The UNC Office of Information Technology Services (ITS) handles everything from email and individual desktop/laptops to large research projects, administrative offices, electronic medical records, and communications services that include a campus data network, fiber and microwave technology, and support for smartphones, mobile and wireless devices. They strive to provide a state-of-the-art environment that will support the highest level of multidisciplinary research and help UNC-Chapel Hill become the premier research university in the U.S.

ITS has major computing equipment that is available to researchers through the University’s central services. These include: a large multi-processor workstation cluster running the Unix operating system with access to terabytes of storage; a robotic tape cartridge system with multiple drives used by a variety of centrally-provided machines for backup and archival; an IBM 3090 computer running MVS/ESA with JES2 and VM/CMS both under VM/XA (a large water-cooled mainframe with a vector (supercomputer) facility); 52 IBM 3380-type disk drives (at least 80 billion bytes); 1 STK 4400 automated cartridge system that is a robotic retrieval system capable of storing 6,000 high-density tapes and delivering them to users within 30 seconds; several local 3174/3274 controllers; 9 STC 3670 tape drives (6250bpi); computer tape backup in separate buildings. Also, UNC has 10 megabit per second switched ethernet to the desktop, 100 megabit connections to all campus buildings, and gigabit connections to the larger Internet as an early adopter of Internet II. The North Carolina Supercomputer Center is located in the Research Triangle Park between Chapel Hill, Raleigh, and Durham. The Supercomputer Center has a Cray Y-MP/432 with associated equipment. The UNC-Chapel Hill data network currently supports more than 40,000 users with approximately 90,000 connected devices in more than 300 buildings with high-speed interconnectivity between buildings. The core routing architecture consists of a redundant infrastructure with 40 Gbps inter-switch connectivity and multiple 10 Gbps links to redundant border routers. The campus network has more than 4000 Ethernet switches and more than 5000 Wi-Fi access points.

An extensive library of software is available on the UNC campus via site licenses or volume purchase agreements. The collection includes all the common statistical analysis languages and packages (SAS, Stata, S-Plus, SPSS-X, BMDP, SUDAAN, etc.); development languages (C++, C, Java, PL/1, Fortran, etc.) Packages such as SAS are available on multiple platforms. An analysis can scale from the smaller capacities of a personal computer, then on to the larger capacities of a departmental Unix workstation and finally to the multiple-processor workstations and clusters provided centrally by the campus information technology organization.

Two recent major implementations within the IT network at UNC are 1) the Epic electronic medical record system within UNC Health Care, and 2) ConnectCarolina, a multi-phased project to develop and implement a fully integrated administrative infrastructure for the University. Both systems are now live, and clearly demonstrate UNC’s commitment to excellence in information technology support of the many missions of the University.

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