

Connecticut Education Network Update

June 13, 2016

1:00PM – 3:00PM

LOB Room 1C, Hartford, CT

➤ CEN Outreach Events

- **Upcoming:** Tuesday June 14 2016: “CIPA and E-rate: How to get free money for your Wifi Network and Internet Access” With Maria Bernier, CT State Library, and Scott Taylor, CEN Register: <https://www.eventbrite.com/e/cipa-and-e-rate-tickets-25824284129>
- **Upcoming:** CT eduRoam Summit, June 23, 2016, Wesleyan University, Middletown, CT.
- Annual Member Conference 2016 – Friday, May 13, 2016.
 - Over 450 registered and 400 in attendance.
 - Increased sponsorship over last year.
 - Programming committee for next year kicks off initial meeting - June 22, 2016.
- Held a fiber optic network troubleshooting workshop - April 27, 2016.
- Held a Higher Ed CIO roundtable - March 10th at Wesleyan in Middletown.

➤ CEN Staffing

- CEN currently has 9 full time staff members, 3 part time student workers.
- Two positions remain open, possibly unfunded, Fiscal Admin and Network Technician positions.
- CEN continues to automate and streamline our quoting, and invoicing back office operations which is critical in order to bill hundreds of organizations quarterly for multiple products.

➤ DDoS

- Daily DDoS (Distributed Denial of Service) attacks are primarily targeted at our public K12 schools.
- Attacks are large enough to fill the connection to the school and cause outages for receiver of the attack.
- CEN has installed detection and mitigation equipment in our backbone. Currently working with the vendors during attacks to do some tuning of the system.
- So far we’ve been able to mitigate some of the attacks in the network automatically and had some good feedback.
- CEN will need to do additional education and sharing of best practice with our members in order to continue to ensure these attacks are less effective and cause less impact. We do not expect these to slow down anytime soon.
- Next we’re working for ways to scale the mitigation and add additional protection measures within the network infrastructure.
- Security continues to be a primary focus with our peer networks and CEN should invest more effort into our security position over the next couple of years.

- NYC Buildout and Peering progress
 - CEN continues to work with our partners through NEREN to build out to NYC.
 - Recently connected a Facebook Cache on the backbone, even as colleges ended their spring semester the cache peaked around 1.8Gbps.
 - Peering requests from Hurricane Electric and Akamai, estimating 1-2Gbps of traffic directly between CEN and these providers.
 - Ability to provide Amazon AWS Direct Connect service through our MASS-IX connectivity.

- Budget impact on CEN's members
 - New pricing model, competitive, postalized across the network service area, tiered pricing.
 - Estimating total revenue from K12's to come in around \$2.0M including e-rate reimbursements.
 - 115 schools filed E-rate 470's and selected CEN as their provider.
 - Estimated \$700,000 in e-rate credits against the CEN bills for these schools.
 - Estimated \$300,000 of e-rate credits not captured by schools that didn't apply for e-rate.
 - We should see a small reduction in revenue from Higher Education and Private Schools.
 - Some new business with additional towns and private customers coming onto the network.

May Newsletter: http://cen.ct.gov/cen/lib/cen/CEN_May_2016_Newsletter_v3.pdf

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