O2

Overview

O2 is a new platform for Linux-based high performance computing at Harvard Medical School. The name is derived from being the next generation of the HMS “Orchestra” cluster, hence “O2”.

- O2 is managed by the Research Computing Group, part of HMS IT.
- O2 is an HPC cluster built on Linux and the Slurm open source job scheduler.
- Please submit a request for O2 help or feedback.
- Follow us on Twitter for updates and alerts about service outages.

Getting Started with O2 and Slurm

- Basic guide to O2 and the Slurm job scheduler
- Switching workflows from Orchestra to O2
- How to login to O2
- Frequently Asked Questions about O2

O2 Jobs and the Slurm scheduler

- How to choose a partition (the Slurm equivalent to job queues in LSF)
- Troubleshooting your O2 jobs
- Parallel Jobs in O2
- Using O2 GPU resources
- O2 HPC Cluster and Computing Nodes Hardware Information
- Job Priority
- Examples of O2 commands
- Get information about current and past jobs

Software and Programming on O2

- Using research applications on O2
- Using Matlab on O2
- Using Mathematica on O2
- Using Conda on O2
- Using Java on O2
- Maintain your own library of software for different languages
  - Personal Python packages
  - Personal R packages
  - Personal Perl packages
- Installing custom software
- Using Genome Browsers (IGV, UCSC Genome Browser)

General UNIX Information

- Using X11 applications remotely
- UNIX permissions tutorial
- O2 cron service

Cluster Status

Our cluster status page has details of service outages and planned maintenance.

Starting on Monday Dec 3 2018, all O2 cluster logins from outside of the HMS network will start requiring two-factor authentication.

We will have a special office hours on Mon Dec 3 (2-4p) to help with two-factor authentication in Gordon Hall suite 500. Come visit with your questions!

For more details, please see:

Two Factor Authentication on O2

Community Events

User Training

- Classes are offered each semester to the HMS community to help you ramp up your research skills!
- Please check the User Training page for courses, dates, and registration

Office Hours

- RC’s Office Hours are held every Wednesday, 1 - 3 PM in Gordon Hall Suite 500
- Please contact us first with a support request before dropping in at office hours so we can better help you!

Intermediate Slurm

- Research Computing Group custom workflows
- Get more informative slurm email notification
- Report CPU/Mem usage in slurm job standard output
- Globus Connection Personal from command line
- screen: go back to the same terminal window from anywhere, anytime
- tmux: go back to the same terminal window from anywhere, anytime
- Install and run HiC-Pro-2.10.0
- Install and run salmon-0.10.0 and Trinity-2.6.6

Grants and Citation Information

- Text about Research Computing and O2 for grant applications
- Published papers that cite HMS Research Computing resources
Data Storage

- There are a number of storage options available for research data.
- Copying files to and from O2 (including downloading from websites)
- If you had an Orchestra account, you will get access to the same home directory and shared network storage from O2.

Search this documentation

- documentation-space-sample
- featured

Popular Topics

Content by label

There is no content with the specified labels

Recently Updated Pages

- Two Factor Authentication on O2 yesterday at 5:27 PM • updated by Prasad, Bhanu • view change
- Two Factor Authentication on O2 yesterday at 4:43 PM • updated by Bergman, Andrew L. • view change
- Two Factor Authentication FAQ yesterday at 3:39 PM • updated by Keating, Kathleen M • view change
- O2 Cluster Status yesterday at 1:57 PM • updated by Bergman, Andrew L. • view change
- Two Factor Authentication on O2 yesterday at 11:35 AM • updated by Karger, Amir • view change