



Intro to the Appverse

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Based on slides from GOOD'26 by

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openondemand.connectci.org/appverse

Agenda

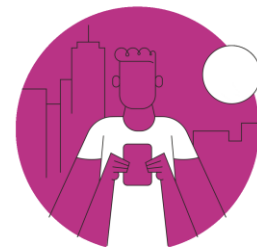
Introduction

- What is Open OnDemand?
- What is the Appverse?
- The Catalogue
- How to Contribute
- Community and Sustainability
- Q&A



Run Open OnDemand

Access your organization's supercomputers through the web to compute from anywhere, on any device.



Zero installation

Run Open OnDemand entirely in your browser. No client software installation required.

Easy to use

Start computing immediately. A simple interface makes Open OnDemand easy to learn and use.

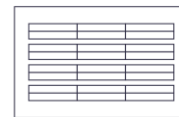
Compatible with any device

Launch on any device with a browser—even a mobile phone or tablet.

openondemand.org/run

Install Open OnDemand

Administer remote web access to your supercomputers to transform the way users work and learn.



Low barrier to entry

Empower users of all skill levels by offering an alternative to command-line interface.

Free and open source

Install Open OnDemand for free, and gather knowledge from our large open-source community.

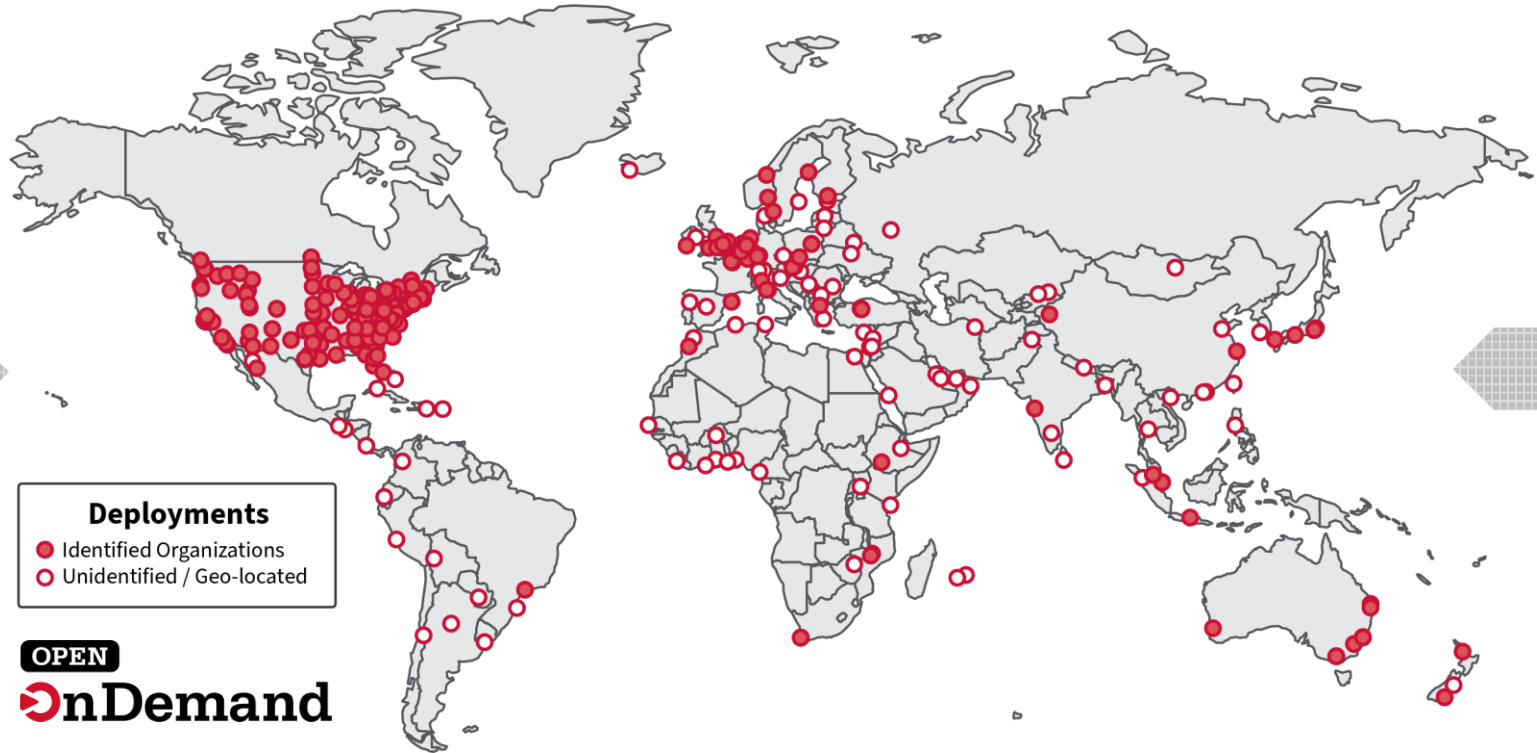
Configurable and flexible

Create and deploy your own applications to meet your users' unique needs.

openondemand.org/install

Open ondemand sites

100+ Countries | 2,100+ Organizations



Sample Deployments

OSC OnDemand Files Jobs Clusters Interactive Apps My Interactive Sessions All Apps Help Logged in as emofat Log Out

Ohio Supercomputer Center

OnDemand provides an integrated, single access point for all of your HPC resources.

Recently Used Apps

- Code Server System Installed App
- Blender System Installed App
- Ascend Desktop System Installed App
- RStudio Server System Installed App

Message of the Day

2025-05-15 - Instability on Clusters after May 13 Downtime

We've been experiencing some instability on the clusters (particularly Cardinal and Ascend) following the recent May 13 downtime, especially with parallel job processing. If you notice any unusual behavior with your jobs, please contact OSC Help.

2025-04-16 - Upcoming OS Migration May Impact Classroom Services

We will perform an OS migration that will affect our classroom services. If you plan to run classroom projects at OSC using the Jupyter or RStudio app this summer, please contact oschelp@osc.edu as soon as possible so we can plan accordingly.

2024-07-22 - Change is Coming!

Later this fall, OSC will be introducing a major change to the current process clients use to get help. We will be rolling out a new web-based system for clients to manage and review open cases with the service desk. More information will be forthcoming over the next few months, so keep an eye out for messages on various OSC communication channels, as well as at https://www.osc.edu/service_portal_deployment.

Looking for a classroom?

[Go to class.osc.edu](#)

Jobs Efficiency Report - 2025-4- Open XDMoD
28 to 2025-5-28

No data available.

Core Hours Efficiency Report - 2025-4-28 to 2025-5-28 Open XDMoD

No data available.

Recently Completed Jobs - 2025-4-28 to 2025-5-28 Open XDMoD

| ID | Name | Date |
|--------------------|------|------|
| No data available. | | |

powered by OPEN **OnDemand**

OnDemand version: 4.0.3

Why the Appverse?



HPC centers repeatedly build the same OOD apps

- Inconsistent configurations across institutions
- No central place to share or discover existing work
- Duplication of effort slowed everyone down
- A standard for shared app was not available
- Documentation or quality varied across the board

What is the Appverse?



A shared, community-driven catalog of Open OnDemand app configurations.

KEY CONCEPTS

Software = the tool (Jupyter, RStudio, MATLAB, LAMMPS, CryoSPARC)

App = the OOD configuration that launches software on an HPC system

CURRENTLY

85

Software entries

84

Apps

20

Contributing Organizations

OSC, Harvard/FASRC, Fred Hutch, TAMU,
Utah CHPC, WFU, NeSI, RIKEN, & more

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What is in the Catalog?



Gathered Content

- Curated apps from participating institutions
- Contributions from developers and vendors
- Automated metadata sync from GitHub (daily)
- Manual verification and curation



Taxonomy and discoverability

- Hierarchical tag system
- Science domain topics for research area filtering
- Implementation tags to differentiate apps: docker, containerized, singularity, classroom
- AI-assisted tag suggestions when adding software

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Grid View



Abaqus

1 apps



AlphaFold

1 app



AMDuProf

★ Add an app



ANSYS

1 app



COMSOL

2 apps



Coot

★ Add an app



Arm

1 app



Avogadro

1 app



BEAST 2

★ Add an app



BEAST X

1 app



DeepLabCut

★ Add an app



Eclipse

★ Add an app



Blender

2 apps



CHIMERA

★ Add an app



ChimeraX

1 app



CloudBeaver

1 app



Firefox

★ Add an app



G-PhoCS

1 app

Filter

Topics (60)

- applied computer science
- applied mathematics
- artificial intelligence
- astronomy and planetary sciences
- behavioral science

App Type (2)

- batch-connect-basic
- batch-connect-VNC

Tags (64)

- abaus

A

AlphaFold

1 app

D

DeepLabCut

★ Add an app



Gradio App

2 apps

H

HeavyAI

★ Add an app



TensorBoard

★ Add an app

Software Details & Apps

< Back to Software

 Share

Add an app



jupyter

 WWW  OPEN-SOURCE

JupyterLab is the latest web-based interactive development environment for notebooks, code, and data. Its flexible interface allows users to configure and arrange workflows in data science, scientific computing, computational journalism, and machine learning.

- computer science
- data science
- applied mathematics
- machine learning
- visualization
- jupyterhub
- python
- data-analysis

Jupyter
Ohio Supercomputer Center

gpu-enabled modules
source install

 SHOW README


 VIEW REPO
 REPORT AN ISSUE


9 ★ on GitHub
0 reported usages 
12/22/25 last commit

Jupyter Notebook on Notchpeak
Center for High Performance Computing - University of Utah

batch connect
gpu-enabled modules
source install


 SHOW README



 VIEW REPO
 REPORT AN ISSUE


1 ★ on GitHub
0 reported usages 
10/10/19 last commit

Jupyter Notebook on Kingspeak with dynamic partitions
Center for High Performance Computing - University of Utah

batch connect
gpu-enabled modules
source install

 SHOW README

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openondemand.connectci.org/appverse

README Rendering



jupyter

WWW  OPEN-SOURCE

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computer science

data science

applied mathematics

machine learning

visualization

jupyterhub

python

data-analysis

Jupyter

Ohio Supercomputer Center

gpu-enabled

modules

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 HIDE README

Batch Connect - OSC Jupyter

release **v0.32.1** license MIT

An interactive app designed for OSC OnDemand that launches a Jupyter server within an Owens batch job.

Prerequisites

This Batch Connect app requires the following software be installed on the **compute nodes** that the batch job is intended to run on (**NOT** the OnDemand node):

- [Lmod 6.0.1+](#) or any other

```
`module purge`
```

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Shareable URLs

< Back to Software



jupyter

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JupyterLab is the latest web-based interactive development environment for notebooks, code, and data. Its flexible interface allows users to configure and arrange workflows in data science, scientific computing, computational journalism, and machine learning.

computer science

data science



 Share

Add an app

Jupyter

Ohio Supercomputer Center

gpu-enabled

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 SHOW README

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Contributing an App



Summary of how it works

1. Prepare your repo with these 3 required files

[manifest.yml](#) App metadata (name, category, description)

[README.md](#) Deployment docs for HPC admins (best practices & template available)

[LICENSE](#) Open source license

2. Submit the app in the Appverse
3. GitHub syncs daily — push changes and the catalog updates automatically

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Contributing an App (cont.)



Explore the Appverse

Use this community-driven catalog of software, interactive apps, dashboards, and widgets.

An illustration showing three stylized figures: one at a computer monitor, one holding a smartphone, and one at a laptop.

Contribute Apps

Help grow the Appverse by sharing your apps and deployment configurations.

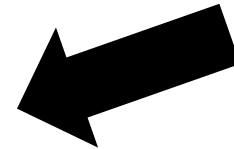
[Find out more](#)

An illustration showing a code editor window with syntax-highlighted text, surrounded by several white stars on a teal background.

The Appverse has launched.

[App Support](#)

[Add an app](#)



> [Show Filters](#)

| | | | |
|----------------------|------------------------|--|--------------------|
| Abaqus 2 apps | AlphaFold 1 app | AMDuProf Add an app | ANSYS 1 app |
|----------------------|------------------------|--|--------------------|

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Potential Future Features



| | |
|-------------------------------|--|
| Bundles & Packages | Grouped app deployments (e.g., "Intro Chemistry Lab" or "AI/ML Starter Pack"). |
| Compatibility Metadata | Structured OOD version and OS declarations to filter apps by what runs on your system. |
| Deployment Assistance | Site configuration generator: enter your cluster details once, download customized app configs. Working toward one-click installation for portable apps. |
| Dashboard Integration | Embeddable React widget to browse Appverse in Open OnDemand. Drop-in embed (~10 lines of HTML) w/ Shadow DOM CSS isolation that won't affect dashboard styles. |
| Review System | Community vetting with quality signals. Reviewers evaluate against a checklist: complete metadata, portable configuration, OOD conventions, open source license. |
| Security Scanning | Automated vulnerability analysis of app repositories to surface issues before they reach production. |

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Community-driven Effort

- Hosted on Connect.CI infrastructure (Drupal CMS + React frontend)
- Community shapes the roadmap, features, and governance
- Appverse Affinity Group Open to all
 - Technical, governance, and UX discussions
 - Meets monthly on 1st Wednesdays, 3-4 PM EST

Who is involved

- Dhruv Chakravorty (Princeton), Julie Ma (MGHPCC), Lissie Fein and Andrew Pasquale (Sweet and Fizzy Digital), Lisa Perez, Josh Winchell, Marinus Pennings, Keegan Smith (TAMU), Sean Anderson (Wake Forest University), Bill Horka (Harvard), and growing
- Appverse Affinity Group
- Early adopters from 14+ institutions already contributing

Helpful Links



**Appverse
Catalog**

openondemand.connectci.org/appverse



**Appverse
Contributor
Documentation**

openondemand.connectci.org/appverse-contributor-documentation



**Affinity
Group**

openondemand.connectci.org/affinity-groups/ood-appverse



**README
Template**

github.com/keeganasmith2003/appverse_readme_template

Questions?

Thanks for your time!

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