JSI Webinar

Outage Reporting Made Simple:

Navigating Preparedness as a Provider

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Section 1

Introduction

Extreme Weather 2024

- 19 weather events to date with 149 lives lost and each event totaling over 1B in loss and total losses close to 50B
- Hurricane Beryl (Texas) – loss of power and flooding impacts to ~2.7M. Loss of power over a week in extreme heat
- Wildfires (Midwest to the West) – millions of acres burned, destroying everything in its path
- Tornadoes from the East through the Mid-West
- Severe Thunderstorms account for 45B in damages across the country
- Predicted to be an active hurricane season
- Major Network Outages impacting millions of users

And we still have the remainder of the year to go…

Outage Reporting Non-Compliance Impacts

- Fine/Penalties
- Compliance Plan (usually 3 years), including:
  - Establishing Operating Procedures
  - Developing and Distributing a Compliance Manual
  - Establishing and implementing a Training Program
  - Designating a Consent Decree Compliance Officer
  - Additional Non-Compliance Reporting
  - Annual Compliance Reports

Outage Reporting Non-Compliance Impacts

Examples of Recent Enforcement Actions:

- CenturyLink fined 3.8M for failure to transmit 911 calls and timely notify 911 call centers during a September 2020 outage.
- AT&T paid 950K for failed 911 calls and timely 911 call centers notification that potentially affected the 911 call centers during an August 2023 outage.
- Intrado fined 1.75M for failing to notify affected 911 calls centers within thirty minutes after the 911 Outage was discovered.
- Altice Mobile fined $96K for filing Initial NORS report 6 days late and a NORS Notification 8.5 hours late for 2 separate outages in 2023.

Section 2

Current & Proposed FCC Rules on Outage Reporting

Current Rules

- 911 Call Transmission and Location Accuracy
- Network Outage Reporting System
- 911 Outage Reporting
- Public Safety Answering Point (PSAP) Notification Requirements
- Suicide Prevention Hotline (988)
- Disaster Information Reporting System (DIRS)
- State Outage Reporting Requirements

911 Call Transmission and Location Accuracy Requirements

- 911 Transmission
- Dispatchable Location
- Commercial Mobile Radio Service (CMRS) Dispatchable Location
- Multi-Line Telephone System (MLTS) Dispatchable Location
- MLTS 911 Specific Rules

911 Transmission:

Service providers must transmit all 911 calls

- Originating Service Provider- Communication providers that enable callers to initiate 911 calls
- PSAP- 911 call centers
- Covered Service Provider- Communications providers that connect directly to a PSAP via a selective router
- Enhanced 911 (E911)- The delivery of 911 calls with automatic number identification and automatic location identification
- MLTS- A telephone system that serves customers in an enterprise environment (i.e.- office buildings, hotels)

Dispatchable Location

Service providers must convey dispatchable location information so first responders can quickly locate callers

- Dispatchable Location- A location that includes the validated street address of the calling party, plus additional information (such as suite, apartment, or similar information) necessary to adequately identify the location of the calling party
- Automated Transmission- Service providers must send location information to PSAPs without requiring any action from the 911 caller
- For **fixed telephony,** a validated street address is considered a dispatchable location and service providers must send that information to PSAPs
- **For Voice over Internet Protocol (VoIP) or Telecommunications Relay Services (TRS):**
  - Fixed devices- Service providers must transmit automated dispatchable location with each 911 call.
  - Non-Fixed Devices- Service providers must transmit automated dispatchable location with each 911 call if it is technically feasible. If not technically feasible:
    - Provide Registered Location Information;
    - Provide alternative location Information sufficient to identify the caller's civic address and approximate in-building location; or
    - Route the call to the appropriate call center

CMRS Dispatchable Location

Wireless providers must provide dispatchable location information or z-axis technology in certain markets

- **Horizontal Location Information:**
  - Must provide either a dispatchable location or x/y location within 50 meters for 80% of all wireless 911 calls
- **Vertical Location Information**
  - As of April 2, 2024, non-nationwide providers should have deployed either dispatchable location or z-axis in the top 50 Cellular Market Areas (CMAs)
    - Non-nationwide providers must deploy throughout their network **by April 3, 2026**
    - Providers must certify compliance within 60 days of each deadline

MLTS Dispatchable Location

New MLTS providers must convey dispatchable location information when technically feasible

- Fixed devices- Service Providers must convey automated dispatchable location information to PSAPs
- On Premises, non-fixed devices
  - Service providers must convey automated dispatchable location when technically feasible
  - If not technically feasible, can provide either:
    - A dispatchable location based on the end-user manual; or
    - Alternate location information that is coordinate based and sufficient to identify the caller's address and approximate in-building location, including floor number
- Off Premises, non-fixed devices
  - Service providers must convey automated dispatchable location when technically feasible
  - If not technically feasible, must provide either:
    - Dispatchable location based on end user manual; or
    - Alternative location information that is coordinate-based and consists of the best available location that can be obtained from any available technology or combination of technologies at reasonable cost

MLTS Dispatchable Location

Other entities have MLTS service requirements

- MLTS manufacturers, importers, sellers, and lessors may not provide a MLTS unless the system has the capability of providing the dispatchable location of the caller as specified
- MLTS managers and operators may not manage or operate an MLTS unless it is configured so that it conveys the dispatchable location of the caller
- MLTS installers may not install an MLTS unless it is configured so that it is capable of being programmed with and conveying dispatchable location information
- Rules only apply to systems manufactured, imported, offered for first sale or lease, first sold or leased, or installed after February 16, 2020

MLTS 911-Specific Rules:

MLTS must support automatic 911 dialing and central location notification

Definitions

- Automatic 911 dialing- allowing the caller to dial and reach 911 without a prefix or access code
- Central location notification- notification that someone has used the MLTS to dial 911
    - Must be where someone is likely to see or hear
    - Can be on or off site
    - Must include (1) that a 911 call was made (2) valid call back number, if technically feasible; and (2) caller's location, if technically feasible

Obligations

- MLTS manufacturers and vendors must preconfigure the system to support dialing 911 without a prefix or access code
- MLTS installers, mangers, and operators must ensure the system supports dialing 911 without a prefix or access code
- MLTS installers, managers, and operators must configure the system to provide notification to a central location

Network Outage Reporting System (NORS)

- What is NORS?
- Important Definitions
- Understanding User Minutes
- Requirements for Wireline Providers
- Requirements for Wireless Providers
- Requirements for Interconnected VoIP Providers
- Requirements for 988 Service providers
- How to File NORS Report

What is NORS?

The FCC requires certain service providers to report network outages that meet specified duration and magnitude thresholds

- Wireline, cable, satellite, wireless, interconnected VoIP, and Signaling 7 rules differ
- The FCC routinely analyzes NORS data to identify trends and inform its decisions on network reliability requirements
- All NORS filings include:
  - Name of reporting entity
  - Incident date and time
  - Geographic area affected
  - Description of the problem
  - Service effects
  - Contact name and phone number

  Codified in Part 4 of the FCC's Rules (47 C.F.R. § 4)

  **Does not apply to broadband networks*

Understanding User Minutes

- The FCC created metrics for measuring the magnitude of an outage
- For telephony, including non-mobile interconnected VoIP telephony and paging networks in which each individual user is assigned a telephone number:
  - User Minutes= Duration x (assigned numbers + administrative numbers); or
  - User Minutes= Duration x working numbers
- Duration of the outage is in minutes
- Assigned Numbers- telephone numbers working in the Public Switched Telephone Network under an agreement such as a contract or tariff at the request of specific end users for their use
- Working Numbers- telephone numbers that can originate or terminate telecommunications. This includes, for example, all working telephone numbers on the customer's side of a PBX, or Centrex, or similar arrangement

Requirements for Wireline Providers

- Notification- Must notify the FCC within 2 hours of discovering a reportable outage, which is an outage that occurs at any facility the provider owns, operates, leases, or utilizes, that lasts at least 30 minutes and:
  - Potentially affects at least 900,000 user minutes of either telephony or paging;
  - Affects at least 667 OC3 minutes;
  - Potentially affects any special offices and facilities; or
  - Potentially Affects a 911 Special Facility
- Initial Report- Within three days of discovering the outage
- Final Report- Within 30 days of discovering the outage

**Providers can withdraw both the notification and initial report if further investigation finds the outage did not meet the reporting threshold*

Requirements for Interconnected VoIP Providers

- Notification-
  - Must notify the FCC within 2 hours of an outage of at least 30 minutes that potentially affects a 911 special facility
  - Must notify the FCC within 24 hours of an outage of at least 30 minutes that either:
    - Potentially affects at least 900,000 user minutes of interconnected VoIP service and results in a complete loss of service; or
    - Potentially affects any special offices and facilities
- Final Report- Within 30 days of discovering the outage

Requirements for Wireless Providers

- Notification- Must notify the FCC within 2 hours of discovering a reportable outage, which is one that occurs at any facility the provider owns, operates, leases, or utilizes, lasts at least 30 minutes and:
  - Occurs at a Mobile Switching Center;
  - Potentially affects at least 900,000 user minutes of either telephony and associated data service or paging service;
  - Affects at least 667 OC3 minutes;
  - Potentially affects any special offices and facilities other than airports through direct service facilities agreements; or
  - Potentially Affects a 911 Special Facility
- Initial Report- Within three days of discovering the outage
- Final Report- Within 30 days of discovering the outage

How to File a NORS Report

- NORS reports should be filed using the Commission's online portal
  - Link available here or on FCC Homepage
  - Under the **Licensing & Databases tab select NORS**
- Create new users with the FCC User Registration System
  - Use this account to login to NORS
  - Upon log-in, use left hand navigation panel to assign yourself to your company
- There are two types of users
  - **Inputters:** Only have access to information they submit
  - **Coordinators:** Have access to all information submitted by their company
  - Request Coordinator privileges by emailing FCCOutage@FCC.gov

911 Outage Reporting

- 911 Outage Reporting Requirements
- PSAP Notification Requirements

Existing 911 Outage Reporting Requirements

- Providers must notify the FCC (via NORS) and PSAPs if they experience an outage that potentially affects 911 as soon as possible but no later than 30 minutes after discovery
- Providers must communicate additional material information to potentially affected 911 special facilities as the information becomes available, but no later than two hours after the initial notification
- An outage potentially affects a 911 special facility if it lasts for at least 30 minutes and:
  - There is a loss of communications to PSAPs potentially affecting at least 900,000 user-minutes, the failure is not at the PSAP, and no reroute for all end users was available;
  - There is a loss of 911 call processing capabilities in one or more E-911 tandems/selective routers;
  - One or more end-office or MSC switches or host/remote clusters is isolated from 911 service for at least 30 minutes and potentially affects at least 900,000 user minutes; or
  - There is a loss of ANI/ALI and/or a failure of location determinate equipment potentially affecting at least 900,000 user-minutes

PSAP Notification Requirements

Originating 911 Service Providers AND **Covered 911 Service Providers**

- **Who Must Comply**: Providers that provide 911, E911, or NG911 capabilities directly to a PSAP or operate one or more central offices that directly serve a PSAP and providers that offer the capability to originate 911 calls, but another provider delivers those calls and associate information to the PSAP
- **Timing:** as soon as possible but no later than 30 minutes after discovery
- **Content:** available information that may be useful in mitigation the outage as well as a name, telephone number, and email address at which the service provider can be reached for follow up
- **Means:** telephone and e-mail unless there is another method mutually agreed upon in advance
- **Follow up:** Within 2 hours to provide material information including the nature of the outage, the best-known cause, the geographical scope, the estimate of repairs
- **Annually**: Review and update accurate PSAP contact information

New 2024 Suicide Prevention Hotline (988) Outage Reporting Requirements

- Notification-
  - **NOTE:** 988 Special facilities must be notified of an outage within 30 minutes of discovering the outage (Substance Abuse & Mental Health Service Admin, Department of Veterans Affairs, and 988 Lifeline Administrator)
  - The notification requirements for 988 are the same as the 911 notification requirements by service provider type
- Initial Report – Within 3 days of discovering the outage
- Final Report- Within 30 days of discovering the outage
- Notification and outage reporting are submitted through NORS
- These 988 requirements took effect **February 15, 2024**

Disaster Information Reporting System (DIRS)

- What is DIRS?
- DIRS Activation
- How to Enroll in DIRS
- New Rules for Reporting During Disasters

What is DIRS?

- Established by the FCC on September 11, 2007, in response to outages and damage caused by Hurricane Katrina
- Currently a voluntary, web-based system that allows providers to report infrastructure status information during and after major disasters
  - Available to wireline, wireless, broadcast, cable, interconnected VoIP, AND broadband providers
  - Allows companies to designate a contact person
  - Provides an avenue for broadcasters to receive aid
  - Mandatory for all stage 3 recipients of the Uniendo - Puerto Rico and Connect USVI Funds
- The FCC uses aggregated data from DIRS to provide public reports on communications statuses during disasters and to inform federal partners and FEMA where to send resources during disaster response
- The FCC shares this information with state and federal agencies for restoration and recovery efforts

DIRS Activation

- The FCC determines when to activate DIRS in coordination with FEMA
  - DIRS activation generally precedes an anticipated emergency, such as a hurricane, or follows an unpredictable disaster
  - The FCC has wide latitude to request activation

- The FCC announces DIRS activations through Public Notices on its website, which includes a list of counties covered and when the reports are first due

- Currently the FCC often suspends NORS reporting requirements for companies that elect to file in DIRS

How to Enroll in DIRS

- Enroll your company in DIRS here
- Current DIRS users without an existing account in the FCC's Commission Registration System (CORES) will need to create a CORES account prior to accessing DIRS.
- Current DIRS users with an existing CORES account will not need to create a new DIRS account.
- New DIRS users will first need to register in CORES, and then create a new DIRS account. The username and password you establish in CORES is also used for DIRS.

Detailed information on creating DIRS accounts, as well as using the system, can be found in the user's guide, available here

New Rules for Reporting During Disasters

The new rules, adopted but not yet in effect, include:

- When the FCC activates DIRS in impacted geographic areas, cable, wireline, wireless, and interconnected Voice over Internet Protocol (VoIP) providers (i.e., subject providers) must report their infrastructure status information daily in DIRS even when their reportable infrastructure status has not changed compared to the prior day.
- Subject providers' NORS reporting obligations will be suspended when DIRS is active.
- Subject providers who report in DIRS must provide a single, final DIRS report to the FCC, within 24 hours of the FCC's deactivation of DIRS. The final report will provide the status of their infrastructure that has not yet been fully restored at the time of the DIRS deactivation.

The rules will become effective the later of 30 days after the FCC issues a Public Notice announcing that the Office of Management and Budget has completed review of any new information collection requirements or at the earliest, **November 30, 2024.**

State Outage Reporting Requirements

- Over 40 states also have some level of outage reporting requirements
- Know your state-specific rules and be sure you have standard operating procedures to comply with any required filing requirements.

Potential Future Regulations for Broadband Outage Reporting

- Second Further Notice of Proposed Rulemaking adopted on January 25, 2024, proposed to require:
  - Broadband Internet Access Service (BIAS) providers to report to NORS and/or DIRS
  - Subject Providers to supply the FCC with after-action reports detailing how their networks fared during an emergency or disaster event
  - Subject Providers report the location, and other specifications of those assets, of mobile recovery assets during a disaster response

Section 4

Importance of a Comprehensive Emergency Operations Plan (EOP)

Why a current EOP?

- **Sole source** document specific to your business
- **Employees** know the importance of their role and what to do in a disaster
- **Prompt** activation and testing of plan via drills
- **Protect** your employees, your customers and your business
- **Mitigate** risks before they occur
- **Restore** services in a safe and timely manner
- **Comply** with federal, state and insurance requirements (where applicable)

Comprehensive Emergency Operations Plans

- ✓ **Purpose**
  - Scope
  - Policy Statement
- ✓ **EOP Planning**
  - Process
  - Plan Administrators
  - Key Management
  - Continuity Coordinator Role & Responsibility
  - Continuity Team
  - Department Point of Contacts
  - Emergency Committee Meetings
- ✓ **Company Profile**
  - Essential Functions & Processes
  - Areas of Operation
  - Employees, Essential Personnel
  - Employee Evacuation Team
  - Primary Control Center
  - Critical Sites
  - Critical Customers
  - Telecommunications Service Priority (TSP)
  - Public Safety Answering Points (PSAPs)
  - Vendors
  - Contractors
  - Neighboring Utilities
  - Mobile Equipment
  - Vehicles & Heavy Equipment
  - Network Design

Comprehensive Emergency Operations Plans

- ✓ **Risk Assessment**
  - Assess level of risk for natural hazards and human-caused events
  - Loss of communications, power, premises, critical equipment
- ✓ **Projects**
  - Network redundancy and reliability
  - County Notification Alerts
  - Critical site monitoring/maintenance
  - Critical equipment/heavy machinery maintenance
  - Physical security
  - Natural hazard preparedness
  - Human –caused events i.e. cybersecurity, data breach incident response, active shooter
- ✓ **Reporting**
  - State outage reporting processes
  - Network Outage Reporting (NORS)
  - Disaster Information Reporting (DIRS)
  - 911 Outage Reporting
  - 988 Reporting (*New*)
- ✓ **Restoration Priority**
- ✓ **Communications**
  - Employee
  - Public Media
  - Customer Contact
  - Complaint management
- ✓ **Training & Plan Updates**
- ✓ **Drills**

The importance of conducting an annual drill

- Leadership, continuity team and employees understand their roles
- Prepared staff to react in a coordinated effort when an event occurs
- Trains new team members on their roles during an event
- Identify needed process improvements
- Order/reorder needed supplies needed for office in case of an outage
- Better preparation creates safe and effective activation and restoration in an emergency
- Provides the opportunity to review and update your plan
- Satisfies state requirements (where applicable)

Section 6

Conclusion

Conclusion

- Several new & enhanced FCC outage reporting rules
- Implement updates to your policies and procedures to ensure compliance with these rules
- Develop a new or updated Emergency Operations Plan
- Review and test your plan on an annual basis
- Need help with state or federal reporting, EOP, EOP drills or network resiliency, JSI is here to assist you.

THANKS FOR ALL YOU DO…

Section 7

Questions

Thank You!

Reach out with any questions.
We are here to assist.

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