Virginia Tech
Campus Cyberinfrastructure Strategy

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NSF CC* and CICI Workshop • CIO Panel on Campus CI Strategy
September 26, 2018
Cyberinfrastructure is a pillar in Virginia Tech’s IT strategic plan

Pillar 2: Providing Competitive Advantage through Sustainable Advanced Cyberinfrastructure and Collaboration

- Provide cyberinfrastructure and services at a university scale that give Virginia Tech a competitive advantage through research computing and, in a coordinated manner, to appropriately facilitate HPC at other scales;
- Foster innovation in cyberinfrastructure and HPC applications through collaborative efforts across the university and beyond;
- Facilitate access to HPC across the university through both computing resource allocations and education and training; and
- Nurture a collaborative community of HPC scholars, practitioners, and educators at Virginia Tech.

Meeting cyberinfrastructure challenges

▪ “Big data”
  • VT-Research Network (NSF CC*DNI Award 1541338)
    o Remove barriers for large data transfers within and beyond campus
    o 10-Gbps connectivity to research users in 24 locations in 11 buildings
    o Connections provided based on an RFP process
  • VT-Archive large-scale archival storage

▪ Diverse compute workloads
  • Huckleberry GPU cluster for deep learning

▪ Compliance and security
  • NIST 800-171 and PHI compliance secure research environments
  • IT and data compliance consultations
MARIA: Mid-Atlantic Research Infrastructure Alliance

- Virginia universities collaborate to share cyberinfrastructure resources and expertise
  - Statewide network partnership with MBC
  - Private optical networks
  - Research Computing Technical Committee

- Research and Education Exchanges in DC and Atlanta
  - Access to Internet2, national and international research networks
  - Direct peering with content and cloud service providers
  - Low-cost commodity services

MARIA: [http://www.marialliance.net/](http://www.marialliance.net/)