9-1-1 Systems Outage Overview

January 14, 2025 Incident

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Overview

- Summary Brief
- Plan Of Action
- Conclusion/Discussion

Summary Brief

- Calls for emergency (9-1-1, text to 9-1-1) and non-emergency services are processed using a ‘geo diverse’ call handling solution, with infrastructure split between strategic locations in Duval County.
- A call for service is processed based on geographic location, routing the request to the appropriate jurisdiction.
- In case of failure of one portion of the system, the redundant portion takes over call handling processing until full restoration is completed.
- A secondary call handling solution, which is portable and utilizes wireless LTE connectivity is available in case of total failure of the geo diverse system.
- *This ‘triple redundancy’ kept services in Duval County functioning during the CrowdStrike software incident in July of 2024, while other Florida counties experienced loss of service.*

Summary Brief

- On January 14, 2025, at approximately 1120 ET, the 9-1-1 infrastructure's co-location provider switched power sources during an emergency maintenance period, creating a hardware failure, leading to the loss of network connectivity to call handling equipment countywide. Multiple additional system failures negatively impacted all county PSAPs (Public Safety Answering Points), causing the loss of 9-1-1, non-emergency, and text to 9-1-1 services. Calls arriving to primary call handling equipment did not failover to backup systems due to call flow configuration issues.
- Call takers were tracking and able to view every incoming 9-1-1 call and direct dial the callers back to provide assistance (RapidSOS).
- The public was instructed to contact emergency services utilizing other means (alternate numbers, e-mail, etc.).
- As the morning progressed, full restoration of public facing services by systems vendors was accomplished at 1216 ET.

Plan Of Action

- JSO lead an intensive After-Action Review, involving local public safety stakeholders and systems vendors to determine the root causes of this failure.
- Routing issues to the backup 9-1-1 call handling solution was found to be a factor in the delay of restoration. This has since been corrected.
- Increased testing of backup systems, with full cutover to said systems has been implemented as a course of regular operations.
- Memorandums Of Understanding with surrounding counties, outside of the 5 local PSAPs included in our previous contingency plan are being reviewed to allow for call overflows to those jurisdictions in case of total system failure.
- Improving network diversity, adding additional redundancy to the existing 9-1-1 system utilizing multiple network carriers is a priority.

Plan Of Action

Previous Redundancies In Place Prior To Event.	Additional Measures Implemented/In Progress Of Implementation.
System Host Provider – Multiple Locations, Redundant Power Sources.	Performed audit of 9-1-1 equipment, correcting power distribution diversity to various components of the system (routers and firewalls).
AT&T – Single Data Transport Carrier With Geo-Diverse Paths.	In process of researching additional network carriers to improve data transport diversity.
Emergency Backup 9-1-1 Systems.	Reviewed and corrected configuration issues for proper failover operation.
RapidSOS – Tracks Inbound 9-1-1 Calls with Feature Rich Data (in addition to caller location).	Corrected system call flow to prevent 9-1-1 calls from being stuck in 'queue' due to network loss/issues.
Monthly Testing of backup 9-1-1 Systems for network connectivity verification.	Monthly Testing of backup 9-1-1 Systems to include 'full cutover', operating completely off the backup system for a brief period before cutover back to the primary call handling solution.

Conclusion/Discussion

Thank you for your time!

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