

Categories have been arranged for alignment with CEN's [Strategic Plan](#).

1. Provide Value

- DDoS Mitigation Summary Review

- 2023-2024 Academic Year (August 1, 2023 – June 1, 2024)

Number of TMS Mitigations	Volume of Traffic Passed by TMS	Volume of Traffic Dropped by TMS	Volume of Largest TMS Mitigation	Rate of Largest TMS Mitigation	Duration of Longest TMS Mitigation
338 ↑0.30%	12.39 TB ↑2.09%	26.34 TB ↓19.30%	5.65 TB ↓65.99%	154.65 Gbps ↑512.18%	0d 13h 13m ↓44.34%

Bottom row indicates increase or decrease from prior period (October 01 2022 6:58 - August 01 2023 4:00).

- 2024 Calendar Year (January 1, 2024 – June 1, 2024)

Number of TMS Mitigations	Volume of Traffic Passed by TMS	Volume of Traffic Dropped by TMS	Volume of Largest TMS Mitigation	Rate of Largest TMS Mitigation	Duration of Longest TMS Mitigation
191 ↑29.93%	10.75 TB ↑552.58%	18.20 TB ↑123.45%	5.65 TB ↑129.27%	154.65 Gbps ↑12.84%	0d 3h 24m ↓74.19%

Bottom row indicates increase or decrease from prior period (August 01 2023 8:58 - January 01 2024 5:00).

- CT Library Fiber Consortium – Internal Connections (FTTL-IC) <https://ctedunet.net/fttl-ic/>

- The goal is to help libraries with internal network infrastructure to better serve library operations. Phase one (assessments and reports) is fully complete.
 - Phase 2 – Remediations and Completion: State library has authorized funding for recommendations made in assessment reports, award contracts have been signed, and funds have been released for individual libraries for equipment and labor to remediate issues.
 - 36 libraries are moving forward with this phase.
 - CEN/Novus Insight is working with them to review equipment lists, update as needed, initiate purchases, and schedule work dates. - This process is ongoing in batches.
 - Work has been completed for 5 of the 36 libraries these five are in the final closeout stage. 7 libraries are in progress (work has been or is in the process of being scheduled). 1 Library is in the quoting stage.
 - The remaining libraries have not started yet.
 - All projects must be completed by April 30, 2025; any funds not fully expended by then must be returned to the State Library; extensions can be requested.

- New Member-Customers since the last Commission meeting (in order of turn up)

- None

- New *connections* to existing CEN members since the last Commission meeting

- West Side Branch Library – Stamford
 - Capitol Region Council of Governments – Hartford (this was a move)
 - Motor Vehicle Network-Enfield
 - Yale University- MGHPC
 - Yale - West Campus
 - Department of Transportation (DOT) - *CEN is providing transport connectivity to DOT Headquarters and 62 Maintenance facilities and garages over a period of two years. Sites will be listed as they are completed. 19 sites were completed as of the last report. Sites will be listed as they are completed.*
 - North Haven Maintenance Garage
 - Brookfield Repair Garage
 - Putnam Maintenance & Repair Garage

- *East Hampton Maintenance Garage*
 - *Bolton Maintenance Garage*
 - *Southington Maintenance Garage*
- Exiting Member-Customers since the last Commission meeting disconnecting (in order of turn down)
 - None

Current Member Count = 684

*Effective 12-1-21 member count process are adjusted to reflect multi-site organizations as one member throughout the community.

2. Ignite Innovation

- PerfSONAR Servers
 - perfSONAR is the **performance Service-Oriented Network monitoring Architecture**, a network measurement toolkit designed to provide federated coverage of paths, and help to establish end-to-end usage expectations, ensuring friction free use of networks for scientific applications. This open-source infrastructure helps to identify and isolate problems as they happen, making the role of supporting network users easier for engineering teams, and increasing productivity when utilizing network resources.
 - Scope is to install 100Gbps PerfSONAR servers at the hub and extranet sites to provide independent tooling for measurement of capacity and throughput helping ensure the highest quality of network experience for the membership and will make these available to the community to run diagnostics from any member site.
 - 6/3/24 Update – All servers will be returned due to manufacturer defect with chassis.
- eduroam <https://www.eduroam.us/>
 - Goal is to address digital divide issues impacting Internet access and provide a more seamless and secure network access experience for students, faculty and staff at learning institutions and affiliate locations.
 - CEN's application for the Internet2 eduroam [Support Organization](https://internet2.edu/internet2-announces-new-eduroam-support-organizations/) program was accepted and will be one of 5 across the country. <https://internet2.edu/internet2-announces-new-eduroam-support-organizations/>
 - eduroam Support Organization (eSO) contract agreement between CEN and Internet2 is complete. New CEN member organizations can be onboarded at will without signing an I2 agreement. CEN has a member subscriber agreement for new eduroam subscribers and will work with the early adopters to convert their I2 based agreements to CEN based agreements.
 - Current subscribers and users: New Haven Public Schools, Darien Public Schools, Suffield Academy, Waterbury Public Schools, Middletown Schools, Choate Rosemary Hall, and ACES. Sterling PS in process.

3. Foster Collaboration

- EDAC - Engagement and Development Advisory Council
 - Co-Chairs: Karen Skudlarek, UCONN; Cathie Drury, Coventry Public Schools
 - Annual Member Conference, *CEN Connect 2024* May 8-9, 2024, at CT Convention Center <https://cvent.me/qLbMDM>

- Day 1: 8 Long-form pre-conference workshops, vendor exhibition, after hour social event at CT Science Center for all attendees on day 1 and 2.
- Day 2: Traditional format, AM welcome and keynote, 30 sessions, all-day vendor exhibition, after hours social.
- 844 Registrants; 755 Attendees; 89% check-in/attendance rate
- 76 Sponsors; 72 Exhibitors; 102 Speakers/presenters
- Member Trainings
 - *Transitioning to IPv6 as a Preferred Network Protocol*
 - Location: Microsoft Teams online seminar,
 - Target Date: late summer/early fall
 - Presenter: Jason Healy, Suffield Academy
- SMAC- Service Management Advisory Council
 - Co-Chairs: Ken Sayers & Jonathan Garbutt
 - Committee members are organizing around aggregated services available for members.
 - Unified Communications - with DAS procurement, initial kickoff complete, SMAC detail work will be edited into state contracting format.
 - Security Services - building new survey feedback for community to help provide priority and direction for committee and CEN to pursue.
 - CIPA filtering - on hold, discussing options.
 - Services Reviews: We're beginning to walk through services to review service lifecycles and https://ctedunet.net/wp-content/uploads/sites/2510/2021/12/2020-10-20_CEN_Service_LifeCycle_Process23.pdf
 - No change from last meeting
- Connecticut Higher Education Roundtable on Information Security (CHERIS) <https://ctedunet.net/cheris/>
 - Co-Chairs: Brad Tudisca, CEN; Owen Brandt, ECSU; John Schaeffer, Conn College
 - Forum of Higher Education IT security professionals that meets quarterly to collaborate on IT solutions, discuss best practices, and share security challenges.
 - Meeting scheduling in process.
- Cyber Nutmeg <https://ctedunet.net/cybernutmeg/>
 - Cyber Nutmeg 2024 will build on the recent success of the CTNG:CEN partnership and continue the one-day event designed to heighten your awareness of cybersecurity threats and defenses you can deploy to protect your organization. This event is intended for state, municipal, and educational leaders, including but not limited to first selectmen, mayors, town managers, superintendents, and the IT and cybersecurity professionals who support them. Cyber Nutmeg consists of three main components: Threat Briefing from the FBI, Homeland Security, and CT Counter Terrorism and Intelligence (CTIC); Cyber Security Awareness Training/workshops; a National Guard led Tabletop exercise where blended groups can work collaboratively to focus on today's most prevalent threats.
 - Date: October 11, 2024
 - Venue: TBA; 2 investigating 2 venues.
 - Status: Program committee met to review agenda, format, and improvement from last year.

4. Promote Advocacy

- CEN advocated for Community Anchor Institution connectivity statewide and developed a broadband infrastructure program renamed as CENConnect (Pronounced C.E.N. Connect). CENConnect is a program that provides direct investment in middle-mile broadband infrastructure in support of Connecticut's municipalities, schools, colleges, universities, libraries, healthcare, open access, and cultural arts institutions, through upgrades and expansion of the CEN (<https://ctedunet.net/cen-connect/>). In addition, the program offers grant funding opportunities to attach to the CEN platform for Community Wi-Fi access to CT citizens in need. Program funding is made available as part of Governor Lamont's Connecticut Plan for the American Rescue Plan Act of 2021. CEN Connect community webinars / info sessions.
 - *CEN Connect - Where Connectivity Builds Community*
 - Feb 22, 2024; Registered: 16, Attended: 16
 - March 13, 2024; Registered: 20, Attended 14
 - *CEN Next Generation Infrastructure - CT's First 400G Network*
 - Feb 21, 2024; Registered: 115
 - March 12, 2024; Registered: 70
 - Additional presentations of *CEN Connect – Where Connectivity Builds Community* at multiple CoG meetings, CT State Library webinar, CCM Meeting, CLA Conference, GMIS, CEN Member Conference, and at multiple individual municipal and library leadership meetings
 - CLA Conference
 - CEN sponsored and presented at CLA on April 29th and 30th promoting CEN connect program for Library prospects.
 - The session attendance was low, being at the end of the second day, however, booth traffic was steady throughout the event.
 - The conference had 598 CLA members in attendance.



5. Enhance Core Resources

- CEN Staff
 - CEN currently has 14 full-time staff members, 4 part-time student workers, 1 volunteer (1 day /week), 1 fellow, and 1 special payroll.
 - Upcoming Searches
 - Cyber Security Manager / ISO – Approved to Interview
 - Cyber Security Engineer – Reviewing Candidates
 - Network Engineer – Posted (refill for recent separation)
 - GIS Specialist – on hold
- Triangular Core Capacity Augment & 400G
 - 400Gbps technologies represent the latest in speed, capability, and capacity for advanced carrier and enterprise networks.
 - We are in the early planning stages to augment the triangular core with 400Gbps links adding capacity and resilience to current network infrastructure and in preparation for Next Generation Infrastructure upgrades.
 - Status: Links between core sites are up, will move to production in July/August, services transitioned to them will be ongoing otherwise.
- Network Performance Tester and Training

- CEN has acquired a network performance tester enabling high throughput protocol and load testing at up to 400G. This new capability enables the CEN Engineering team to better stress test network-based equipment and/or appliances before acquisition and move to production in the network. In addition, we completed a training session for the CEN Engineering team and invited our colleagues at DAS-BITS and OSHEAN (Rhode Island Regional like CEN) to attend.
- Status – moved to regular testing practice in CEN lab / interop space
- In partnership with the Northeast Research and Education Network (NEREN)
 - CEN is part of a collaborative effort to connect the Massachusetts Green High Performance Compute Center (MGHPCC) to the NEREN backbone. This connectivity will help CT based researchers and their institutions by providing high throughput connectivity and access to resources at the MGHPCC and beyond. Components include:
 - Optical node install to integrate MGHPCC into NEREN fabric
 - New service with Internet 2 to setup an 'Exchange' for NEREN partners to aggregate services in the region fostering collaboration and costs control.
 - Status: NEREN optical node installation target completion in June.
 - In partnership with the Northeast Research and Education Network (NEREN)
- CEN Connect (ARPA-CPF) Project Updates
 - Next Generation Infrastructure (NGI)
Scope: Comprehensive upgrade of the CEN equipment infrastructure bringing 400G backbone and handoff options of 1G, 10G, 25G, 40G, 100G, and 400G to every member location.
 - Site survey / audit of every service location - Complete May 31, 2024
 - Network Lab / Automation / Orchestration build out – in process – partial completion June
 - Optical Upgrades – planning/scheduling, projected Completion August 2024
 - Packet Upgrades – Design meeting in motion for each phase and/or section of the network
 - Libraries, Municipalities, COGS, and Charter Schools
Scope: Expand network services to target members/sites with free fiber build
 - 176 Eligible Organizations
 - 95 Engaged in discussions
 - 29 Signed agreements and in process to connect
 - 11 formally declined
 - Community WiFi
Scope: \$10M Grant funds to expand WiFi to communities in need, expand 'eduroam' adoption / use
 - Developing Content for Grant Guidance
 - Purchased Salesforce Grant Module, build out will begin after guidance is done
 - Promotion / engagement planning underway