ACCESS | Advancing Innovation

NSF

Anvil 101

New User Tutorial

The Anvil Team, Purdue Research Computing

rcac.purdue.edu/training/anvil101

rcac.purdue.edu/knowledge/anvil

PURDUE UNIVERSITY | Information Technology

Acknowledgement

“This material is based upon work supported by the National Science Foundation under Grant No. 2005632.”

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Full Agenda

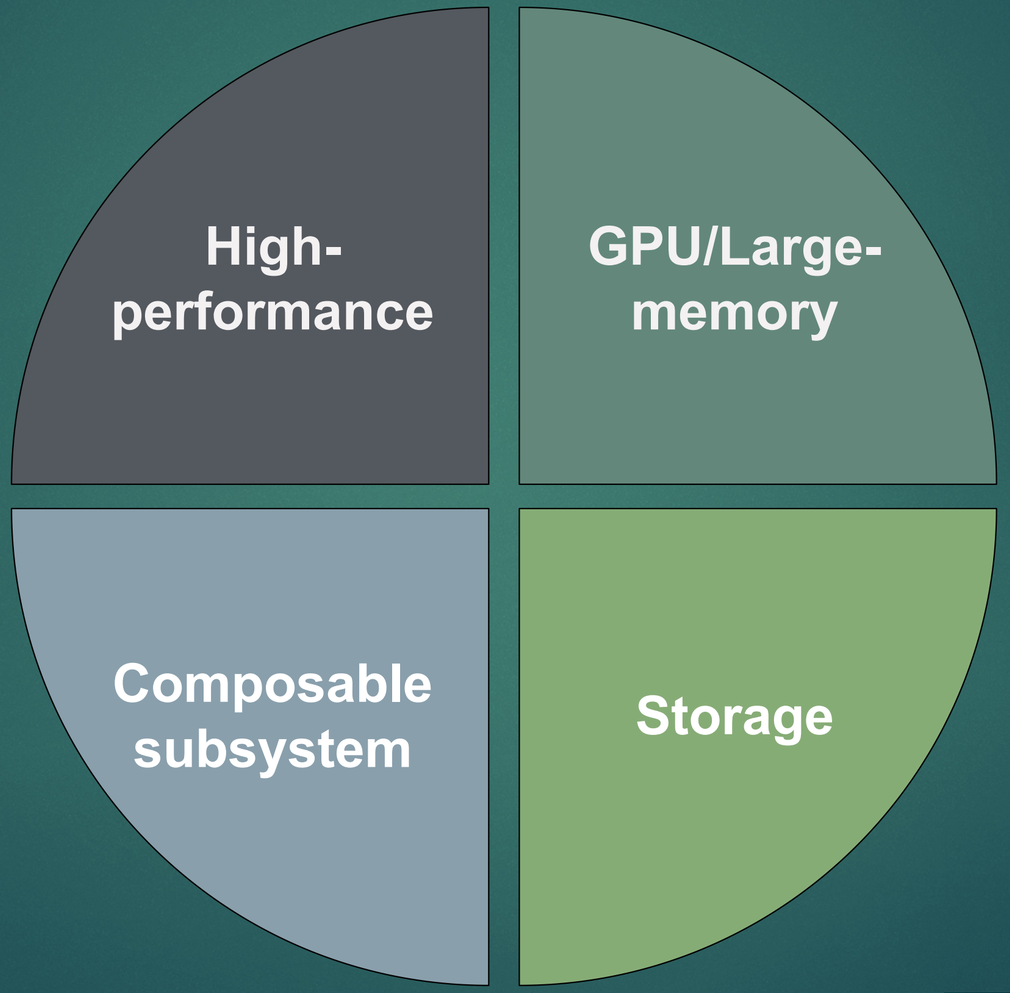
- Anvil system architecture
- Sign up for Access/Anvil accounts and apply for allocations
- Data management and transfer on Anvil
- Running Jobs on Anvil
- Q&A

About Anvil

- **Category I: A national composable advanced computational resource for the future of science and engineering**
- **By the Purdue research computing team. Full access started February, 2022**
- **NSF award #2005632; 5 years of operations; allocated via NSF ACCESS**

System Resources

- **1000** compute nodes
- **128** core AMD 3rd Gen EPYC 7763 processors
- **5.3** PF peak performance



- **16** nodes with **4** NVIDIA A100 GPUs each
- **32** large memory nodes with **1** TB of RAM

- **8** large memory & storage nodes
- Kubernetes – Rancher for DevOps

- Multi-tier storage (including object storage)
- **10** PB of parallel filesystem, and **3** PB of all-flash storage
- Globus data transfer

Service & Support

Quick turnaround via ACCESS support tickets

support.access-ci.org/

Support team

[comprising domain experts from multiple disciplines]

Advanced user support

[data science consulting, HPC performance optimization, science gateway development]

Multimodal Training Delivery

[live lessons, online tutorials, video lessons]

Agenda

2. Getting started

- **Get anvil account and allocation**
- **Logging in**
- **Check account usage**

Obtaining ACCESS and Anvil Account

Anvil is accessible to ACCESS users who are given an allocation on the system. To obtain an account, users may submit a proposal through:

ACCESS Allocation Request System:
https://allocations.access-ci.org/

- Sign up for an ACCESS account (if you don't have one already) at https://allocations.access-ci.org
- Prepare an allocation request with details of your proposed computational workflows (science, software needs), resource requirements, and a short CV. See the individual "Preparing Your … Request" pages for details on what documents are required:

allocations.access-ci.org/prepare-requests-overview

Obtaining an Allocation

How do I get onto Anvil through ACCESS?

Allocation	Credit Threshold
Explore ACCESS	400,000
Discover ACCESS	1,500,000
Accelerate ACCESS	3,000,000
Maximize ACCESS	Not awarded in credits.

allocations.access-ci.org/prepare-requests-overview

Obtaining an Allocation

When your request is approved, you only get ACCESS **credits** awarded. You still need to go through the step of exchanging these credits for time on Anvil.

You need not use up all your credits and may also use part of your credits for time on other ACCESS resources.

Exchange calculator (https://allocations.access-ci.org/exchange_calculator)

You will also need to go to the allocations page and add any users you would like to have access to these resources.

Note that they will need to sign up for ACCESS accounts as well before you can add them.

For other questions you may have, take a look at the FAQs on the ACCESS page here:

(https://allocations.access-ci.org/ramps-policies-faqs)

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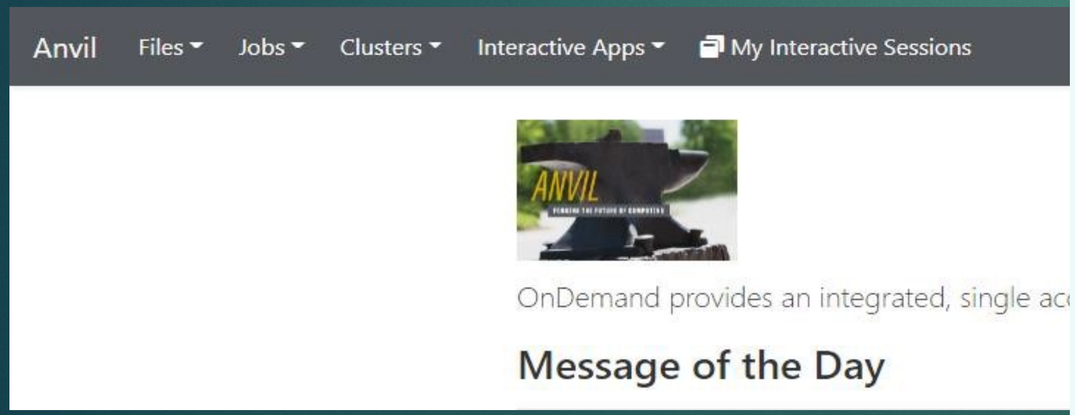
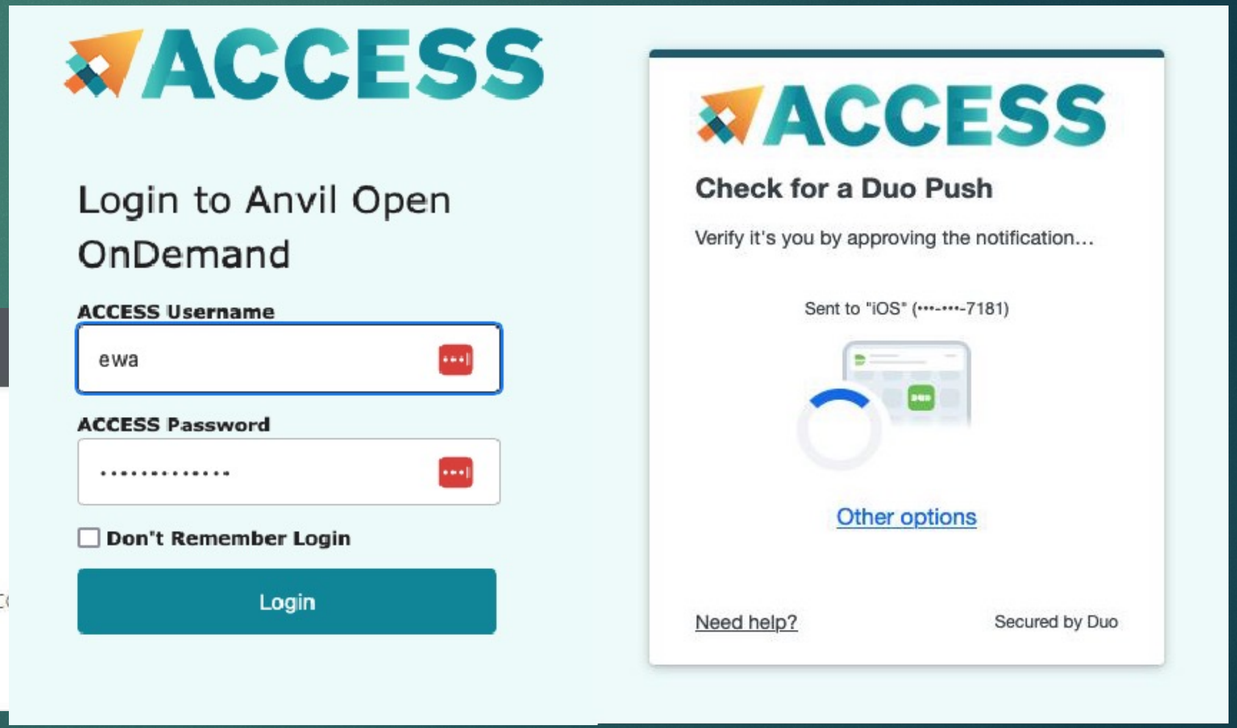
Open OnDemand

Open OnDemand allows one to interact with HPC resources through a web browser and easily manage files, submit jobs, and interact with graphical applications directly in a browser, all with no software to install.

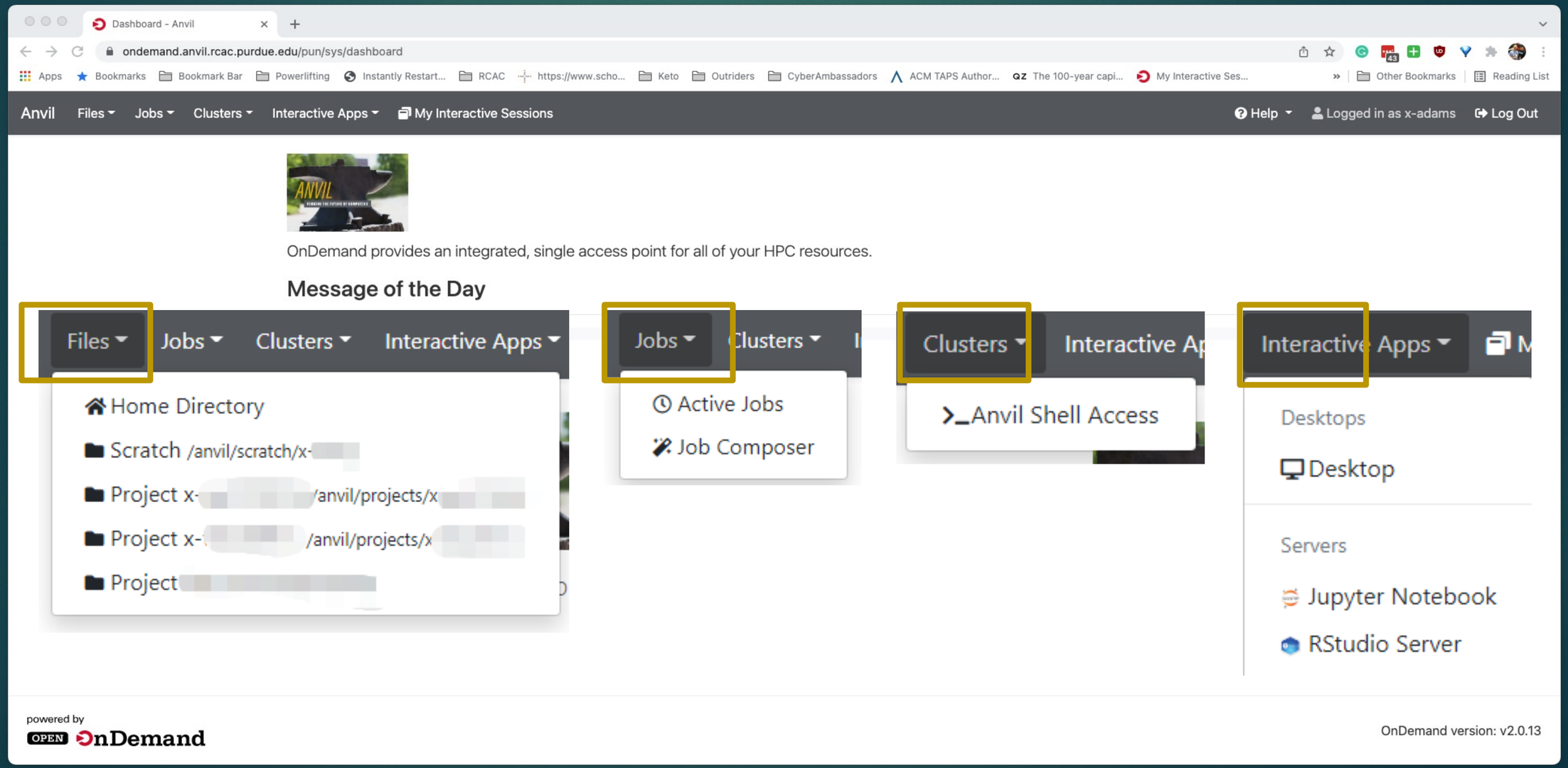
Navigate to ***https://ondemand.anvil.rcac.purdue.edu***

Log in using your **ACCESS portal username and password**





More training section about Open OnDemand will be given by Anvil team in the future.


Dashboard - Anvil
ondemand.anvil.rcac.purdue.edu/pun/sys/dashboard
Anvil
Files
Jobs
Clusters
Interactive Apps
My Interactive Sessions
Help
Logged in as x-adams
Log Out
OnDemand provides an integrated, single access point for all of your HPC resources.
Message of the Day
Home Directory
Scratch /anvil/scratch/x-
Project x-
/anvil/projects/x
Project x-
/anvil/projects/x
Project
Active Jobs
Job Composer
Anvil Shell Access
Desktops
Desktop
Servers
Jupyter Notebook
RStudio Server
powered by
OPEN OnDemand
OnDemand version: v2.0.13

THANK YOU!

Contact Us

For user support please submit a ticket at Help Desk, by selecting the appropriate Anvil resource to have it routed to us.