University of Manitoba

Digital Research Alliance of Canada

OSC OpenOnDemand portal on Grex

UofM-Fall-Workshop 2022

October 2022

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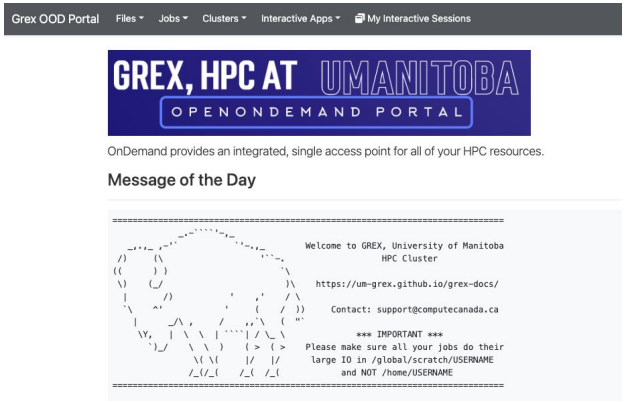
What Is OpenOnDemand

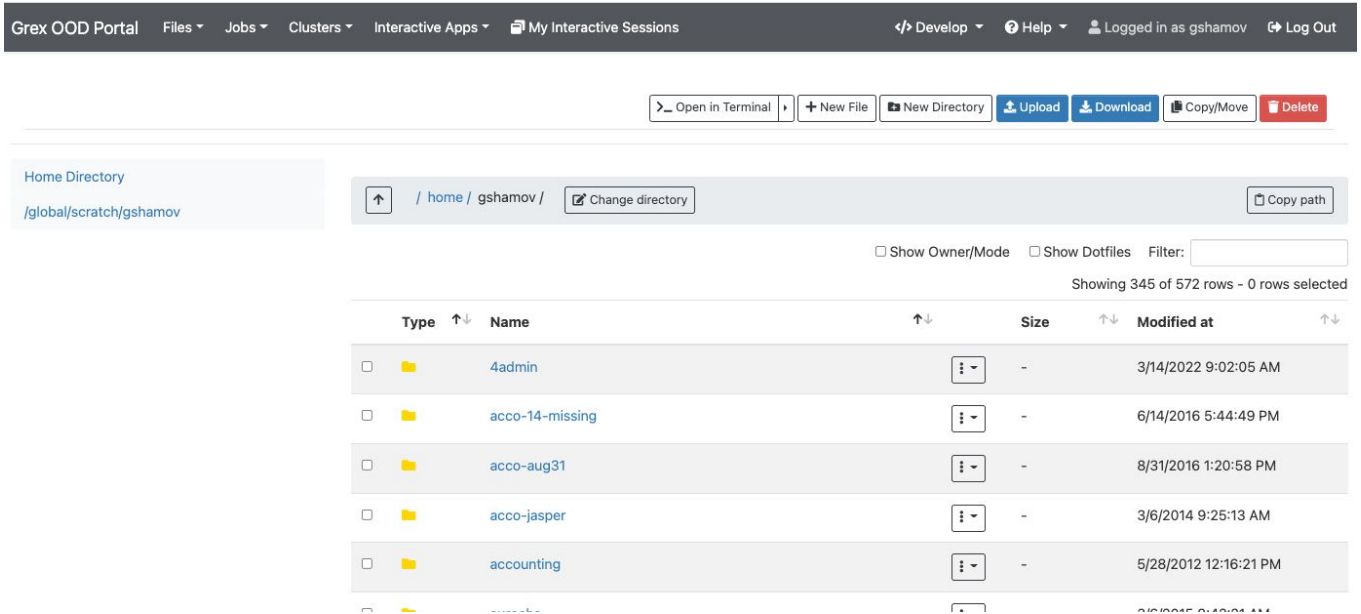
- https://openondemand.org/ is an HPC Web portal, or a browser GUI for HPC systems
  - File management
  - Command-line shell access
  - Job management and monitoring across different batch servers and resource managers
  - Graphical desktop environments and desktop applications
- On Grex:
  - ~~https://aurochs.westgrid.ca~~ https://aurochs.hpc.umanitoba.ca
  - Still uses CCDB user IDs, not UMNetID !
  - Available from within Campus network, or when on UM VPN
    - https://umanitoba.ca/computing/ist/connect/virtualpn.html
- Demo..



Working with Files

https://aurochs.hpc.umanitoba.ca is an HPC Web portal, or a browser GUI for Grex

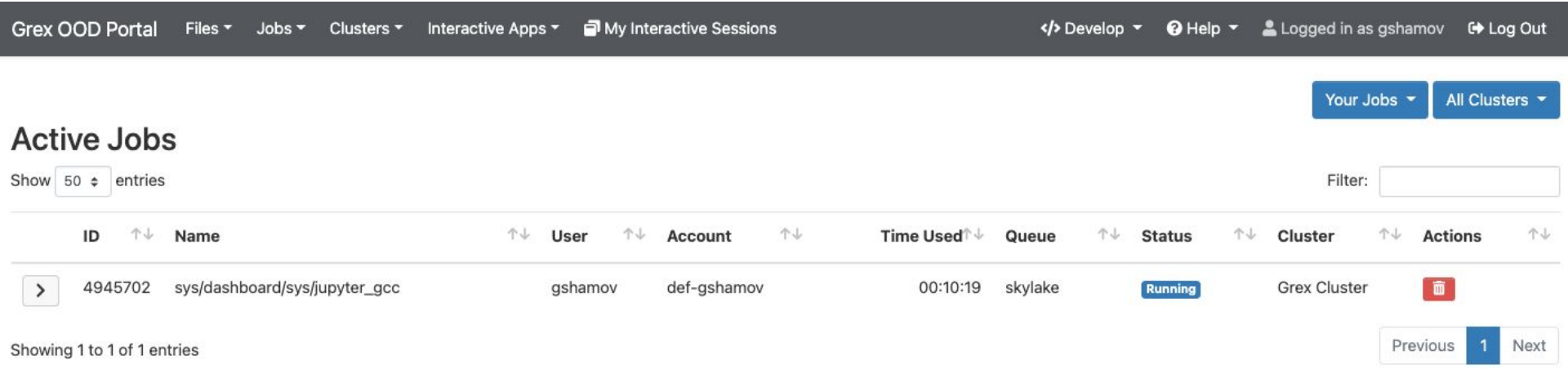
- File browser in Web browser



Browsing Queue status, submitting jobs

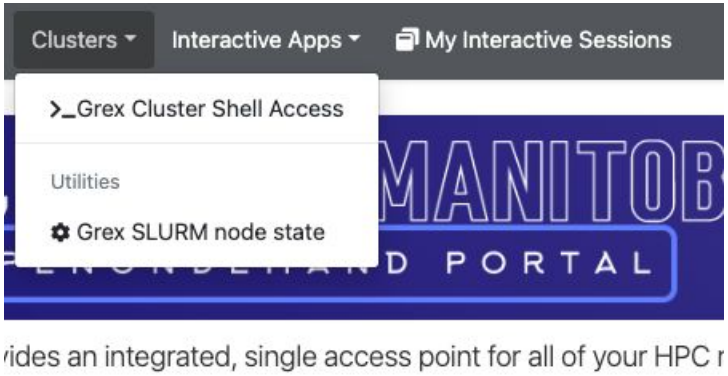
https://aurochs.hpc.umanitoba.ca is an HPC Web portal, or a browser GUI for Grex

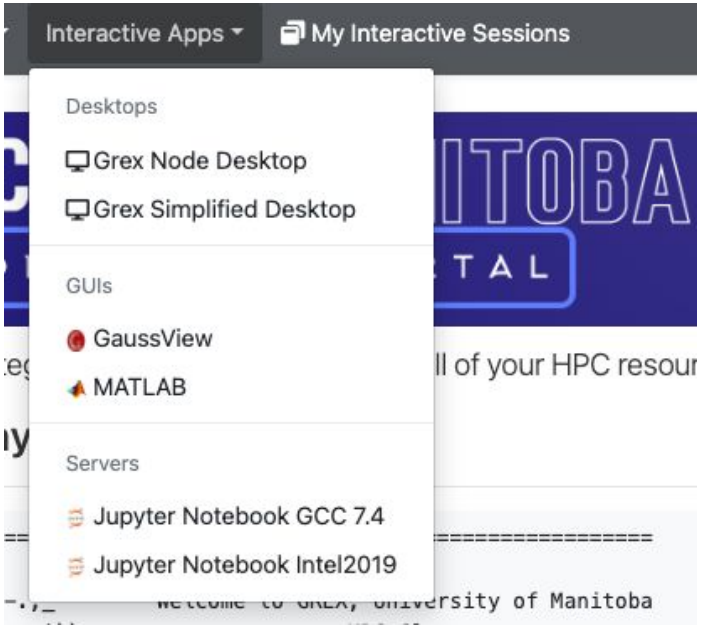
- Browser for the jobs in queue
- Allows for submitting job scripts from Web browser too. (But Apps are better)



Desktops, Shells and Apps

- https://aurochs.hpc.umanitoba.ca is an HPC Web portal, o ra browser GUI for Grex
  - Simple SSH shell in-browser, on a login node is available
  - Desktops
    - on compute nodes (Lightweight GUIs like on X2go)
    - On special test node (Easiest, better GUIs)
  - Apps: GV, Matlab, Jupyter Notebooks

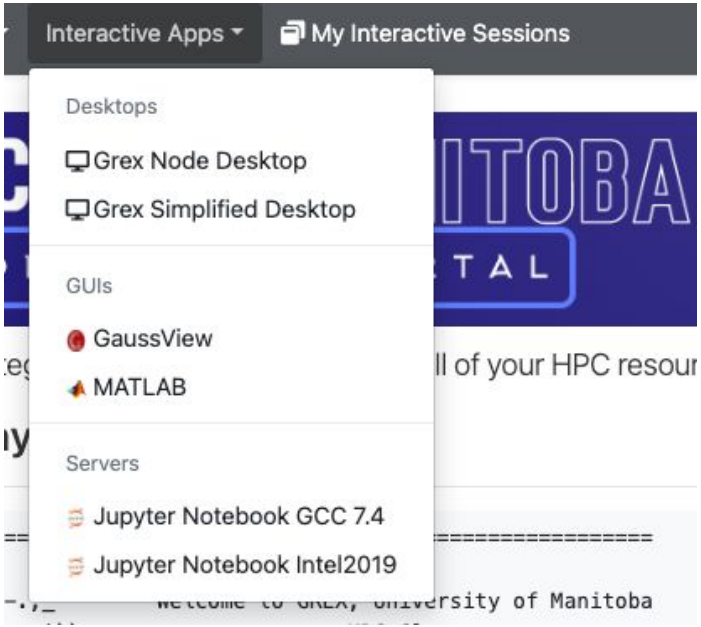




Desktops, Shells and Apps

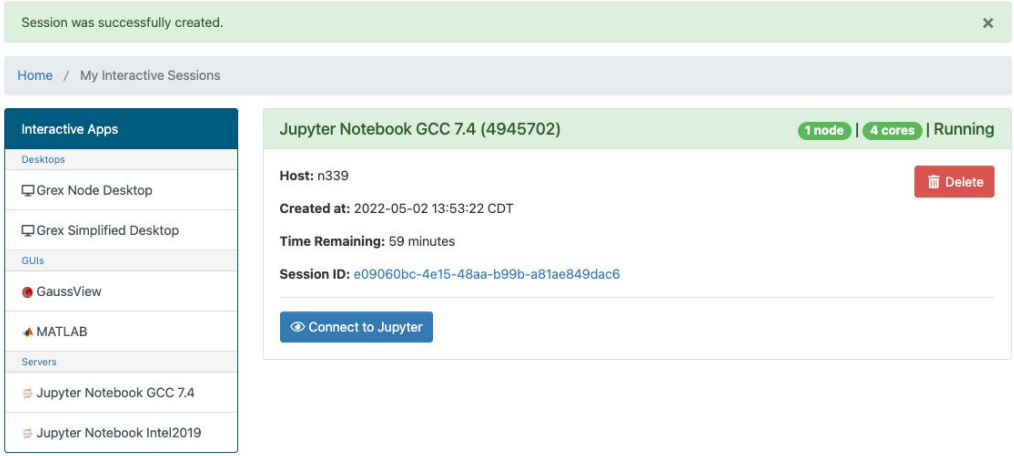
- https://aurochs.hpc.umanitoba.ca is an HPC Web portal, or a browser GUI for Grex

- Desktops for contributed partitions
  - For Research groups that contribute hardware
  - Only visible for the group members
  - Presently, work as SImplified GPU desktop



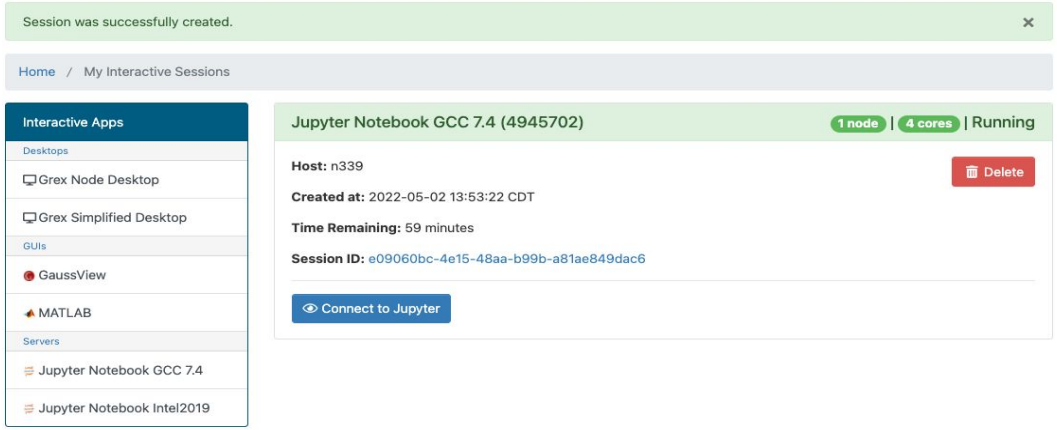
Interactive Sessions, Desktop Apps

- https://aurochs.hpc.umanitoba.ca is an HPC Web portal, ora browser GUI for Grex
  - Apps and Desktops are running as SLURM jobs
  - Jobs create Interactive Sessions when start.
  - Desktop Sessions (like, Matlab or GaussView) talk to OOD Portal via NoVNC protocol. You can connect to Sessions, terminate them etc.

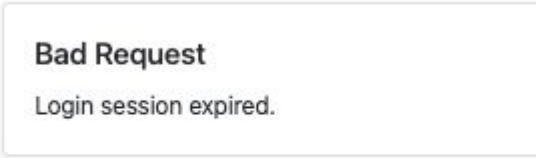


Interactive Sessions example, JupyterLab

- https://aurochs.hpc.umanitoba.ca is an HPC Web portal, or a browser GUI for Grex
  - Apps and Desktops are running as SLURM jobs
  - JuPyteR is an example of a server application
  - JuPyteR Web notebook/sessions are forwarded via OOD's proxy mechanism
  - Some "Kernels" (R, Julia, etc.) need to be user-installed first!
  - https://docs.alliancecan.ca/wiki/JupyterNotebook#Adding_kernels



FAQ, Issues etc.



- https://aurochs.hpc.umanitoba.ca/ gives a Bad Request message to the left:
  - Old Dex session it kept in browser cache; clean cache, restart browser
  - Re-type aurochs.hpc.umanitoba.ca w/o the session key parameter
- Timeout messages when loading Desktop Apps or starting jobs
  - Keep hitting Reload
  - Use “test” partition for simple Desktop
- No /home and /global/scratch for new Grex users
  - Connect first time via command line SSH; a script creates them on first SSH login
- Inconvenient time limits for Desktop app
  - Contact us, we are now trying to optimize these things
- An Application X would be useful to have on Grex
  - Contact us, we are working on expanding the list of Apps.