



Research Computing Center Cyber Infrastructure Info Sheet

Overview

The Research Computing Center (RCC) is a unit of the University of New Hampshire's Research office. RCC provides CyberInfrastructure (CI) resources to the sponsored research community at UNH and collaborate with higher education, industry, and government to create innovative technologies designed to address important social, environmental, and economic needs.



Morse Hall on the UNH Durham campus, home to RCC.

Lenharth Data Center

RCC's Lenharth Data Center is located in Morse Hall on the UNH Durham campus. RCC is responsible for maintaining the Morse Hall network infrastructure consisting of 12 subnets of the UNH IPv4 address space.



The Lenharth Data Center, named in honor of RCC's founding director William Lenharth.

The 2,000 square foot Lenharth Data Center offers:

- Multiple HPC clusters, including a central shared cluster and a CRAY supercomputer
- More than 1PB of storage, across various Lustre and RAID arrays
- Physical security, including 24 hour video monitoring, motion alarms, and logged swipe card door access
- Energy efficient in-row cooling and Uninterruptible Power Supply (UPS) distributed in an alternating hot and cold aisle layout
- Backbone switch supporting 10Gbps for both IPv4 and IPv6
- One of two locations on campus approved for the storage of restricted data that is required to comply with federal regulations, such as HIPAA
- A 20Gbps node on the UNH ScienceNet (see below)

UNH ScienceNet

The UNH ScienceNet is a high speed data network connecting selected research facilities and instruments across the UNH Durham campus that have a demonstrated need for large volume data transfers. RCC's Lenharth Data Center is a 20Gbps node on the ScienceNet providing high speed connections to compute and storage resources. The core 100Gbps switch and six 20-40Gbps satellite switches enable advanced research and collaboration locally and nationally.

UNH designed and constructed this network based on the "Science DMZ" model currently in place at many other research institutions. Funded by the National Science Foundation (ACI-1340972), ScienceNet also includes dedicated bandwidth directly to Internet2.



The CRAY Supercomputer "Trillian" was the first CRAY supercomputer in New England. It is the result of work supported by the National Science Foundation under grant number PHY-1229408.