Connecticut Education Network (CEN)

Part of the Nutmeg Network

The Next Generation of
Education and Open Access Networking

Improving at Light Speed
January 2013

THE NUTMEG NETWORK – IS A NEWLY FORMED ENTITY THAT IS DEFINED AS A COMBINATION OF:

- **PUBLIC SAFETY DATA NETWORK (PSDN)** - A closed, secure network that serves first responder and public safety community.
- **CONNECTICUT EDUCATION NETWORK (CEN) -** Partially open (by nomination) network that serves the education and library community.
- **CONNECTICUT OPEN ACCESS NETWORK (CTOAN)** - Requirement of BTOP award to provide fair and open access to the network constructed with federal funds.
  - These networks are managed together as the staff, equipment and fiber that support these networks have multiple overlap points.

CEN BENEFITS AND FEATURES:

- EXPANDABLE DWDM BACKBONE
- ABILITY TO SUPPORT 42 100GB CIRCUITS
- FAULT-TOLERANT DESIGN
- MULTIPLE INTERNET SERVICE PROVIDERS
- ACCESS TO INTERNET2
- FUTURE UPGRADES AT LOWER COSTS
- LOWER COST TRANSPORT TO CEN MEMBERS
- STATE SUPPLEMENTED RATE STRUCTURE

CURRENT STATUS:

- PROJECT 100% COMPLETE

Education and Open Access at Light Speed

EXTENDING THE EDUCATION NETWORK TODAY AND PREPARING FOR THE FUTURE

The upgraded Connecticut Education Network (CEN) is here! The core of the network has been upgraded to 100GB capabilities; all sections of the network have been completed, tested and enabled. Have you considered what your CEN needs are?

CEN is America's first statewide K-12 and higher education network to be built exclusively using state-of-the-art fiber optic connections. Initially established in 2000, CEN provides a high speed, redundant, connection to every K-12 school district - over 240 schools, and over 170 public libraries in the state. These institutions that are on the front line of education reform, use CEN to access the Internet, Internet2, iCONN, and thousands of other resources exclusively targeted to students, teachers, researchers, and administrators.

Connecticut was awarded $94 Million from the Broadband Technologies Opportunities Program (BTOP), which we used to improve both Education and Public Safety communications. The grant included $35 Million that supported the refresh of hardware at public schools, public libraries, and the entire CEN backbone. This investment positions CEN to meet exploding networking growth needs in our education community.

As a condition of the federal grant, the network must support “Open Access” use of the network. Open Access allows for any entity to join the network at a fair price without discrimination. We anticipate many municipalities, state agencies and some public companies will be interested in using the network. The CEN team continues to develop and improve on processes required to provide this access, while also maintaining the vibrancy and original goals of the CEN.

PROJECT DETAILS

TIGHT DEADLINES PLACE FOCUS ON CURRENT PROJECT SCOPE

CONDITIONS

The BTOP grant contains strict timing requirements for completion of the work and these timelines will not be modified. There is an absolute need to ensure that nothing endangers meeting the grant plan deadlines of 66% completion by September of 2012, and project completion by September of 2013. CEN engineers maintained a pace that was continuously ahead of schedule and completed the project 8 months before the September 2013 deadline.

CEN IS:

A secure, reliable network providing high-speed transport, and value added services for its members.

CEN IS NOT:

Free. All users pay an equitable fee for use of the network. The State of CT offsets many of the K-12 and public library costs.

CEN SERVICES:

The core CEN services are:

- Network Transport
- Network Connection

The optional CEN services are:

- Internet access
- Internet2 access
- Video Conferencing (including recording, equipment loan, desktop and mobile access)
- Web Filtering
- Network and performance monitoring
- Domain Name Service (DNS)
- Disaster Recovery Services
- Training
- Content Caching and Distribution

EQUITABLE RATES FOR EDUCATION ADVANCEMENT

CEN helps deliver on the promise of equality in education by providing access to technology that schools and libraries would not be able to afford on their own. This investment is supported by private schools and institutions of higher education that are committed to the idea of overall improvement in education and broad support for access to technology.

This network also provides greater access for areas of the state from where it has been prohibitively expensive to obtain high-speed internet access. Open Access is intended to remove barriers to technology. This could include town-to-town sharing of databases, providing remote access to municipal applications, and so on. Where these expanded capabilities bring additional costs, these costs will need to be covered by the requestors and users of the newly approved services.

OPERATIONS AND GOVERNANCE

CEN is a joint venture between the State's Department of Administrative Services/Bureau of Enterprise Systems & Technology (DAS/BEST) and the University of Connecticut. This unique partnership provides project management, network architecture, and operational support for CEN in a cost-effective manner.

The Commission for Educational Technology (CET) is the governing body for CEN. This committee is responsible for providing oversight and decisions regarding policy, procedures, and budget. CEN will look to this governing body as we address adding municipalities and private businesses along with adding new services above the network layer. Governance answers questions such as:

- Who is allowed to use the network and at what cost?
- When will open access be allowed / enabled – what is the timeline?
- What additional services will be added to the network?
- What types of service level agreements will the network entertain?

WHAT HAPPENS NEXT

The State is convening a meeting of the Commission for Educational Technology to review the expanded nature of the network and to review a draft rate structure. We have several municipalities that have submitted requests for access to the expanded network.

Potential users of the CEN should evaluate their data connectivity needs now and may wish to start the process of determining whether the CEN could provide connectivity that would be useful for their organization. However, given the time constraints and federal requirements, we must commit all available resources to the network build. We will make efforts to expand the network before September 2013. Users should expect to see an "Application for CEN Access" from the CET which will explain the rules, application process, and what the user should expect prior to the application window opening.

CEN

Part of the CT Nutmeg Network

If you have any questions regarding CEN current or future services, you can contact CEN through email at: CEN@po.state.ct.gov

If you have a technical issue that needs attention, you can contact the 24*7 help desk at BEST.helpdesk@ct.gov or by phone @ (860) 622-2300 option 9.

Additional details about CEN and our services can be found at our website: http://cen.ct.gov