



NSF Campus Cyberinfrastructure PI and
Cybersecurity Innovation for Cyberinfrastructure PI Workshop
September 24 – 26, 2018 | University of Maryland, College Park, MD

NSF Program (either CC or CICI): CC

Program Area: Networking Infrastructure Award Number: 1659232

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**Project Title: CICNet - The One-Rutgers Next Generation Data
Driven Research Network**



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Quad Chart for:

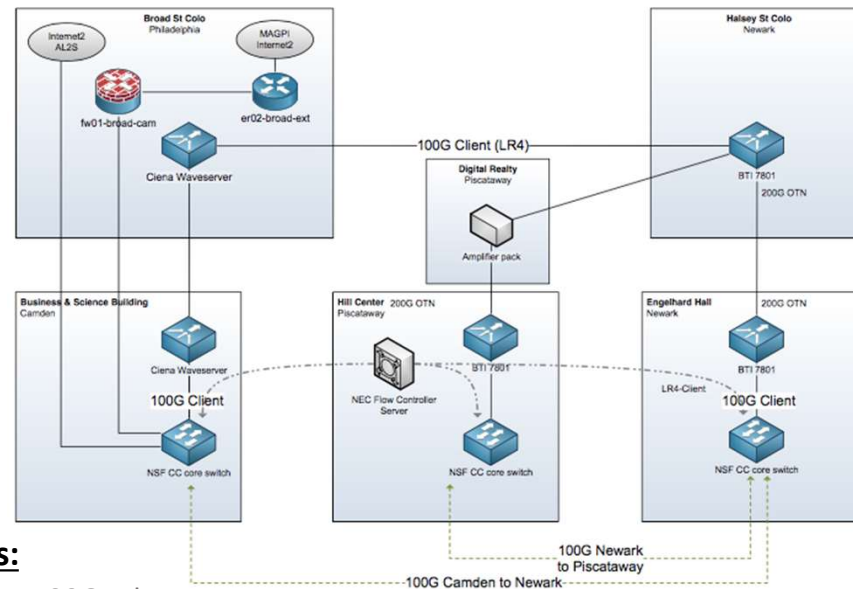
CC* Networking Infrastructure: CICNet - The One-Rutgers Next Generation Data Driven Research Network

Deliverables:

- Build a programmable “One Rutgers” data driven friction-less research network, connecting all campuses
- Deploy perfSONAR instances to monitor environment
- Design an Education, Outreach, and Training program around the platform to engage the research community
- Work closely with Brain Research, Medical Imaging, Genomics, Genetics, & Bioinformatics, Observational Astronomy, Experimental Physics, Climate Modeling, and Network Research communities to fully utilize CICNet

Broader Impact:

- Science Discovery
- Prototype for future enterprise solutions
- Technology Transfer
- Partnering with the Rutgers Women in Science, Engineering, and Mathematics Program
- Workforce Development



Challenges:

- Providing 100G Ethernet over DWDM between cities presents considerable challenges introduced by distance, fiber quality and path construction
- Working in an environment that hasn't had a network upgrade in years
- Over 1788 telecommunication rooms and 903 buildings
- Non-centralized IT services and support
- Introducing SDN to researchers and staff
- Network engineers and HPC sys admins learning each others areas

Metadata tag:

- *Local Research Platform*
- *Deployment of Data Transfer Nodes*
- *Data DMZ*
- *Engaging Women in Science, Engineering, and Mathematics*
- *Open Environment*
- *Test-Bed for research and Industry*
- *Need CI Engineer*
- *Collaborations Welcome*