Getting ARC setup

To access the virtual desktop on ARC via the web, you must go to
`https://portal.arc.utsa.edu/` and log in with your UTSA id, passphrase, and DUO app.

Once logged in you'll be able to schedule a job on ARC that reserves a node and allows you to run a
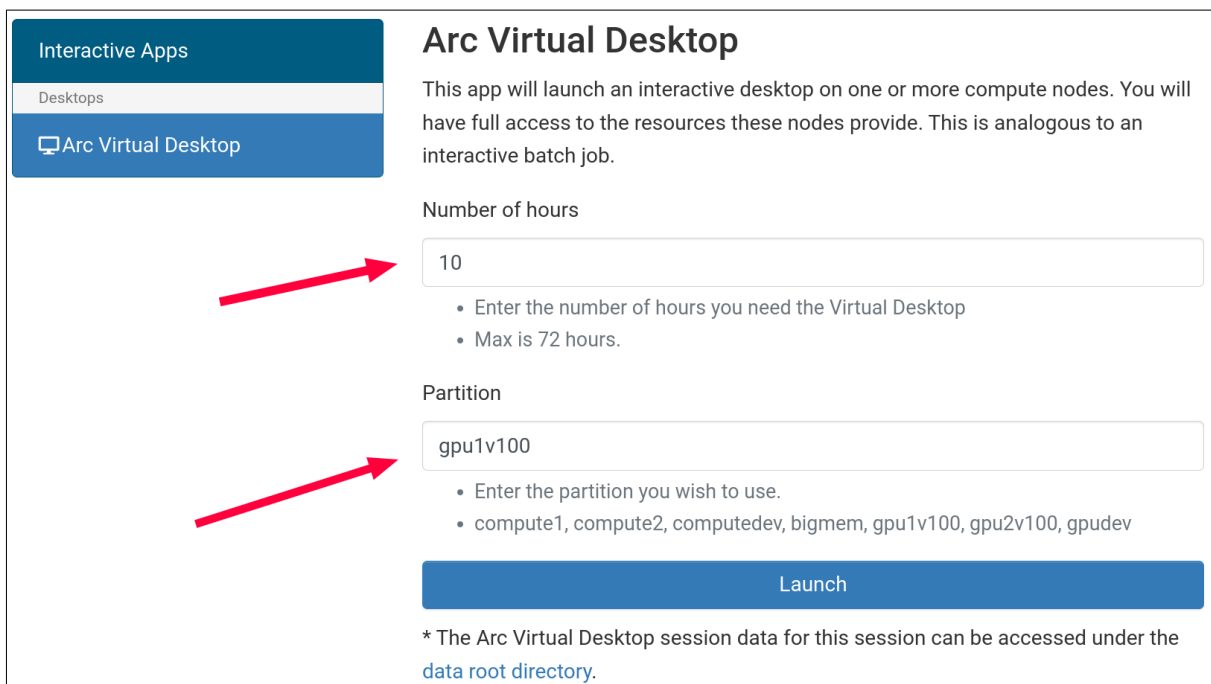virtual desktop from your web browser.

Launching a virtual desktop

Once logged in, to launch a virtual desktop, go to Interactive Apps to bring down the option for Arc
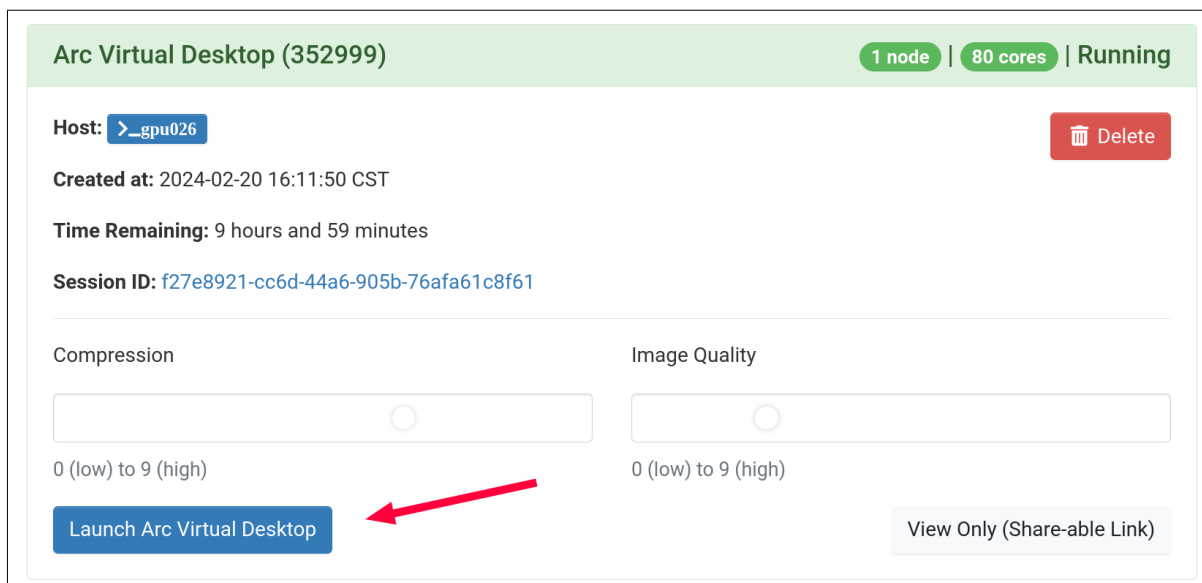Virtual Desktop.
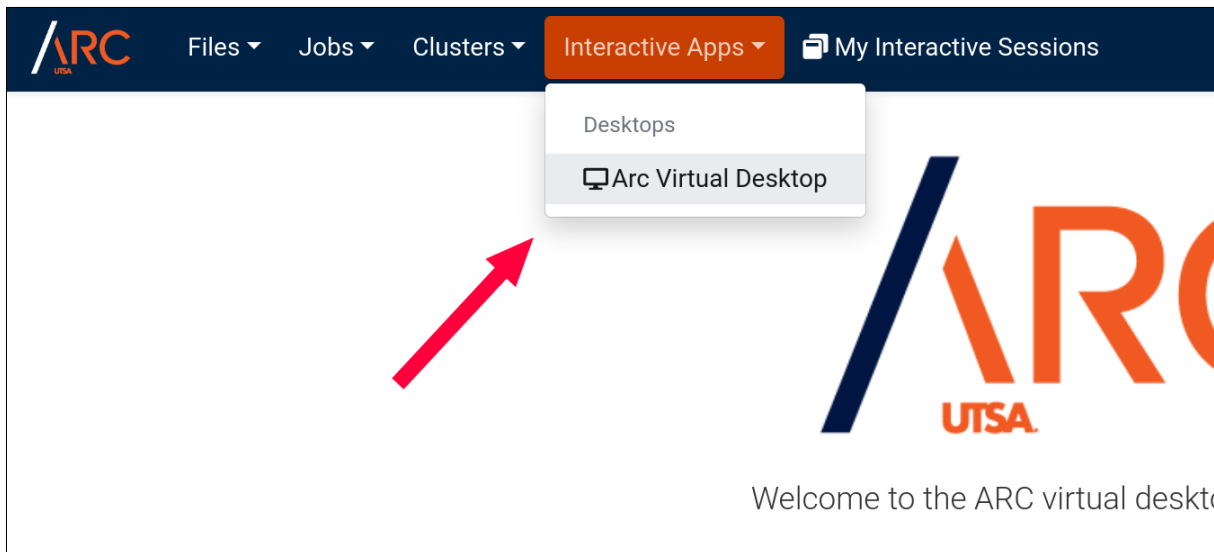
Once you click that you'll be presented with a page that asks for the number of hours you intend to
use the virtual desktop and the partition you want to use.

For this workshop, we will need a node with a single GPU and can approximate 4 hours of usage.

Once the job request is sent you will get a confirmation that the job has been scheduled. Your job request will then be queued until the resource can be allocated (For this workshop it will be nearly immediate).

Once you acquire a node you'll get this menu on your interactive sessions page that allows you to launch the virtual desktop and shell.

For more information about using the Virtual desktop in ARC read guide at:
https://hpcsupport.utsa.edu/foswiki/bin/view/ARC/VirtualDesktop

Once you've clicked **Launch Arc Virtual Desktop**, launch a terminal by clicking the Terminal Icon in the bottom
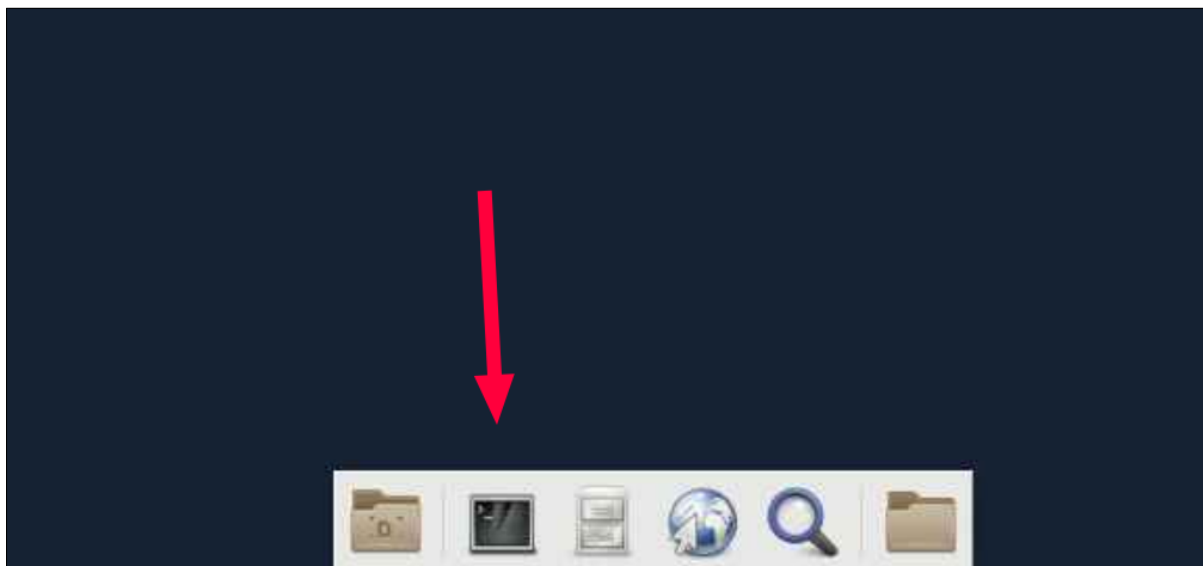
Run the following commands in the terminal

Pull the tutorial from the github repo

```
git clone https://github.com/IsaulGarcia/ml_workshop_utsa.git
```

```
cd ml_workshop_utsa
```

Load anaconda ARC module to create a virtual environment

- NOTE: While ARC allows you to load cudnn and toolkit modules, I would **not** recommend using these. They are old versions, which require you to use deprecated versions of Python libraries. Instead install them through Conda, which allows you to use up-to-date machine-learning libraries.

```
ml anaconda3
```

Create an environment and install some libraries we will use in the workshop conda install

```
conda create -n workshop_ml scikit-learn matplotlib jupyter pytorch torchvision torchaudio
↪    pytorch-cuda=12.1 -c pytorch -c nvidia
```

```
jupyter notebook
```

This will open a juypter notebook in your browser, open `tutorial_1.pynb` to begin :)