



NSF Campus Cyberinfrastructure PI and Cybersecurity Innovation for Cyberinfrastructure PI Workshop

September 23 – 25, 2019 | Minneapolis, MN

NSF Program (either CC or CICI): CC

Program Area: Cloud

Award Number: 190444

PI: Howard Pfeffer

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Project Title: Exploring Clouds for Acceleration of Science



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Quad Chart for: *E-CAS Exploring Clouds for Acceleration of Science*

Challenge Project Seeks to Address:

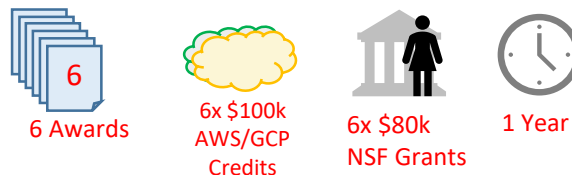
- Investigate the viability of commercial clouds for leading-edge research computing and computational science supporting a range of academic disciplines
- Leverage the novel capabilities of cloud heterogeneous hardware resources and platforms, such as CPUs, GPUs and FPGAs, for scientific applications and workflows .
- Achieve the best time-to-solution for scientific applications and workflows using cloud computing.

Deliverables:

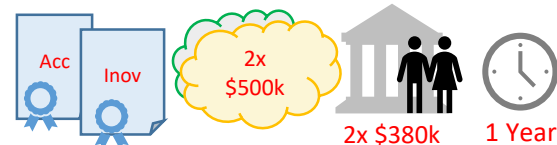
- Facilitate review process and sub-award administration.
- Identify common issues across projects and cloud providers
- Identify gaps and limitations in provider capabilities
- Document patterns in software stacks and deployment practices.

Phase 1 – sponsored by AWS & GCP Credits & NSF Grants

2 projects AWS
2 projects on CGP
2 projects multi-cloud +AWS/GCP
Most projects also using XSEDE and Campus Compute allocations



Phase 2 – Funded by NSF grants



Scientific Impact or Broader Impact:

- Demonstrator of new technologies and multi-cloud integrations
- Access to the newest technologies including GPUs, FPGAs and Machine Learning platforms
- Supporting development of 6 individual science projects
- Developing learnings for future computational research platforms using commercial clouds.

Metadata tag:

<https://internet2.edu/ecas>

Updates at:

Internet2 TechEx2019, New Orleans

*Full phase 1 review workshop:
Internet2 Global Summit 2020*