



MCNC[®]
Connecting North Carolina's Future Today

Hosting North Carolina's Internet Economy

Introducing MCNC and NCREN

MCNC is a broadband non-profit organization that owns and operates the North Carolina Research and Education Network (NCREN). This world-class, 2,600-mile fiber network and MCNC's operational expertise supports high-speed connectivity and hosting services for education, research, health care, public safety, and other community anchor institutions throughout North Carolina.

Data centers for today's North Carolina

- **Research Triangle Park:** MCNC offers a 5,000 square-foot data center in RTP with 150 tons of n+1 redundant cooling, a 900kVA redundant battery-backed uninterruptible power supply (UPS) system, and a 1,250kVA diesel generator. MCNC provides 24x7 power, cooling, network, and expertise to ensure your IT infrastructure is always up and operating. The data center has redundant physical and geographical connections to the NCREN backbone, 24x7x365 photo badge access, security, alarms, monitoring, and support staff 24 hours a day.
- **PARI:** MCNC also has a data center presence at the Pisgah Astronomical Research Institute (PARI) in Rosman, N.C., offering an expanded range of sophisticated networking and hosting capabilities in western North Carolina. The facility has more than 1,500 square-foot, raised-floor space available to locate racks or computing operations. The building was constructed to stringent U.S. Department of Defense standards as a secure, stand-alone site with 45 tons of cooling, 500kVA UPS, and a 500kVA diesel generator. The facility has experienced a \$1.5 million renovation funded by PARI and the National Science Foundation and is an ideal location for remote computing, data storage, and disaster recovery IT operations.

Hosting that puts customers first

From basic broadband to advanced services for experimental networks, MCNC's core engineers are instrumental in connecting millions of North Carolinians with reliable and forward-thinking technology solutions. MCNC's Network Operations Center (NOC), Client Network Engineers (CNE) and MCNC Systems Operations (SysOps) are uniquely positioned to identify networking issues within the NCREN community. Staff holds certifications from Microsoft, Red Hat, and ISC2. MCNC offers a range of owned or leased data center services from the most basic managed hosting to more advanced performance monitoring, diagnostics, architecture assessments, system tuning, IT management, and planning services. MCNC's goal is to help keep costs down, doing the heavy-lifting for you by maintaining hardware and operating systems or virtual machines at optimal levels.

Infrastructure makes all the difference

MCNC has invested nearly \$35 million over the last decade in the upkeep of NCREN. MCNC offers three data center service models: server co-location, data protection, and managed hosting - striving for 100 percent satisfaction in all areas. MCNC SysOps is responsible for data center services in RTP and PARI. For customers using the RTP data center, MCNC offers additional data center services including options such as managed firewall, load balancing, and SAN-based storage. Data protection makes use of Tivoli Storage Manager backing up to disks in two physically separate locations - to provide automatic off-site backups. MCNC SysOps has a broad skillset and also can assist with designing and specifying custom solutions.

Did You Know?

- ✓ MCNC's 5,000 square-foot data center in RTP has a Network Operations Center monitored by staff 24x7x365.
- ✓ PARI's Data Center facility in western North Carolina is a 1,500 square-foot, raised-floor space ideal to locate disaster recovery racks or other computing operations.
- ✓ All MCNC data center environments are monitored electronically, covering anything from individual CRAC unit humidity to chilled water flow and all things between.
- ✓ Data center bandwidth sits on two 10 Gbps connections to the Web and one 100 Gbps to Internet2.
- ✓ MCNC is compliant with Service Organization Control (SOC 2) data center standards.
- ✓ Data backups are provided by the IBM TSM system. MCNC provides backup to disk with replication to Winston-Salem.

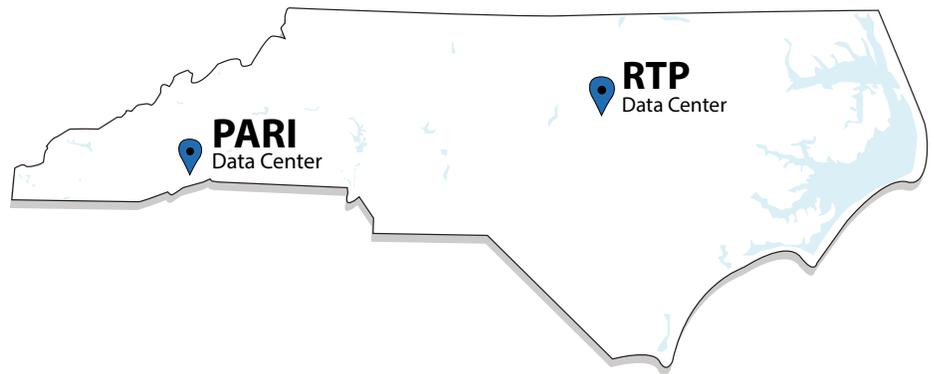
"MCNC and NCREN mean more than just connectivity. They are a resource providing things that wouldn't otherwise be possible. Coupled with PARI's secure and sophisticated infrastructure, NCREN connectivity makes PARI an ideal location for remote computing, data storage, and disaster recovery IT operations."

Don Cline
PARI Founder and President

**All data and information provided herein was recorded as of April 2016.*

Contact us today by calling
919.248.1900
visit www.mcnc.org

MCNC's Data Center Locations



Managed hosting options with high ROI and lower costs

- Hardware Installation
- Hardware Repairs
- Triage Problems
- Performance Monitoring
- Remote Hands
- Advanced Diagnostics
- Operating System Installation
- System Tuning
- Review Log Files
- Architecture Assessment and Planning
- Advise/Install Critical OS & Hardware Patches
- IT Management Assessment & Planning
- Uptime Monitoring and Alerting

Server co-location improves performance

For NCREN connectors and those providing applications, tools and services to NCREN connectors that require additional server and data storage space, co-location helps customers improve network performance, increase redundancy, and strengthen disaster recovery. Base packages provide customers with four post-lockable, 19-inch, 42u high and 42-inch deep EIA-310-E cabinet enclosures fully-dedicated for use by the customer; two 20-amp power circuits with NEMA 5-20R receptacles per cabinet (upgrades to 208v 30-amp and 60-amp circuits are available); and one 1 Gbps Ethernet uplink port per cabinet (additional 1 Gbps and 10 Gbps uplinks are available). Custom installation options are available. MCNC co-location is based on a physical space model with power, cooling, and network capabilities to fulfill virtually every computing and storage need.

Eligibility

Data center and hosting customers are North Carolina education institutions, organizations providing services, applications or tools to NCREN users who desire to host "on-net" with MCNC, or a relevant North Carolina non-profit. Relationships with the North Carolina Department of Information Technology and the North Carolina Telehealth Network allows for additional connectivity and data services specifically designed for non-profit health care institutions and public health entities.

Peace of mind with data protection and security

MCNC offers centralized, automated data protection services utilizing an IBM Tivoli Storage Manager backup system. MCNC's data storage system can backup, replicate, or archive data connected to NCREN to facilities in RTP and Winston-Salem. MCNC engineers work closely with your technical staff to ensure data integrity and restores can be done at any time. MCNC also offers raw storage delivered over NFS or iSCSI. MCNC maintains two distinct data storage systems, in support of data center customer demands. MCNC also aids in design and implementation of a disaster recovery plan and provides secure, off-site storage protection. MCNC remains committed to Connecting North Carolina's Future Today.