NENA Resource Analysis Operations Information Document (OID)

NENA
OPERATIONS INFORMATION DOCUMENT

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NENA's Operations Committee has developed this document. Recommendations for changes to this document may be submitted via email to opsdoccomments@nena.org or via mail to:

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1 Executive Overview

This document is provided to assist Public Safety Answering Points (PSAPs) with the development of a Resource Analysis. The Resources Analysis is the first step in completing a Hazard and Vulnerability Analysis. These analyses are essentially audits that provide planning tools to prevent, prepare for, respond to and recover from incidents, which may adversely affect the PSAPs ability to perform its critical functions. Every PSAP is unique and this document should be used as a starting point in disaster recovery planning.

2 Introduction

2.1 Purpose and Scope of Document

This document is intended as a guide for PSAP staff to review the many components of their system and as a starting point for evaluating hazards and their individual vulnerability to the hazards, which may adversely impact their ability to serve their communities. This document is not intended as a template, but as a process guide.

2.2 Reason to Implement

PSAPs are critical for the safety and security of the public. The ability for manmade or natural occurrences to prevent the PSAP from receiving, processing, dispatching and monitoring incidents places the public and first responders in danger. It is therefore incumbent on PSAP administrators to prepare for such occurrences.

2.3 Reason for Reissue

NENA reserves the right to modify this document. Whenever it is reissued, the reason(s) will be provided in this paragraph.

2.4 Recommendation for Standards Development Work

This document is intended to be used as a guide to assist PSAPs with disaster planning. Current and future Standards regarding equipment, infrastructure and capability should be used to assist with a Resource and Vulnerability Analysis. In particular, the National Fire Protection Association (NFPA) Standard 1221and the NENA Communications Center/PSAP Disaster and Contingency Plans Model Recommendations should be utilized.

2.5 Cost Factors

PSAPs that desire or are required to prepare for disaster will incur expense in planning for disaster recovery. The expense will be unique to the PSAPs current ability to recover and the safety measures taken. Administrators are urged to look beyond the cost of planning and preventing disaster to the potential cost of a system failure.

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2.6 Acronyms/Abbreviations

Some acronyms/abbreviations used in this document have not yet been included in the master glossary. After initial approval of this document, they will be included. Link to the master glossary is located at http://www.nena.org/pages/ContentList.asp?CTID=5

The following Acronyms are used in this document:	
ALI	Automatic Location Identification
ANI	Automatic Number Identification
CAD	Computer Aided Dispatch
LAN	Local Area Network
NFPA	National Fire Protection Association
PSAP	Public Safety Answering Point
WAN	Wide Area Network

3   Resource Analysis Components

3.1   Network

3.1.1   Central Offices

Where feasible, a minimum of two central offices should be used to route calls to the PSAP. It is recommended that calls from one central office routed through a dedicated fiber loop directly to the PSAP. Central offices should allow the automatic transfer of calls to the other central office should the link with the PSAP fail. Where this cannot be accomplished PSAP administrators should consider alternate resources to ensure operations.

3.1.2   Tandems

Where feasible, End office trunks should be routed through a minimum of two redundant tandem computers. This design requires that every other end office trunk be routed to a different tandem so that half terminate in one central office and the other half in another.

3.2   PSAP Equipment

3.2.1 ANI/ALI Master Controller

Should be compliant with NENA-02-010, 04-001 and 04-005

3.2.2 CAD/Mapping

The CAD/Mapping System should have redundant processors capable of sustaining the normal operations of the system on either server/processor, so that if a failure of the primary system occurs, operations are able to resume on the secondary/backup server/processor. All data and incident information should be simultaneously written and recorded onto a duplicate/redundant disk storage system, arranged so the data stored data on either disk of the redundant set is readable by either server/processor.

All incident and operational/system data should be backed up on a regular schedule. Duplicate copies of the main system files necessary to restore the system to operation in the case of catastrophic failure of the facility should be stored off-site at another secure location.

3.3   Infrastructure

3.3.1   Data

It is recommended that data networks for call processing be segregated so that a failure/intrusion of Local Area Network does not have an impact on the performance of the network. If call processing networks are shared with administrative functions then safeguards must be in place to assure the integrity of the call processing systems.

3.3.2   Voice

All emergency phone and radio transmissions should be recorded. All recordings should be maintained for no less than ninety days. It is recommended that maintained recordings be protected by either recordings stored on networks be backed up to an off-site location or if being stored on site that recordings be kept in flame/heat proof containers.

3.3.3   Computer Networks

All Local Area Networks (LAN) and Wide Area Networks (WAN) should have safeguards in place to protect information.

3.3.4   Other Phone Service

Ten-digit lines used for urgent calls and for 9-1-1 back-up service should be routed through at least two central offices. Where this is not feasible, administrators should consider other resources.

3.3.5   Field Communications

3.3.5.1 Radio Communications

Radio communications should have back-up power systems at each tower site. It is recommended that all radio networks be dual path without single point failure.

3.3.5.2 Towers and Transmitters

Secure facilities with appropriate power and climate control as needed to maintain operations at each site.

3.3.5.3 Mobile Data

Security features to assure integrity of data being transported and prevent unauthorized access are essential.

3.3.6   Security

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All infrastructure components require the level of security necessary to protect the call processing mission. All facilities should have sufficient security to protect the personnel and resources within.

3.3.6.1 Systems

Appropriate security should be in place to prevent unauthorized access to computer systems, electrical systems and communications systems.

3.3.6.2 Facility

All facilities should have adequate security to prevent unauthorized access, which could impact critical functions of operations.

3.3.7 Facilities

It is recommended that all facilities have redundant power supplies. UPS and generator capacity should be sufficient to maintain full operations. UPS should be adequate to provide service for all power needs should the first generator fail to automatically start and the second power supply starts. It is recommended that primary and backup generators have a minimum of seven days fuel and that provisions for online refueling be addressed.

3.4   Human Resources

3.4.1   Staffing

Telecommunicator and administrative staff are sufficient to provide critical services.

3.4.2   Education and Training

Staff is trained to meet all local, state and federal standards.

3.4.3   Support personnel

Sufficient support personnel are available to maintain operational readiness.

3.5   Administrative

Adequate funding is available to maintain operations and adequately plan for continued operations.

3.6   Support Services

PSAP has the available resources of support utilities to respond to catastrophic incident. This includes the ability to reestablish power and communication needs.

3.7   Field Users

Adequate field user resources shall have adequate resources to effectively respond to any emergency situation involving the PSAP.

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4   References

National Fire Protection Association, Standard 1221, Installation, Maintenance, and Use of Emergency Services Communications Systems.

Alexander, David, Principles of Emergency Planning and Management, Oxford University Press 2002