

Connecticut Education Network Policy, Process, & Procedures

Title: Service Level Objectives
Applies to: CEN directly connected members
Effective Date: June 5, 2018
Contact: CEN Director

Background

CEN is a member-driven organization operating in a cost recovery model focused on quality and adding value to our members. We strive to provide our members with services that meet and exceed expectations. We are committed to continuous improvement which serves as a framework for providing, measuring, and improving our performance.

This is a statement of Service Level Objectives (SLO) to help define a framework for measuring performance and problem management.

Policy

CEN provides the following Network Availability, Performance, and Problem Management expectations and procedures to support our goal of member satisfaction and continuous improvement throughout our operations:

- Network Availability and Performance Overview
 - Overview Statement
 - CEN maintains the following performance standards for sites connected directly to the CEN network hereby defined as “on-net” services, which include CEN Hub Sites, dark fiber which is being lit by CEN equipment, and CEN designated nodes (Example: CyrusOne, ChimeNet Data Center, CCAT, Etc). Sites not directly attached to the CEN network are defined as ‘off-net’ and may include leased lines or dark fiber solutions lit by Member or 3rd party equipment, and services that utilize carrier networks including upstream ISPs, are not covered under the performance standards.
 - Network Availability
 - On-Net services are available and capable of forwarding packets 99.99 % averaged over a calendar month.
 - Availability does not include scheduled maintenance.
 - Availability does not apply to off-net services or member-owned LANs.
 - Availability does not include member related facilities or power incidents/issues.
 - Latency
 - Less than 20ms for one-way transit delay measured by a 64 Byte ping from any CEN managed edge equipment to any other CEN managed edge equipment.
 - Packet Delivery
 - On-Net services will have an average monthly packet loss no greater than 0.1% (or successful delivery of 99.9% of packets).
 - Packet loss is defined as the % of packets dropped between on-net CEN network devices.
 - Reports are published here:
 - <https://docs.globalnoc.iu.edu/cennoc/support/cen-reporting.html>

Procedure

- Incident and Problem Management
 - Overview Statement
 - Issues or incidents with services will be prioritized by CEN staff based on CEN’s determination of criticality, and the response time, escalation interval, mean time to repair (MTTR), and update interval with regards to the incidents will be determined by the priority given by CEN

staff. Response times for onsite engineer visits only apply to on-net services; CEN makes no warranty for onsite response for off-net services.

- Prioritization of incidents are based on Impact and Urgency in relation to the overall service provided:
 - Impact - The impact of an incident is measured by how large the interruption is on the member area(s).
 - 1-Critical: Extensive/Widespread CEN network-wide issue of a service, all members impacted.
 - 2-High: Significant/Large, multiple members(s) and/or location(s) impacted, or a significant service is unavailable to the membership.
 - 3-Moderate: Low member business impact, may be single or multi-member issue where the service is not significant.
 - 4-Low: Minor/localized single-member business impact, general break/fix issue with no or little business impact.
 - Urgency - The urgency of an incident is measured by how quickly the incident needs to be resolved.
 - 1-Critical: The member organization cannot provide a critical service to the public.
 - 2-High: The member organization cannot provide a non-critical service to the public, a single-member organization cannot perform a critical job function.
 - 3-Moderate: Single-member organization cannot complete a job function.
 - 4-Low: No urgency/impact to member business services, single-member “how to” or related to a service request.

Prioritization Matrix		Urgency			
		Critical	High	Moderate	Low
Impact	Extensive/Widespread	Critical	Critical	High	High
	Significant/Large	Critical	High	High	Moderate
	Moderate/Limited	High	Moderate	Moderate	Moderate
	Minor/Localized	High	Moderate	Low	Low

- Prioritization and response
 - Priority 1-CRITICAL – ‘Service Down’
 - A problem or issue for which the customer needs immediate, undivided attention from NOC staff until resolved.
 - Service down includes services that are completely non-functional, or services partially down impacting a significant portion of the membership, or services impacting a significant portion of the member’s business and no workaround is available.
 - The customer is expected to be available immediately to commit full-time resources until the situation is resolved.
 - The NOC uses this by default when the network is monitored to have an outage of a non-redundant core network element.
 - Target Response Times:

- Engineer will be made available near immediately. Member updates every 60 minutes, if the issue requires a site visit, a technician will be on-site within 6 hours.
- Priority 2-HIGH – ‘Serious Degradation’
 - A problem or issue for which the customer needs resolution within 1 business day.
 - Occurs when the Service is severely degraded and/or functionality is noticeably impaired, but most Member business operations continue (voice or data partially affected).
 - The customer is expected to commit resources to resolve the situation between the hours of 1300 and 0100 UTC (1200 and 0000 UTC when Daylight Saving Time is in effect)
 - The NOC uses this by default when the network is monitored to have an outage of a redundant core network element.
 - Target Response Times:
 - Engineer will be involved within 30 minutes. Member updates every 120 minutes, if issue requires a site visit, a technician will be on-site within 8 hours.
- Priority 3-MODERATE – ‘Impaired Performance’
 - A problem or issue for which the customer does not need immediate resolution but needs NOC attention within 3 business days.
 - The customer is expected to be available to provide information or assistance when available during normal business hours.
 - The NOC uses this by default when a customer connection or session is monitored to have a problem or outage. This is also used by default for maintenance which is both NOC initiated and customer impacting.
 - Target Response Times:
 - Engineer will be involved within 60 minutes. Member updates every 8 hours, if issue requires a site visit, a technician will be on-site within 24 hours.
- Priority 4-NORMAL – ‘Information or Assistance’
 - No impact to the customer’s operations, performance, and usability.
 - Non-urgent customer service requests, requests for information.
 - Routine installation/provisioning tickets, non-customer impacting maintenance, and customer-initiated maintenance.
 - Target Response Times:
 - Engineer will be involved within 24 hours. Member updates every 24 hours.
- Response: CEN will respond to automated alerts for Monitored Services or service requests for all Services submitted by members within the stated Response Time set forth above that corresponds to the Priority assigned to such alert or request by CEN. CEN will notify the member of its response to such alert or request through the Technical and Management Escalation List on file with the NOC. Such notification will be via e-mail or phone.
- Escalation: Should CEN fail to respond to an alert or service request within the Response Time set forth above that corresponds to the Priority assigned to such alert or request by CEN, the issue will be escalated through the Technical and Management Escalation List for CEN attached hereto as the “CEN Escalation List”.