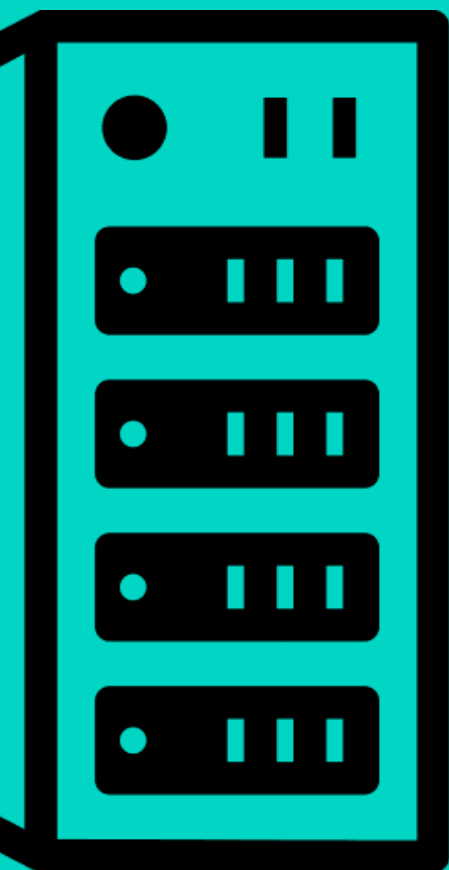


CRESCO ONDEMAND



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CREATING AND SUBMITTING A JOB
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MONITORING INTERACTIVE APPS

OPEN

 **nDemand**

INTRODUCTION

Open OnDemand (OOD) is a web portal that provides easy and interactive access to high-performance computing (HPC) resources, without the need to use the command line. Through a simple web interface, users can:

- Explore files and folders
- Run jobs on SLURM
- Launch interactive applications (Jupyter, RStudio, MATLAB, etc.)
- Use web terminals
- Upload and download files

Let's explore each point.

The portal is available at:

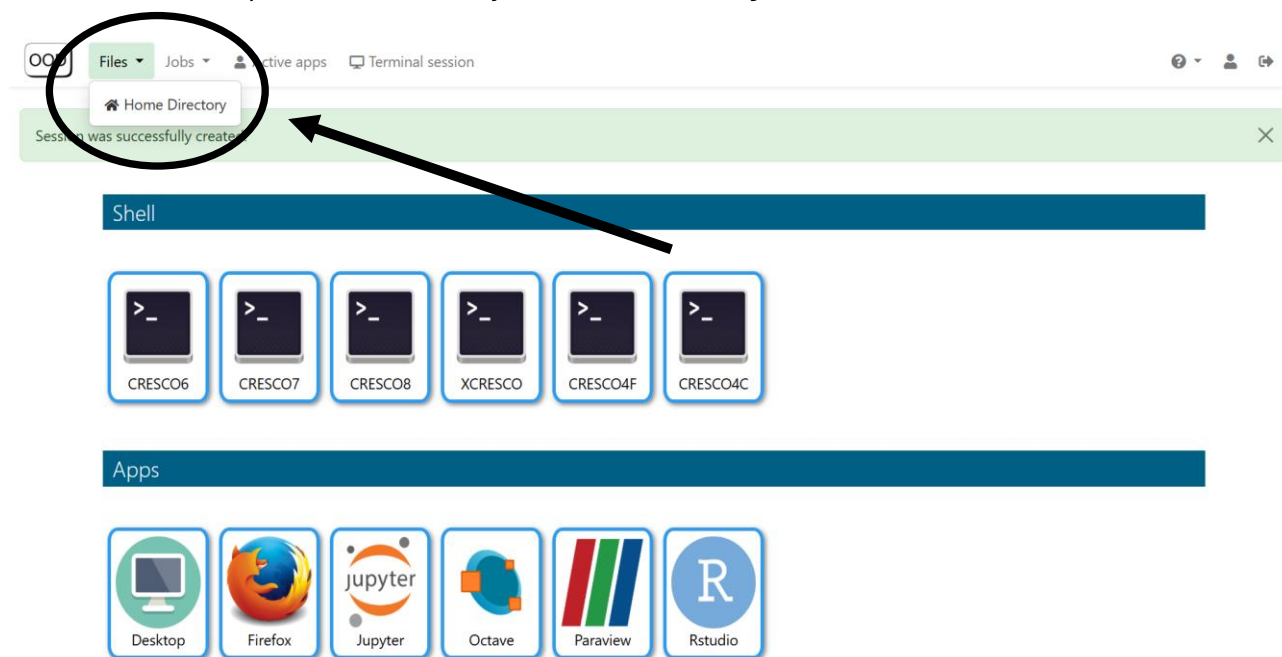
<https://cresco-ondemand.portici.enea.it/>

EXPLORING FILES AND FOLDERS

One of the main features of Open OnDemand is access to and management of files through an intuitive web interface. You can explore your personal space, upload or download files, create directories, edit text documents, and more.

As soon as you access the "Files" section by clicking on the menu at the top left, your **Home Directory** is displayed, which is your personal user directory located on the central filesystem.

The "Files" section provides access to your **Home Directory**:

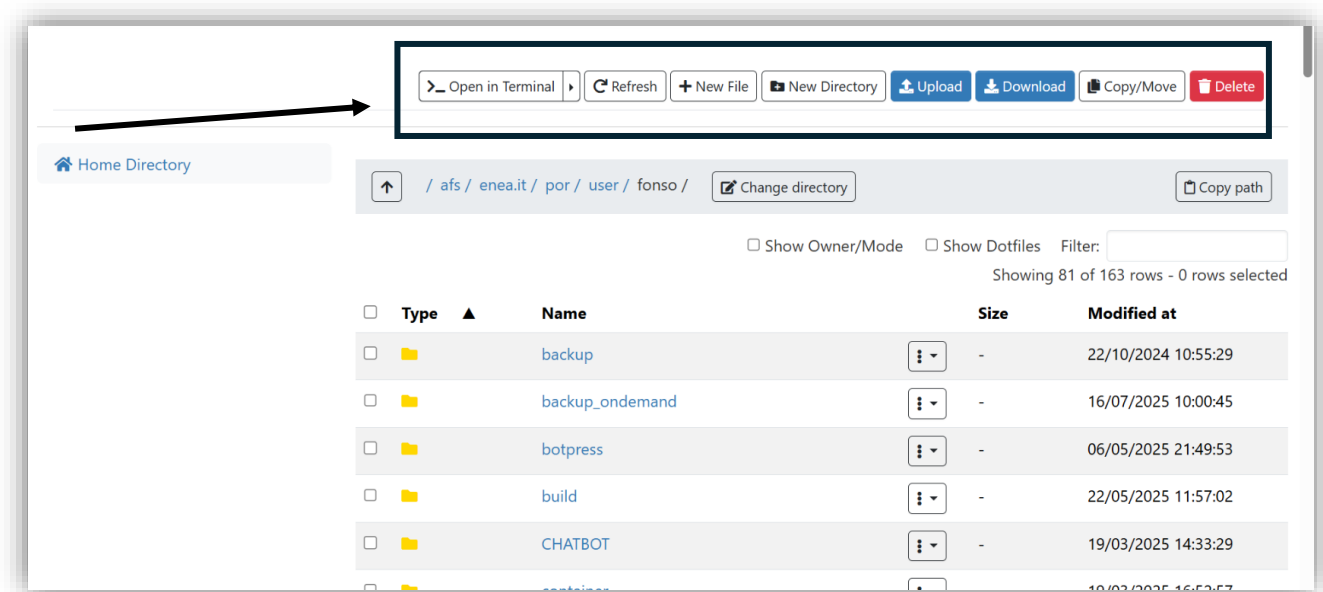


Available Operations

Once inside the **Home Directory**, you will find a series of commands that you can use via buttons located at the top of the window. These functionalities include:

- **Refresh:** refreshes the folder's content
- **New File / New Directory:** creates a new file or directory
- **Upload / Download:** allows uploading files from your PC and downloading local files from the cluster
- **Copy/Move:** enables copying or moving files and folders
- **Delete:** deletes the selected files

Viewing Available Operations and the Content of the Home Directory on AFS



The screenshot shows the AFS Home Directory interface. A black arrow points to a toolbar containing the following buttons: Open in Terminal, Refresh, New File, New Directory, Upload, Download, Copy/Move, and Delete. Below the toolbar, the breadcrumb path is displayed as / afs / enea.it / por / user / fonso /. To the right of the path is a 'Change directory' button and a 'Copy path' button. Below the path, there are checkboxes for 'Show Owner/Mode' and 'Show Dotfiles', and a 'Filter:' input field. The main content area displays a table of files and directories. The table has columns for 'Type', 'Name', 'Size', and 'Modified at'. The files listed are 'backup', 'backup_ondemand', 'botpress', 'build', and 'CHATBOT'. The 'Size' column shows '-' for all files. The 'Modified at' column shows the last modification date and time for each file.

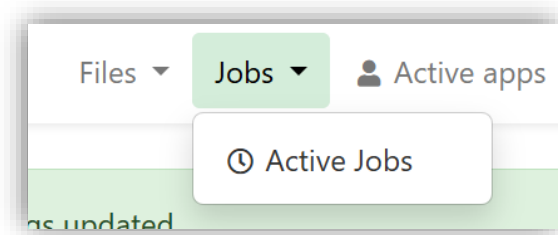
Type	Name	Size	Modified at
Folder	backup	-	22/10/2024 10:55:29
Folder	backup_ondemand	-	16/07/2025 10:00:45
Folder	botpress	-	06/05/2025 21:49:53
Folder	build	-	22/05/2025 11:57:02
Folder	CHATBOT	-	19/03/2025 14:33:29



MONITORING JOBS ON SLURM

Active Jobs: Monitoring Running Jobs

After submission, you can monitor the status of your job through the **Active Jobs** section. From the top menu (**Jobs > Active Jobs**), access the list of active jobs associated with your user and the selected cluster.



Here you can:

- View the ID, name, user, and time used
- Check the queue and the job status (e.g., Running, Pending, etc.)
- Filter by cluster or job name
- Terminate a job by clicking on the red button

Access to the **Active Jobs** section from the navbar:

Active Jobs

Show entries

Filter:

ID	Name	User	Account	Time Used	Queue	Status	Cluster	Actions
> 1840053	example_sleep	fonso	enea	00:00:15	cresco8_cpu	Running	CRESCO8	

Running example_sleep 1840053

Cluster	CRESCO8
Job Id	1840053
Job Name	example_sleep
User	fonso
Account	enea
Partition	cresco8_cpu
State	RUNNING
Reason	None
Total Nodes	1
Node List	cresco8x057
Total CPUs	1
Time Limit	1-00:00:00
Time Used	00:02:26
Start Time	2025-12-09 12:59:58
End Time	2025-12-10 12:59:58
Memory	0

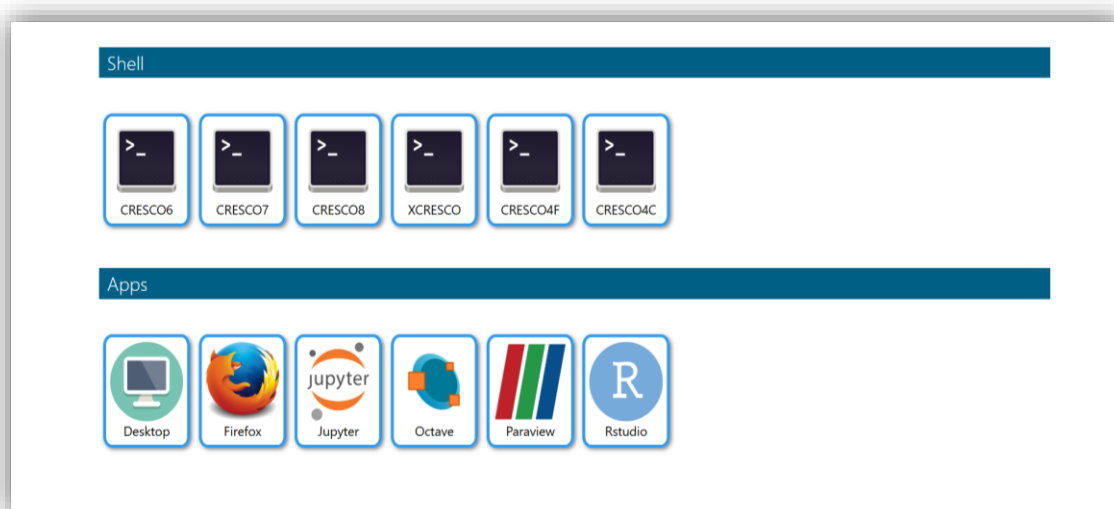
USE WEB TERMINAL

Open OnDemand allows direct access to the CRESCO cluster terminals through a web interface. This feature is useful for executing shell commands, interacting with software modules, monitoring jobs in real-time, or exploring the filesystem in an advanced way.

Within the main dashboard, in the top section, you will find the terminals divided by geographic site:

- Portici: CRESCO6, CRESCO7, CRESCO8
- Frascati: XCRESCO, CRESCO4F
- Casaccia: CRESCO4C

Access to available terminals for each HPC site:



By clicking on one of the terminals, an interactive session opens directly in the browser, similar to a classic Linux shell. The session is authenticated and allows you to operate in your user environment, exactly as if you were connected via SSH:

```
Host: cresco8x001.portici.enea.it Themes: Default

Welcome to ENEAGRID/CRESCO!
=====
ENEAGRID/CRESCO is the infrastructure of the computational resources of ENEA TERIN-ICT Division
[Dipartimento Tecnologie energetiche e Fonti Rinnovabili (TERIN)/Divisione per lo sviluppo Sistemi per l'Informatica e l'ICT]
http://www.ict.enea.it
Information about ENEAGRID/CRESCO can be found at the page: http://www.eneagrid.enea.it
The main computational resources are CRESCO HPC systems: http://www.cresco.enea.it
located in Portici (main site),Frascati,Casaccia,Brindisi,Bologna

A primer for ENEAGRID/CRESCO can be found at: http://www.eneagrid.enea.it/ENEAGRID_info.html
User support is provided at http://gridticket.enea.it.

Access conditions & Citation/Acknowledgement rules for ENEA employees:
http://www.eneagrid.enea.it/rules/CondizionidiUtilizzoUtenzaENEA.html

Access conditions & Citation/Acknowledgement rules for non ENEA users:
http://www.eneagrid.enea.it/rules/CondizionidiUtilizzoEN.html

Your username is:
fonso
Your contact data are:
Mail:helpdesk_hpcportici@enea.it Phone:3334603155
You are an external user. ENEA contact Mail:guido.guarnieri@enea.it
* Please check these data and submit a ticket via ENEAGRID ticketing
system (https://gridticket.enea.it) if they are not up to date

Principal: fonso@ENEA.IT
Expiration date: [never]
Last password change: Thu Feb 13 11:00:42 CET 2025
Password expiration date: Fri Feb 13 11:00:42 CET 2026

<fonso@cresco8x001 ->
```

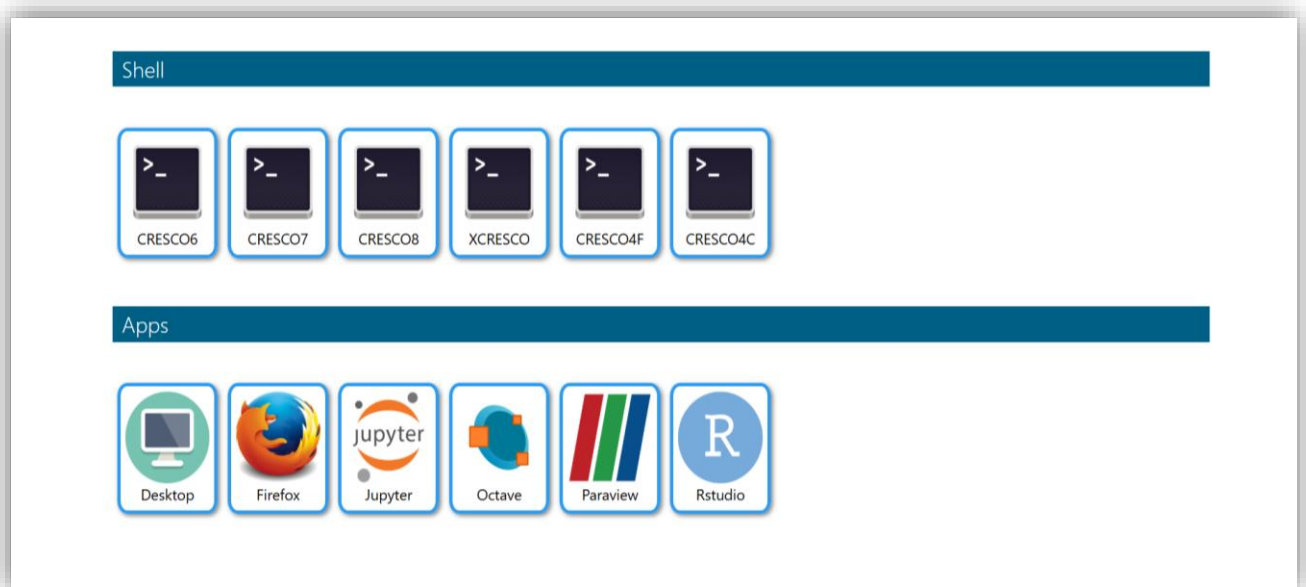
INTERACTIVE APPS

Open OnDemand provides a set of interactive applications that allow you to work with graphical environments or scientific tools directly from your browser, without the need to configure anything locally. These applications are executed on a cluster node in interactive mode through the SLURM scheduler and are available for up to 24 hours.

Once the session has started, a “**Launch**” button will appear to access the environment. The software available on the platform are:

- **Desktop**: full graphical environment accessible via browser
- **Firefox**: web browser useful for accessing the internet from the cluster
- **Gedit**: graphical text editor
- **Jupyter**: an environment for interactive multi-language notebooks based on kernels
- **Octave**: scientific computing environment
- **ParaView**: 3D scientific visualization
- **RStudio**: IDE for the R programming language

Interactive Apps available in the Open OnDemand portal:



Launching an Interactive Session

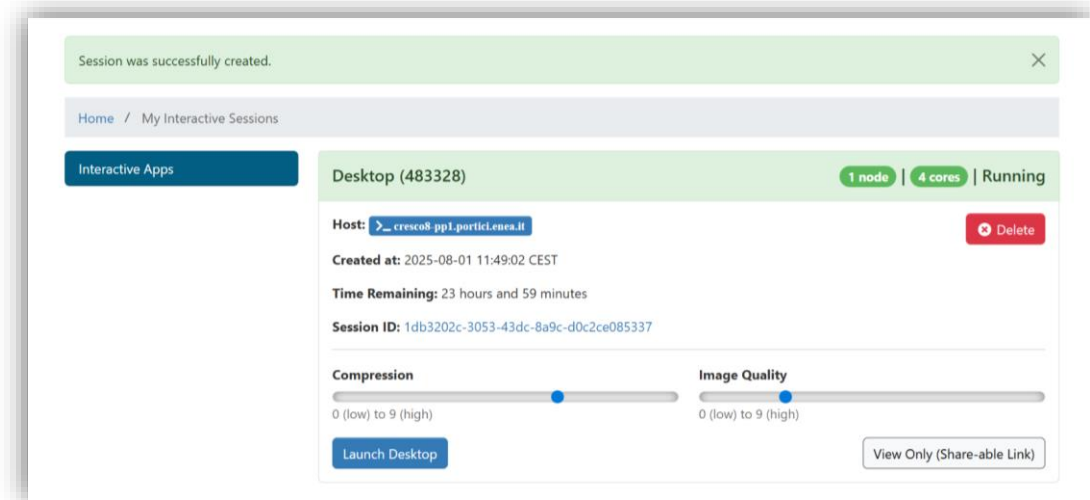
To launch an app, simply click on the corresponding icon. The system will submit a job to the cluster with the pre-configured resources. After a moment, if the launch is successful, a confirmation message will appear along with a new window displaying the session information:

- Assigned cluster (host)
- Remaining time
- Session ID
- Optional graphical settings (compression, image quality)

Active Apps – Monitoring Interactive Apps

From the top menu, there is an option called **Active Apps**, which allows you to view all the currently active interactive sessions for the user.

Navbar menu with access to **Active Apps**:



This section displays for each session:

- App name
- Host where it is running
- Remaining time
- Session status (Running, Idle, etc.)
- Buttons to access the app or terminate the session

OTHER BUTTONS

The Open OnDemand interface also provides several additional buttons in the navigation bar that help users manage their sessions and interactive environments more effectively.

Dashboard Icon:

The icon located in the top-left corner allows you to quickly return to the **main Dashboard** at any time.

Active Apps:

This button allows you to view all active interactive applications currently running under your user enea. From here, you can monitor, access, or terminate ongoing interactive sessions (e.g., Jupyter, Desktop, RStudio, etc.).

Terminal Sessions:

This section lists all terminal sessions that are still active.

Since terminals are also executed as SLURM jobs, they remain available as long as the associated session is running on a cluster node.

Help -> Refresh Session



This option restarts the user's web session on the OOD server.

It is useful when the interface becomes unresponsive or if displayed information appears out of sync.

LogOut:

This button logs the user out of the Open OnDemand portal on the **server side**.

To complete the logout fully and securely, the user must also **close the browser**, as cookies may still persist locally.

CONCLUSION

Open OnDemand provides an easy and powerful way to access and manage high-performance computing resources without the need to use the command line. With features ranging from file management to job execution, as well as access to terminals and interactive applications, the platform makes HPC resources more accessible to everyone, from beginners to experienced users.

We encourage you to explore the various features of Open OnDemand to make the most of the cluster resources and optimize your workflow.