



NSF Campus Cyberinfrastructure PI and
Cybersecurity Innovation for Cyberinfrastructure PI Workshop
October 3-4 | Albuquerque, New Mexico

NSF Program (either CC or CICI): CC

Program Area: CC-NIE

Award Number: 1541310

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Project Title: A Dedicated High-Speed Campus Research Network



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Quad Chart for:

A Dedicated High-Speed Campus Research Network University of Alabama at Birmingham

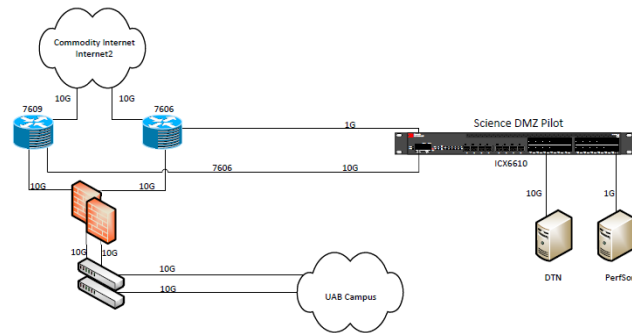
Challenge:

- Onboarding production network operators – Science DMZ considered a “research” project
- Bandwidth rich – shifts performance constraints to servers
- Adopting horizontal scaling in campus architectures to leverage bandwidth

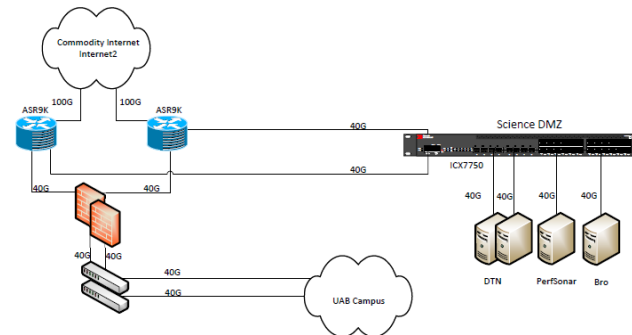
Solution(s) or Deliverables:

- Campus network backbone upgraded to 40G and building links to 10G
- Established a dedicated 40G Science DMZ and Globus endpoints
- Enabled seamless transfer for large datasets for neuro-imaging and genomic research

Before



After



Broader Impact:

- State-wide regional optical network upgraded to 100G
- Abundant campus network bandwidth – default desktop 1G
- Performance monitoring and network operations validation through the use of perfSONAR nodes

Metadata tag:

- *PerfSONAR for ScienceDMZ:*
<https://ps-sd.rc.uab.edu/toolkit>
- *Video promoting impact of project:*
<https://goo.gl/p8dkpw>