Jetstream Instructions

Setting up a virtual machine and opening Jupyter

Let's make an XSEDE account!

- Go to https://portal.xsede.org (https://portal.xsede.org).
- Click the blue "Create Account" button on the left.
- Once the "Create an XSEDE User Portal account" page loads, follow the instructions.
- After you have created an account, add your XSEDE username to https://docs.google.com/spreadsheets/d/1M0oismSTDrqk_z4esYTPxS2P9wR900_vW3P4_T0pyzo (https://docs.google.com/spreadsheets/d/1M0oismSTDrqk_z4esYTPxS2P9wR900_vW3P4_T0pyzo)
    - You will be notified once you've been added.

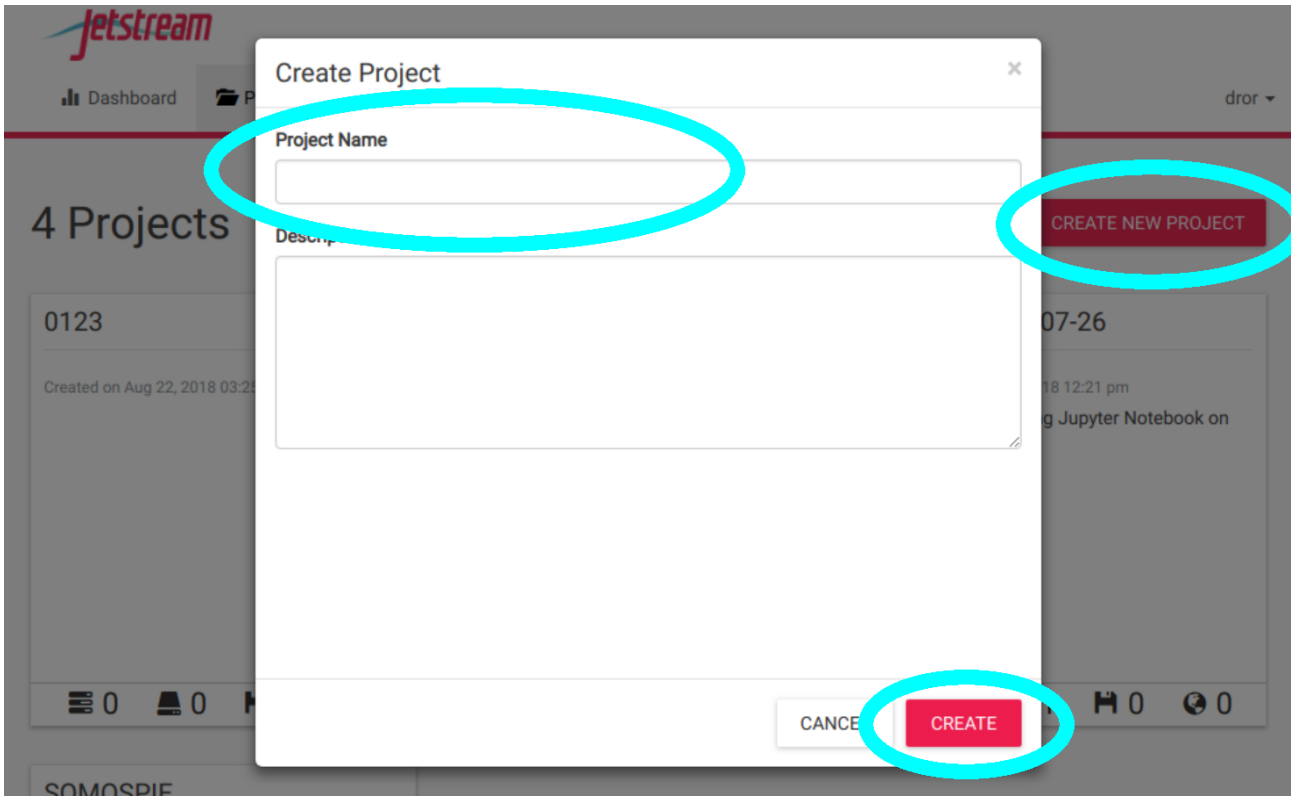
Let's log in to Jetstream!

- Go to https://use.jetstream-cloud.org (https://use.jetstream-cloud.org).
- Click "Login" in upper-right corner.
- Selecte XSEDE from the drop-down menu and click the blue "Continue" button.
- Enter XSEDE credentials and click the "SIGN IN" button.

Let's create a Jetstream project!

You sould now be logged into Jetstream.

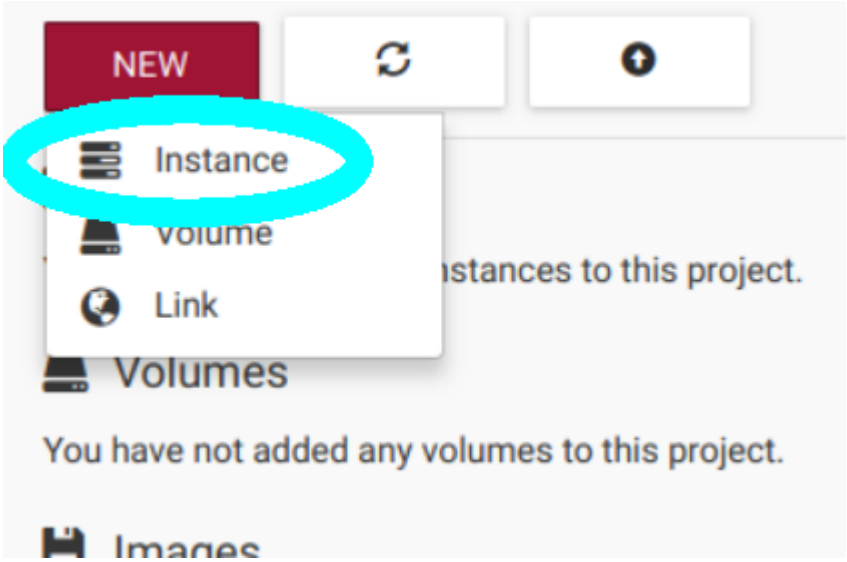
- Click "Projects" tab.
- Click pink "CREATE NEW PROJECT" button.
- Enter "2018F-CS594-CS690" under "Project Name" and click the pink "CREATE" button.



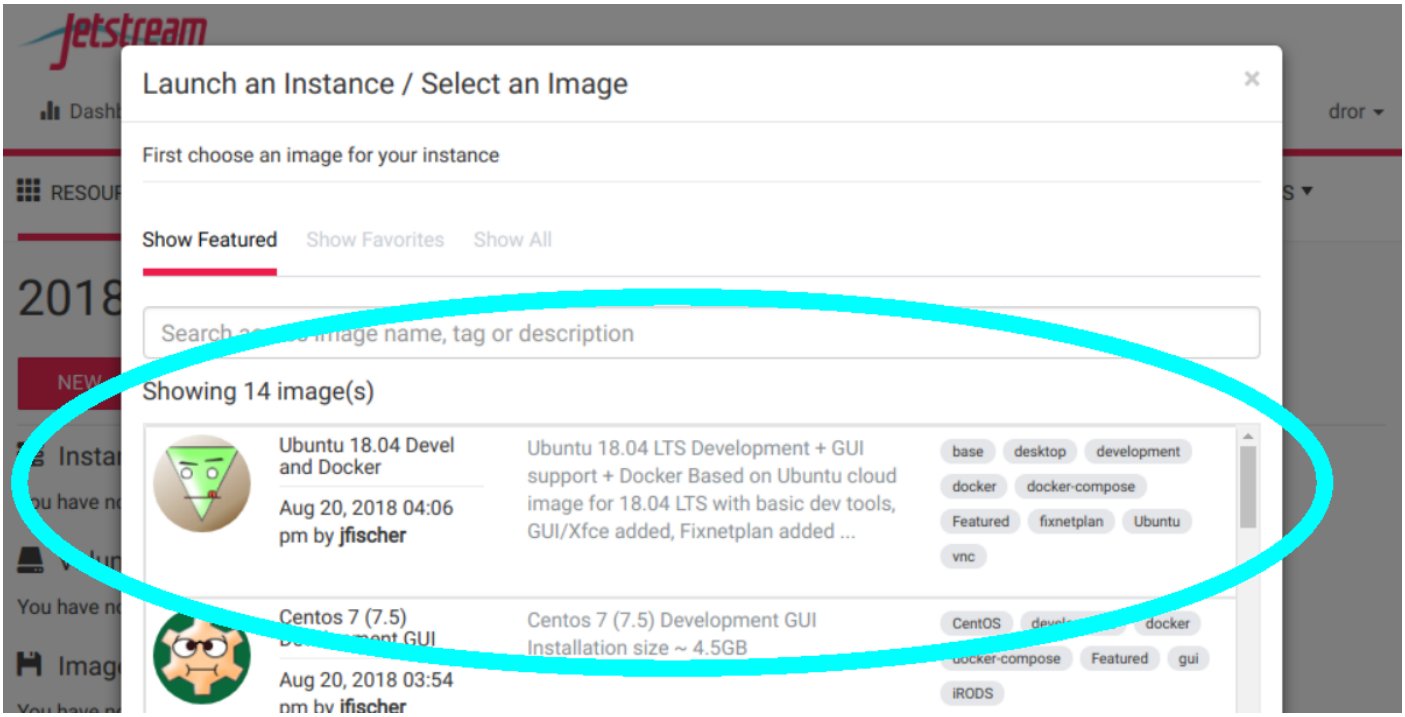
Let's create a Jetstream virtual machine (VM)!

You should now be in the Jetstream project page.

- Click on the project where you want your VM.
- Now click the pink "NEW" button, and select "Instance" from the drop-down menu that appears.

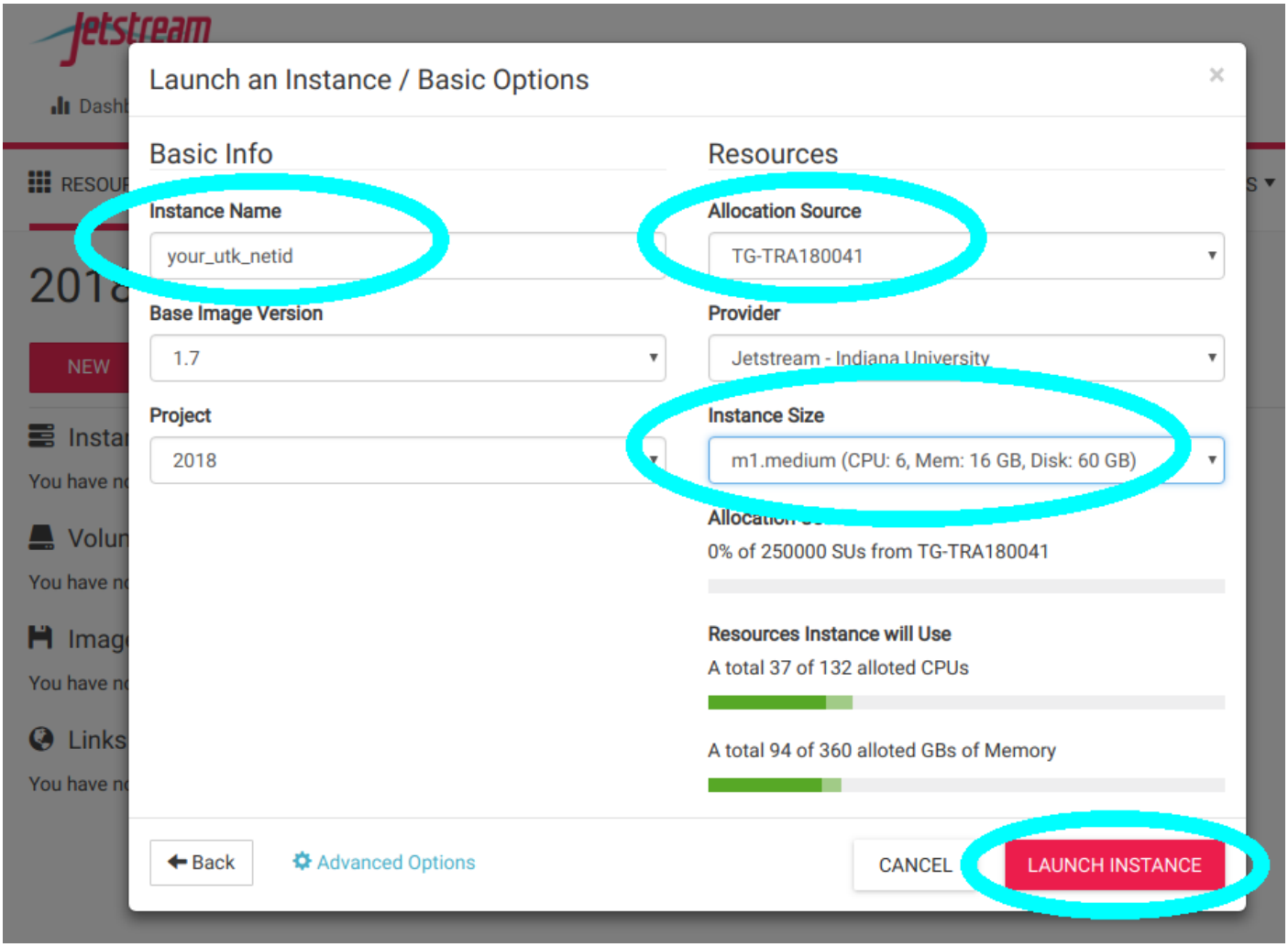


- Under "Showing ## image(s)", select "Ubuntu 18.04 Devel and Docker".



- The "Launch and Instance / Basic Options" form should appear.
- Under "Basic Info" type your netid for the "Instance Name".
- Under "Resources", make sure **TG-TRA180041** is selected for the "Allocation Source".
  IMPORTANT: Do not launch more than one virtual machine with this Allocation Source; we only have enough VMs for each person in the course to have one!

- Under "Instance Size", make sure **m1.medium** (CPU: 6, Mem: 16 GB, Disk: 60 GB) is selected for "Instance Size".
  IMPORTANT: Anything smaller than m1.medium cannot fit Jupyter, anything bigger takes more than your share of our allocation.
- Click the pink "LAUNCH INSTANCE" button.

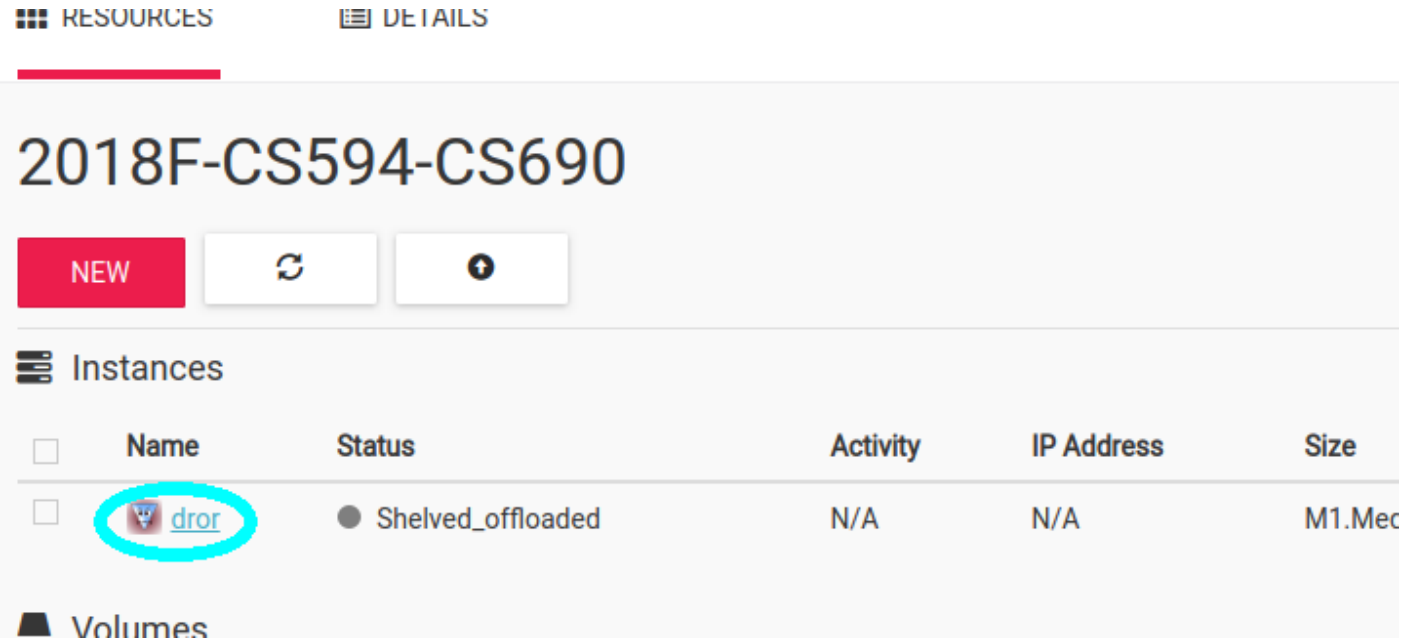


- A spinning blue ring icon will appear next to the text "LAUNCHING ..."; wait.

Let's access your virtual machine (VM)!

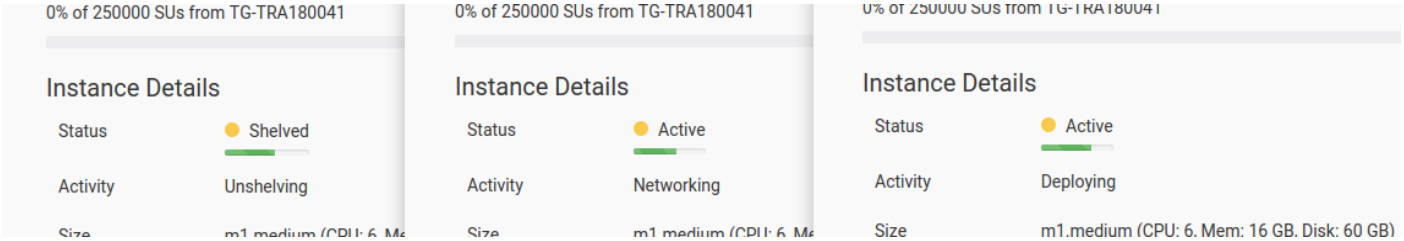
You should be in the page for the specific jetstream project.

- Look for your VM listed under "Instances".
- Click on the name of the VM, a blue, underlined hyperlink.

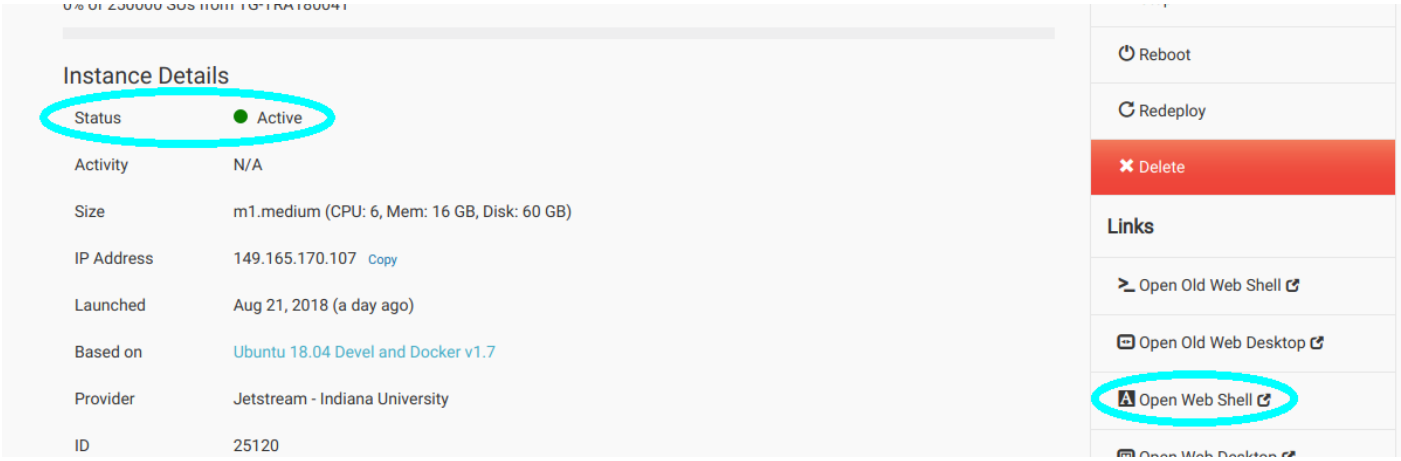


- If the "Status" has a grey circle, click "Resume"/"Start"/"Unshelve" under "Actions" on the right, then the pink "YES, __ THIS INSTANCE" button that pops up.

- If the "Status" has a yellow circle, wait.
  - If the "Status" has a yellow circle and the "Activity" hasn't changed in 20 minutes, you can try the "Reboot" option under the "Actions" on the right.



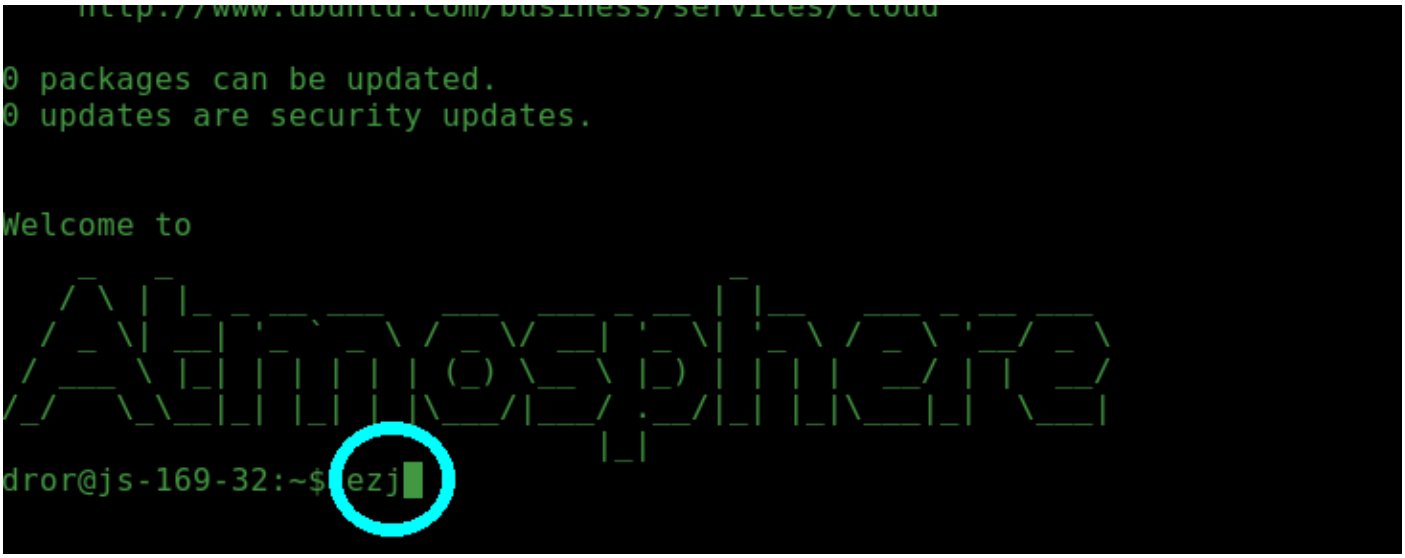
- Once "Status" has a green circle, you are ready to connect to your VM.
- Click "Open Web Shell" under "Links" on the right; this should open a new tab with a green-text, black-background command-line interface.



Let's install Jupyter on your VM!

You should be in the green-text, black-background command-line interface.

- Type `ezj` and press ENTER.



- Python3-dependent anaconda and jupyter will install, but it will take several minutes.
- When installation has finished a, jupyter notebook will automatically launch; press CTRL+C twice to cancel.

Let's clone the class repository to your VM!

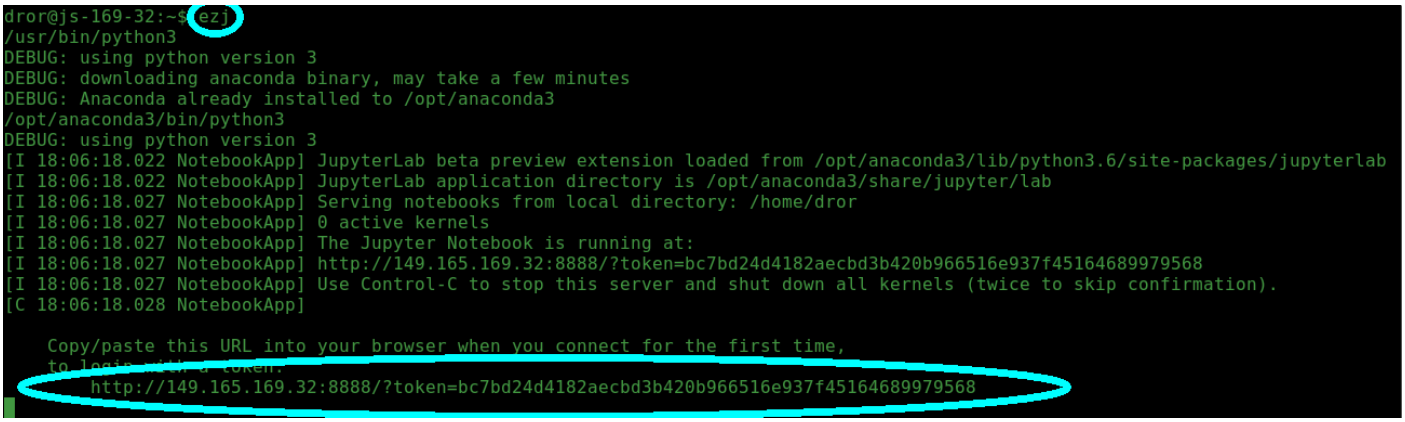
You should be in the green-text, black-background command-line interface (CLI).

- (If you want the repo somewhere other than your home directory, `cd` to the desired location.)
- Type `git clone https://github.com/CISC879-BigData/2018F-CS594-CS690.git` and press ENTER.
- You should be prompted to enter your GitHub credentials.
  NOTE: If you wish to paste text into Jetstream's web-browser CLI:
  - Press CTRL+ALT+SHIFT to open the grey control panel on the left;
  - Paste the text within the Clipboard box;
  - Press CTRL+ALT+SHIFT to close the control panel;
  - Press CTRL+SHIFT+V to paste.

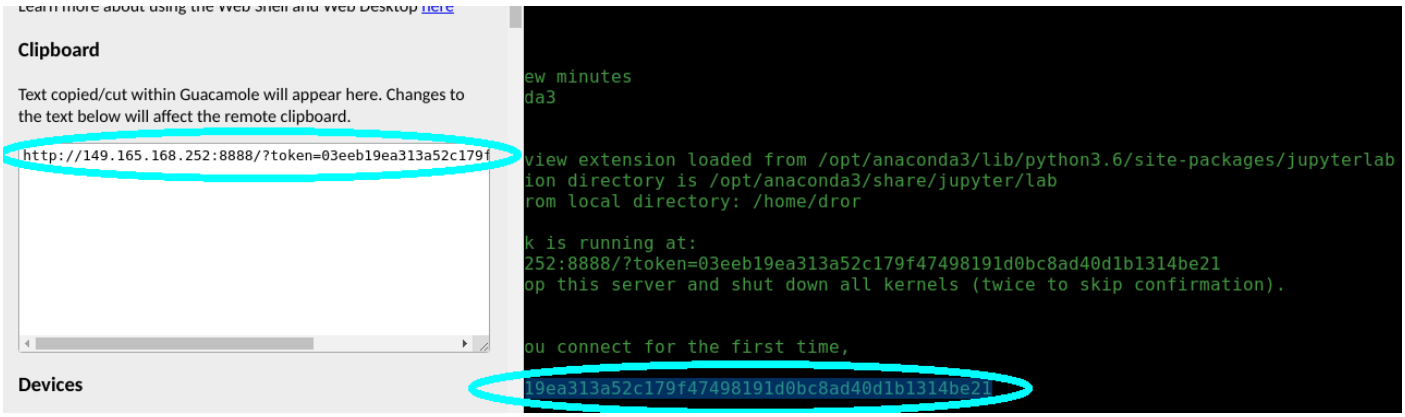
Let's open a Jupyter notebook!

You should be in the green-text, black-background command-line interface (CLI).

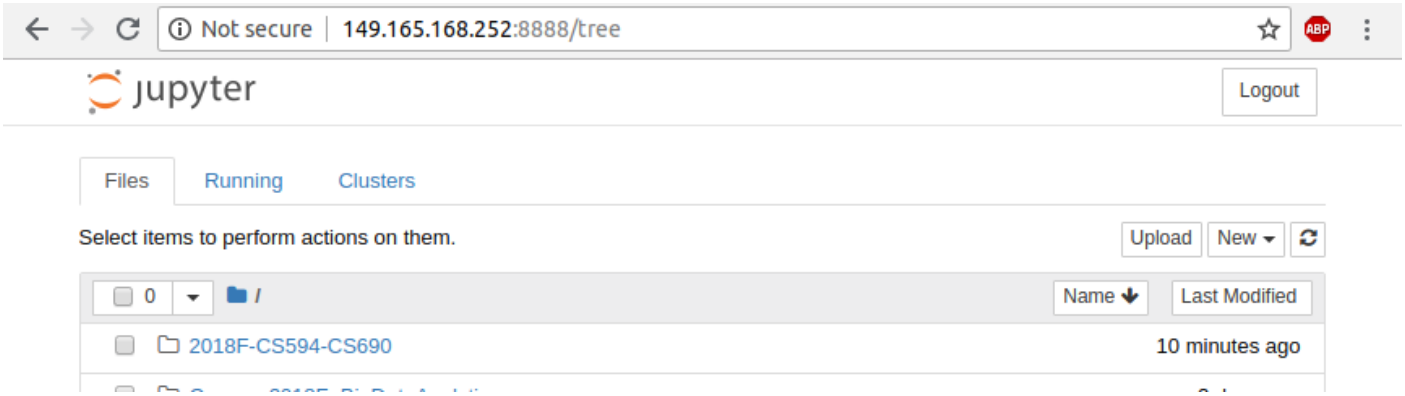
- Type `ezj` and press ENTER.
- There will be a URL you can copy/paste to access the notebook.
  NOTE: Do not launch with `jupyter notebook`, or it will launch under `localhost:8888` and you won't be able to access it.



- Highlight the URL with your mouse, then use CTRL+ALT+SHIFT to open the grey control panel.
- Copy the url from the Clipboard box.



- Open a new tab, paste the URL into the address bar, and press ENTER.
- You should now be in a Jupyter notebook on your VM.



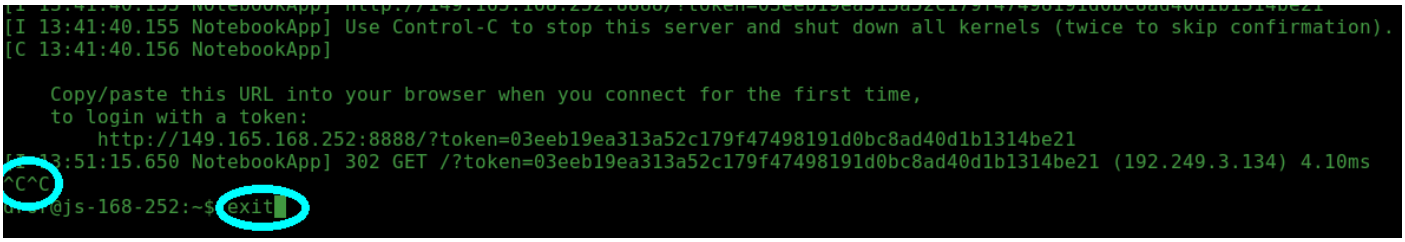
Let's close out everything!

If you are in the Jupyter notebook menu:

- Click the "Logout" button in the upper-right corner;
- Close the tab.

If you are in the CLI:

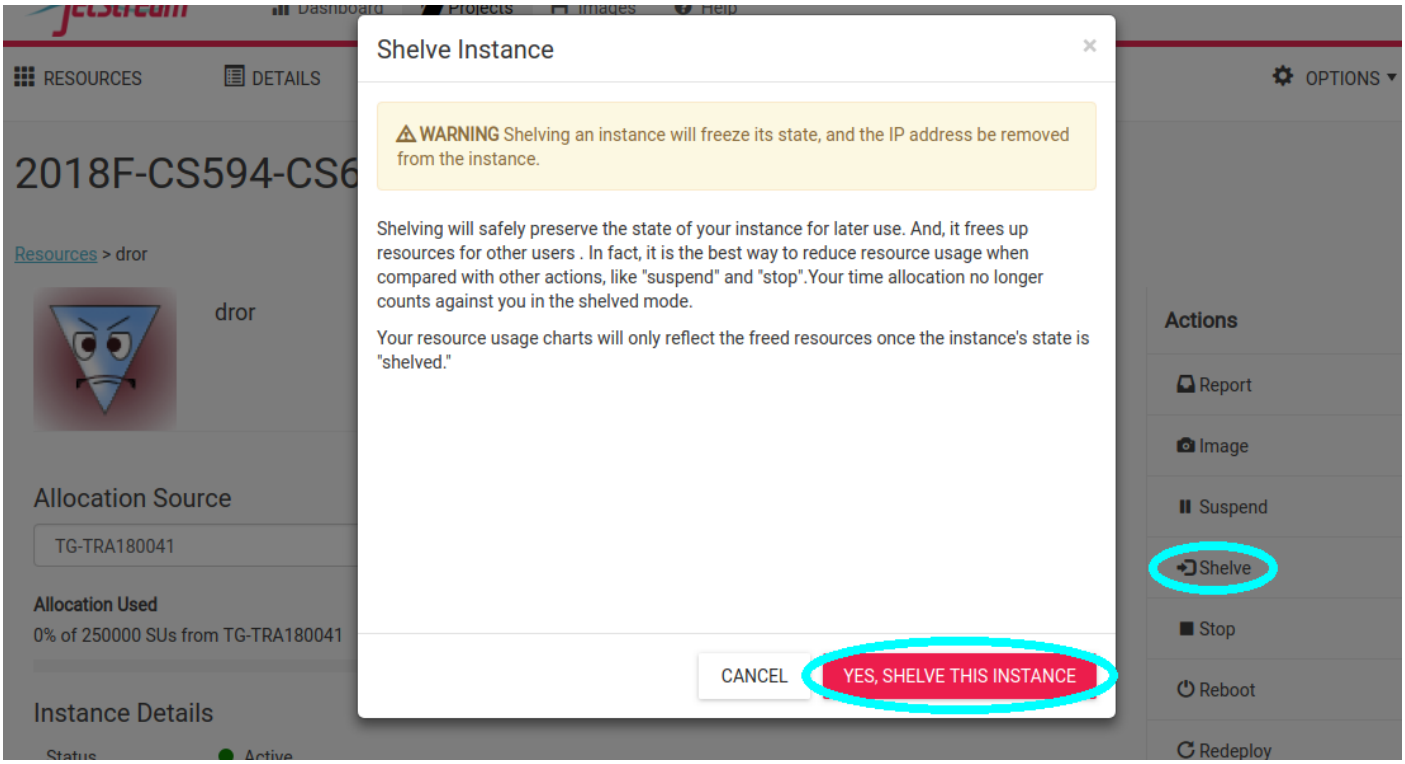
- If Jupyter is running, press CTRL+C twice in succession;
- If nothing is running, type `exit` and press ENTER;



- When a "DISCONNECTED" notice appears, click "Logout";
- Close the tab.

If you are in your VM window in Jetstream:

- Click "Shelve" under "Actions" on the right;
- In the "Shelve Instance" box that pops up, click the pink "YES, SHELVE THIS INSTANCE" button;



- The "Status" should have a yellow circle and the "Activity" should say "Shelving";
- You may now log out, but if you wait a while the "Status" should become "Shelved_offloaded" with a grey circle.

IMPORTANT: You MUST shelve your VM when you are not using it, or else you will use up our limited compute-time resources. (Shelved units are deleted after 6 months.)