

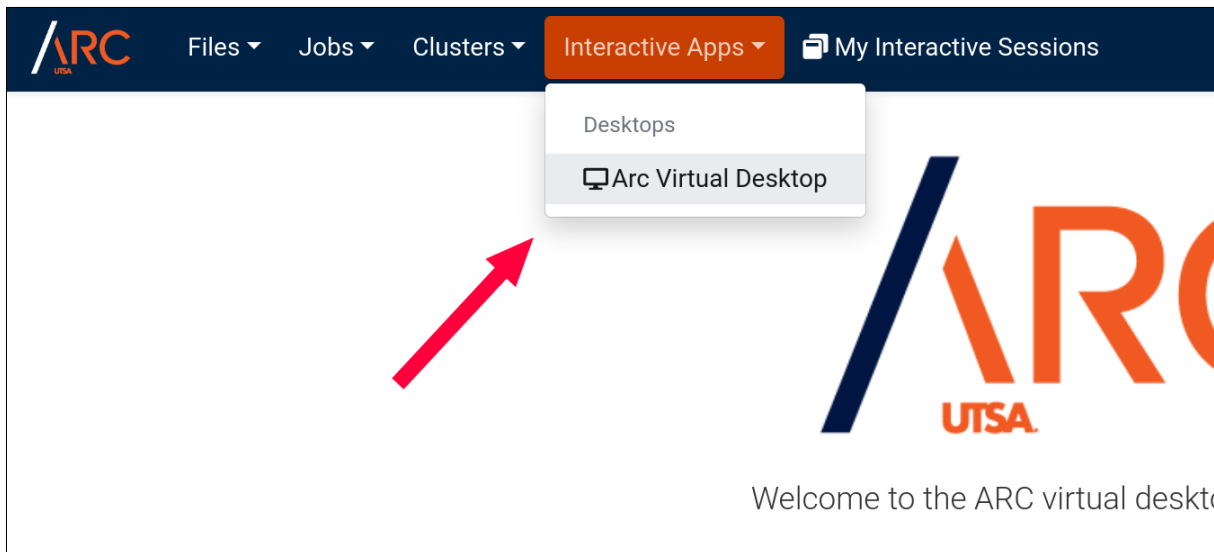
Getting ARC setup

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.

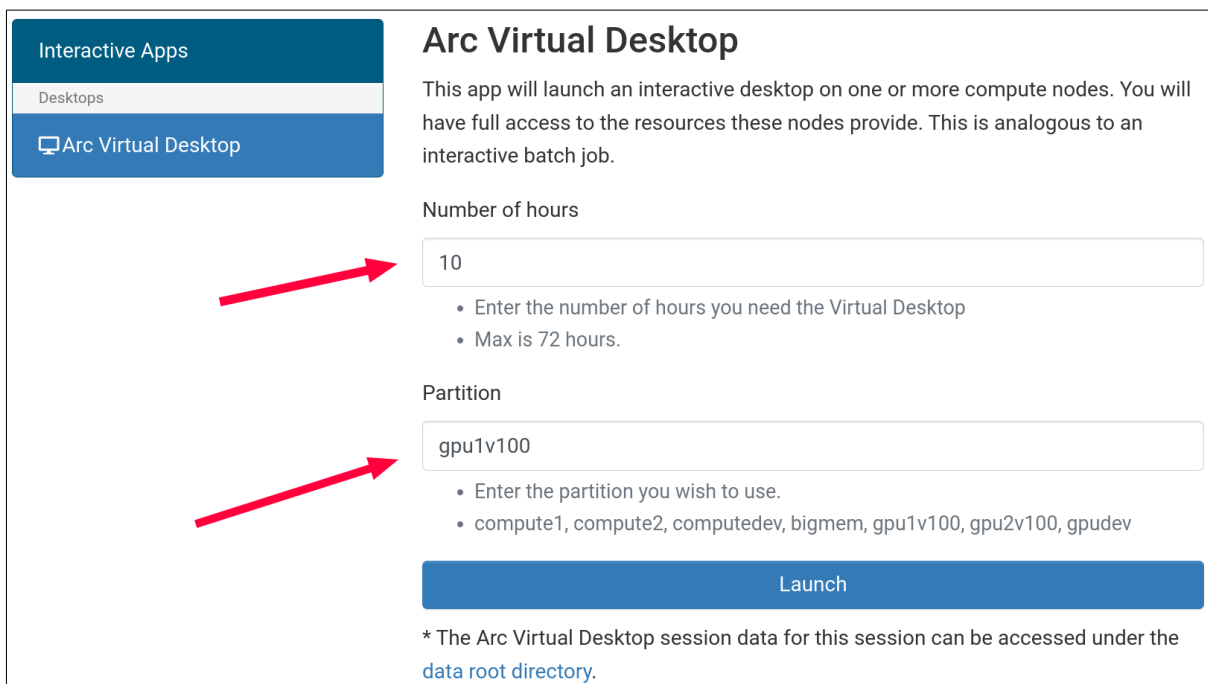
Launching a virtual desktop

Once logged in, to launch a virtual desktop go to Interactive Apps to bring down the option for Arc Virtual Desktop.



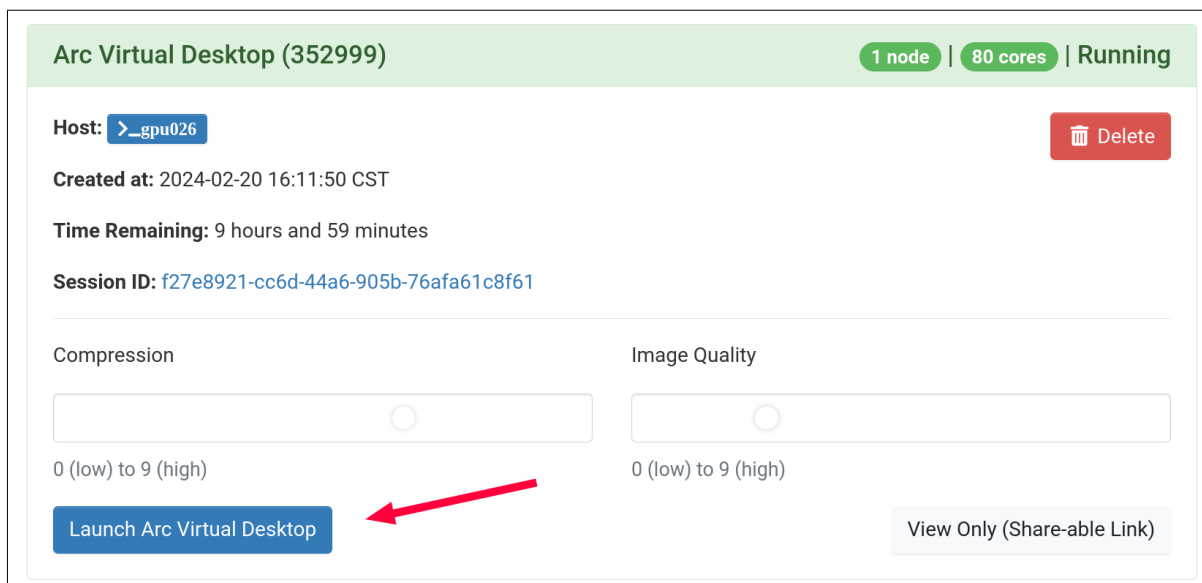
Once you click that you'll be presented with a page that asks for the number of hours you intend to use the virtual desktop and the partition you want to use.

For this workshop we will be need a node with a single gpu, and can input 4 hours.

A screenshot of the 'Arc Virtual Desktop' configuration page. On the left is a sidebar with 'Interactive Apps' and 'Desktops' sections, with 'Arc Virtual Desktop' selected. The main content area has the title 'Arc Virtual Desktop' and a description: 'This app will launch an interactive desktop on one or more compute nodes. You will have full access to the resources these nodes provide. This is analogous to an interactive batch job.' Below this are two input fields: 'Number of hours' with the value '10' and 'Partition' with the value 'gpu1v100'. Both fields have red arrows pointing to them from the left. Below the input fields are instructions: 'Enter the number of hours you need the Virtual Desktop' and 'Max is 72 hours.' for the hours field; and 'Enter the partition you wish to use.' and a list of partitions (compute1, compute2, computedev, bigmem, gpu1v100, gpu2v100, gpudev) for the partition field. At the bottom is a blue 'Launch' button. A footnote at the very bottom states: '* The Arc Virtual Desktop session data for this session can be accessed under the data root directory.'

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).

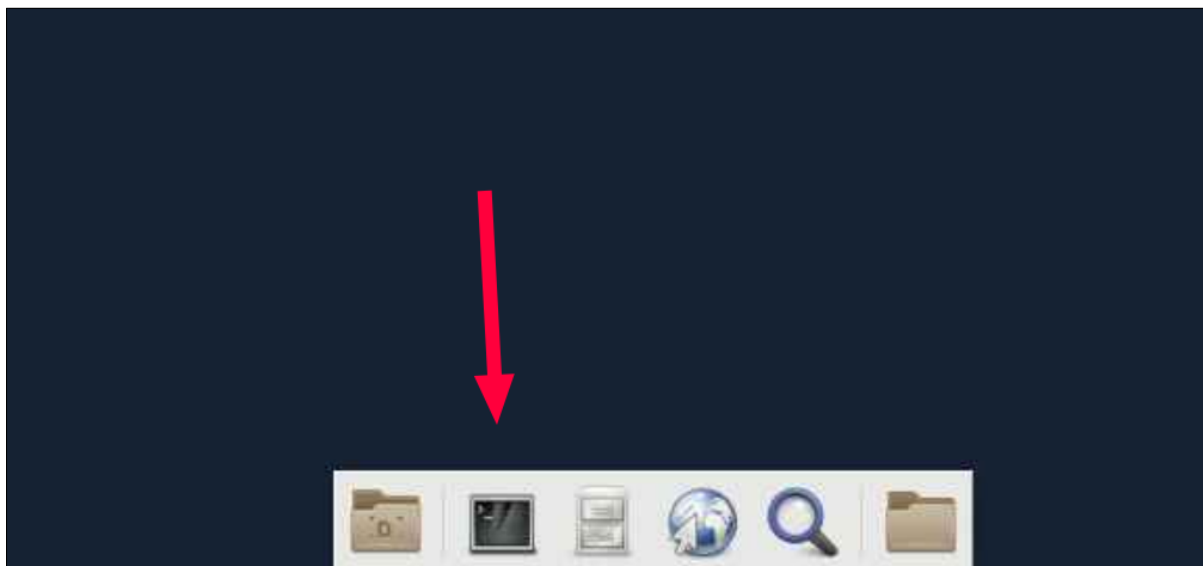
Once you acquire a node you'll get this menu on your interactive sessions page that allows you to launch the virtual desktop and shell.



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 some ARC modules we will use

```
ml cuda/toolkit  
ml cuda/cudnn  
ml anaconda3
```

Create an environment and install some libraries we will use

```
conda create -n workshop_ml jupyter pytorch==1.12.1 torchvision==0.13.1 torchaudio==0.12.1  
↪  cudatoolkit=11.3 -c pytorch  
conda activate workshop_ml
```

```
jupyter notebook
```

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