An intuitive, innovative, and interactive interface to remote computing resources

Open OnDemand helps computational researchers and students efficiently utilize remote computing resources by making them easy to access from any device. It helps computer center staff support a wide range of clients by simplifying the user interface and experience.

Key Benefits & Impact

- Key benefit to you, the end user:
  You can use any web browser to access resources at a computing service provider.

- Key benefit to you, the computer center staff:
  A wide range of clients/needs can utilize your computing resources.

- Overall impact:
  Users are able to use remote computing resources faster and more efficiently.
Launched Sep. 2016, % users has steadily increased since launch

OnDemand users start work faster than traditional users, both in terms of first login and job submission.
Approx Number of Institutions based on RPM logs

- 136 unique US locations
- 70 unique international locations
Example Current Engagements and Deployments

Production Deployments

In Process of Installing

[List of universities and institutions]
openondemand.org

- Use our Discourse instance for help
- Join our mailing list for updates
- Our webinars are roughly quarterly
Open OnDemand 2.0 Project Overview

• Previous three year NSF SI2 award (#1534949) to develop OnDemand 1.x
• Awarded followon NSF CSSI award (#1835725) to develop OnDemand 2.x
  – Project runs from Jan 2019 to Dec 2023
  – Collaborators include SUNY Buffalo and Virginia Tech
• Four areas
  – **Visibility:** Enhancing resource utilization visibility by integrating the existing Open XDMoD platform
  – **Scalability:** support more types of computing resources and software
  – **Accessibility:** appeal to more scientists in more fields of science
  – **Engagement:** establish community of departmental, campus and national HPC users and administrators
Open XDMoD

- XDMoD: XD Metrics on Demand
- On demand access to job accounting & performance data
- Optimize resource utilization & performance
  - Utilization metrics
  - Measure infrastructure QoS
  - Job and Cloud level performance data
- 200+ academic & industrial installations worldwide

http://open.xdmod.org/
Architecture

CLIENT

Zero Install
Requires only a modern web browser

SERVER FRONT END
(Runs as Apache User)

Functions
1. User Authentication
2. Reverse Proxy

SERVER BACK ENDS
(Each Runs as an Authenticated User)

Per-User NGINX (PUN)

Passenger

Interactive HPC (iHPC)
VNC Server + Websockify
COMSOL Server
Jupyter Notebook Server
RStudio Server

Interactive Jobs

IPC Sockets

HTTP/WS

HTTPS/WSS

Apache
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