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Because the Mission Matters

The Changing World of PSAP Network Management

September 12, 2017

What we'll cover today

- Public safety technology "forces of nature"
- What is meant by "public safety IP network"?
- The network management transition of responsibility
- What is my current and future level of risk?
- Strategies to facilitate the PSAP network management needs now, and in the future

Public Safety Technology “Forces of Nature”

The Changing World of PSAP Network Management

Public Safety Technology “Forces of Nature”

- Agencies need enhanced featured and functionality that comes with public safety application advances.
- Network providers are aggressively abandoning their support of copper infrastructure and other legacy technology.
- The public safety market continues to position itself for the deployment of Next Generation 911 capabilities.
- The result is an ever-increasing dependency on public safety IP networks
- The responsibility for supporting these networks is shifting from vendors and network providers toward PSAP leadership

What is meant by “public safety IP networks?”

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What do you mean by “Public Safety IP Network?”

Any network that supports the transport of a public safety application from the application server to the desktop

ESInet

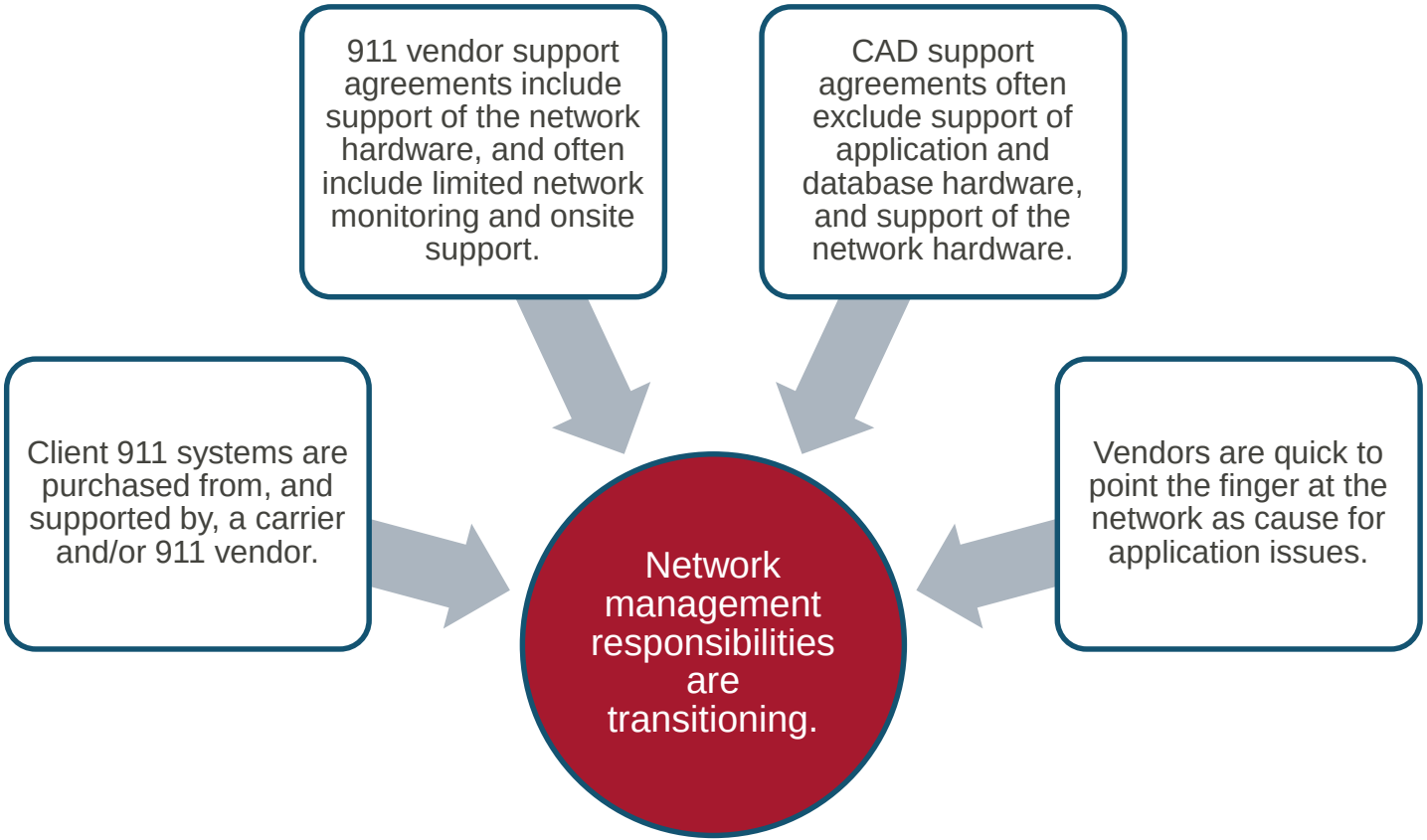
City or county public safety

V-LAN or Sub-Net

CAD network

Carrier- provided CPE network

The Network Management Transition of Responsibility



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The network management transition of responsibility

- Problems typically arise with the support of the network, not the application.
- Frustrations exist with the support from the vendors.
  - NOC misses alarms.
  - Response to incidents is too slow for 911 operations.
  - Carrier support centers are difficult to deal with.
- Agencies are often on their own to support CAD application hardware, and the associated network, including wiring, switches, controllers, policies, firewalls, etc.
- Because of issues with vendor support, or the lack of it, agencies are forced into the role of network manager.

Symptoms indicating you're playing the role of network manager

- You've invested in, or continue to invest in, technical support staff.
- You've invested in, or continue to invest in, ticketing and network management utilities.
- You've negotiated a reduction in coverage from your vendor.
- The perception amongst agency leadership is that when an application issue is determined to be network related, it is an internal responsibility, not a vendor's.

What is my current and future level of risk?

What is my current level of risk?

In terms of reliability…

- Do I have an accurate infrastructure inventory and diagram?
- Do I have a current understanding of my single points of failure, of components that are nearing end of life?
- Do I experience outages that have the same, or similar, root cause?
- Do I have a process for change management that ensures I'm not introducing risk into the environment?

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What is my current level of risk?

In terms of performance…

- Do I have an accurate infrastructure inventory and diagram?
- Do I have an accurate understanding of all network routes and paths?
- Do I receive complaints from users of slow or inconsistent application response times?
- Do I have a view to the real time bandwidth capacity and utilization of my network?

What is my current level of risk?

In terms of security…

- Am I confident that my environment is appropriately hardened from a design perspective?
- Am I confident in the configuration of my firewalls, have I recently reviewed settings?
- Are my network security policies and procedures appropriate and documented?
- Am I confident that all my network devices are current with security patches?

What is my current level of risk?

In terms of sustainability and continuity?

- Do I have an accurate infrastructure inventory and diagram?
- Are my critical configuration files securely maintained in a database?
- Do I have a documented and tested network disaster recovery plan?
- Is the ongoing management of my network at risk given the departure of key personnel?

What is my current level of risk?

In terms of incident response…

- Are all critical components of my network monitored 24x7 for fault or failure?
- Do I have the appropriately skilled resources available to respond to a network problem 24x7?
- Do I have incident ticketing capability, with history reporting?
- Is a root cause analysis conducted on every network incident such that it is prevented in the future?

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What is my current level of risk?

In terms of my future level of risk….

- Does my agency have a documented three to five year plan for technology deployment and migration?
- Does a corresponding plan exist for my network environment?
- Does my agency have a strategic vision for converging technologies? For NG911? For FirstNet?
- Does my agency have an understanding of the network dependencies to support future converging technologies?

What strategies can I employ to facilitate network management now, and in the future?

Facilitating Your PSAP's Current Network Management Needs

Define and Document a Network Management Plan.

1. Take a holistic view of your entire network environment.
2. Place increased emphasis on proactive, preventative, aspects.
3. Ensure that your plan is executable and sustainable, not personality driven or dependent.
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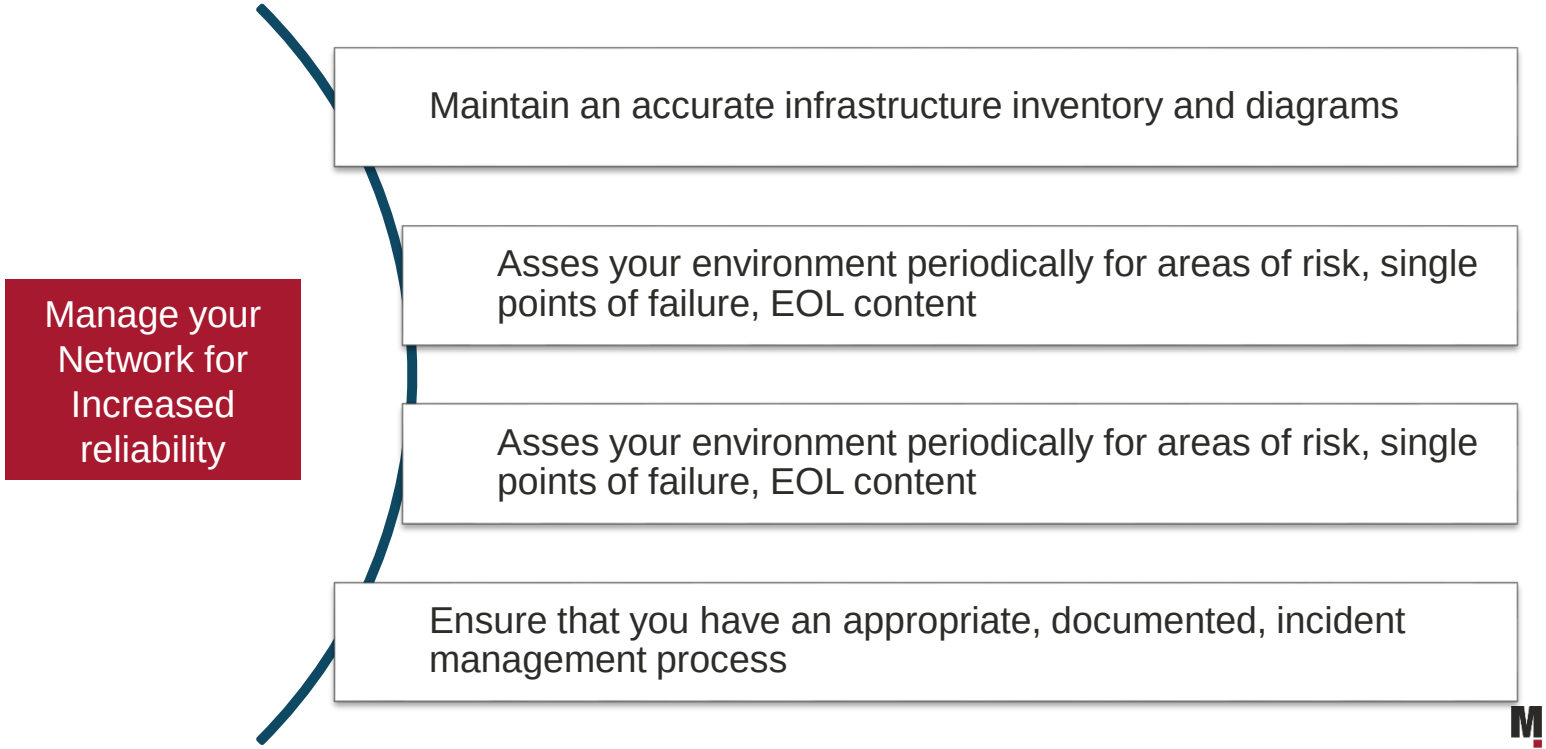
5. Explore blended options of internal and outsourced support.

Facilitating Your PSAP's Current Network Management Needs



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Facilitating Your Current PSAP's Network Management Needs

Manage your Network for improved security

- ✓ Have a network security assessment done by an independent third party security firm
- ✓ Establish and maintain a process to document, and audit, key security policies and procedures
- ✓ Ensure that cyber security training is conducted for all personnel using a device on the network
- ✓ Ensure that a process exists to keep all security patches current on all relevant devices

Facilitating Your Current PSAP's Network Management Needs

Establish a future looking network management plan.

Work with your agency to construct and document a three to five year plan for technology deployment and migration

Work with your agency to develop a strategic vision for converging technologies, including NG911 and FirstNet

Develop a technology roadmap specific to infrastructure, including ongoing support and security.

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