ACCESS: RAMPS

Resource Allocations Marketplace & Platform Services

"The NSF-funded national CI must be accessible and equitable for all researchers no matter the size of the institution, the scale of the planned work, the discipline of the research, or the demographics of the requestor."

Our Goals

- open, inviting, and **democratized allocations marketplace**
- efficient, scalable, and **simplified request and review framework**
- robust, decentralized, and **flexible software platform**

Our Team

- Pittsburgh Supercomputing Center (PSC)
  - *Shawn Brown, PI*
- National Center for Atmospheric Research (NCAR)
  - *Dave Hart, co-PI*
- National Center for Supercomputing Applications (NCSA)
  - *Laura Herriott, co -PI*

ACCESS Community

Robust, decentralized, and flexible software platform built on the established XRAS software.

RAMPS Platform

Allocation Tiers

ACCESS Credits

AARC Panel Reviewed

Multiple tiers of entry to create an open, inviting, and democratized allocations marketplace for all researchers.

Credits will be exchanged for resource specific units.

1. **Explore**

Eligibility review, Small allocation

4. **Maximize**

10-page proposal, Maximum allocation, Merit review

2. **Discover**

1-page proposal, Medium allocation

3. **Ramp-Up**

3-page proposal, Large allocation, Merit review

Continuous improvement (through community engagement, DEI focus groups, advisory boards, stakeholder feedback) built into the project.

Resource Marketplace

Where researchers will "spend" their allocated ACCESS credits.

Resource Providers

Maintain full control of their resources and marketplace exchange rates.

Innovative Pilots

A more flexible marketplace, On - RAMPS, and an expanding resource portfolio

1. Variable marketplace

- More dynamic changes of exchange rates to respond to supply and demand
- Targeted rates, e.g., for particular domains or application classes
- Understanding marketplace behavior

2. On-RAMPS

- Pushing the marketplace interfaces out to university portals
- Engaging researchers and instructors in their comfort zones
- Providing institutions with a "virtual data center"

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3. Integrating clouds

- Integrate commercial cloud providers into the marketplace
- Linking cloud provider credits to ACCESS credits
- Support workflows that span NSF - funded and commercial resources

4. CI Workflows
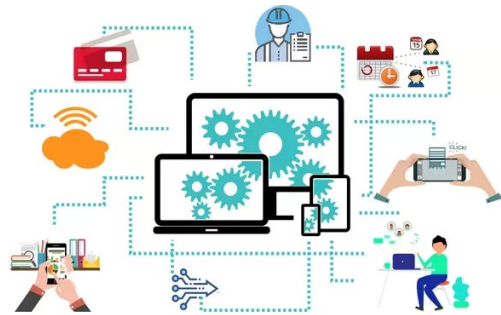
- Permit resource providers to allocate their resources as part of constructed workflows
- Build workflows from the edge to "central" resource
- Incorporate a range of resource types—instruments to HPC

5. Sensornets and Instrumentation

- Calendar -level scheduling for resources that can't be shared simultaneously
- Integrate scheduling application within XRAS platform

Questions?

- Shawn Brown
  stbrown@psc.edu
- Dave Hart
  dhart@ucar.edu
- Laura Herriott
  herrio@illinois.edu
- Stephen Deems
  deems@psc.edu
- Agbeli Ameko
  agbeli@ucar.edu

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