

Categories have been arranged for alignment with CEN's 2019-2024 [Strategic Plan](#).

1. Provide Value

- DDoS Mitigation Summary Review
 - 2021-2022 Academic Year (August 1, 2021 – June 1, 2022)

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
275 ↓56.56%	47.95 TB ↑144.84%	32.62 TB ↓54.65%	18.31 TB ↑205.38%	38.42 Gbps ↑27.81%	112d 14h 49m ↓3.09%

Bottom row indicates increase or decrease from prior period (September 30 2020 22:58 - August 01 2021 0:00).

- 2022 Calendar Year (January 1, 2022 – June 1, 2022)

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
128 ↓13.51%	37.71 TB ↑273.81%	17.47 TB ↑16.16%	18.25 TB ↑462.59%	29.75 Gbps ↓22.56%	58d 7h 42m ↓48.23%

Bottom row indicates increase or decrease from prior period (July 31 2021 22:58 - January 01 2022 0:00).

- CT Library Fiber Consortium – Fiber to the Library (FTTL)
 - Project to connect libraries through federal E-rate and matching State Library bonded funds.
 - Many project sites connect underserved communities where connectivity options have remained relatively unchanged for decades. This project provides high-quality service at reasonable costs to bridge gaps in the digital divide and help libraries continue to thrive as community assets.
 - Phase 5: The final library (Beardsley Branch Library in Bridgeport) fiber is complete, and turn-up is pending.
 - Phase 7: 5 Fiber builds are completed.
 - Phase 8: Awarded February 21, 2022. 64 libraries are eligible and 4 are moving forward.
 - The current project across all phases (1–7) will bring total fiber-connected libraries to 146 representing 76% of all 191 libraries statewide.
- CT Library Fiber Consortium – Internal Connections (FTTL-IC)
 - New Program announced December 3, 2021. <https://ctedunet.net/fttl-ic/>
 - Goal is to help libraries with internal network infrastructure to better serve library operations.
 - Libraries will receive assessments, prioritized remediation plans, and awards to assist each.
 - Items may include switches, routers, WiFi Access points, UPS', target wiring upgrades.
 - Call for applicants closed on Feb 21, 2022. 41 libraries applied and are moving forward.
 - Network infrastructure Assessments to begin in June; 12 scheduled so far.
- New Members/Customers since the last Commission meeting (in order of turn up)
 - Stetson Branch Library at Q House New Haven (Ph.5) (not in count)
 - UConn Foundation
 - Waterbury Bunker Hill Branch Library (Ph.7) (not in count)
 - Hartford Housing Authority
 - Voluntown Public Library (Ph.7)
 - Westbrook Public Library (Ph.7)
 - Morris Fire Department
 - Lime Rock Park

- North Haven Memorial Library (Ph.7) (this was an existing customer using town owned fiber now on their own connection to CEN) (not in count)
- Derby Neck Library (Ph.7)

Current Member Count = 667

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

2. Ignite Innovation

- eduroam <https://www.eduroam.us/>
 - Goal is to address digital divide issues impacting students' learning and provide a more seamless network access experience for students.
 - Tom Dillon helping coordinate activities as CET Infrastructure Advisory Council Chair, with CEN resources and fiscal support. This is a crossover item between CET Infrastructure Advisory and CEN Service Management Advisory Councils.
 - Suffield Academy and Waterbury Public Schools have launched their eduroam pilots (90 days, renewable). Darien Public Schools is expecting to launch this summer. Pilot interest also received from Russell Library and Coventry Public Schools. Goodwin University has initiated their own license agreement.
 - 71 respondents to Secure WiFi & eduroam readiness in schools and libraries. Will re-send and collect more info.
 - 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/>
 - Agreement reached with Internet2 on terms for extending eduroam purchasing agreement through the end of 2023, to be succeeded by Support Organization agreement in 2024.
- Additional services are in development and will be prioritized based on community feedback
 - With help of SMAC Chair(s), items are categorized and prioritized
 - Unified Communications RFP team meeting monthly to define service categories and requirements and targeting Q3 for RFP publication.
 - UConn procurement will assist with RFP development
 - Aligning initiatives with the existing UConn RFP cycle where possible to make more efficient use of time and effort.





3. Foster Collaboration

- 9th Annual Member Conference; May 5, 2022, <https://ctedunet.net/annual-conference/>
 - 1 Day in-person event at the CT Convention Center
 - 33 Sessions, cybersecurity, advanced networking, education and innovation, community best practices
 - Keynotes: Christopher Roberts, Ethical Hacker, Dan Lohman, Presidio
 - New Feature: 10 poster sessions
 - Attendance statistics

	2022	2019	2018
Registered	612	673	568
Attended	515	613	486
# of Sponsors	43	59 (included tech lounge)	47

- Survey Feedback on
 - date
 - venue
 - session quality and quantity
 - keynotes
 - poster session
 - registration process
- The average response was above 4.0 out of 5, for everything except the lunch keynote (2.84) and poster sessions (3.89). 4= Very Satisfied 5= Extremely Satisfied

Quality of Breakout Sessions

Answer Choice	0%	100%	Number of Responses	Responses Ratio
1 (Unsatisfied)			0	0%
2			3	4%
3			8	11%
4			26	37%
5 (Extremely Satisfied)			33	47%
Mean	4.27			
Median	4.00			
Total Responses			70	100%

- 2023 Member Conference Save the date: May 11, 2023
- EDAC - Engagement and Development Advisory Council
 - New Co-Chairs, Karen Skudlarek, UCONN, and John Mercier, Regional District 17
 - Rebecca Osleger and Karen Warren transition out from the position
- SMAC- Service Management Advisory Council
 - Co-Chairs: Matt Ross & Jonathan Garbutt
 - Committee members organizing around community RFPs for
 - Unified Communications
 - Security Services
 - CIPA filtering

4. Promote Advocacy

- CEN Outstanding Leader Awards (COLA) <https://ctedunet.net/cola/>
 - ‘CEN Members play a key role in the success of our community. To acknowledge those contributions, CEN presents the Outstanding Leader Awards annually to any individual from a CEN member organization who has provided extraordinary leadership, energy, ideas, and achievements for the advancement and development of the CEN community, its products and/or services, and/or its foundational mission, vision, and values.’
 - 2022 Awardees
 - Karen Warren, Wesleyan University
 - Rebecca Osleger, BoE, and Town of Suffield
 - Nicholas Caruso, Connecticut Association of Board Educators (CABE)
 - Matthew Ross, Farmington Public Schools
 - John Elsesser, Town of Coventry
 - Scott Roberts, Town of South Windsor
 - Tom Dillon, CET
 - Dick LeFave, D&L Partners LLC
 - Jeromy Nelson, Regional School District 15
- Everybody Learns - WiFi Expansion
 - \$10M Authorized in June 2021 Special Session for CEN to expand community WiFi

- Program will be a grant funded to directly attached CEN members, may be used to physically connect sites as needed.
- CEN working with CET Infrastructure council to advise on program eligibility criteria, application intake, scoring/ranking, and awards.
- Federal guidance on ARPA program criteria and how to apply for funding was delivered end of January
- Working with OPM on ARPA application to Treasury
- Governor's Biennium Budget, HB5037, American Rescue Plan Act - Coronavirus Relief Fund (ARPA-CRF)
 - In February, Governor Lamont's biennium budget priorities were released and contained 3 line-items that involve CEN and Federal ARPA-CRF Monies. <https://portal.ct.gov/-/media/Office-of-the-Governor/2022-Legislative-Proposals/Implementer-fact-sheet---Appropriations-Act.pdf>
 - \$19.8M - Grant Funding for municipalities and libraries to connect to CEN
 - \$38.4M - Upgrades to CEN (or NextGen Infrastructure)
 - \$850K - Grant Funding for Charter Schools to connect to CEN
 - PA 22-118 <https://search.cga.state.ct.us/2022/PA/pdf/2022PA-00118-R00HB-05506-PA.pdf>
Final Authorizations below
 - \$10,719,936 – Everybody Learns WiFi Expansion + \$719,936 from June session
 - \$21,225,474 – Grant funding for municipalities and libraries to connect to CEN
 - \$41,109,884 - CEN Next Generation Infrastructure Upgrades
 - \$911,195 – Grant funding for charter Schools to connect to CEN
 - Funding increases are due to reallocation of unused ARPA monies and will help with projected cost increases by equipment manufacturers since initial submittal to projected project start.
 - All projects will be submitted through OPM to US Treasury for funding allocations

5. Enhance Core Resources

- CEN Staff
 - CEN currently has 13 full-time staff members, 4 part-time student workers, and 1 volunteer (1 day /week)
 - Christian Hitchcock, Associate Network Engineer, started April 22, 2022
 - Christopher Tingley, Associate Network Engineer, started May 6, 2022
 - Planned searches
 - Network Systems, Security, Automation
- Infrastructure Improvements/Investments
 - CEN was allocated ~ \$2.5M in CEPF funds for equipment maintenance improvements to the infrastructure. This was less than the requested amount and items are being re-prioritized, re-quoted, and sequenced based on price and availability of equipment. projects in queue
 - Uninterruptible Power Supply (UPS) upgrades at hub sites
 - Augmented two important hub sites, Enfield, and Groton. Enfield (Asnuntuck) went from 10Gbps east/west to 20Gbps east/west. Groton (State Data Center) went from 10Gbps east/west to 30Gbps east/west. This was needed as those backbones were running hot.
 - InfoBlox – Finished the upgrade and replacement of the old standard forwarders and RPZ forwarders in both Groton and Storrs, this included the upgrade to Grid Manager as well.
 - Of Note - Component delays are impacting lead times for items such as routers and switches. Lead times can be anywhere from 120-180 days for orders with little relief in sight.

- Operational Improvements
 - Network Peering Additions (note: network peering improves performance and enabled faster throughput by reducing hop counts and latency to reach the target)
 - Akamai Prolexic
 - Cisco Webex
 - Microsoft
 - INAP
 - Upgraded Google Cache appliances in Hartford and Storrs to faster, more storage
 - Upgraded Facebook Cache appliances in Storrs to faster, more storage
 - CTEC's customer migrations to production firewalls
 - Security Hardening - Leveraging additional threat feeds of malicious IP addresses to augment our security posture for internal assets.
 - Security Hardening - Upgraded our Arbor DDOS mitigation system and updated the template to leverage new features to help with future DDOS attacks, changing vectors, and UDP attacks.