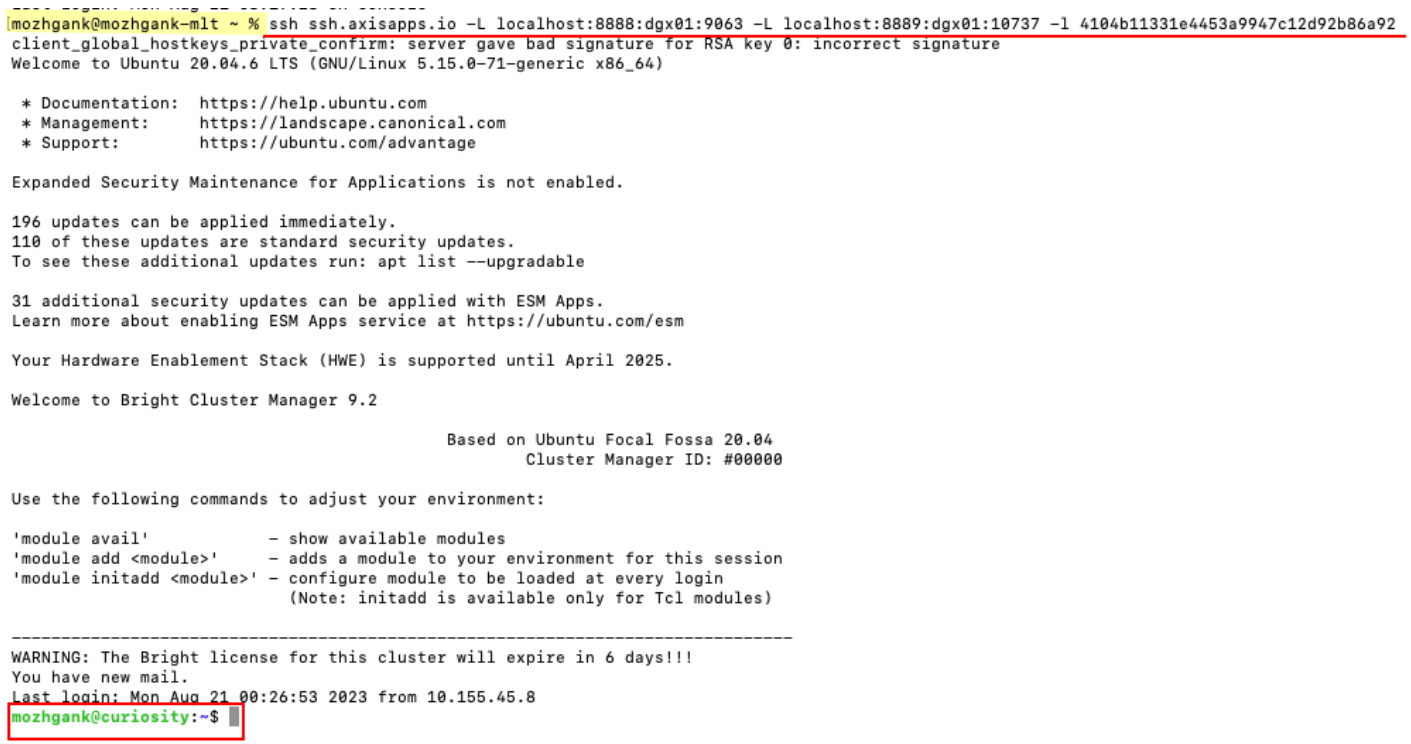


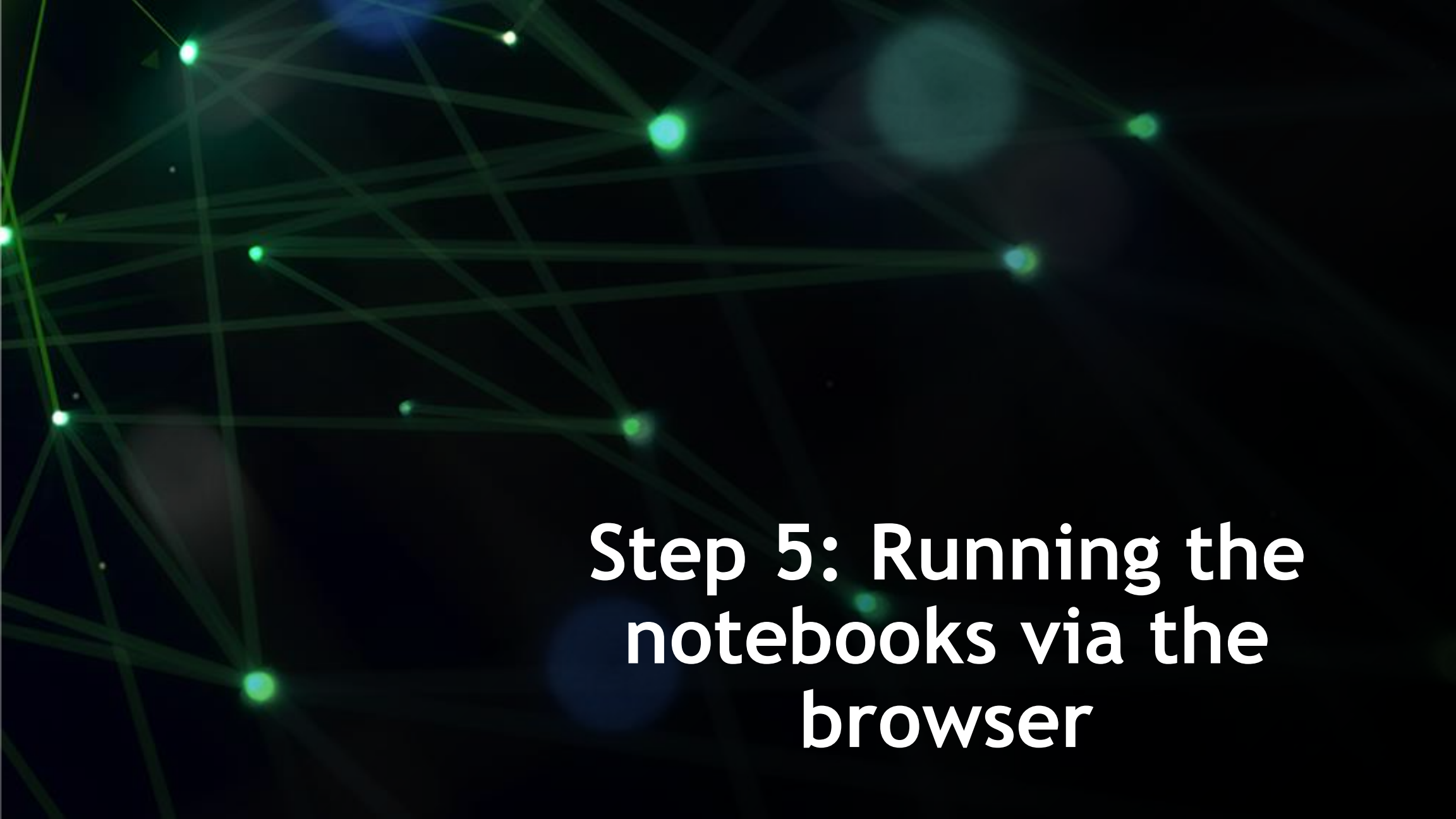
*Note: We will use the **second port** later when using "nemoguardrails server"*

Connect to the CURIOSITY with Port forwarding

STEP 3) Open a terminal on your local machine to login to the CURIOSITY with port forwarding. Copy the content of the “port_forwarding_command” file from the “step 2” onto the local terminal on your own computer and press “Enter” to run.

Note: In the screenshot, the local terminal is used, two port numbers are used (9063 and 10737). These PORTS will be different for everyone.

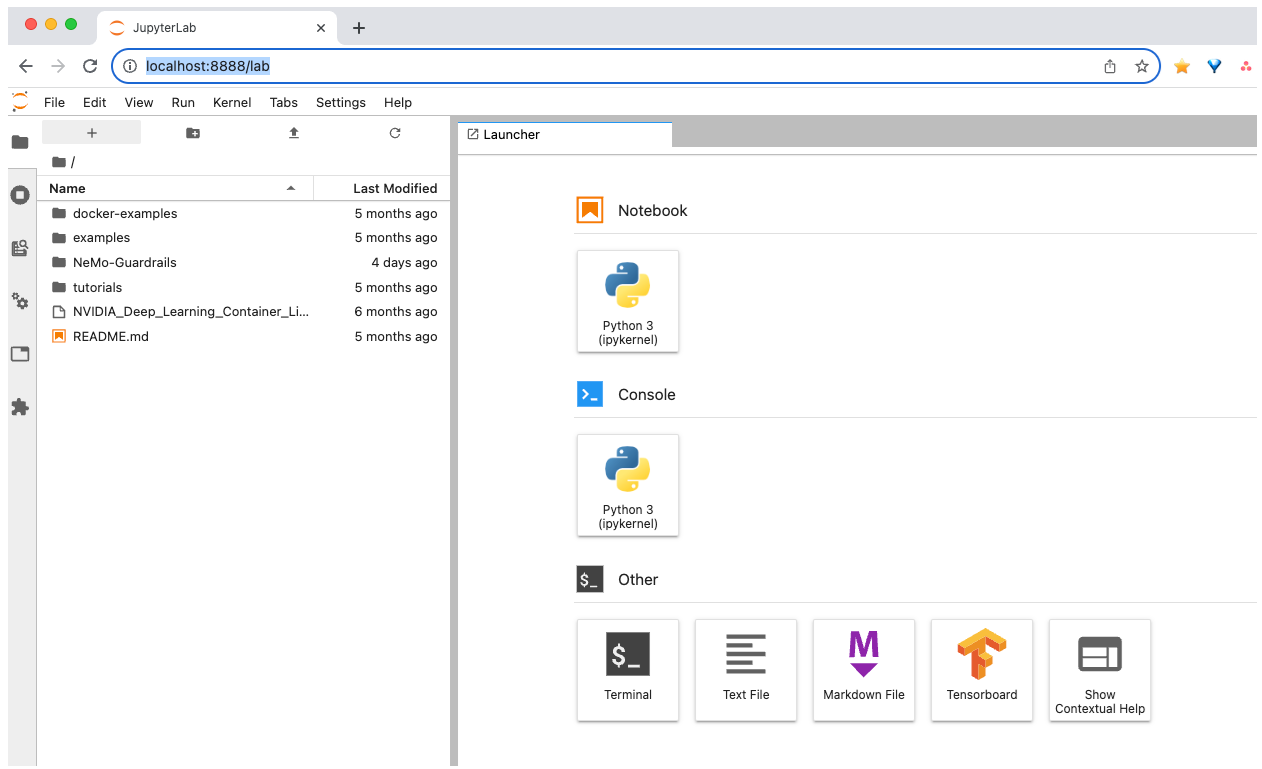



Step 5: Running the notebooks via the browser

Running the notebooks via the browser

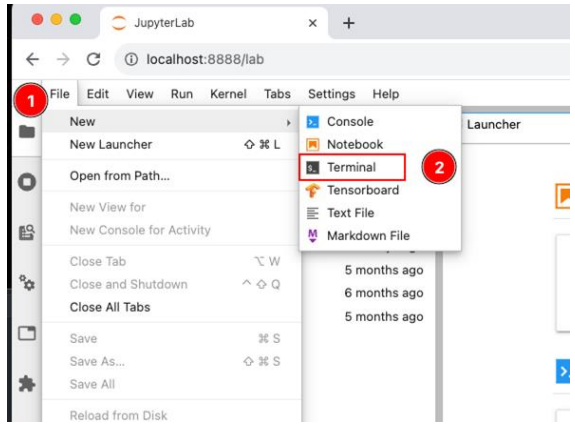
Now, to view the notebooks, open your browser at http://localhost:8888 , this port is local to you.

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.

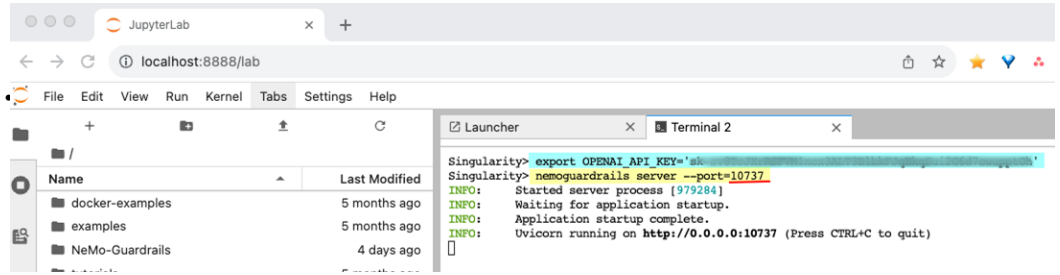


Running the nemoguardrails server via the browser

Step 3) from the Jupyter lab page on the browser, click on “File” > “New” > “Terminal”.

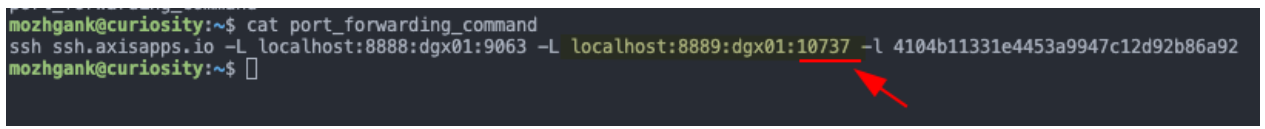


Step 4) Enter your `OPENAI_API_KEY` via `export OPENAI_API_KEY=’{add your key}’` and press “enter”.



Step 5) Type “`cd /workspace/NeMo-Guardrails && nemoguardrails server --port={PORT}`” on the terminal and enter the second PORT from STEP 1 on slide 12 (Your ports will be different from the screenshot).

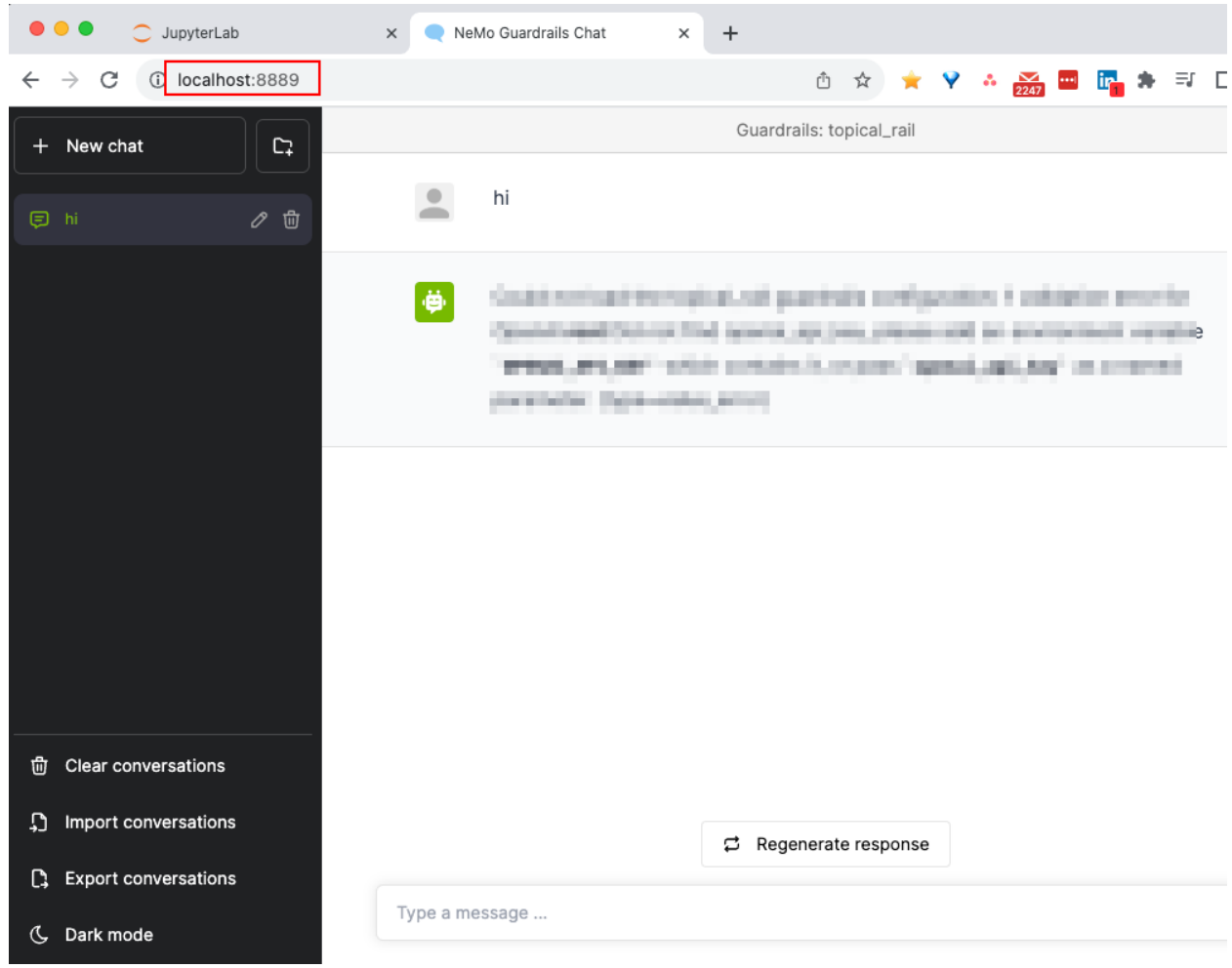
Reminder: For the second PORT, have a look at the output of “`port_forwarding_command`” file on the CURIOSITY cluster as shown below.



Running the nemoguardrails server via the browser

Now, to view the notebooks, open your browser at http://localhost:8889 , this port is local to you.

Note: Please note, you will need to add your `OPENAI_API_KEY` first in the terminal before opening this page. Check Step 4 on previous slide.



Troubleshooting

- Everyone can only run 1 job at a time.
- The jobs will run for 8 hours so you do not need to re-submit the sbatch script. All you need is the content of the "port_forwarding_command" to reconnect to the cluster.
- Each person will get access to 1 GPU only.
- The Hash key is valid for 24 hours.
- Do not use VPN or eduroam
- The access will be revoked by the end of the day.
- If you get the following error in the final Step :

```
bind [127.0.0.1]:8888: Address already in use
channel_setup_fwd_listener_tcpip: cannot listen to port: 8888
Could not request local forwarding.
```

You will need to change the port 8888 in your ssh command to some other port, examples would be 8890, 8900 etc.

For example: `ssh -L localhost:8890:dgx05:9538 ssh.axisapps.io -l 7aab57129c95450cb80c4df5c13836bd`

Troubleshooting

- Useful commands:
  - Check the number of jobs submitted via squeue --me
  - Cancel the submitted job via scancel {job id}
  - Check the slurm output via cat slurm-{job id}.out
- To check if the new "`port_forwarding_command`" has been created, run `ls port_forwarding_command`
- Type the commands instead of copy-pasting to avoid errors.
- Please direct the questions to the "**cluster-support**" channel on the Slack.


NVIDIA