

O2 Portal – Simplifying the Interaction and Experience of Using an HPC Environment

RC INFO SESSION | 10/04/22

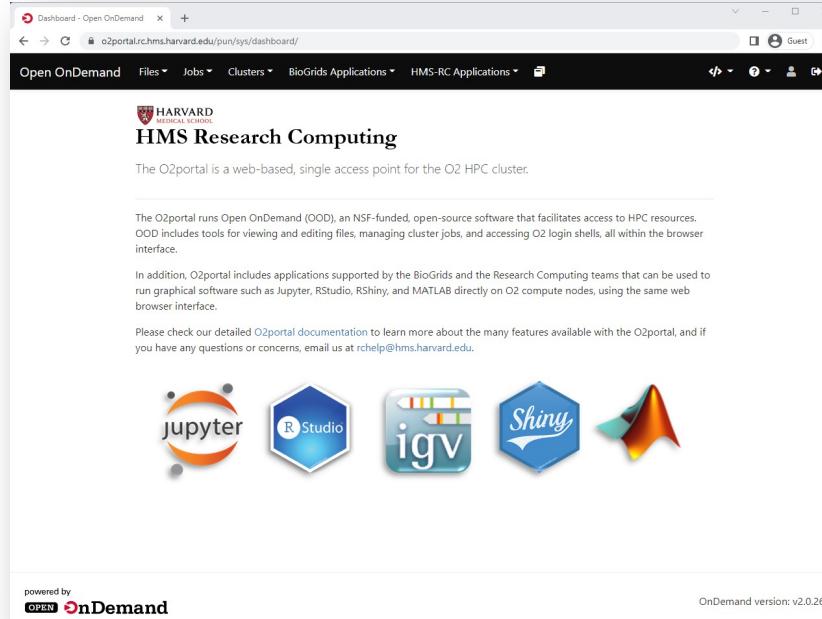


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O2 portal – O2 web-based access point

- Powered by Open OnDemand



The screenshot shows a web browser window titled "Dashboard - Open OnDemand". The address bar indicates the URL is o2portalrc.hms.harvard.edu/pun/sys/dashboard/. The page header includes the Harvard Medical School logo and the text "HMS Research Computing". Below the header, a sub-header states: "The O2portal is a web-based, single access point for the O2 HPC cluster." A detailed description follows: "The O2portal runs Open OnDemand (OOD), an NSF-funded, open-source software that facilitates access to HPC resources. OOD includes tools for viewing and editing files, managing cluster jobs, and accessing O2 login shells, all within the browser interface." It also mentions: "In addition, O2portal includes applications supported by the BioGrids and the Research Computing teams that can be used to run graphical software such as Jupyter, RStudio, RShiny, and MATLAB directly on O2 compute nodes, using the same web browser interface." At the bottom, there is a note: "Please check our detailed O2portal documentation to learn more about the many features available with the O2portal, and if you have any questions or concerns, email us at rchelp@hms.harvard.edu." Below this note are icons for Jupyter, R Studio, igv, Shiny, and MATLAB. The footer of the page includes the text "powered by OPEN OnDemand" and "OnDemand version: v2.0.26".

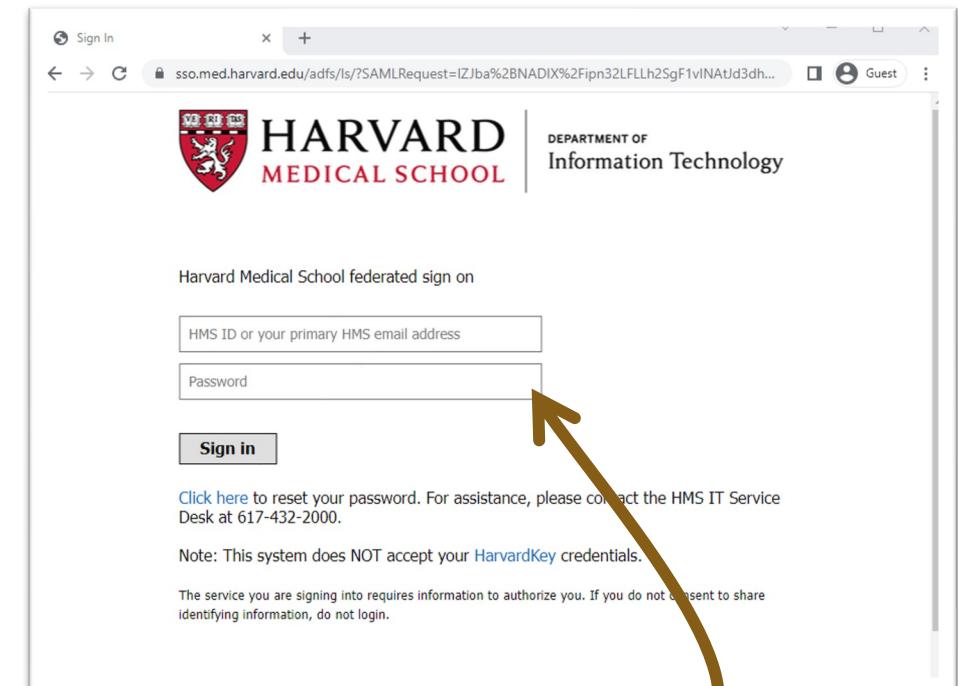


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Requirements to Access the O2 Portal

- O2 account
- Setup 2FA authentication



Authenticate with HMS ID



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Transfer Files



Submit Jobs



Monitor Jobs



Terminal



View/Edit Files



Applications



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Transfer Files

Upload

Open OnDemand Files ▾ Jobs ▾ Clusters ▾ BioGrids Applications ▾ HMS-RC Applications ▾ My Interactive Sessions ? Help ▾ Logged in as rc_training01 Log Out

Open in Terminal + New File + New Directory **Upload** Download Copy/Move Delete

Home Directory

Scratch

data1

data2

groups

no_backup2

Drop files here, [browse files](#) or
[browse folders](#)

Empty directories will be included in the upload only when a directory upload is initiated via drag and drop. This is because the File and Directory Entries API is available only on a drop event, not during an input change event.

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OPEN OnDemand

OnDemand version: v2.0.26



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Download

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Open in Terminal + New File New Directory Upload Download Copy/Move Delete

Home Directory

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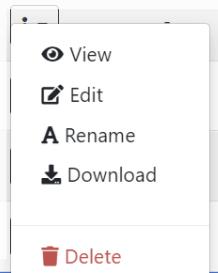
no_backup2

Up / home / rc_training01 / Change directory Copy path

Show Owner/Mode Show Dotfiles Filter:

Showing 5 of 16 rows - 1 rows selected

Type	Name	Size	Modified at
Folder	ondemand		8/8/2022 5:01:26 PM
Folder	programs		8/8/2022 4:00:36 PM
Folder	R		8/8/2022 5:09:16 PM
Folder	tissue_project		8/8/2022 3:59:27 PM
File	rstudio_launcher.sh	0 Bytes	8/8/2022 4:01:16 PM



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OPEN OnDemand

OnDemand version: v2.0.26



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View/Edit Files



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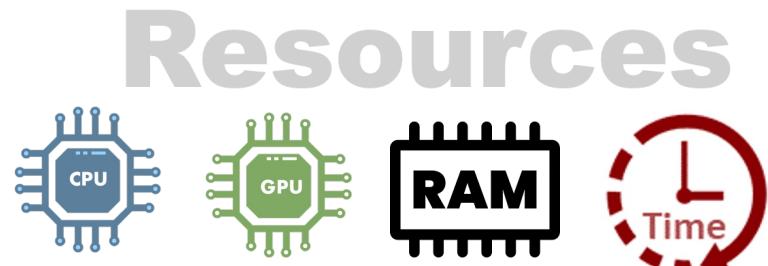
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Submit Jobs

A job is a **resource** request sent to O2 via the O2 Portal containing one or more **tasks**.



Launch Application



Data Analysis



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Monitor Jobs

Open OnDemand Files ▾ Jobs ▾ Clusters ▾ BioGrids Applications ▾ HMS-RC Applications ▾ **My Interactive Sessions** Help ▾ Logged in as rc_training01 Log Out

RStudio Environment (59163745)

Created at: 2022-08-08 17:03:32 EDT

Time Requested: 1 hour

Session ID: 9ce067da-658d-42e0-bad0-6879fbb5d766

Host: compute-a-16-160.o2.rc.hms.harvard.edu

Created at: 2022-08-08 17:03:32 EDT

Time Remaining: 56 minutes

1 node | 1 core | **Running**

Queued

Job Status

>Delete

Delete

Connect to RStudio Server

The screenshot shows a session card for an RStudio Environment. At the top, it says 'RStudio Environment (59163745)' and 'Created at: 2022-08-08 17:03:32 EDT'. Below that is a green bar with '1 node | 1 core | **Running**'. To the right of the bar is a red box containing the word 'Queued'. A large red arrow points from the text 'Job Status' to the 'Running' button. At the bottom of the card is a blue button labeled '(R) Connect to RStudio Server'.



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The O2portal is a web-based, single access point for the O2 HPC cluster.

The O2portal runs Open OnDemand (OOD), an NSF-funded, open-source software that facilitates access to the O2 HPC cluster.

Host: transfer.rc.hms.harvard.edu
running kernel 3.10.0 born on 2020-08-11

Host: o2.hms.harvard.edu
running kernel 3.10.0 born on 2021-09-27

News (Jan 3 2022)

RC Core launch

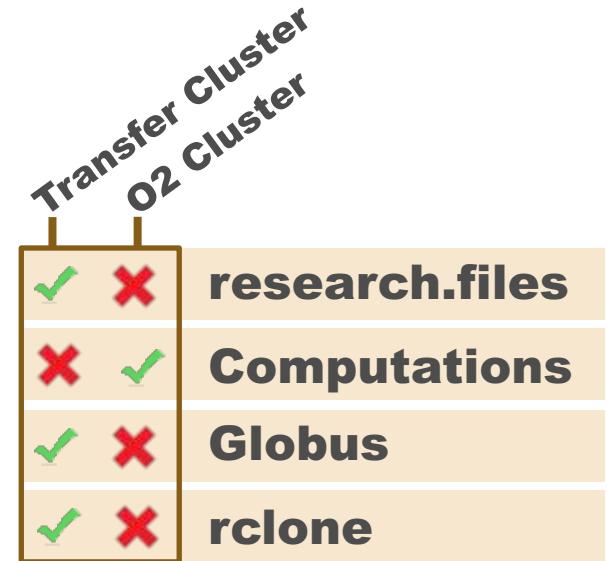
Since July 2021, researchers whose PI does not have a primary or secondary faculty appointment in an HMS Basic or Social Science Department will incur charges to their lab for O2 usage. Details at: it.hms.harvard.edu/rc/core

Contact HMS Research Computing:

E-mail rchelp@hms.harvard.edu
Web it.hms.harvard.edu/rc
Twitter @hms_rc

[rc_training01@transfer06 ~]\$

[rc_training01@login02 ~]\$



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Open in Terminal + New File New Directory Upload Download Copy/Move Delete

Home Directory

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/ home / rc_training01 / Change directory Copy path

Show Owner/Mode Show Dotfiles Filter: Showing 3 of 9 rows - 0 rows selected

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View Edit Rename Download Delete

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View/Edit Files



Applications



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Applications

- Two sets of scientific software applications provided by BioGrids and HMS Research Computing

BioGrids Applications	
GUIs	
	IGV
	IDE
	Jupyter
	RStudio

HMS-RC Applications	
GUIs	
	Desktop Mate
	MATLAB
	IDE
	Jupyter
	MATLAB-proxy-app
	RStudio Environment
	Shiny (Internal)



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Applications

1. Select Application



2. Specify Resources



3. Launch Application

Launch



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Contact Information

 Email: rchelp@hms.harvard.edu

 Website: <https://it.hms.harvard.edu/rc>

 Phone: 617-432-2000 (HMS IT Service Desk, 8a-5p)

 Twitter: http://twitter.com/hms_rc

 Location: 1635 Tremont Street

 Office hours: Wednesdays 1:00-3:00 pm (Currently via Zoom - <https://rc.hms.harvard.edu/office-hours>)



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