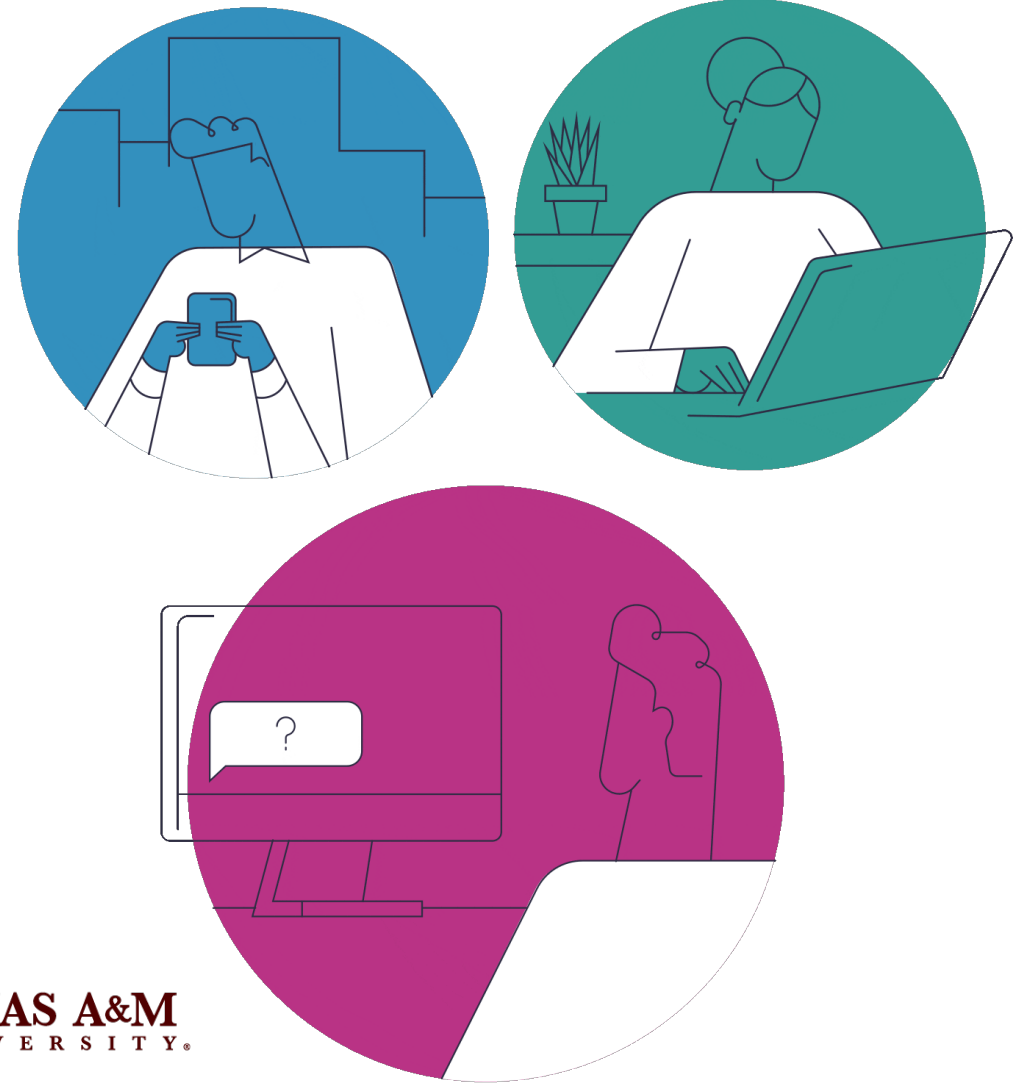


Connecting Computing Power with Powerful Minds

Alan Chalker



This work is supported by the National Science Foundation of the United States
under the awards 1534949, 1835725, 2138286, 2303692, and 2411375-7

openondemand.org/ihpc-sc25

Agenda

The Platform

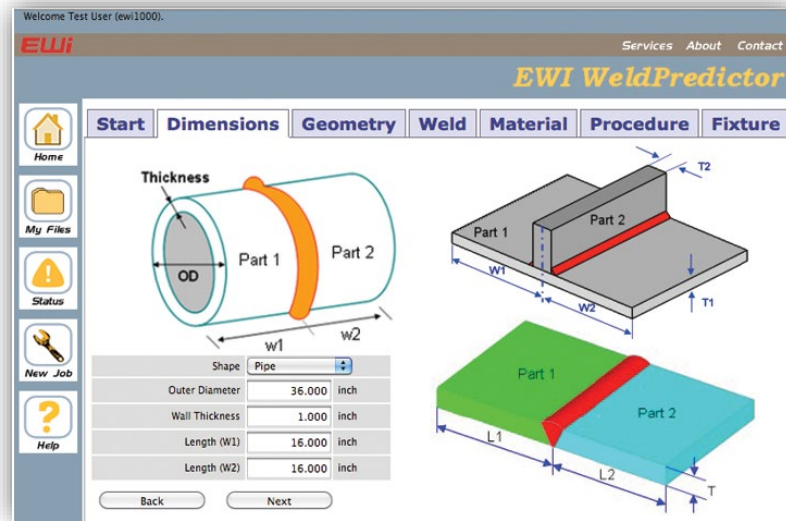
The Community

The Impact

The Future

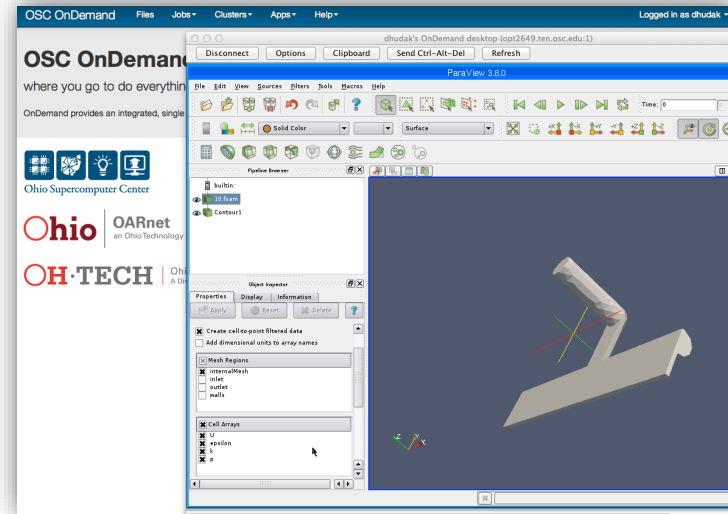


OnDemand Origins



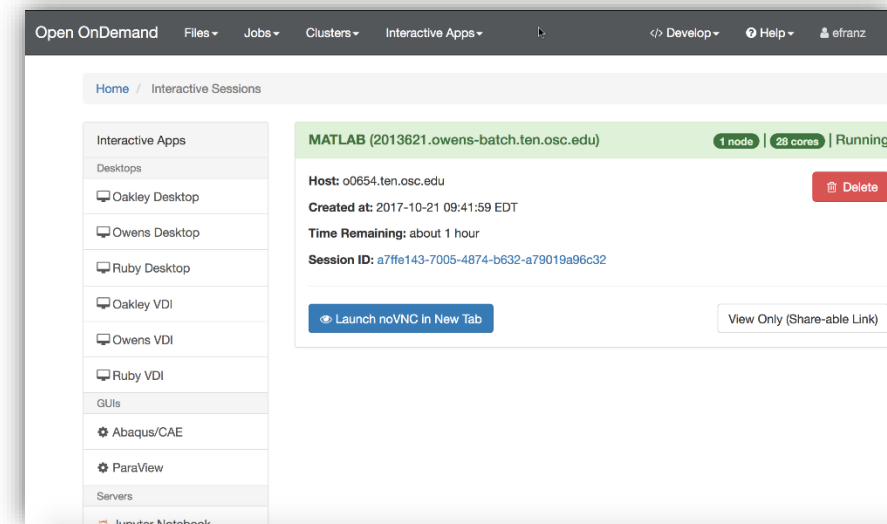
2007

(Weld Predictor)



2013

(OSC OnDemand)



2017

(Open OnDemand)

OnDemand for a Decade+



Ohio Supercomputer Center
An OH·TECH Consortium Member

OSC OnDemand: A Web Platform Integrating Access to HPC Systems, Web and VNC Applications

Dave Hudak, Thomas Bitterman, Patricia Carey, Douglas Johnson,
Eric Franz, Shaun Brady, Piyush Diwan

www.osc.edu

OH·TECH | Ohio Technology Consortium
A Division of the Ohio Board of Regents

OSC OnDemand: A Web Platform Integrating Access to HPC Systems, Web and VNC Applications

David E. Hudak, Thomas Bitterman, Patricia Carey, Douglas Johnson,
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ABSTRACT

In this paper, we describe the OnDemand web platform for providing OSC users integrated access to HPC systems, web applications and VNC services. We present the user experience and implementation of OnDemand and compare it with existing science gateway approaches.

Categories and Subject Descriptors

I.6.7 [Simulation and Modeling]: Simulation Support Systems - environments

General Terms

Design, Reliability, Security, Human Factors.

Keywords

Web platform, OpenID, REST, High Performance Computing, Virtual Organizations, Cyberinfrastructure.

1. INTRODUCTION

The web has become the dominant access mechanism for remote compute services in every computing area except HPC. In HPC, web applications primarily exist in the form of science gateways. However, the majority of work is performed via HPC system access provided through SSH for text-based access and (occasionally) VNC for visualization access. This separation between web and system functionality inhibits the impact of HPC. Web applications (gateways) have not truly proliferated in HPC due to the development and administrative overheads required for each individual gateway. Meanwhile, traditional SSH interfaces represent a barrier to entry for new users who must locate acceptable client software and learn command-line interfaces for file editing and job control.

We created OSC OnDemand to be a unified web platform where users could access science gateway-style web applications, VNC applications, HPC center filesystems and login node terminals. The user has to know only three things: the URL (ondemand.osc.edu), their username and their password. Once logged into OnDemand, the user is presented with a dashboard showing a set of applications for filesystem access, job

construction and monitoring, login node terminal access, visualization node access via VNC and science gateways.

2. RELATED WORK

There has been a large and impressive body of work completed to support grid services and science gateways. The Globus Toolkit [5], [6] provides fundamental technologies for identification, authentication, authorization and service discovery. For example, the Computational Chemistry Grid project created and maintains the GridChem science gateway, [4] using Globus technologies. GridChem users from multiple institutions can securely access services from multiple resource providers. GridChem is also illustrative of the use of science gateways to form *virtual organizations*, where participants from multiple physical institutions can perform calculations and share data via a common web platform, thus forming a single virtual organization. This model has proven popular. Presently, XSEDE supports twenty-nine individual science gateways, many of them supporting discipline-specific virtual organizations [15]. The XSEDE User Portal (XUP) (portal.xsede.org) provides integrated GSI-SSH, job status, machine status and account management. OnDemand includes similar functions but adds file browsing and editing, job control (job submission and deletion) and VNC application access. In addition, the nanoHUB project [9] has released the HUBzero [10] software distribution for the creation of virtual organizations at the institutional (or even the laboratory) level. The Open Science Grid also supports non-browser applications for submitting HPC jobs from desktops, like BoSCO [16]. UNICORE [17] supports web portals through its Portal Task Force [18]. Current efforts address basic services, security, and workflow management.

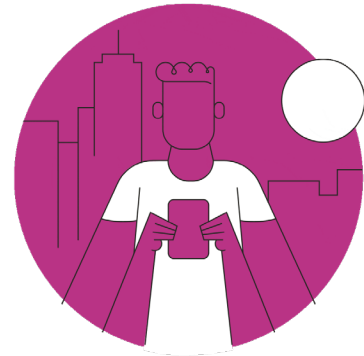
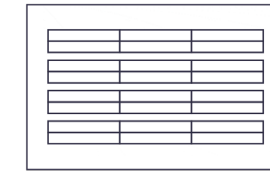
Our team began designing web applications in 2008, including examples in remote instrumentation [2] and data-intensive biomedical science [7]. These applications, like many XSEDE science gateways, are built as standalone web applications that provide user separation at the application level and are deployed in community accounts, i.e., a single HPC account holding all gateway users' data. We encountered two major problems with scaling this approach: first, the increasing overhead of managing gateway deployments and accounts on a per-gateway basis and second, an inability to effectively support use cases in which a user required both gateway functionality as well as system-level access to their data (e.g., access at the command line). In order to solve the overhead problem, we experimented successfully with multiple services reachable from a single entry point that relied on common authentication [8]. In order to solve the second problem, we invented a new mechanism for web server deployment that is used in OnDemand (see section 4).

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XSEDE '13, July 22 - 25 2013, San Diego, CA, USA
Copyright 2013 ACM 978-1-4503-2170-9/13/07...\$15.00.

openondemand.org/xsede13

Run Open OnDemand

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



Zero installation

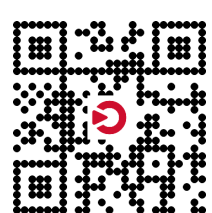
Run Open OnDemand entirely in your browser. No client software installation required.

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

Any Device, Anywhere



openondemand.org/anydevice



Sample Deployments

OSC OnDemand

Files

Jobs

Clusters

Interactive Apps

My Interactive Sessions

All Apps

Help

Logged in as emoffat

Log Out



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 - 2025-4-28 to 2025-5-28

Open XDMoD

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.		

OnDemand version: 4.0.3



openondemand.org/custom

Sample Deployments

OSC OnDemand

Files

Jobs

Clusters



OnDemand

System

Message

2025-05

We've been ex
May 13 downt
contact OSC H

2025-04

Services

We will perfor
OSC using the
plan accordi

2024-07

Later this fall,
rolling out a n
information w
communicatio

Research
Technologies
—
ARIZONA HPC Systems

Apps

Files

Jobs

Clusters

Interactive Apps

My Interactive Sessions

Help

Logged in as

Log Out

Quota limit warning for

Reload page to see updated quota information. Quota information is updated every few minutes.

Using 428 GB of quota 500 GB . Consider deleting or archiving files to free up disk space.

85%

OPEN

 nDemand

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

Pinned Apps A featured subset of [all available apps](#)



Abaqus GUI
System Installed App



Ansys Workbench GUI
System Installed App



Mathematica GUI
System Installed App



Matlab GUI
System Installed App



Stata GUI
System Installed App



VSCode GUI
System Installed App

Recently Completed Jobs - 2025-6-17 to 2025-7-17

[Open XDMoD](#)

ID	Name	Date
----	------	------

OnDemand version: 4.0.3

openondemand.org/custom

Sample Deployments

Research Technologies
ARIZONA HPC Systems

Apps ▾ Files ▾

Quota limit
Using 428 GB of

OPEN  nDemand

OnDemand prov

Pinned App


Abaqus GUI
System Installed


Stata GUI
System Installed

DEAC OnDemand Files ▾ Jobs ▾ Clusters ▾ Interactive Apps ▾ My Interactive Sessions

Help ▾ Logged in as anderss Log Out



WAKE FOREST
UNIVERSITY
Information Systems

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

Pinned Apps

DEAC Apps


Avogadro
System Installed App


Blender
System Installed App


Code
System Installed App


DBeaver
System Installed App


FastQC
System Installed App


G-PhoCS
System Installed App


GaussView
System Installed App


Jupyter Notebook
System Installed App

Message of the Day

2025-01-13 FDOC Spring 2025

Happy Spring FDOC from the HPC Team! DEAC OnDemand will be used in 4 classes this semester, where students will be able to carry out their coursework on the DEAC Cluster.

2024-09-03 Fall 2024 Pilot Phase

Open OnDemand now in its pilot phase during the Fall 2024 semester. Selected user groups will be able to leverage OOD and the DEAC Cluster for their research and classroom work.

2024-07-15 Entering OOD Phase 1

The DEAC Cluster is now entering Phase 1 of its Open OnDemand deployment. This milestone was achieved after the successfully submitting the first interactive job through the OOD interface.

powered by
OPEN  nDemand

OnDemand version: 3.1.11

Recently Completed

ID	Name	Date
----	------	------

openondemand.org/custom

OnDemand version: 4.0.3

Sample Deployments

OSC OnDemand

Files

Jobs

Clusters



OnDemand

System

Message

2025-05-13

We've been ex
May 13 downt
contact OSC H

2025-04-13

Services

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OSC using the
plan accordin

2024-07-13

Later this fall,
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Apps

Files

Quota limit
Using 428 GB of

OPEN  nDemand

OnDemand prov

Pinned Ap



Abaqus GUI

System Installed



Stata GUI

System Installed

DEAC OnDemand

Files

Jobs

Clust



DEAC OnDemand

Pinned Apps

DEAC Apps



Avogadro

System Installed App



FastQC

System Installed App

Anvil

Files

Jobs

Clusters

Interactive Apps

My Interactive Sessions

New Features

Rosen Center for Advanced Computing

Service Unit (SU) Usage

asc170016

15196.22 SUs used / 979191.95 total (963995.73 left)

Export

asc170016-gpu

13.05 SUs used / 855.13 total (842.08 left)

Export

cis230138

0 SUs used / 0 total (0 left)

Export

cis230270

3671.28 SUs used / 166515.47 total (162844.18 left)

Export

hum250006

1941.68 SUs used / 20000 total (18058.32 left)

Export

oth250002-gpu

81.2 SUs used / 1915.68 total (1834.48 left)

Export

tra220012

0 SUs used / 0 total (0 left)

Export

Disk Usage

home / x-lentner

Size → 6.1GB / 25.0GB

View

scratch / x-lentner

Size → 0.0KB / 100.0TB

Files → 1 / 1.0M files

View

projects / x-asc170016

Size → 986.3GB / 5.0TB

Files → 260.0K / 1.0M files

View

projects / x-cis230138-data

Size → 0.0KB / 5.0TB

Files → 1 / 1.0M files

View

projects / x-cis230138

Size → 4.9TB / 5.0TB

Files → 7.4K / 1.0M files

View

projects / x-cis230270

Size → 524.0MB / 5.0TB

Files → 1.0K / 1.0M files

View

projects / x-hum250006

Size → 40.6GB / 5.0TB

Files → 113.0K / 1.0M files

View

Announcements

No recent announcements.

[View All Announcements](#)

Partition Status

[View Queue Limits](#)

powered by

OPEN  nDemand

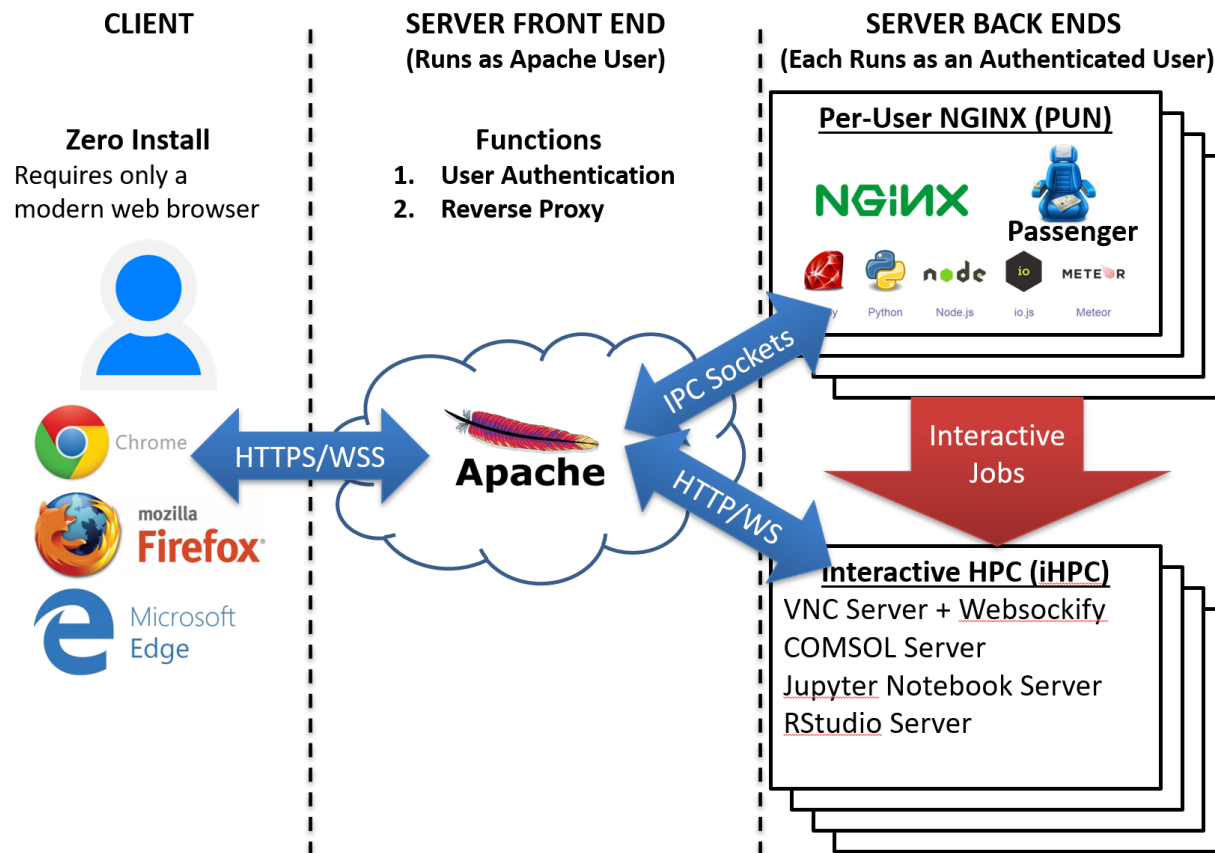
OnDemand version: 3.1.11

OnDemand version: 4.0.3

openondemand.org/custom



Architecture & Security



XDMoD Integration

Jobs Efficiency Report - 2024-01-16 to 2024-02-15

[Open XDMoD](#)

100% efficient

0% inefficient



0 inefficient jobs / 30 total jobs

Core Hours Efficiency Report - 2024-01-16 to 2024-02-15

[Open XDMoD](#)

100% efficient

0% inefficient



0.0 inefficient core hours / 0.0 total core hours

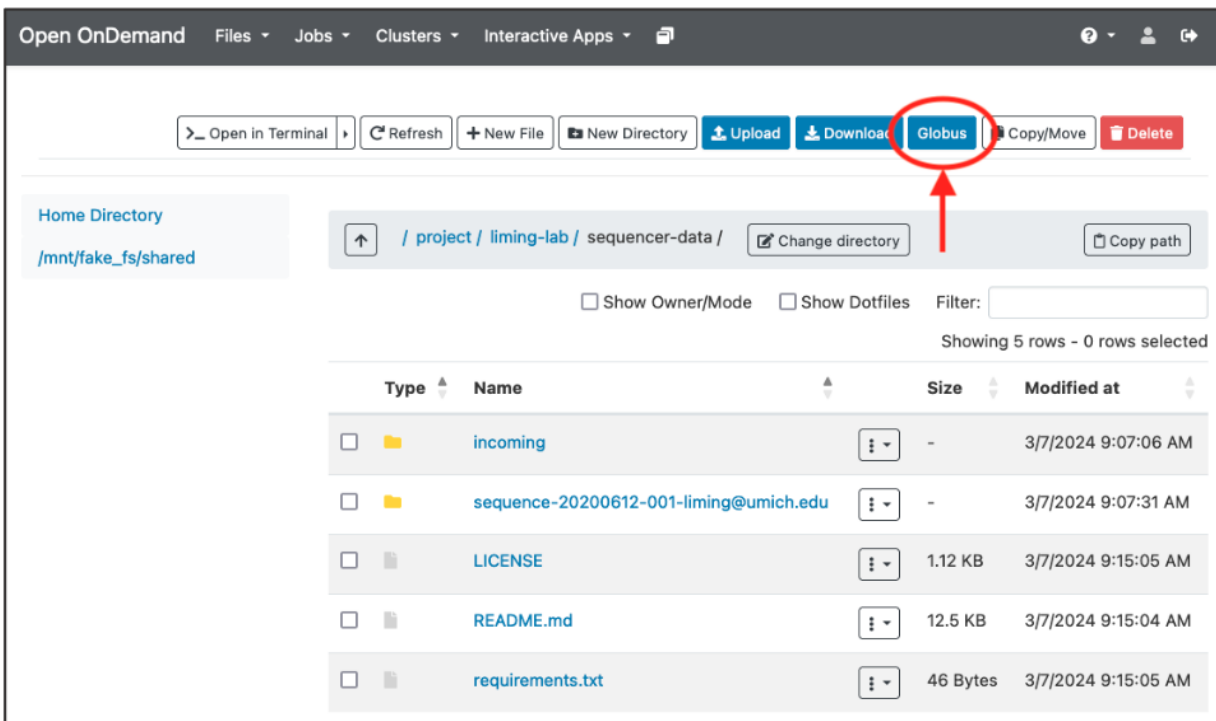
Recently Completed Jobs - 2024-01-16 to 2024-02-15

[Open XDMoD](#)

ID	Name	Date	CPU
28806519	testjob_2024-02-14	2/15	N/A
28796025	testjob_2024-02-13	2/14	N/A
28786508	testjob_2024-02-12	2/13	N/A
28755646	testjob_2024-02-11	2/12	N/A
28747366	testjob_2024-02-10	2/11	N/A
28727644	testjob_2024-02-09	2/10	N/A
28710708	testjob_2024-02-08	2/9	N/A
28704095	testjob_2024-02-07	2/8	N/A
28692363	testjob_2024-02-06	2/7	N/A
28686623	testjob_2024-02-05	2/6	N/A

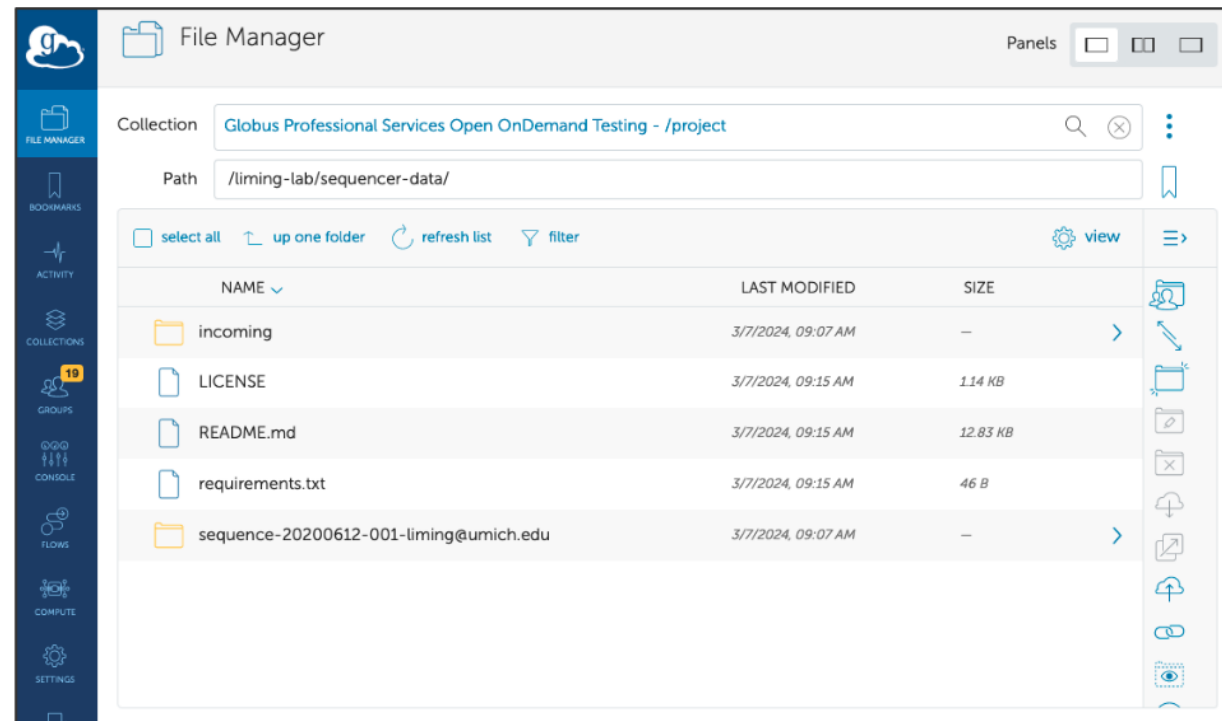
Showing first 10 of 30 jobs. See [your Open XDMoD dashboard](#) for more information.

Globus Integration



The screenshot shows the Open OnDemand web interface. The top navigation bar includes links for Files, Jobs, Clusters, and Interactive Apps. Below this, a toolbar contains buttons for 'Open in Terminal', 'Refresh', 'New File', 'New Directory', 'Upload', 'Download', 'Globus' (highlighted with a red circle and an arrow), 'Copy/Move', and 'Delete'. The main content area displays the current directory path as '/ project / liming-lab / sequencer-data /'. Below the path, there are checkboxes for 'Show Owner/Mode' and 'Show Dotfiles', and a 'Filter:' input field. A table lists the contents of the directory:

Type	Name	Size	Modified at
Folder	incoming	-	3/7/2024 9:07:06 AM
Folder	sequence-20200612-001-liming@umich.edu	-	3/7/2024 9:07:31 AM
File	LICENSE	1.12 KB	3/7/2024 9:15:05 AM
File	README.md	12.5 KB	3/7/2024 9:15:04 AM
File	requirements.txt	46 Bytes	3/7/2024 9:15:05 AM



The screenshot shows the Open OnDemand File Manager interface. The top navigation bar includes links for Files, Jobs, Clusters, and Interactive Apps. Below this, a toolbar contains buttons for 'Open in Terminal', 'Refresh', 'New File', 'New Directory', 'Upload', 'Download', 'Globus' (highlighted with a red circle and an arrow), 'Copy/Move', and 'Delete'. The main content area displays the current directory path as '/liming-lab/sequencer-data/'. Below the path, there are checkboxes for 'Show Owner/Mode' and 'Show Dotfiles', and a 'Filter:' input field. A table lists the contents of the directory:

NAME	LAST MODIFIED	SIZE
incoming	3/7/2024, 09:07 AM	-
LICENSE	3/7/2024, 09:15 AM	1.14 KB
README.md	3/7/2024, 09:15 AM	12.83 KB
requirements.txt	3/7/2024, 09:15 AM	46 B
sequence-20200612-001-liming@umich.edu	3/7/2024, 09:07 AM	-

Agenda

~~The Platform~~

The Community

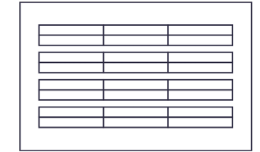
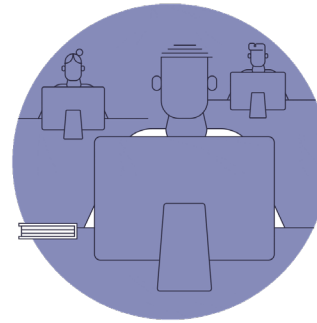
The Impact

The Future



Install Open OnDemand

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



Low barrier to entry

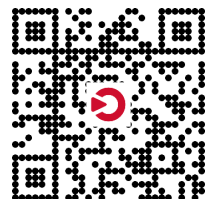
Empower users of all skill levels by offering an alternative to command-line interface.

Free and open source

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

Configurable and flexible

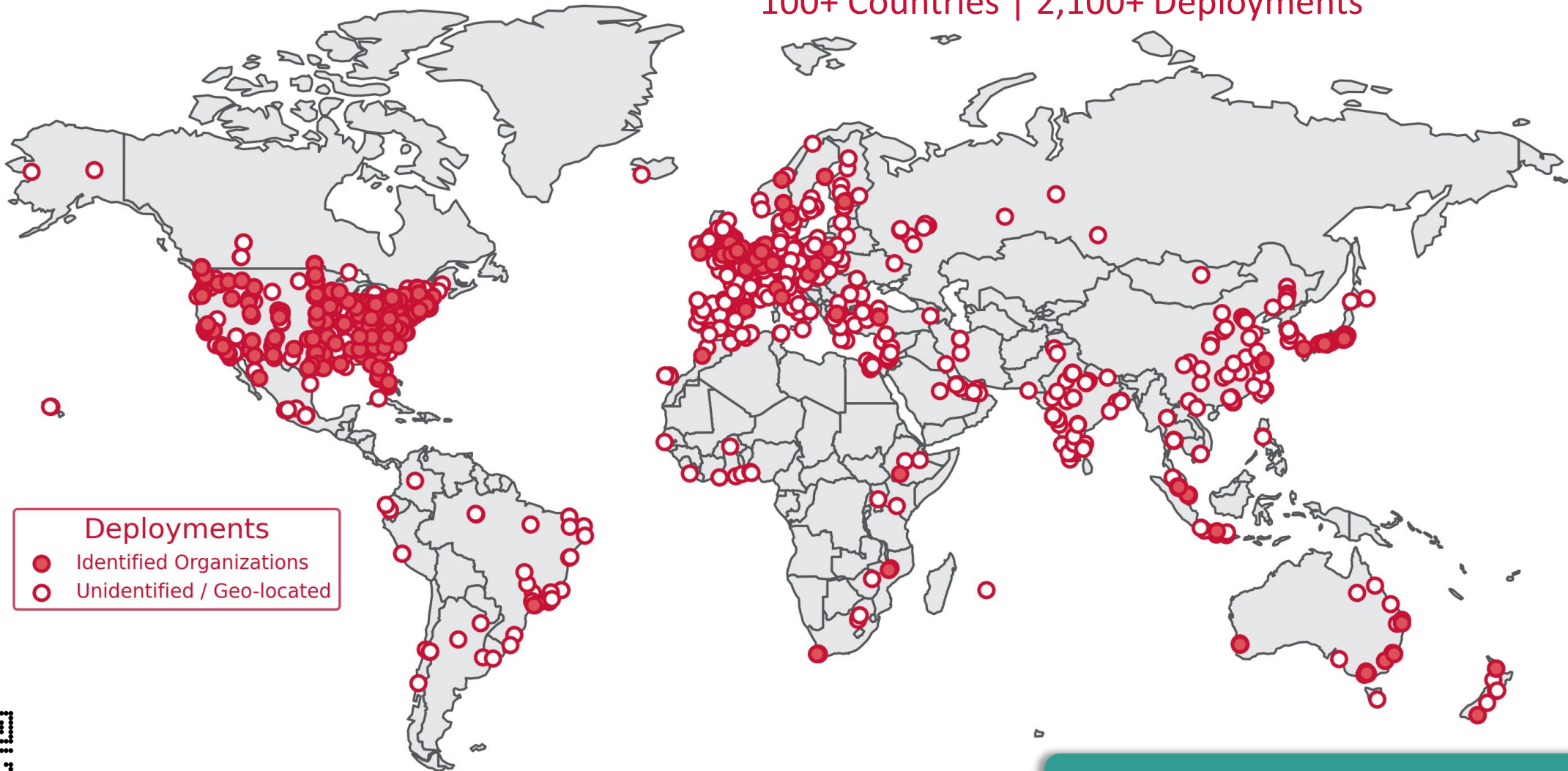
Create and deploy your own applications to meet your users' unique needs.



openondemand.org/install

Deployed Worldwide

100+ Countries | 2,100+ Deployments



openondemand.org/locations



Example Deployments

Nonprofit / Research centers



International academia



Government



Minority-serving institutions



Check the full list of identified organizations online and let us know if yours is missing.

Private academia



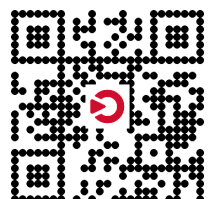
Public academia



Industry



openondemand.org/orgs



NSF ACCESS



Hive



Rockfish



ACES &
FASTER



Anvil



Bridges-2 &
Neocortex



KyRIC



Delta



Ookami

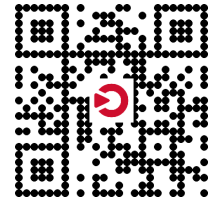
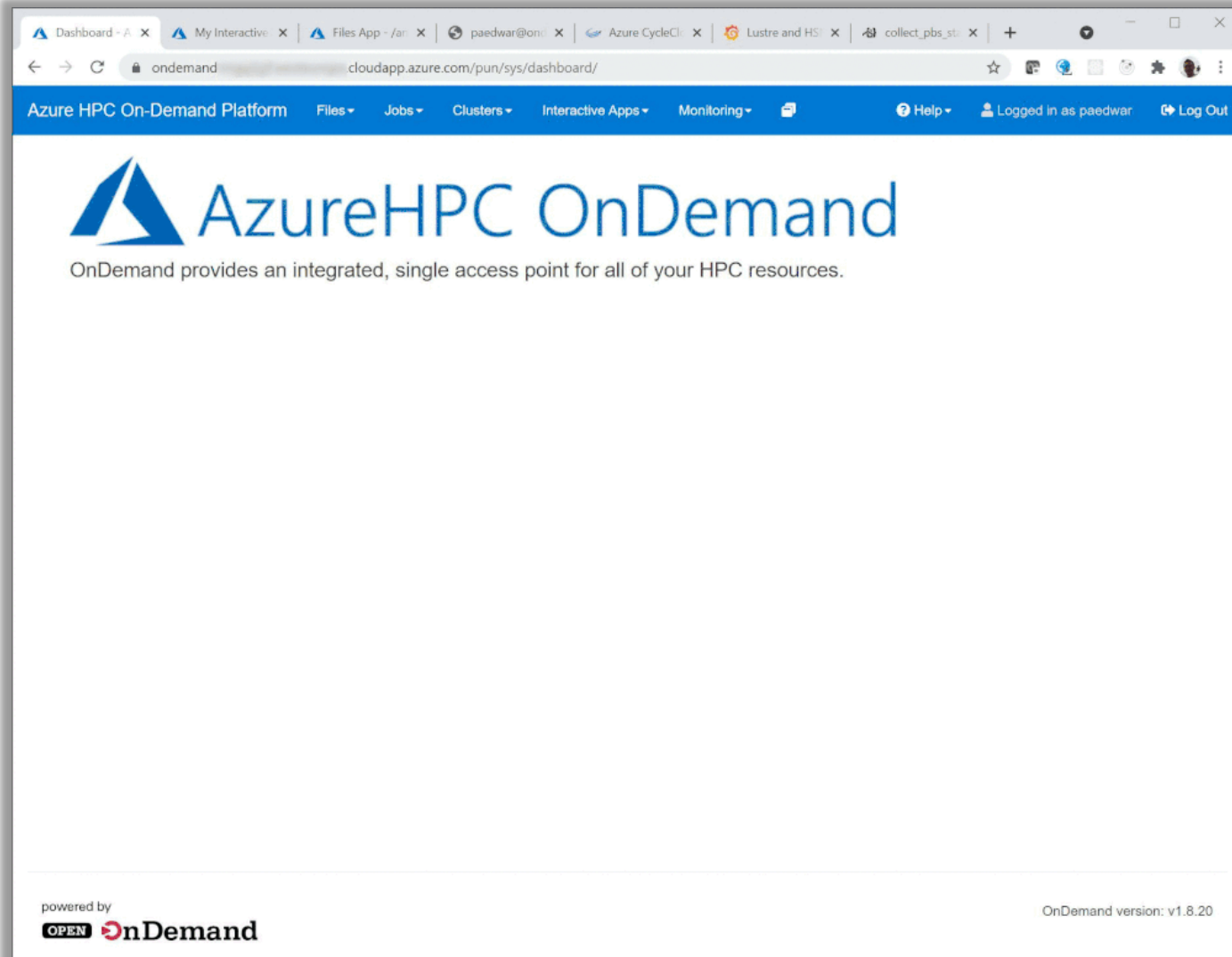


Expanse

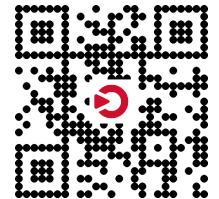
openondemand.org/access



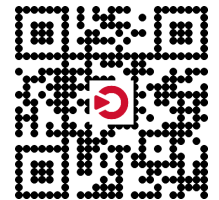
Commercial Cloud



openondemand.org/aws



openondemand.org/azure



openondemand.org/gcp

National AI Resources

NAIRR Pilot

National Artificial Intelligence
Research Resource Pilot

	Indiana Jetstream2 GPU	▼
	NCSA Delta GPU	▼
	NCSA DeltaAI	▼
	PSC Bridges-2 Extreme Memory (PSC Bridges-2 EM)	▼
	PSC Bridges-2 GPU (PSC Bridges-2 GPU)	▼
	PSC Bridges-2 Regular Memory (PSC Bridges-2 RM)	▼
	Purdue Anvil AI	▼
	Purdue Anvil CPU	▼
	Purdue Anvil GPU	▼
	SDSC Expanse CPU	▼
	SDSC Expanse GPU	▼
	PSC Neocortex CS-2	▼
	SDSC Voyager (Habana Training and Inference Processor based AI System)	▼
	TAMU ACES	▼

	Amazon Web Services	▼
	Cerebras Wafer-Scale Engine 2 (CS-2) AI Accelerator	▼
	DOE Argonne National Laboratory AI Testbed	▼
	Google Cloud Platform	▼
	Groq LPU Inference Engine	▼
	Microsoft Azure	▼
	NVIDIA DGX Cloud	▼
	SambaNova Cloud (API Services for Llama, DeepSeek, Tulu, Qwen, etc.)	▼
	SambaNova Suite (LLMOps platform, fine-tuning, inference and app dev kits)	▼
	TACC Frontera	▼
	TACC Frontera GPU	▼
	TACC Lonestar6	▼
	TACC Lonestar6-GPU	▼
	TACC Vista (NVIDIA GH100 Grace Hopper Superchip)	▼

Fugaku OnDemand

スーパーコンピュータ「富岳」における HPC クラスタ用 Web ポータル Open OnDemand の導入

中尾 昌広^{1,a)} 三浦 信一¹ 山本 啓二²

概要: 「富岳」などの HPC クラスタの問題点として、HPC クラスタを用いるための前提知識が多いため、初心者にとって利用するまでの学習コストが大きい点が挙げられる。また、近年では、対話的操作を伴う GUI (Graphical User Interface) アプリケーションを計算ノード上で動作させることを望まれているが、その手順は煩雑である。そこで、本稿では HPC クラスタの計算資源を簡単に利用可能にする Web ポータル Open OnDemand を「富岳」に導入する。その導入を実現するため、「富岳」で用いられているジョブスケジューラを Open OnDemand から利用できるアダプタの開発を行った。本稿では、アダプタの開発および「富岳」における Open OnDemand の利用例について述べる。

1. はじめに

理化学研究所 計算科学研究センター (R-CCS: RIKEN Center for Computational Science) [1] は、日本におけるフラグシップスーパーコンピュータとして「富岳」を運用している [2]。また、R-CCS は「富岳」の利便性を向上させるため、可視化やデータ変換等を行うプリポスト環境も提供している。図 1 に「富岳」とプリポスト環境の概念図を示す。プリポスト環境は、GPU を搭載したノードと大容量メモリを搭載したノードで構成される。ジョブスケジューラは「富岳」とプリポスト環境とで異なり、「富岳」は Fujitsu Software Technical Computing Suite (Fujitsu TCS) [3] であるのに対し、プリポスト環境は Slurm [4] である。各システムの利用手順としては、ユーザはまず Secure Shell (SSH) を用いて共通のログインノードにログインし、次にジョブスケジューラを用いて各システムにジョブを投入する。

「富岳」などの HPC クラスタを利用するためには、Shell による CLI (Command Line Interface)、SSH の鍵ペアの生成と公開鍵の登録、ジョブスケジューラなどの知識が必要であるため、初心者にとって学習コストが大きいという問題点がある。また、近年では、対話的操作を伴う GUI (Graphical User Interface) アプリケーションを HPC アプリケーションとして動作させることを望まれているが、そのようなアプリケーションを HPC クラスタ上で動作させ

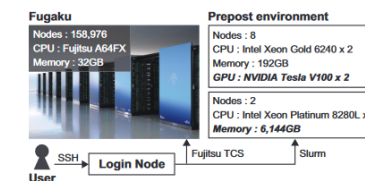


図 1 「富岳」とプリポスト環境の概念図

る手順は煩雑である。例えば、JupyterLab のような Web ベースのアプリケーションの場合、次のような手順をアプリケーションを実行する毎に GUI で行う必要がある。(1) SSH でログインノードにログインする。(2) ジョブスケジューラを通して JupyterLab を計算ノード上で実行する。(3) 計算ノードの IP アドレスと JupyterLab が利用するポート番号を取得する。(4) 取得した IP アドレスとポート番号に SSH トンネリングでローカルポートと接続する。(5) ローカルポートを Web ブラウザで開く。このように、多くの手間を要するだけでなく、これらの作業には前述した知識も必要であるため、GUI に慣れたユーザにとって大きな負担となっている。

本稿では HPC クラスタ用の Web ポータル Open OnDemand [5] を「富岳」に導入する。Open OnDemand を用いると、SSH ではなく Web ブラウザから HPC クラスタの計算資源を利用できる。さらに、HPC クラスタの計算ノード上で動作する GUI アプリケーションの対話的操作を簡単に実行できる。ここで、Open OnDemand は様々なスケ

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^{a)} masahiro.nakao@riken.jp

OnDemand In The News

ACCESS Enhances Bioscience Exploration: Introducing CryoSPARC on Anvil's HPC Resources

October 9, 2023

Oct. 9, 2023 — In the last couple of years, you may have seen some extremely detailed models of microscopically tiny things. [Read more...](#)

Accelerating Scientific Discovery at the University of Melbourne

January 16, 2023

4,500 researchers with ~1,500 different projects leverage HPC at the University of Melbourne, translating discovery into meaningful, practical impact to benefit all of us. [Read more...](#)

LUMI Supercomputer Sheds Light on Quantum Mechanics, Solar Subsurface Physics, and More

June 23, 2023

June 23, 2023 — The European scientific community has been able to utilize LUMI, Europe's fastest supercomputer, in full scale since December last year. [Read more...](#)

Sharing the wealth of HPC-driven apps with flexible as-a-service models

October 4, 2021

Growing numbers of IT shops are delivering high performance computing systems and the applications they support as on-demand services accessed via cloud connections. [Read more...](#)

Deploying Open OnDemand with AWS ParallelCluster

February 21, 2023

Open OnDemand is an open-source High Performance Compute (HPC) portal that provides an easy way for system administrators to provide web-based access to HPC resources. [Read more...](#)

By Amazon Web Services

HPC Open Source Web Portals now Offered to Enterprise by Nor-Tech

December 12, 2019

MINNEAPOLIS, Dec. 12, 2019 — Nor-Tech, experts on complete Open Source HPC technology solutions, just announced the first two enterprise deployments of Open OnDemand, which enables even those without HPC expertise to take advantage of the significant cost-savings of open source.

[Read more...](#)



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Agenda

~~The Platform~~

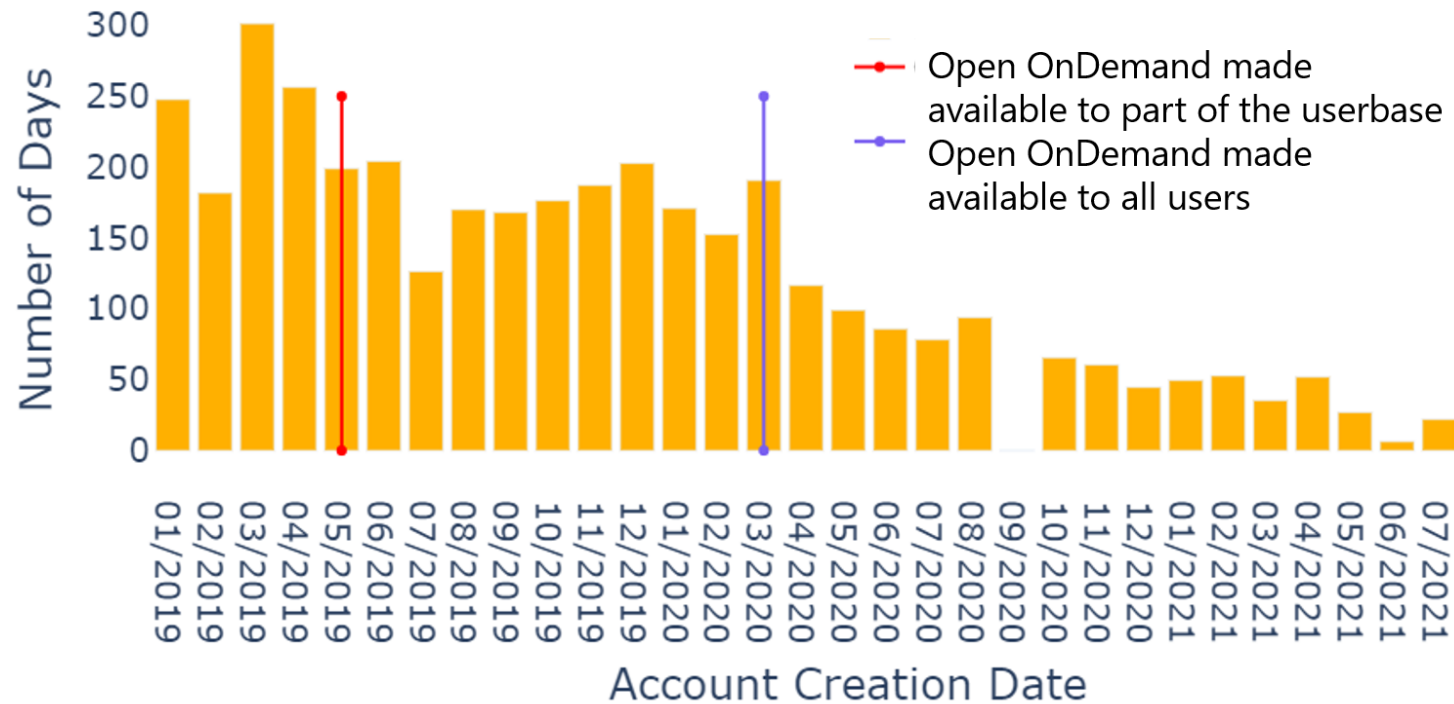
~~The Community~~

The Impact

The Future



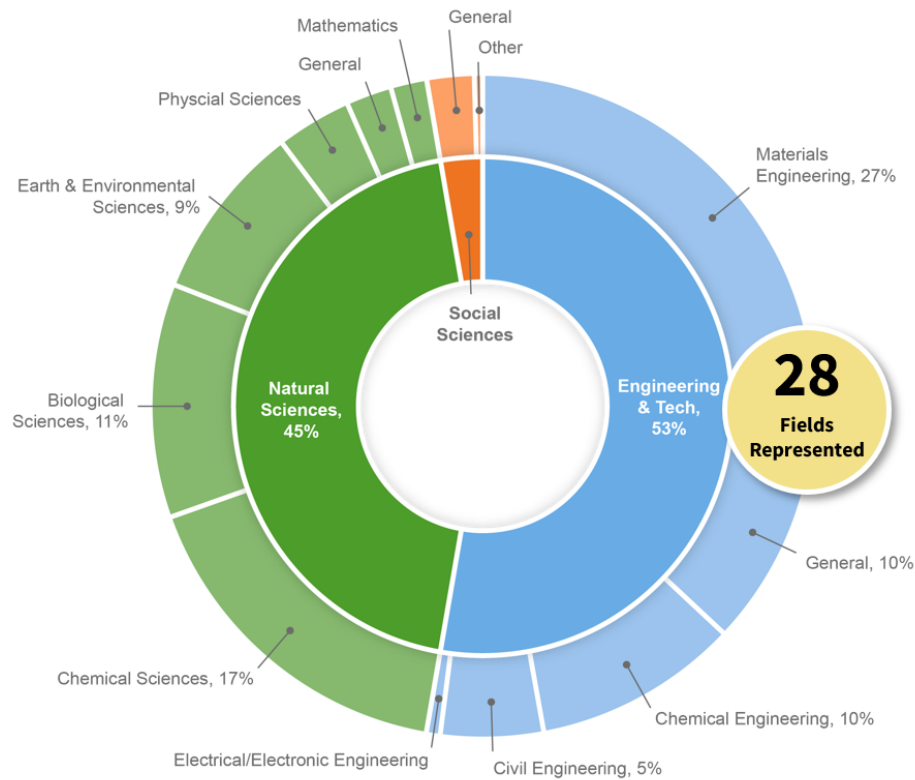
Average Number of Days Between Account Creation to First Job Submission



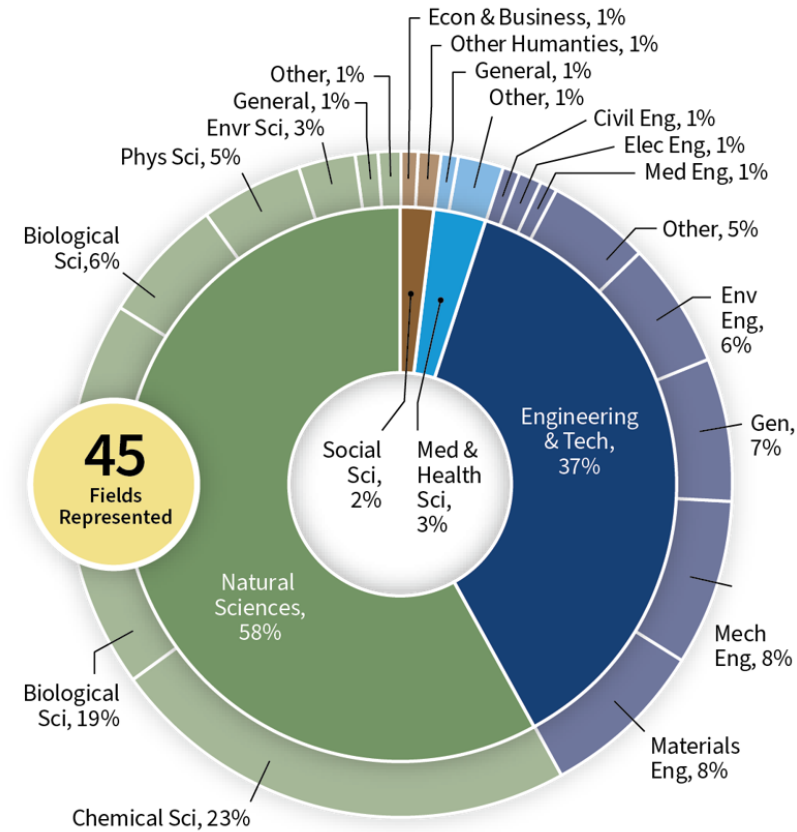
19 times shorter

In days between
account creation
and first job
submission

Impact at OSC

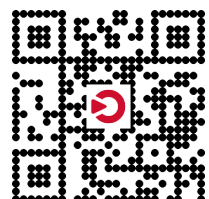


2017

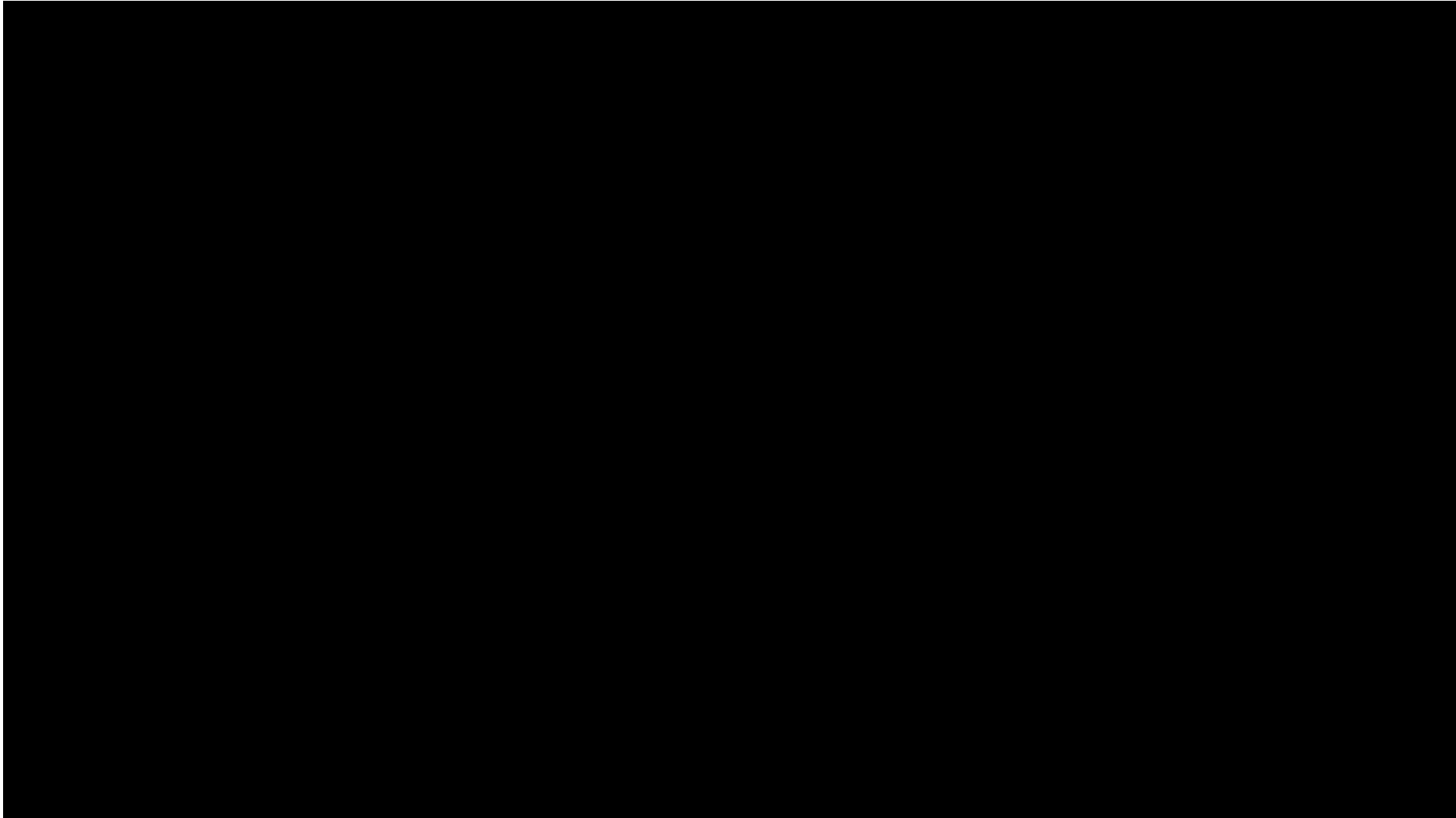


2023

openondemand.org/fields

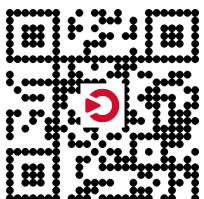
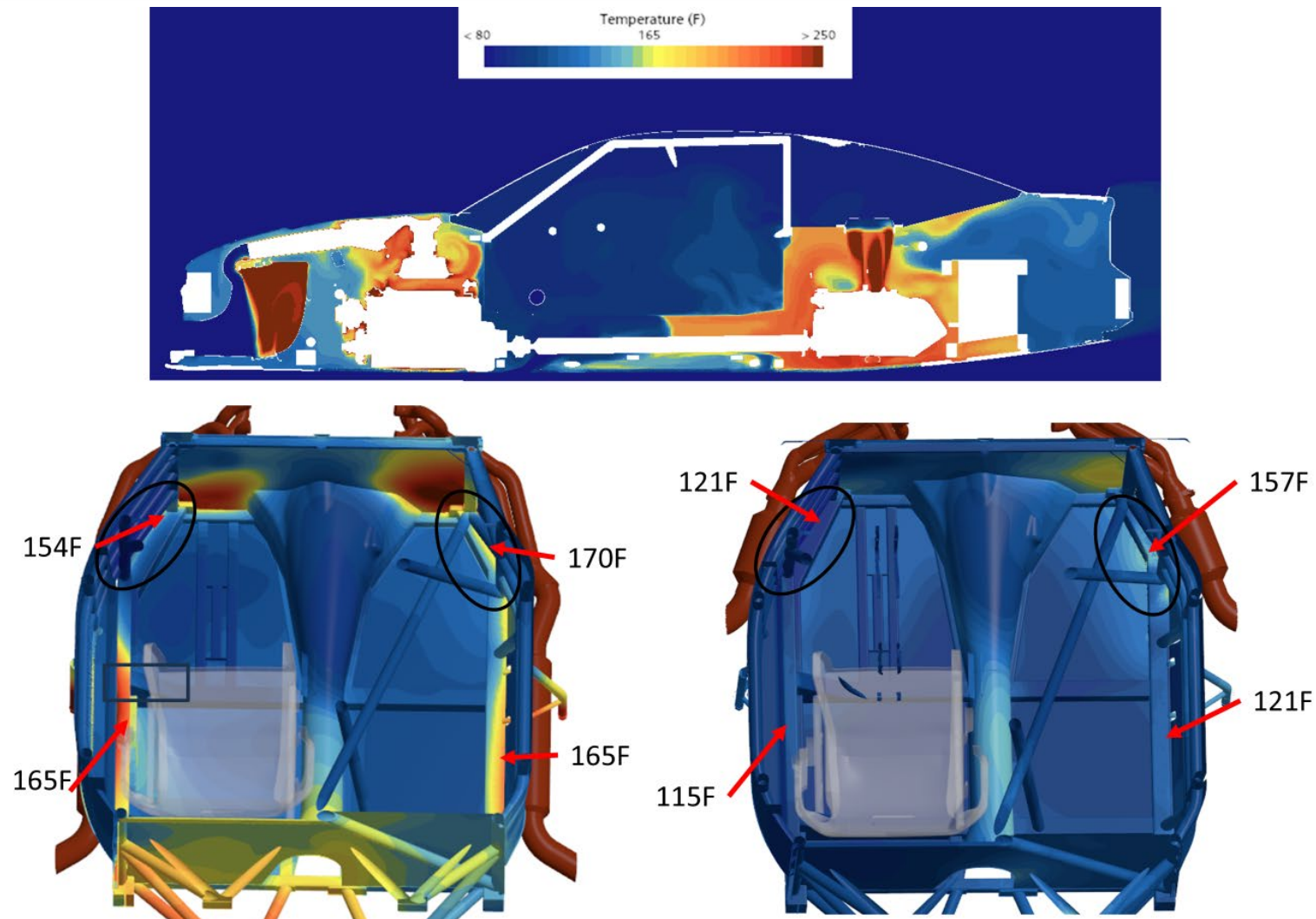


Any Challenge, Every Solution

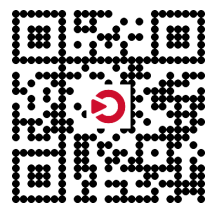
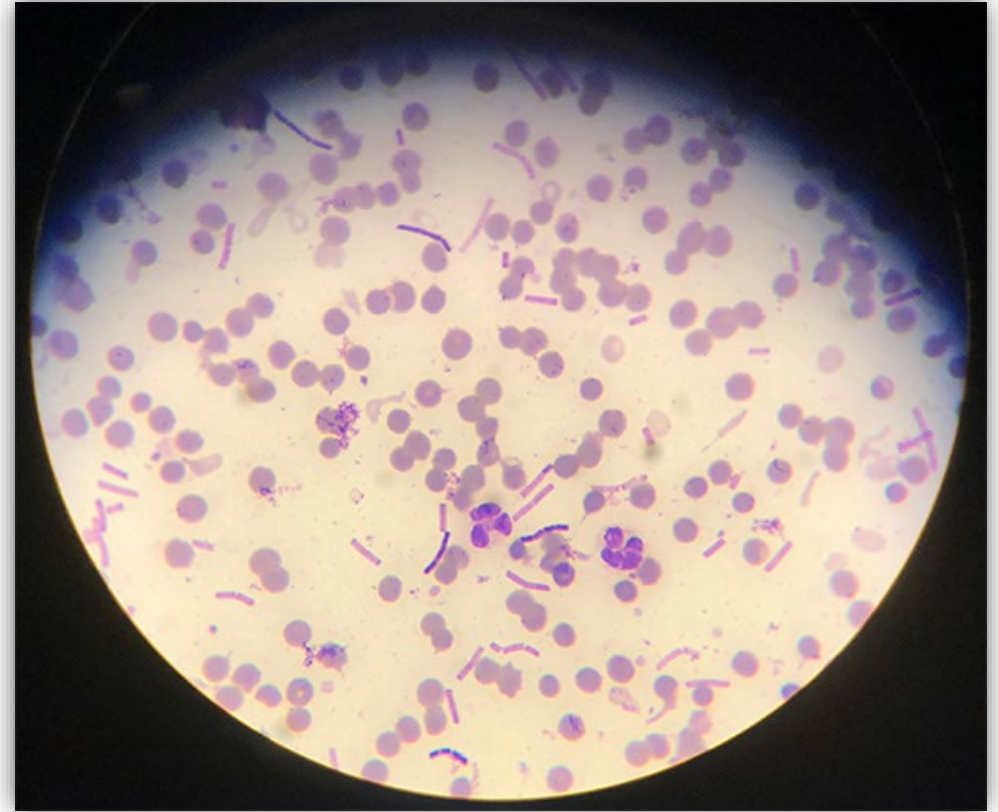


openondemand.org/anysolution

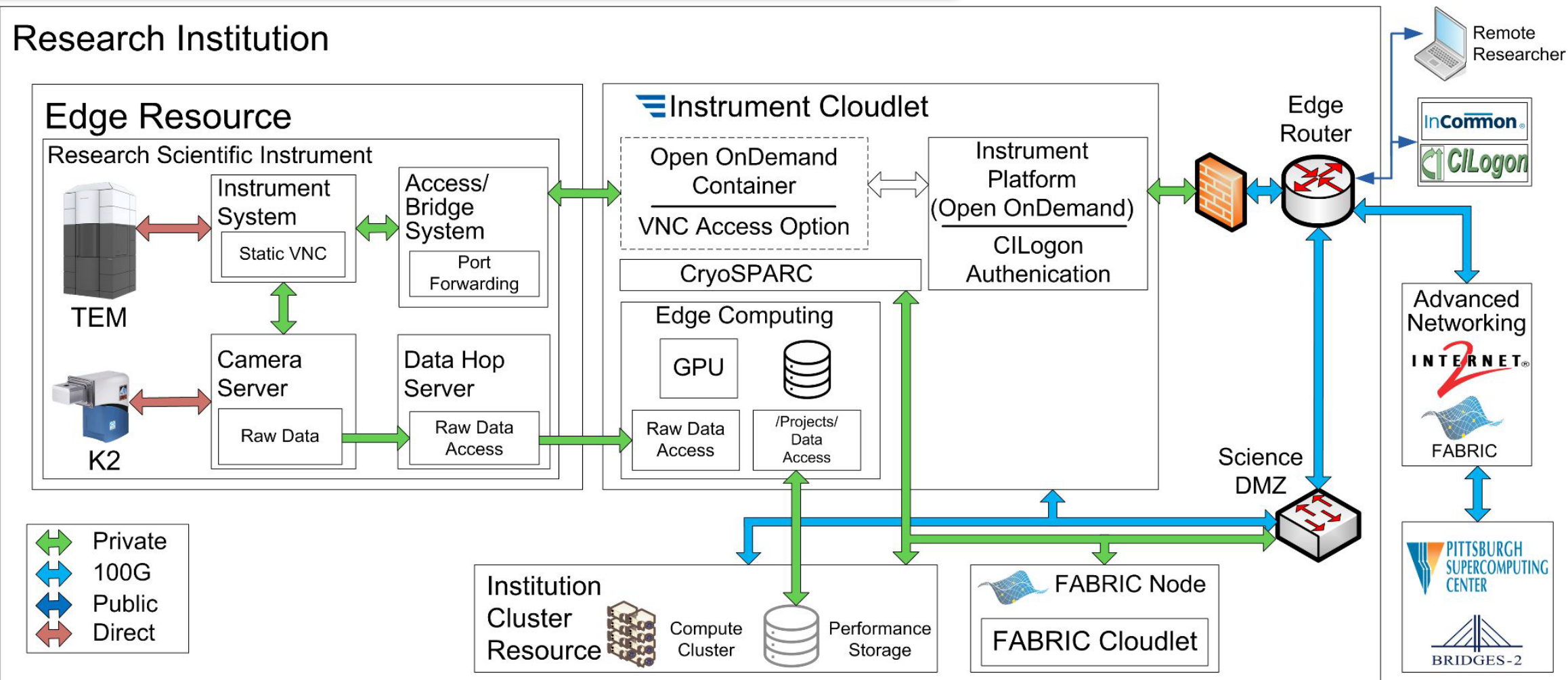
Race Car Comfort



Anthrax-Infected Zebras



Remote Science



Generative AI



openondemand.org/genai



Community Hub

 nDemand

Community Hub

Affinity Groups Knowledge Base People Events News

Leveraging community knowledge

Join Us

We are an active community of developers, resource providers, researchers, and vendors. We speed up scientific progress and work more efficiently by sharing tools, code, processes and best practices in working with Open OnDemand across disciplines and technologies.

[JOIN](#)



Affinity Groups

Topical user groups across disciplines and technologies.

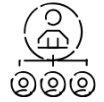
[➤ Affinity Groups](#)



Knowledge Base

Find and share resources useful to the community.

[➤ Knowledge Base](#)



People

Meet the community using Open OnDemand.

[➤ Member Directory](#)

Upcoming Events

11/18/2025
[SC25 - Forum for Open OnDemand \(FOOD\)](#)

11/19/2025
[SC25 - Forum for Open OnDemand \(FOOD\)](#)

12/04/2025
[Open OnDemand Tips and Tricks Call](#)

12/09/2025
[Open OnDemand Office Hours](#)

[ALL EVENTS](#)

openondemand.org/hub



Affinity Groups



Customizing the Backend



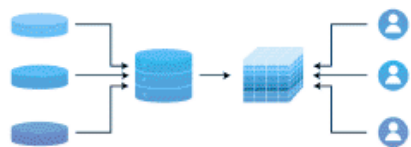
Genomics



LLMs



New to
OPEN
nDemand



Project Design



Appverse



Classroom



Azure



Security Best Practices



Multilingual Community



Structural Biology Apps



Web Apps & Absolute URLs



Community Events



Tips and tricks calls

Hosted by the larger Open OnDemand community, tips and tricks webinars share best practices for setting up and using Open OnDemand. They take place on the first Thursday of every month at 1 p.m. ET in the US



Open office hours

Hosted by our development team, Zoom open office hours are the perfect opportunity to ask questions or make a suggestion. They are held on the second Tuesday of every month from 11:15 a.m. to 12:45 p.m. ET in the US

European and Asia Pacific-timed versions of tips and tricks also now happening!



openondemand.org/events

Agenda

~~The Platform~~

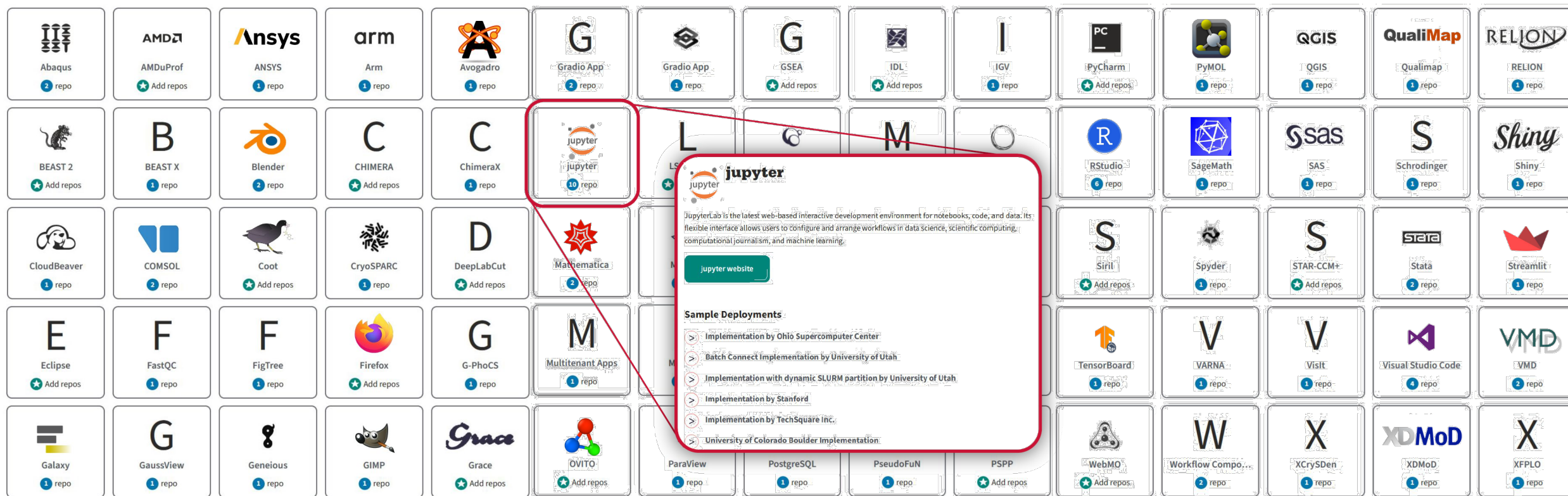
~~The Community~~

~~The Impact~~

The Future



Appverse is Coming!



Jupyter
10 repo

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.

[jupyter website](#)

Sample Deployments:

- > Implementation by Ohio Supercomputer Center
- > Batch Connect Implementation by University of Utah
- > Implementation with dynamic SLURM partition by University of Utah
- > Implementation by Stanford
- > Implementation by TechSquare Inc.
- > University of Colorado Boulder Implementation



Annual Conference

OPEN  nDemand



Global Open OnDemand Conference

THE UNIVERSITY OF UTAH | MARCH 9-12, 2026

Deadline to Submit Proposals: December 15, 2025

openondemand.org/good



Other Ways to Get Involved



Write Documentation

Draft documentation for a new app or feature, or help us revise existing docs.



Write Code

Write code for a new app or feature, and share it with our community.



Fund the Project

Provide monetary support to our development team or one of our partners.



Spread the Word

Mention us on social media [@open_ondemand](#)—or simply tell your friends!



Engage With Us

Collaborate with us to make your corporate or higher ed project a reality



Make a Suggestion

Pitch a new app or feature—or report a bug—to help make Open OnDemand even better.



openondemand.org/get-involved

Free Support Program



Discuss on Discourse

The Get Help category features user and admin questions and answers.

openondemand.org/discourse



Slack Workspace

Communicate and collaborate with the project team and community members.

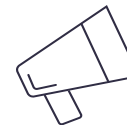
openondemand.org/slack



GitHub Documentation

Outlines installation steps, app guidelines, release notes, and more.

openondemand.org/docs



Constant Contact Newsletter

Subscribe to get notices about upcoming events, new releases and user stories.

openondemand.org/newsletter



openondemand.org/support

Paid Support Program

Free	Basic		Pro BEST VALUE		Elite	
All Open OnDemand clients have access to free support services.	All the benefits of Free + priority support channels and early releases.		All the benefits of Basic + private support sessions on a set calendar and event exclusives.		All the benefits of Pro + scheduled private support sessions when they work for you and priority access to Open OnDemand staff.	
✓ Public office hours ✓ Public discussion boards ✓ Public GitHub troubleshooting ✓ Public events	✓ Private Discourse & GitHub access ✓ Early access to updates		✓ 3 private support sessions per quarter on a set calendar (add-on sessions available; see reverse) ✓ Recognition at public events ✓ Special event invitations ✓ Exclusive brand items		✓ 6 private “choose your time” support sessions per quarter (add-on sessions available; see reverse) ✓ Support via email ✓ Access to special developer sessions at major public events	
Academic Others FREE	Academic \$3,000/ year	Others \$5,000/ year	Academic \$5,500/ year	Others \$7,500/ year	Academic \$13,000/ year	Others \$15,000/ year

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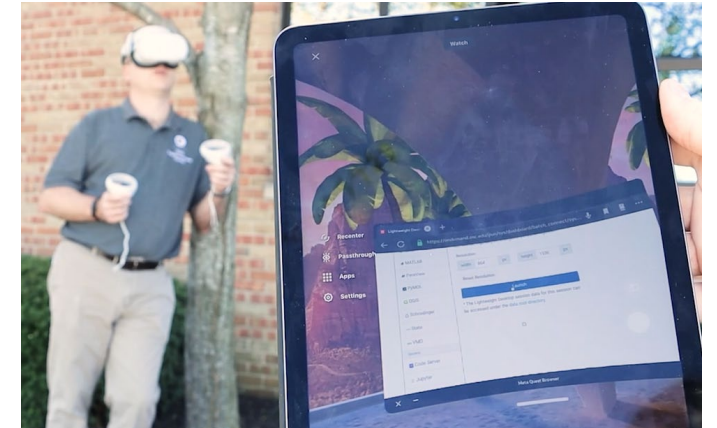
Future Hardware Plans



Instruments
(e.g. CryoEM)

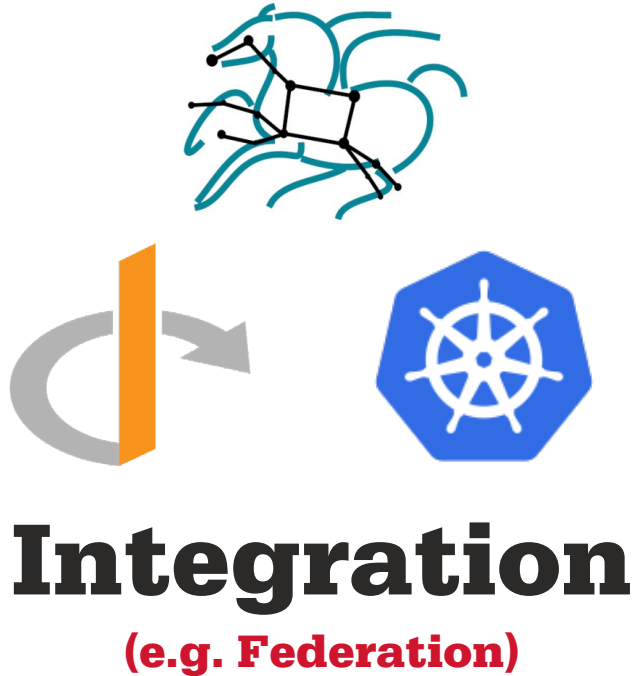


Computers
(e.g quantum)



Interfaces
(e.g VR)

Future Software Plans

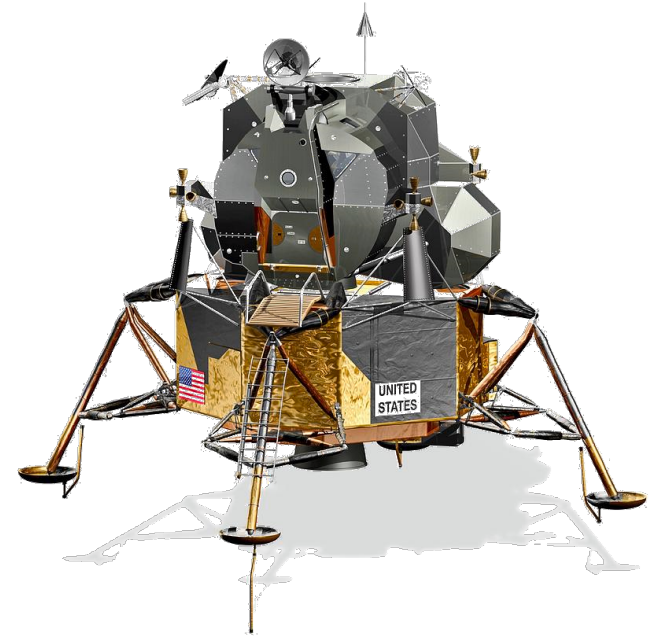


What is a Supercomputer?



**2020 Smartphone
Charger**

\$20	Cost	\$200,000,000
8 KB	Memory	4 KB
128 KB	Storage	72 KB
50,000 KFLOPS	Speed	80 KFLOPS



**1970 Apollo
Lunar Module**

Staying Up To Date

 **OPEN**
 **nDemand**
openondemand.org



Connecting Computing Power With
Powerful Minds

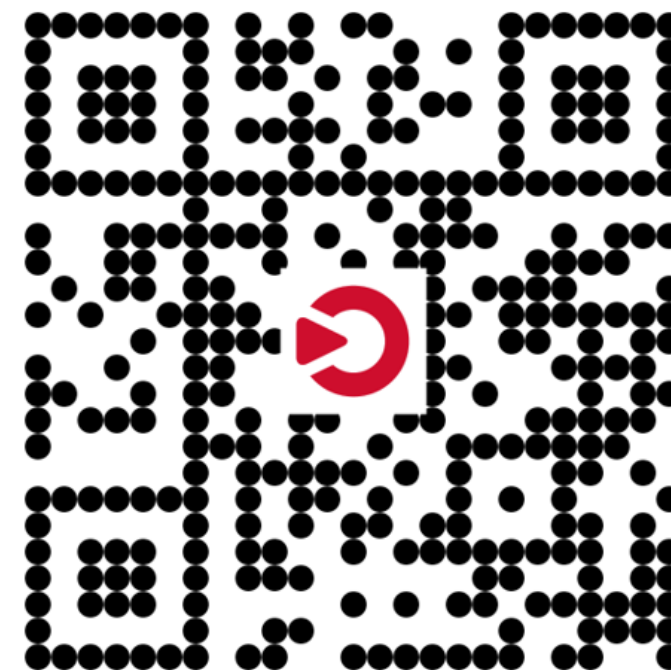
Visit us at SC25

November 16-21, 2025 | St. Louis, Missouri
Booth 4214: Ohio Supercomputer Center & Open OnDemand

We are excited for another spectacular Supercomputing Conference and eager to see lots of familiar faces and hopefully many new ones, too.

We will have a robust presence, including our Ohio Supercomputer Center (OSC) and Open OnDemand **exhibitor booth 4214**, special events, demos, giveaways and more.

The full Open OnDemand schedule is below, with even more at the OSC and Open OnDemand SC hub at osc.edu/sc25.



openondemand.org/newsletter

Thank You!

Alan Chalker

alanc@openondemand.org



openondemand.org/ihpc-sc25