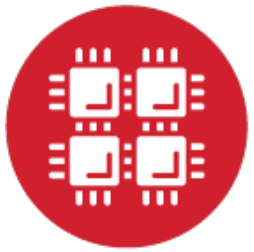

Ohio Supercomputer Center

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# Open OnDemand:
# Supporting your HPC needs now more than ever

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Web and Interface Applications Manager

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# Open OnDemand Overview

- ✓ About Open OnDemand
- Recap
- What's new?
- Community experience
- Upcoming and Future

# About Open OnDemand

- Open source software project
- Installable for an HPC cluster (or clusters)
  - Standalone system, Lab, Department, University or National Resources
- More than just an “out of the box” solution
  - OnDemand is a platform that can be extended through additional and custom apps

# OnDemand Features

- Single point of entry for HPC Center's services
- User needs three things
  - URL:  ondemand.xxx.edu
  - Username
  - Password
- Zero install (Completely browser based)
- Single sign-on
- Firewall friendly (Keep traffic on https port)

# What sort of things can you do with Open OnDemand?

- Access your supercomputer via web
  - File Browser, File Editor:  upload/download, browse edit files
  - Terminal:  connect to a login node command line
- Manage Batch Jobs via the web
  - MyJobs app:  create, submit and inspect individual jobs
  - ActiveJobs app:  inspect queues and running job statistics

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First webinar can be found on the Open OnDemand website:
https://osc.github.io/Open-OnDemand

# Previously…

- ✓About Open OnDemand
- Using Apps
- How does it work?
- Installation Procedure
- Site Integration
- Extending the Platform

## Open OnDemand App Features

| App | Features |
|---|---|
| Dashboard | Browse and Launch Apps. |
| File Browser | Browse directories. Upload/Download. Move and Rename. |
| File Editor | Multiple themes. Key bindings. Syntax highlighting. |
| Terminal | SSH session to login node. |
| My Jobs | Create and submit jobs to cluster. |
| Active Jobs | Display job queue. |

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## Installation Procedure

https://osc.github.io/Open-OnDemand/installation

*Installation steps limited to OnDemand server*

- Install system dependencies
  - Apache, Ruby, NodeJS, Passenger, git (we use Software Collections)
  - Client libraries for authentication, resource manager, and shared file system access (like any login node)
- Install Open OnDemand infrastructure from GitHub
  - Sets up web server to run apps
- Install Open OnDemand apps from GitHub
  - Dashboard, Shell, Files, Editor, Active Jobs, My Jobs

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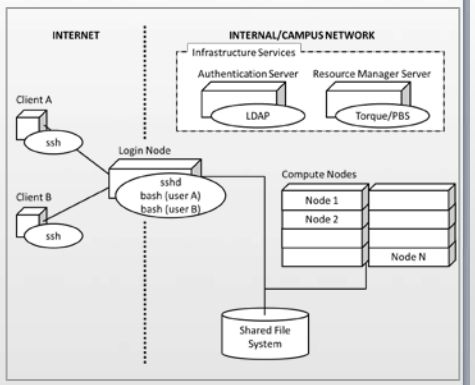

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# Open OnDemand Timeline

- 2016Q4
  - OSC OnDemand 3.0 released
    - First usage of Open OnDemand
  - Beta testing at external sites begins
- 2017Q1
  - First public, fully installable release
  - First webinar
- 2017Q2
  - Second webinar

# What's new?

- MOTD support
- Simpler installation
  - App installation with a single script
- Interactive Desktop support
  - Linux Desktop (e.g., GNOME, MATE)
  - Custom desktop applications
- Additional resource manager support
  - Slurm
  - LSF

# What's new?

Installation Overview

- Motivated by making the process easier
- Found opportunities to make installation smoother and simpler for admins
- Many steps reduced to a single step
- Released on April 27th, 2017

# What's new?

## Interactive Desktop Demonstration

# What's new?

External install and Slurm demo by PSC

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# Community experience

- In addition to PSC, we also have installs at at a handful of other locations that we know about
  - If you've tried it and we don't know, please let us know!
- Feedback
  - Resource managers (Slurm & LSF)
  - Theming/Branding
  - 2FA
  - CILogon
  - X11
  - VNC

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# Upcoming and Future

- PEARC17 BoF – Come meet us!
  - Wednesday, July 12 • 4:00pm - 5:00pm
  - http://sched.co/Ax2T
- Upcoming features
  - App development
    - Graphical desktop applications
      - Paraview, MATLAB, Abaqus, ANSYS Workbench, COMSOL Multiphysics
    - Interactive web applications
      - Jupyter, RStudio Server, COMSOL Server
    - New and customized apps
  - Suggestions?

# Next Webinar/Staying in Touch

- Our webinars are planned roughly quarterly
  - Let us know what you'd like to learn about next
- Visit our website
  - https://osc.github.io/Open-OnDemand/
- Join our mailing list
  - https://lists.osu.edu/mailman/listinfo/ood-users
- Get Open OnDemand!
  - https://github.com/OSC/Open-OnDemand

# Thank you!  Any questions?

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https://osc.github.io/Open-OnDemand/  go.osu.edu/ood