



Information Technology Services Research Computing and Data

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About Us

The Research Computing and Data division of Information Technology Services (ITS) empowers students, faculty, and staff across all disciplines by providing the tools, training, and equipment for more robust, reproducible research with reduced time to results.

Our Clusters

Impulse (launched in 2017)

- 42 servers with 28 CPU cores each (Intel Xeon E5-2680v4)
- 4 NVIDIA K80 GPUs
- 128–896 GB RAM per server
- 56 Gb Infiniband network

Warp 1 (launched in 2023, NSF award #2127188)

- 10 servers with 128 CPU cores each (AMD Epyc 7713)
- 20 NVIDIA A100 GPUs
- 512 GB RAM per server
- 100 Gb Infiniband network

Shared Resources

- 300 TB all-flash storage
- Open source and commercial software for disciplines including, but not limited to:
 - AI/Machine Learning
 - Bioinformatics
 - Computational Fluid Dynamics
 - Finite Element Analysis
 - Molecular Dynamics
- Secure container-based environments for reproducible, mobile, and compatible workflows

Who Can Use It?

All Tennessee Tech researchers and classes!

Just schedule a quick consultation at www.rcd.tntech.edu/bookings/ and you're in.

Support and Expertise

- End-user training and onboarding
- Help with software installation, licensing, and workflows
- Personalized guidance from:
 - **Dr. Mike Renfro**: Director of Research Computing and Data. PhD in mechanical engineering with 17 years of experience as a research and development engineer before joining ITS.
 - **Sharon Colson**: Research Technology Engineer. BS in computer science with a data science and artificial intelligence concentration, plus experience with chemistry and humanities.
 - **Jim Moroney**: Research Technology Engineer. BS in computer science. Former ORNL/NCCS systems engineer.
 - **Trevor Clark**: Student Research Computing and Data Facilitator. Third-year computer science student with high-performance computing concentration and commercial systems administration experience.

Research Network

(Offered in conjunction with ITS Networking and Operations and Projects and Advanced Services divisions)

- Secure, high performance, customizable networking for instruments and projects