The TAMU Visualization Portal

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HPRC Short Course – Spring 2017

HIGH PERFORMANCE RESEARCH COMPUTING
TEXAS A&M UNIVERSITY

Outline

- Introduction to TAMU Visualization Portal
  - Overview of the portal
  - Using the portal
  - Using Abaqus CAE
  - Using Comsol GUI
  - Using ParaView

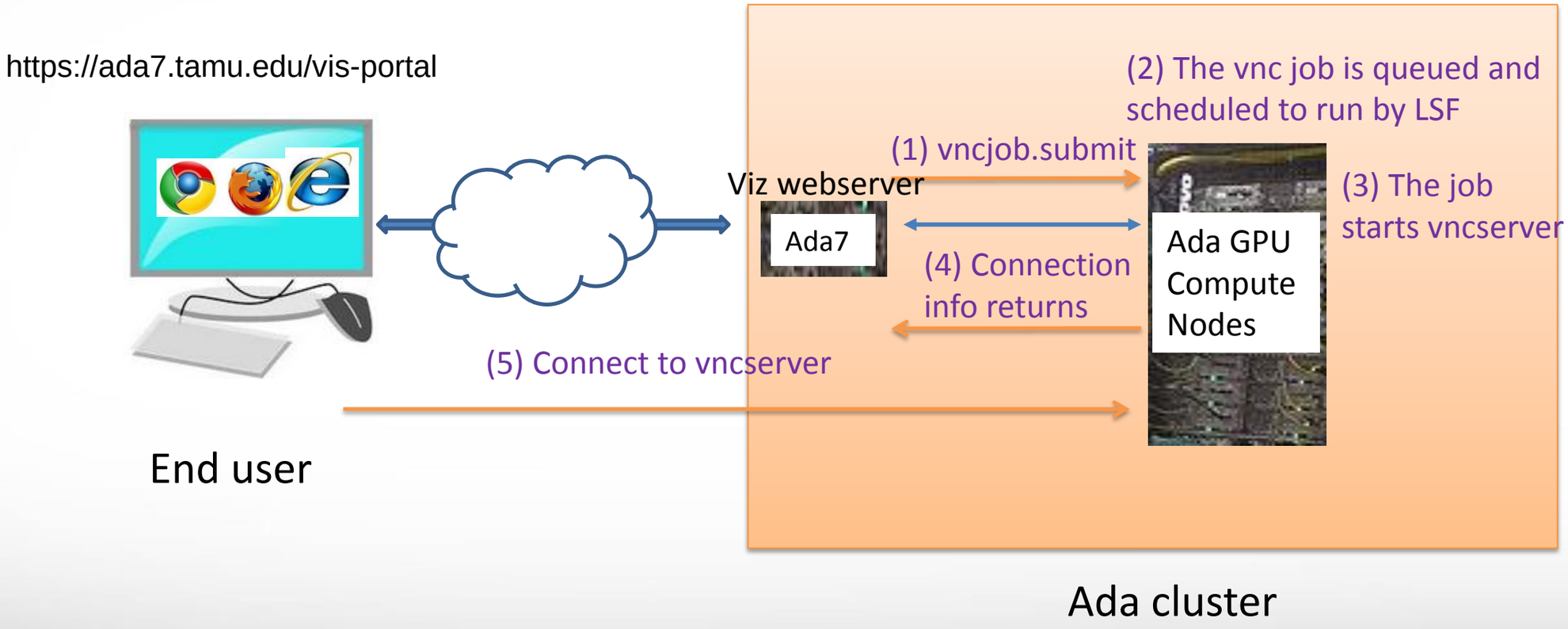
The TAMU Visualization Portal

- What is it?
- Who can use it?
- What's the benefit of using it?
- Is it free?
- What applications can be used with it?

The TAMU Visualization Portal

- A web service for submitting and viewing remote visualization jobs
- Ada users with our permission
- It supports major web browsers (IE, Firefox, Chrome) and can be accessed anywhere with Internet connection (VPN is needed from off-campus connections)
- It is free, but Ada allocations are charged
- Any GUI applications that support OpenGL can use the portal, including ABAQUS, ANSYS, COMSOL, Paraview, Matlab GUI, etc.

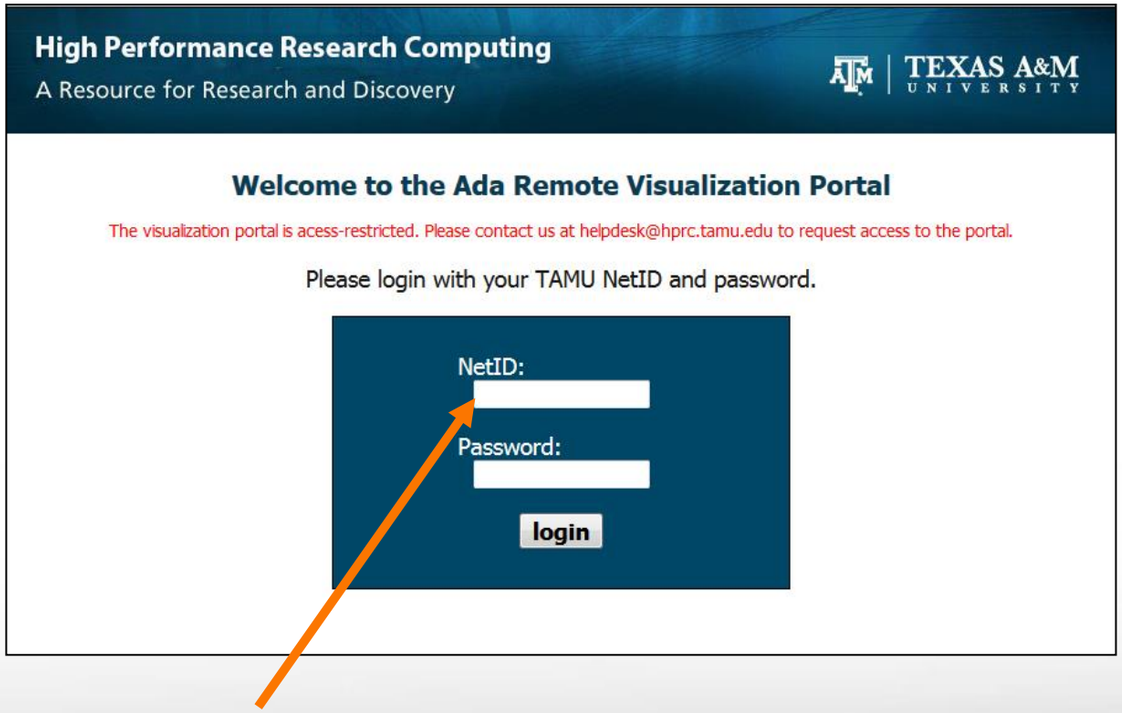
Worlflow of the Portal



Accessing the Visualization Portal

- Please request permission to access the portal by sending an email to help@hprc.tamu.edu
- If you are off-campus, please first login to the TAMU VPN
- Using a web-browser open https://ada7.tamu.edu/vis-portal/
- Please confirm the security exception to access the site
- Use your TAMU Net-ID and password to log into the portal.

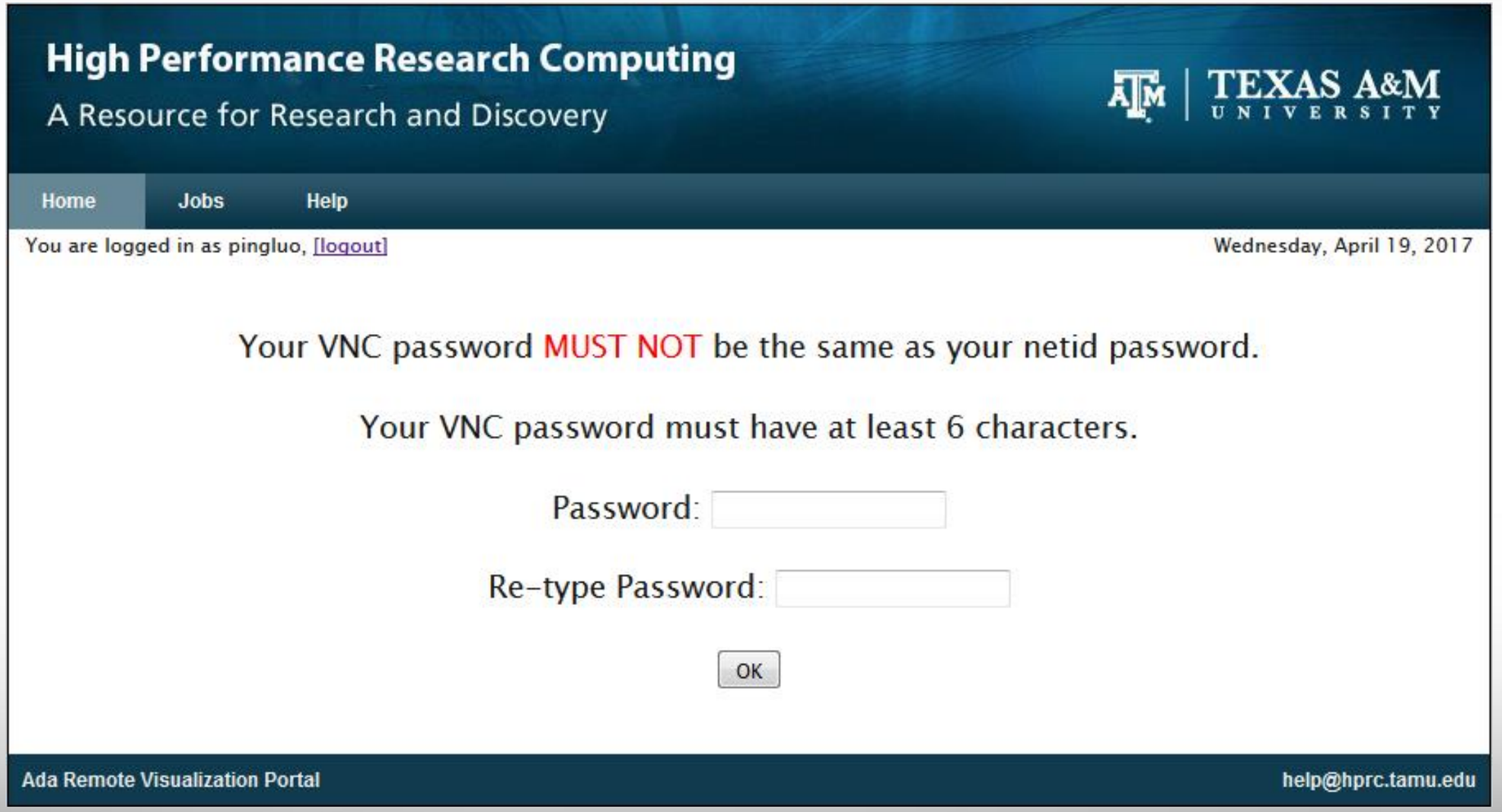
https://ada7.tamu.edu/vis-portal



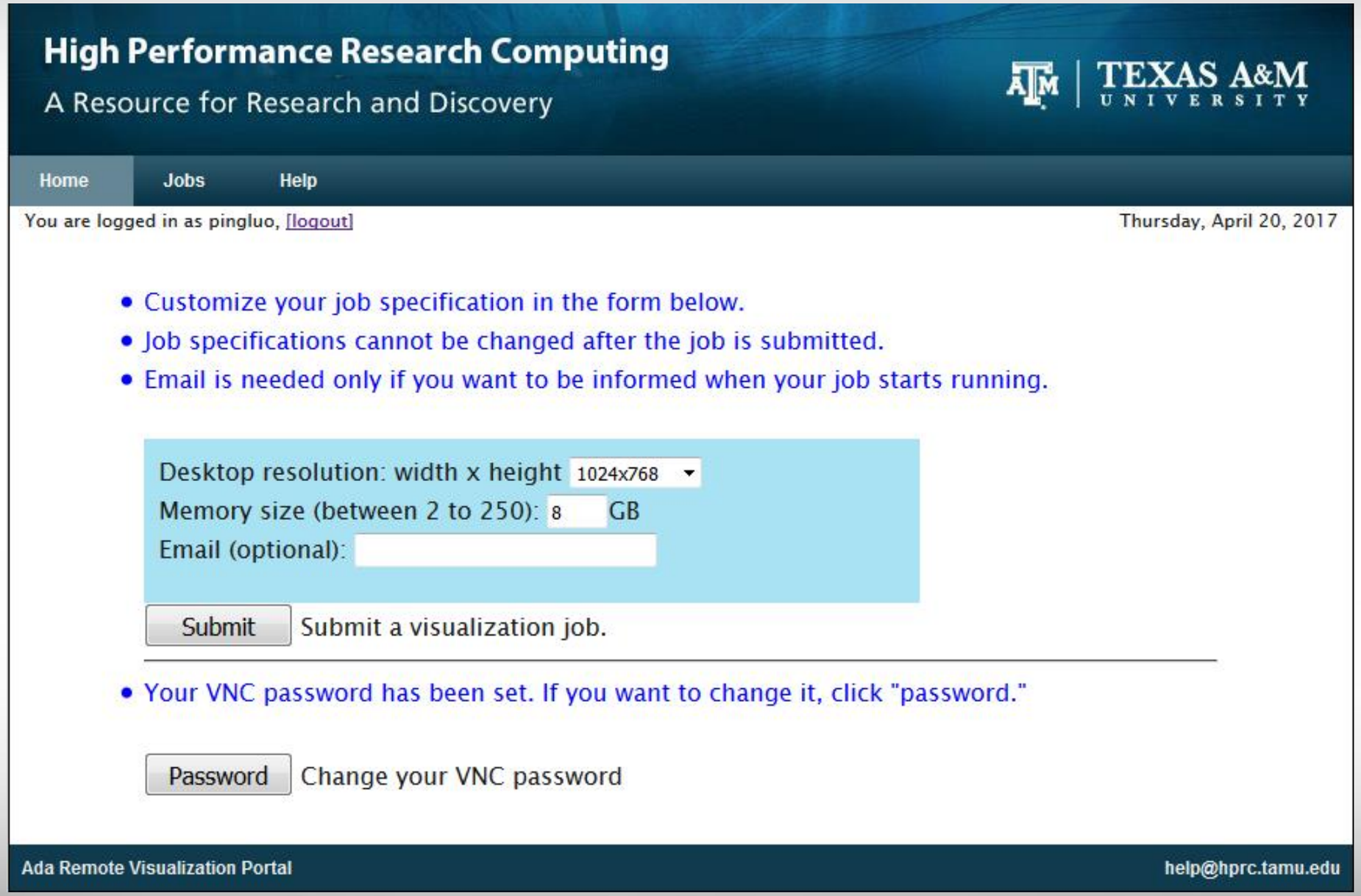
Enter your TAMU Net-ID

For New Remote Visualization Users

Setting Your VNC Password



Submitting a Visualization Job



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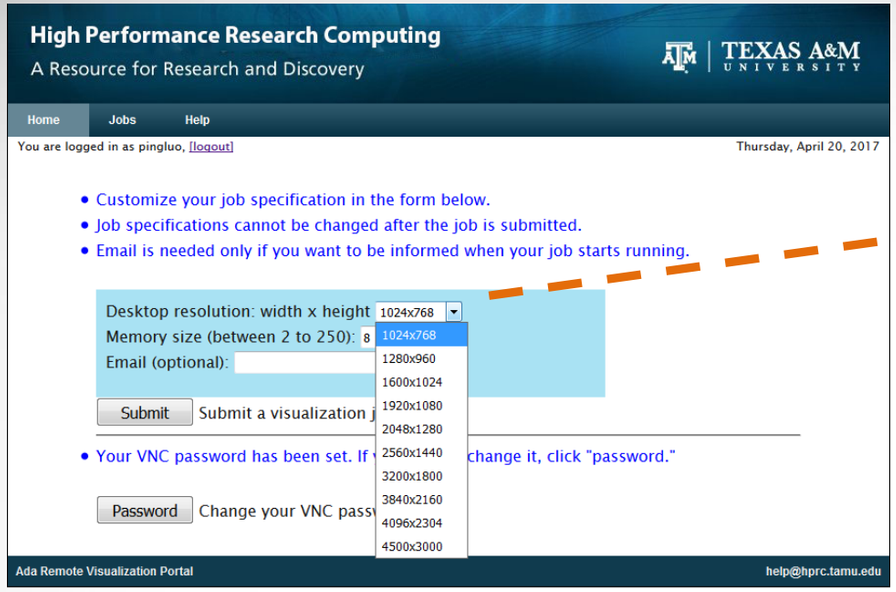

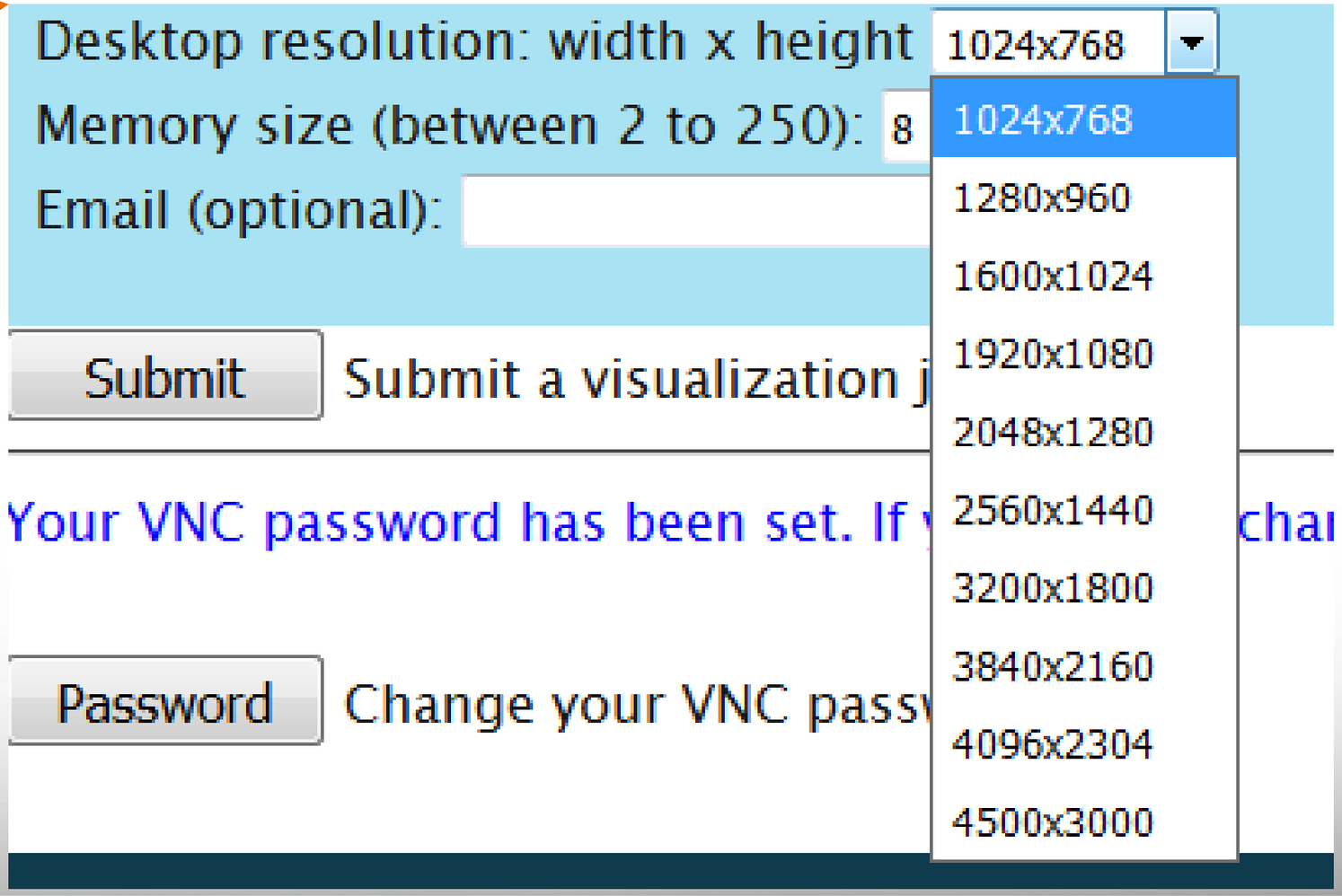

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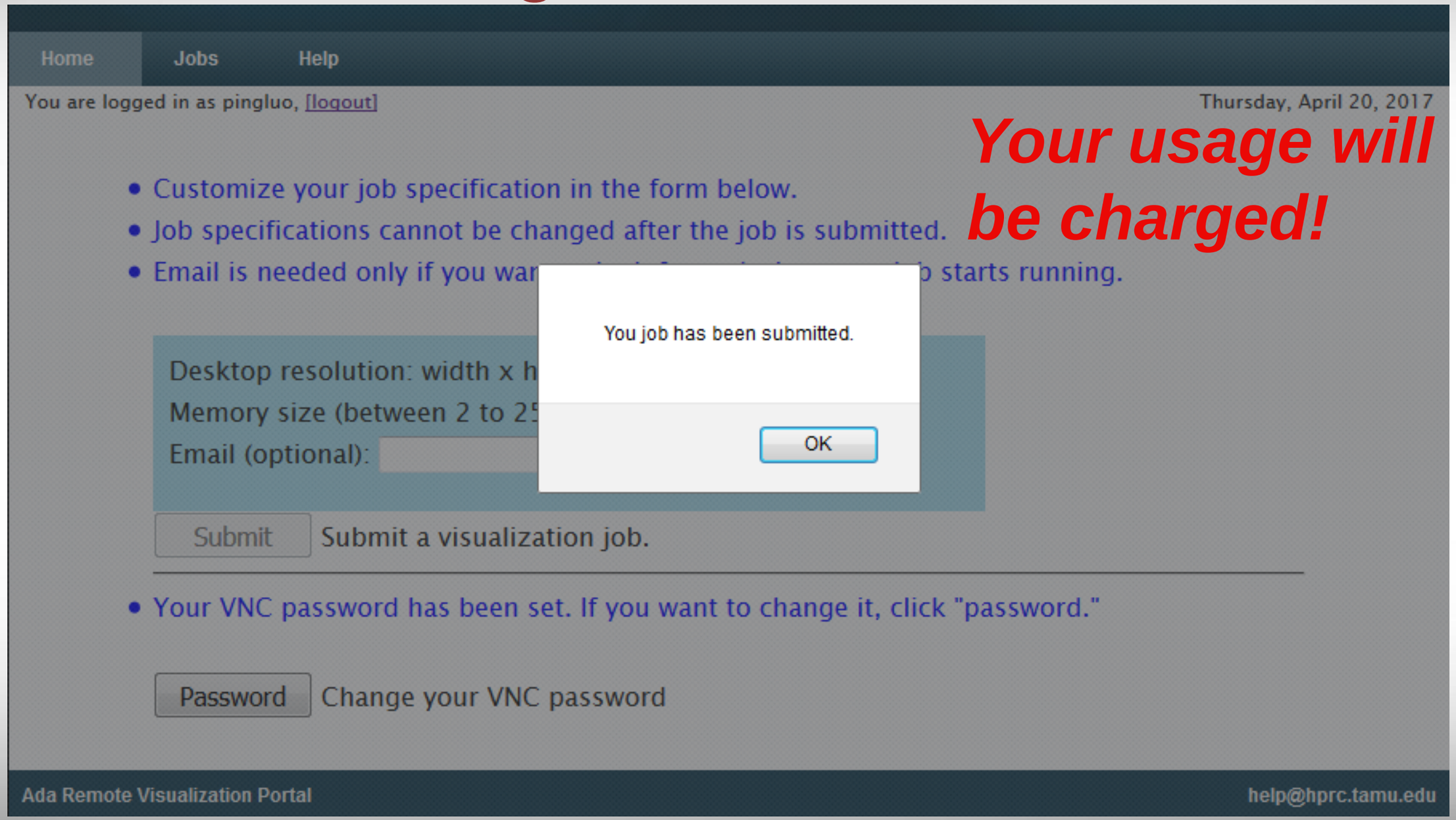


The Job Control Page

Home | Jobs | Help

You are logged in as pingluo, [logout] Thursday, April 20, 2017

- When your job starts running, click **view** to connect to the VNC server. You will be redirected to a different page.
- Type your VNC password to login into the remote desktop.
- The GUI application must be launched with **vglrun** to use hardware acceleration.
- To go back to the main page, first toggle up the control bar at the leftmost center of your screen, and then click the disconnect button  .
- Delete your job by clicking **delete** when you are done with your visualization job.

Refresh Your job 5466914 is running.

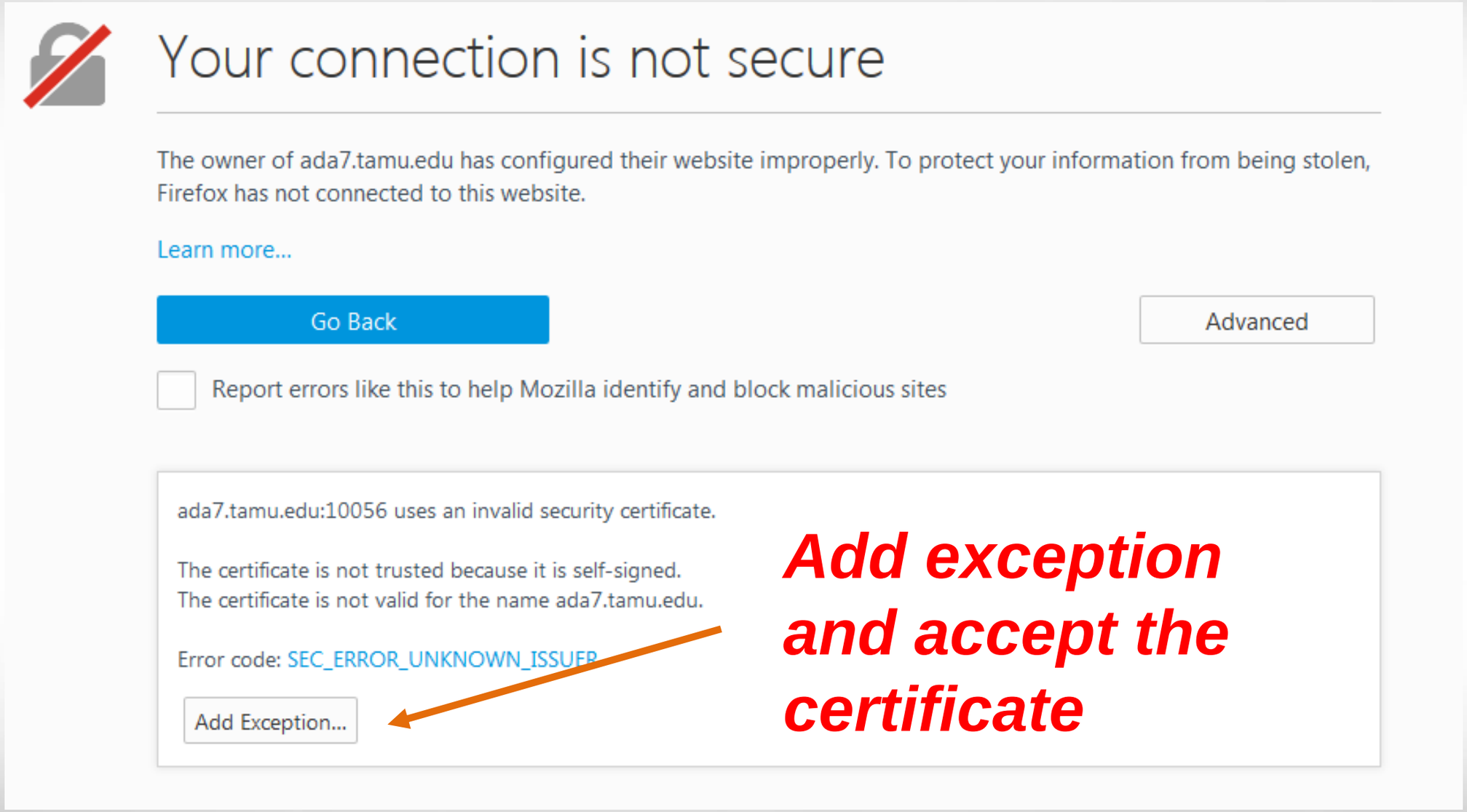
View Connect to the VNC server and start running GUI applications.

Delete Delete the visualization job.

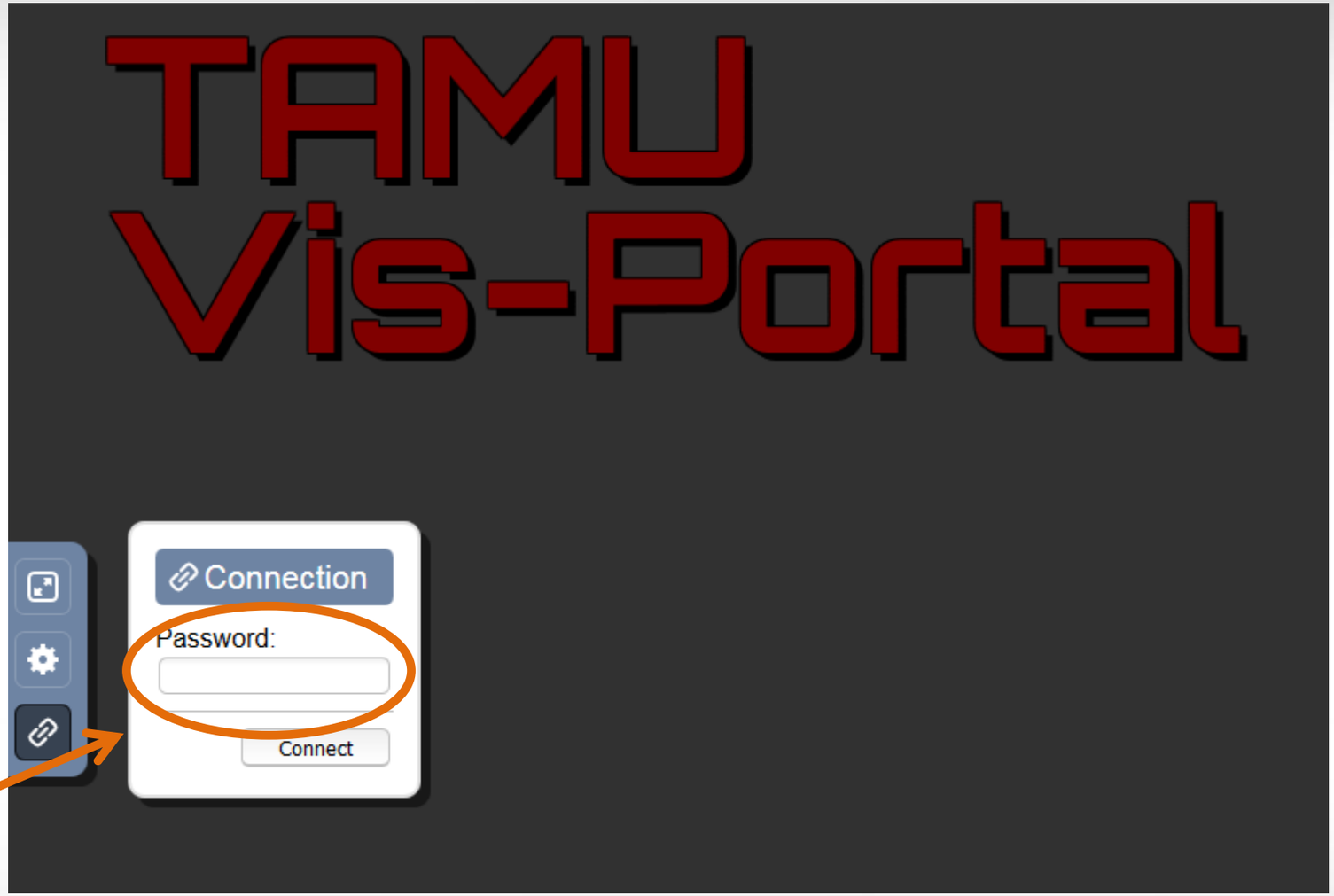
- Your VNC password has been set. If you want to change it, click "password."

Password Change your VNC password

Connecting to the VNC Server

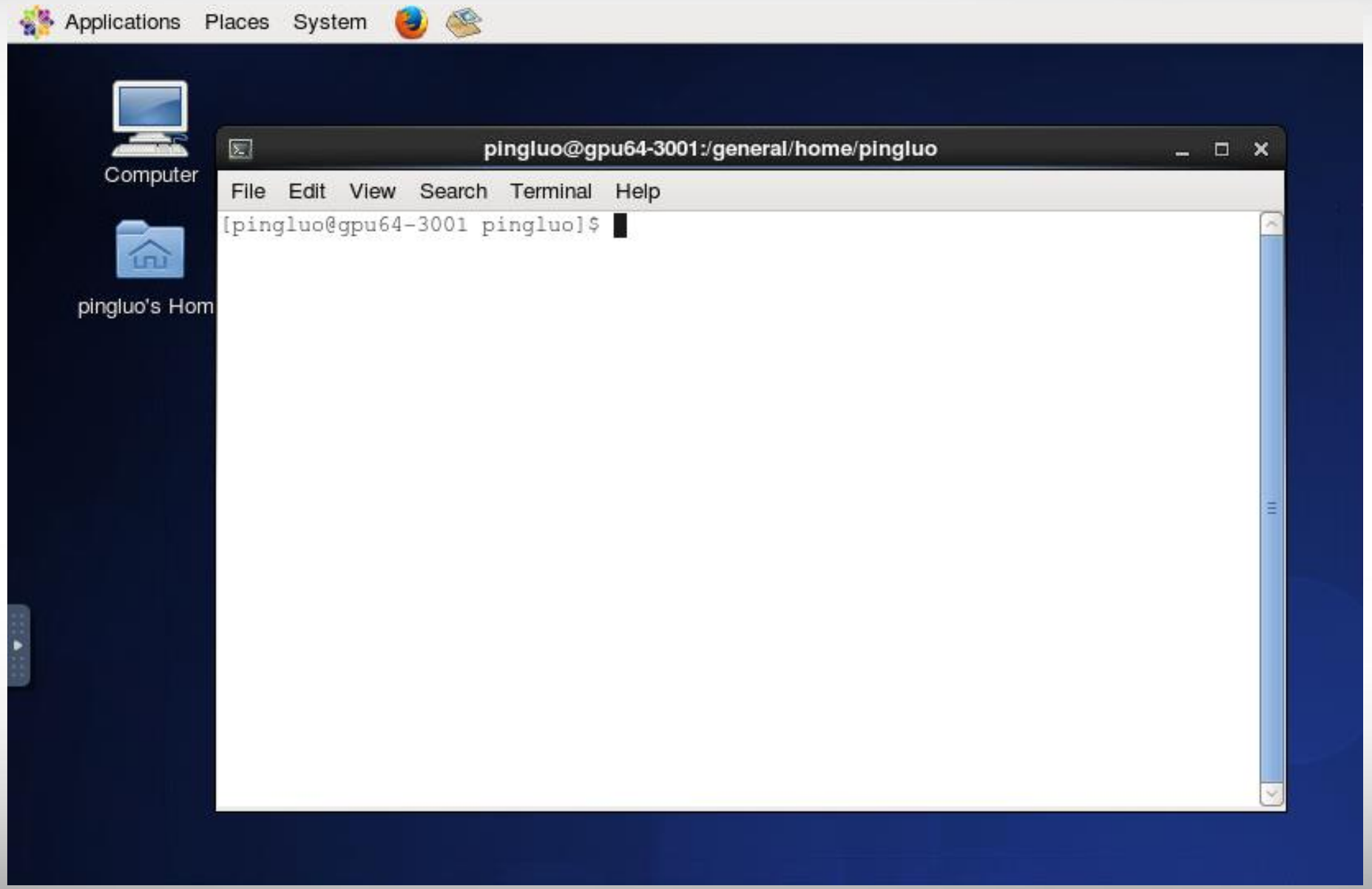


Connecting to the VNC Server



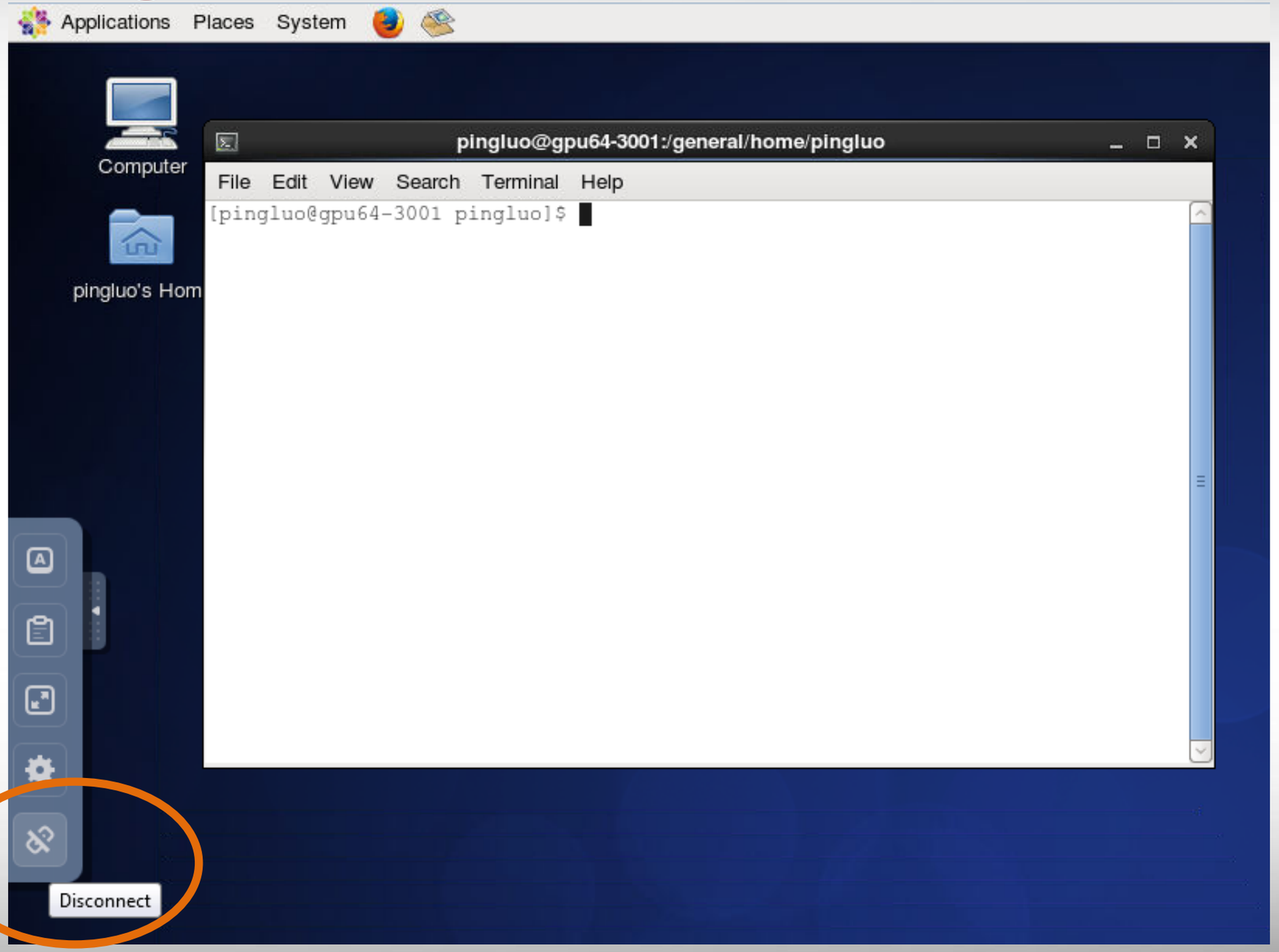
This is your VNC password.
and not your TAMU NetID password

The Remote Desktop



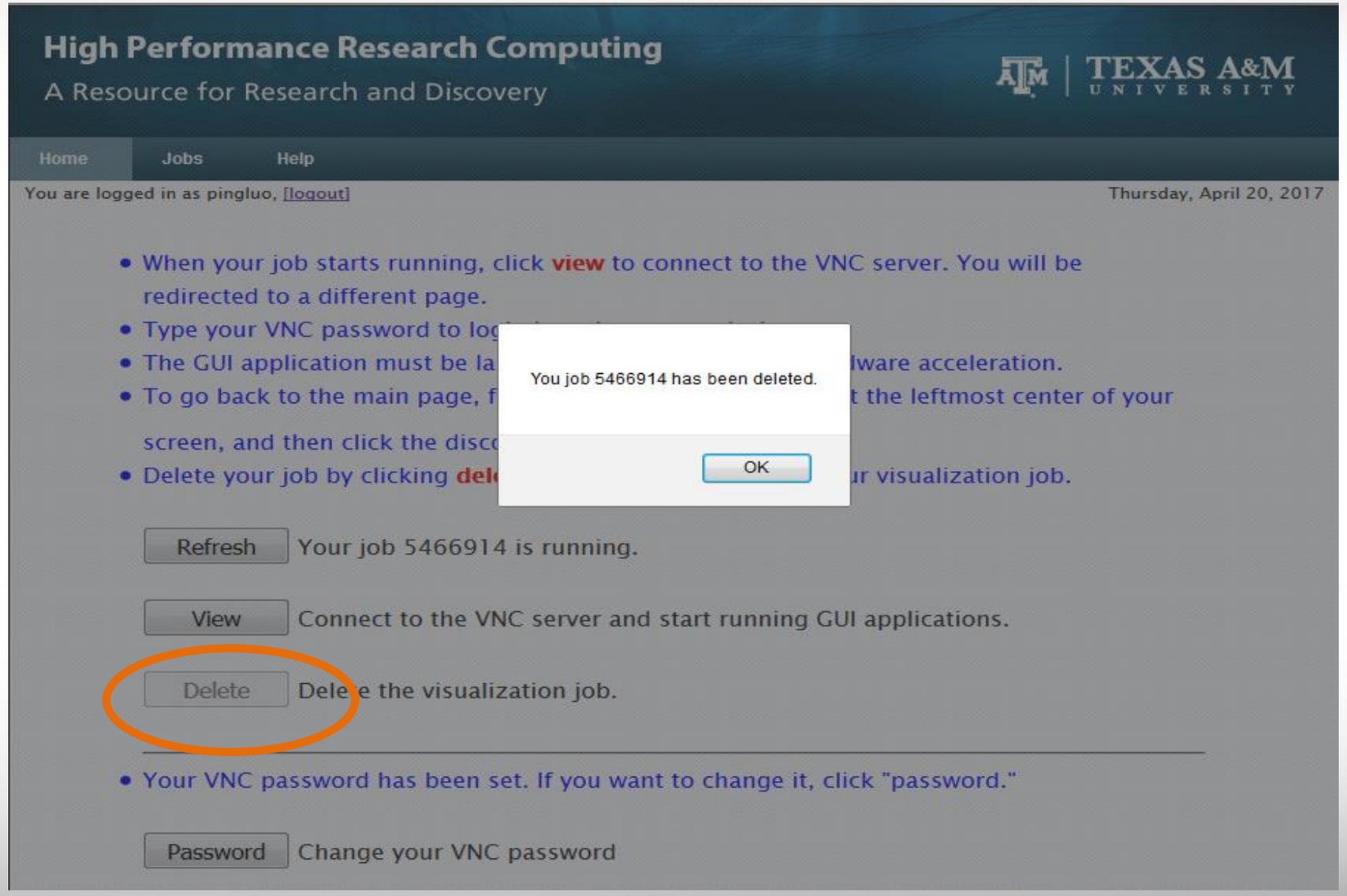
Disconnecting From the VNC Server

- Disconnecting returns the user to the job control page
- The job continues to run and can be accessed by clicking “view” on the job control page.
- Charging continues till the job is deleted from the Job Control page



Deleting a Visualization Job

- Deleting a job terminates it permanently
- Charging stops at this point
- You will be brought back to the job submission page.
- To submit a new job please repeat previous the steps



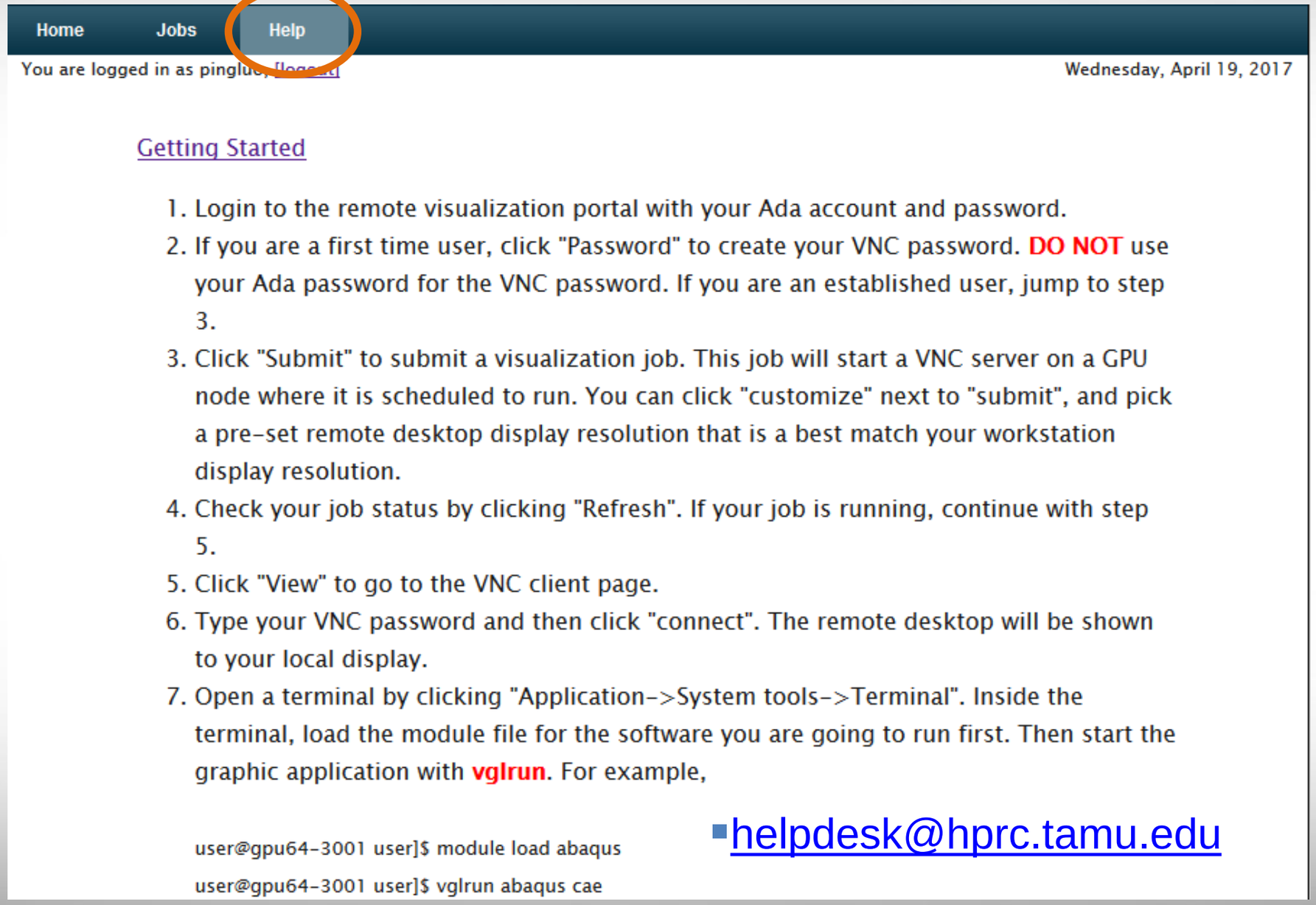
How Are SUs Charged

- Currently only one CPU core is allocated to each portal VNC job (may lift this requirement if there are needs for multiple cores)
- Maximum wall-time is 6 hours (remote visualization is for pre- and/or post-processing, not for analyzing).
- SUs are charged based on equivalent CPU cores and actual wall-time

1 SU = 1 core x 1 hour

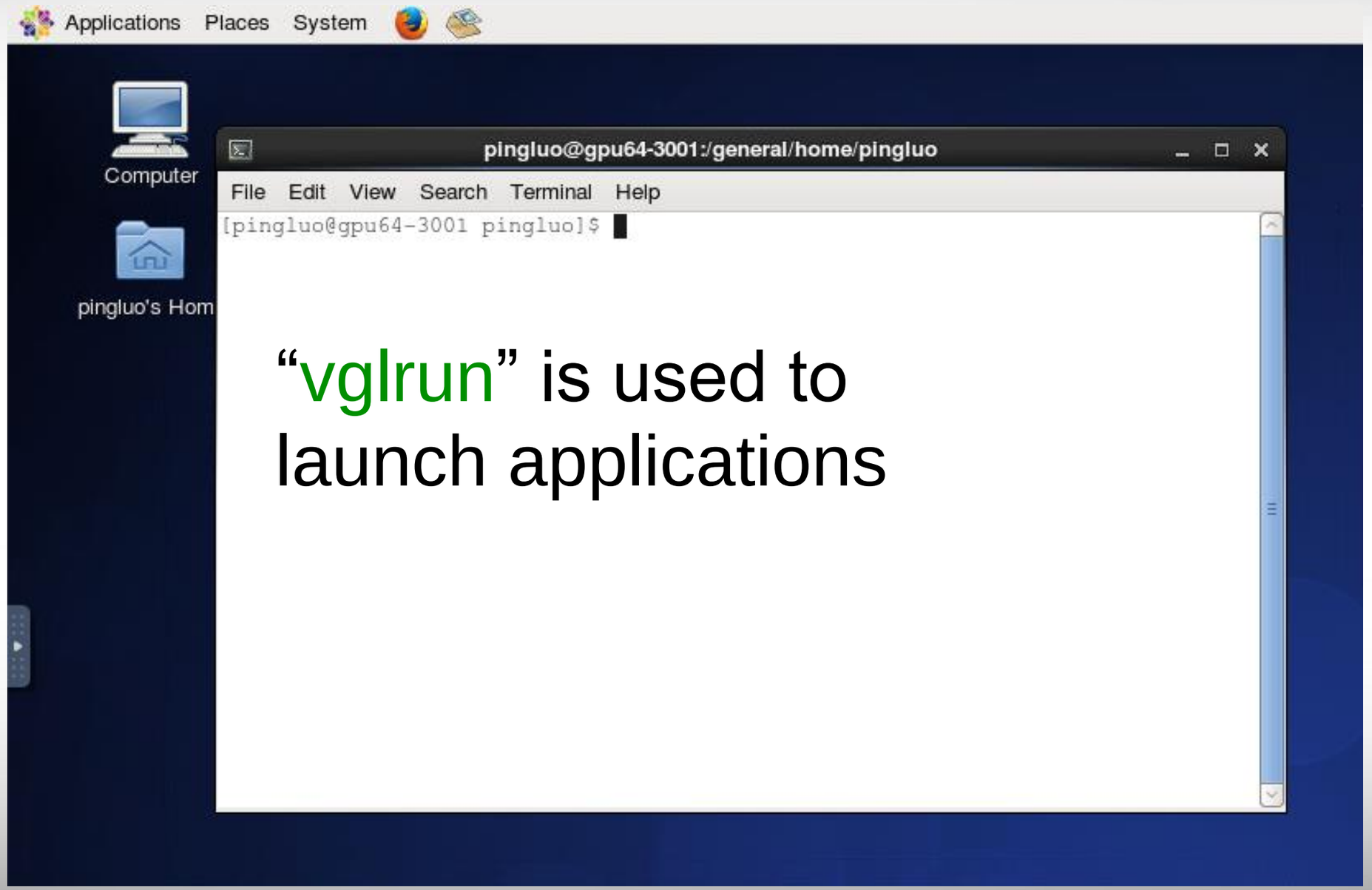
0 - 2.56G	⟺	1 core
2.56G – 5.12G	⟺	2 cores
5.12G – 7.68G	⟺	3 cores
⋮	⋮	⋮

Getting Help!

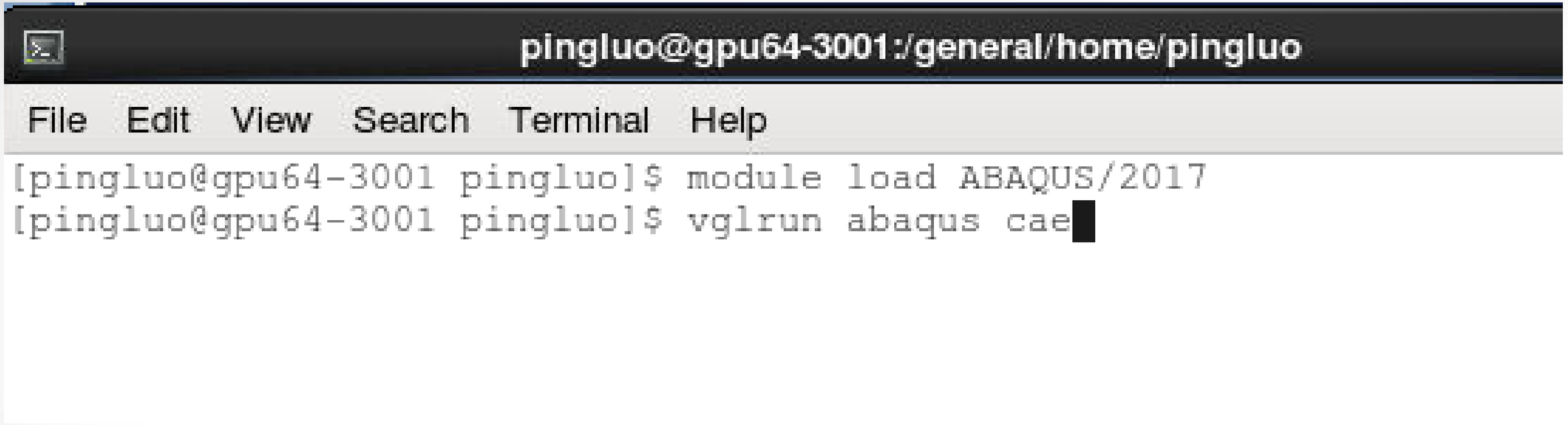


- helpdesk@hprc.tamu.edu

Launching Applications



Using Abaqus CAE



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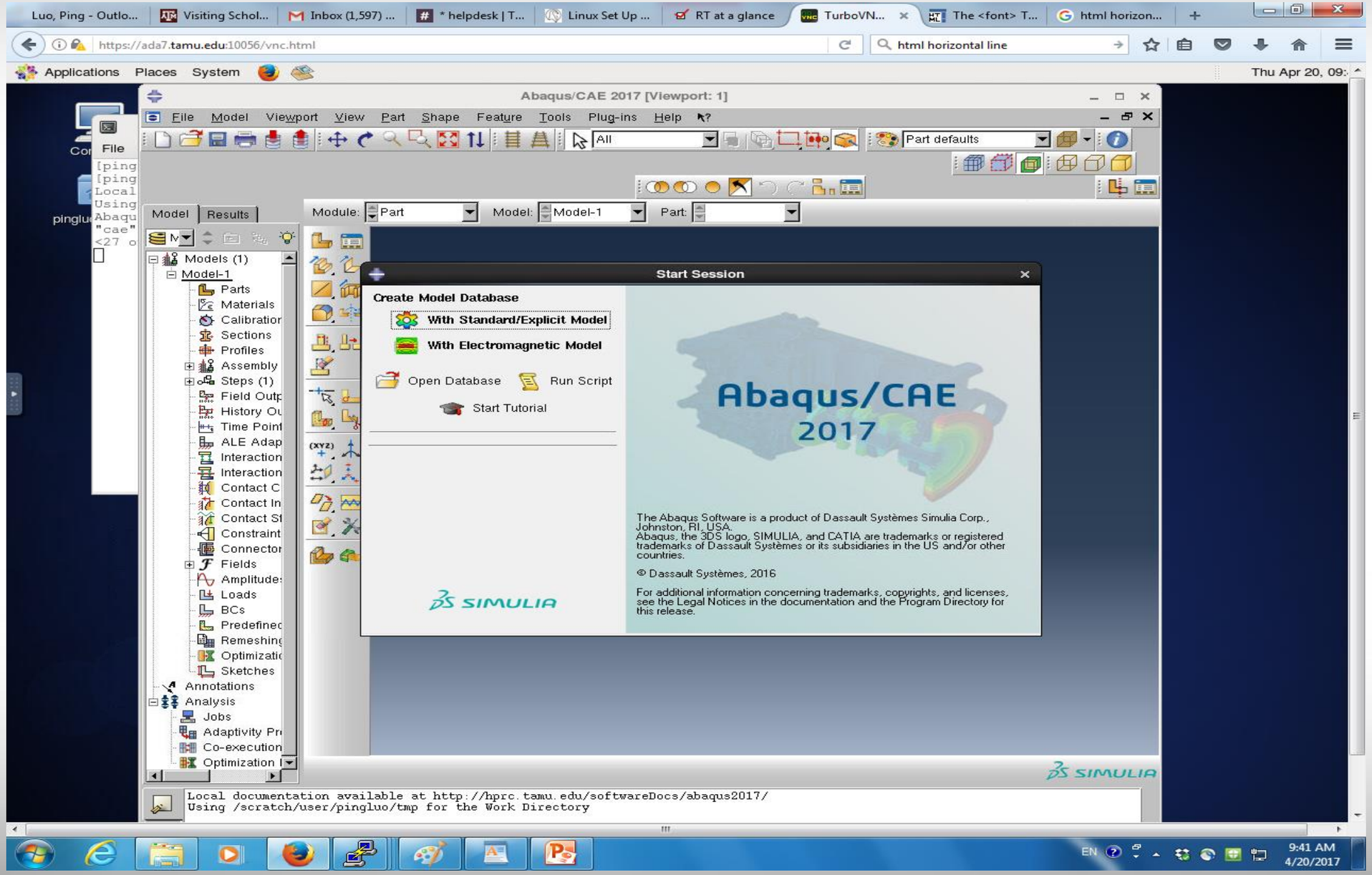
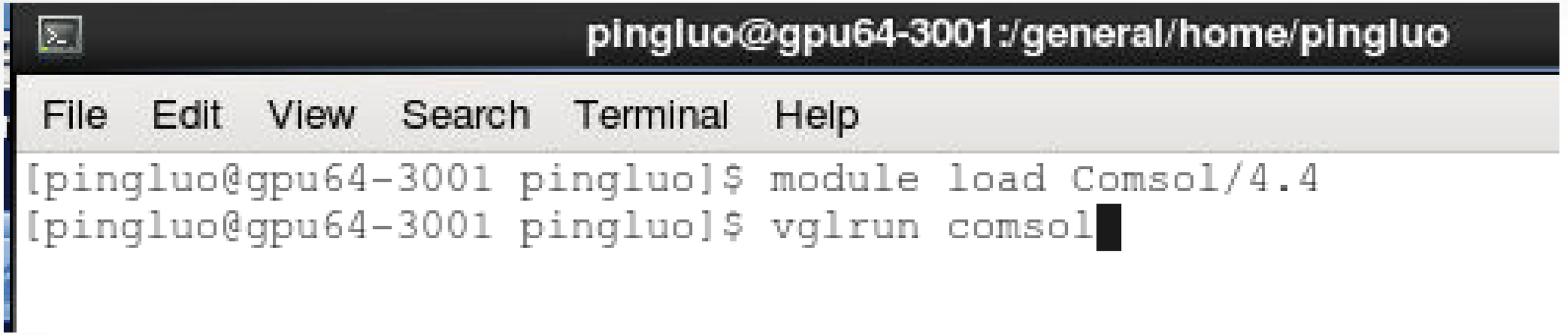


Using the Comsol GUI



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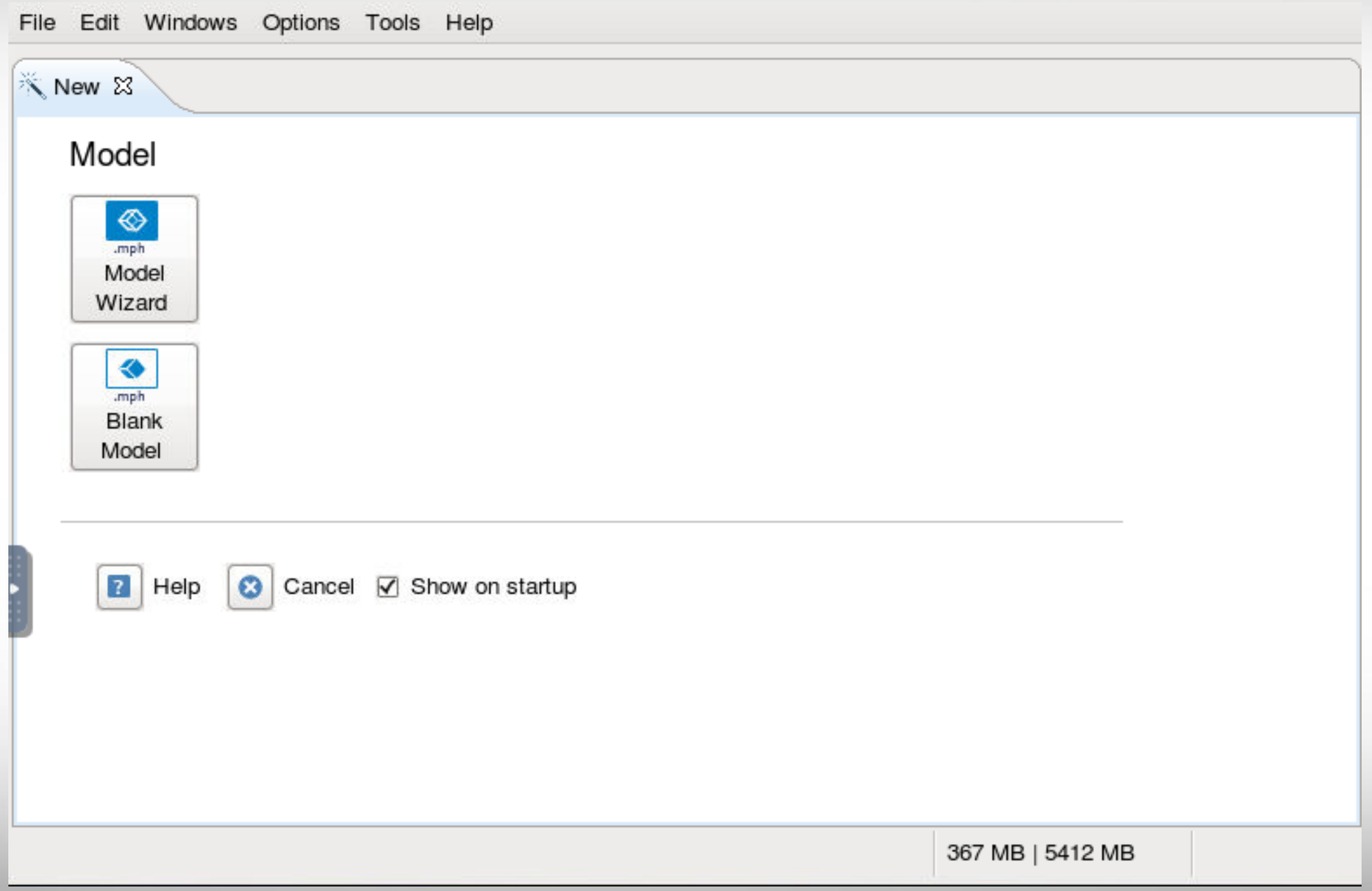
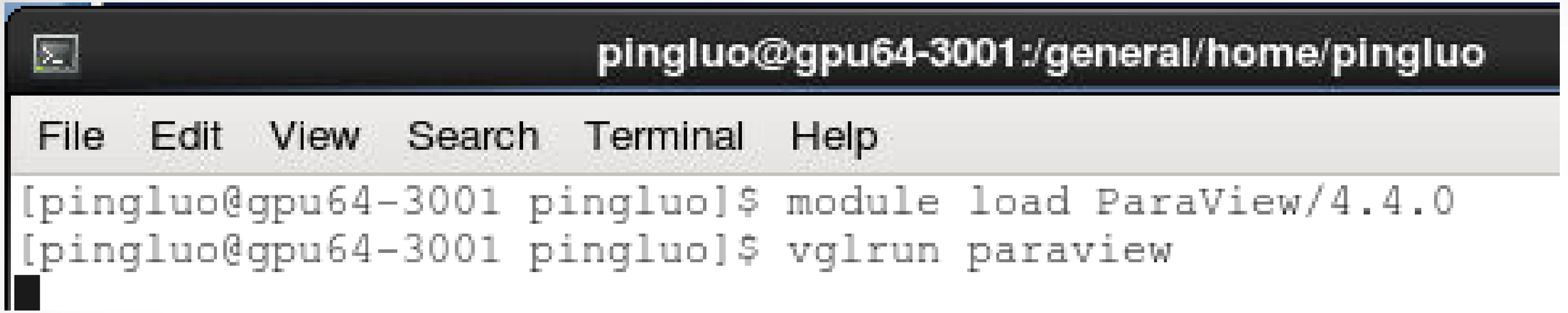


Using ParaView



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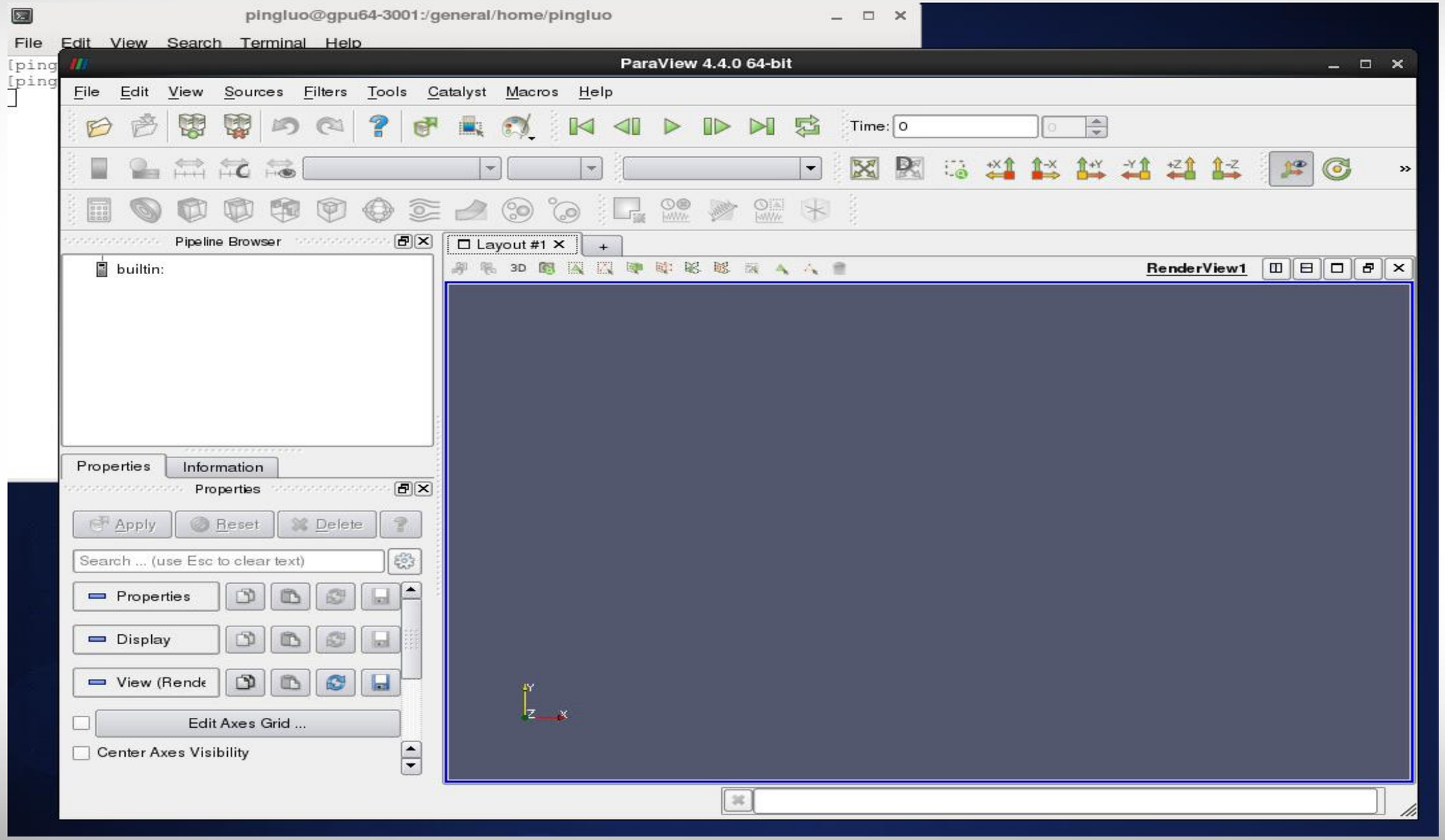

Announcements

Short course

Introduction to Databases

Wed, Apr 26
3:00 pm - 5:00 pm

Seminar

Toughness, Roughness and Crack Path Engineering for Improved Fracture Resistance
Alan Needleman
University Distinguished Professor
Koldus Building: 110
May 1, 2017: 2:00 - 03:00 pm

Research Computing Week