## Leveraging National Cyberinfrastructure for Earth Science

### **Easy Access to Free Computing Cycles**

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# Advanced Cyberinfrastructure Coordination Ecosystem: Services & Support

### Overview

ACCESS is a program established and funded by the National Science Foundation to help researchers and educators, with or without supporting grants, to utilize the nation's advanced computing systems and services - at no cost.

Single entry point for over 20 compute, cloud, storage, and networking systems, including:

- Computing systems
- Varying core counts & memory sizes
- Accelerators
- GPUs, vector processors, FPGAs
- Data storage systems
- Archival, object, tiered
- Data repositories
- Software & workflow managers
- High performance networking
- CI Professionals & support tools
- System performance monitoring

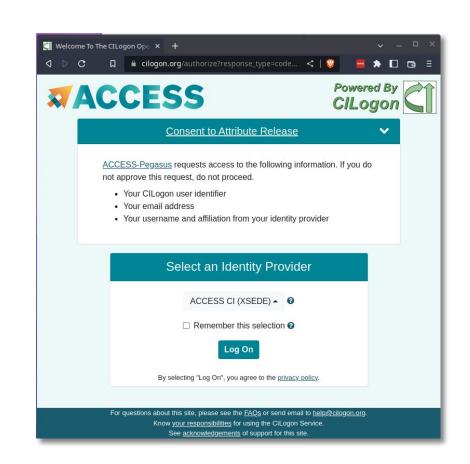
### **Comprehensive Support Services**

In addition to the traditional documentation, ticket system and training, ACCESS provides support via a community driven question/answer system at ask.Cl, and affinity groups around many topics.

The MATCH services connects researchers with consultants, mentors, and student. The CI expert is assigned to the researcher's project for 6-12 months.

### **Getting an Account**

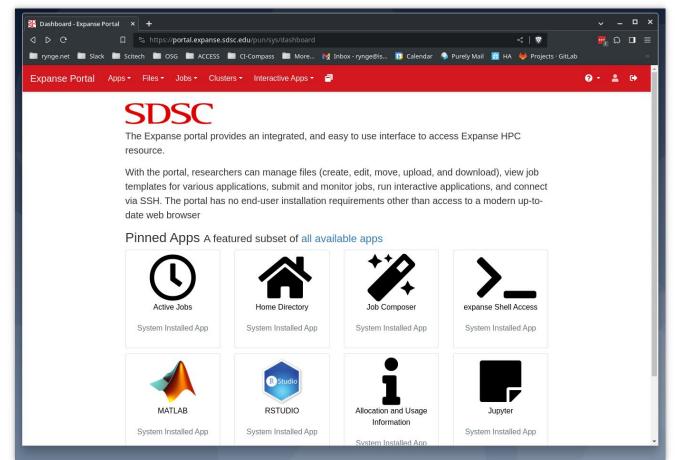
You may use an existing University account to register - this simplifies the signup process, and CILogon is used for authentication. Alternatively you can register without an existing identity, and use an ACCESS-specific username/password/MFA for authentication.



### **Open Ondemand**

Open OnDemand is an easy-to-use web portal that is being deployed on ACCESS resources to allow researchers to compute from anywhere without client software or command-line interface, and significantly speed up the time to science.

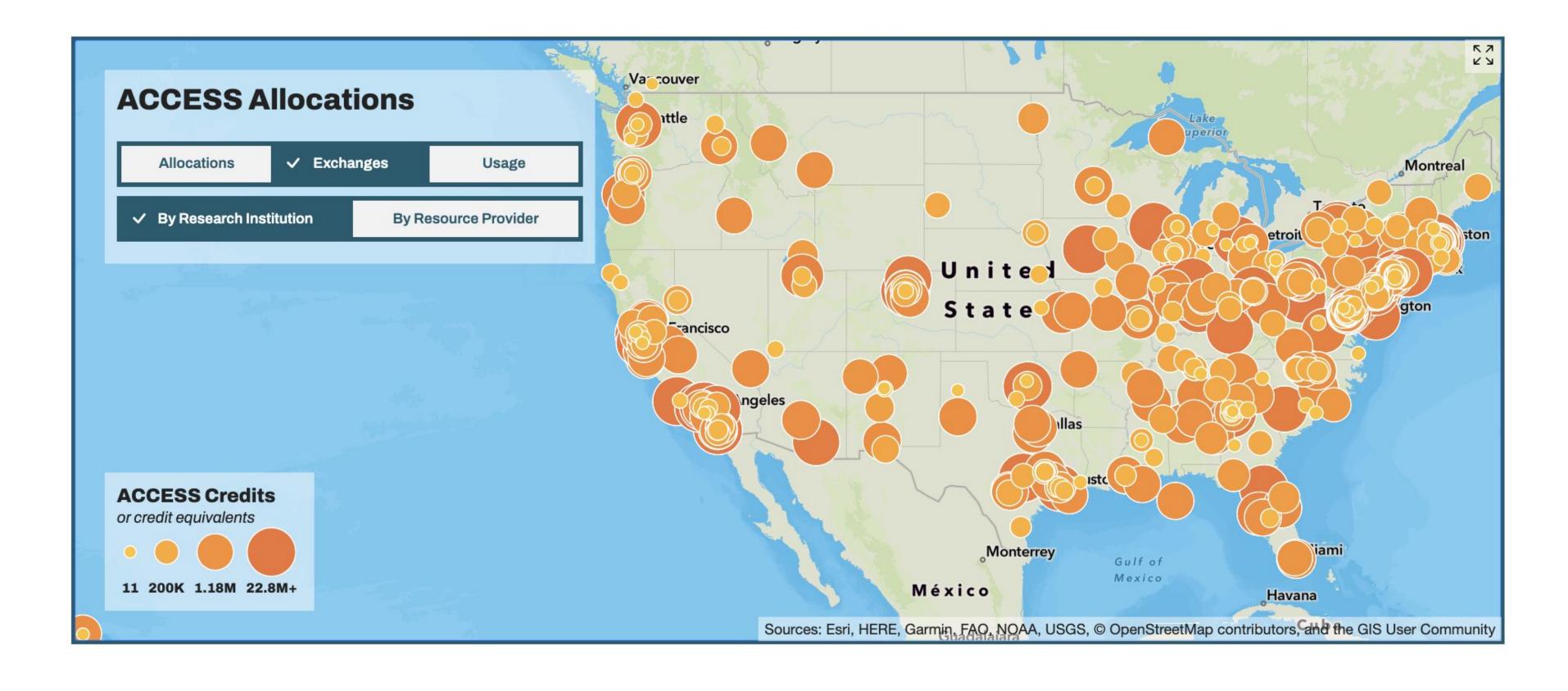




### Allocations

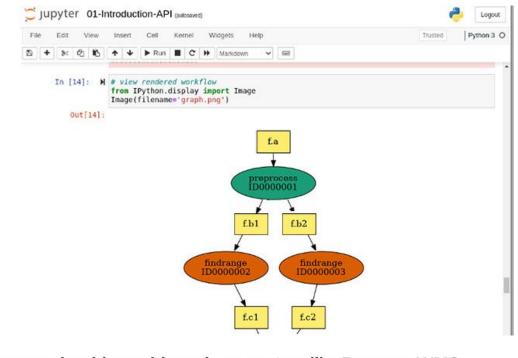
ACCESS allocations are available to any researcher or educator at a U.S. academic, non-profit research, or educational institution.

ACCESS welcomes requests not just for traditional high-performance computing (HPC) activities, but for any work that can benefit from resources in the ecosystem, including machine learning, data science, science gateways, software development, and more.



### **ACCESS Pegasus**

ACCESS Pegasus is a hosted workflow management system which allows users to construct, run, and debug workflows from a Jupyter Notebook. Perform simple interactions on the command line. Work across environments and get started quickly with sample workflows using a Python API.



Some reasons you should consider using a system like Pegasus WMS:



Document and reproduce your analyses, ensuring their validity, with scientific workflows



Automate repetitive and time-consuming tasks and reduce your workload

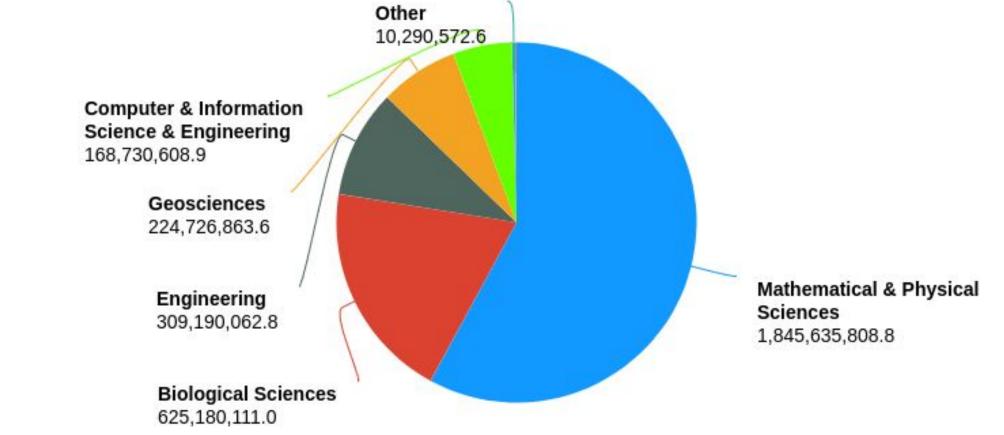


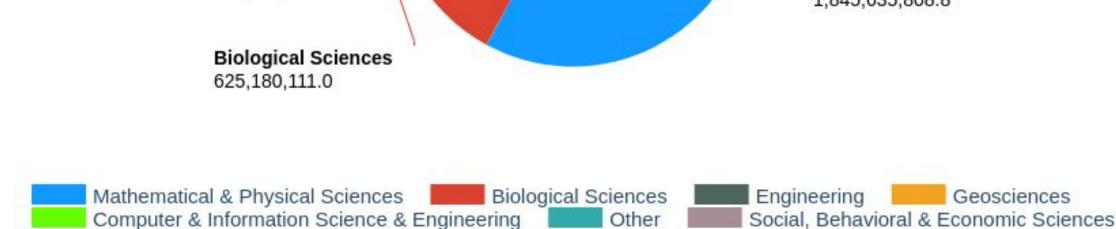
Build libraries of reusable code and tools that can be adapted by other researchers

Handle large data sets and complex analyses and take on bigger research problems.

### **Metrics**

ACCESS credits, by NSF Directorate, Sept 2022 - Dec 2023





# https://access-ci.org

### **Service Providers**



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