Selecting the Best ESInet System for Your Needs

Chad Brothers

Client Services Manager

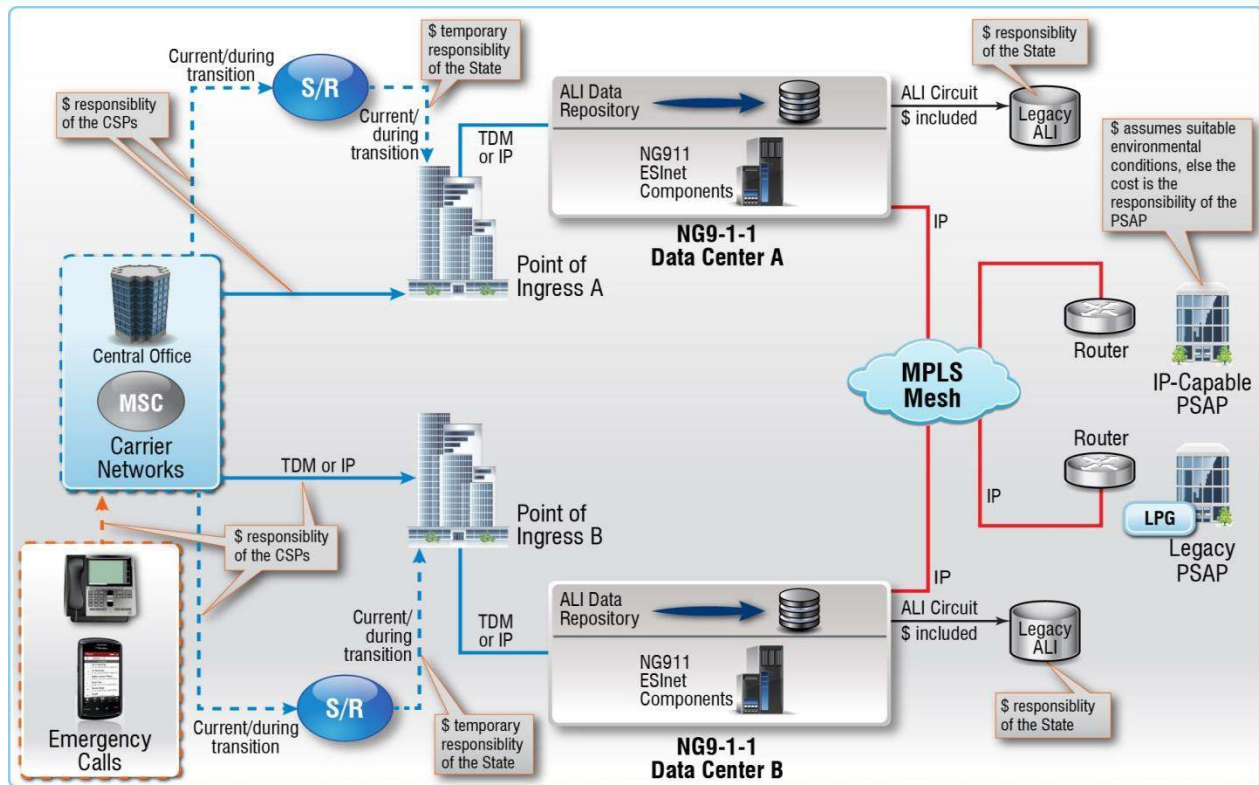Comtech

So, you want your very own ESInet?

What Questions Do You Need To Be Asking?

- Networking
- Call Routing
- Call Handling
- Security
- GIS
- Operations

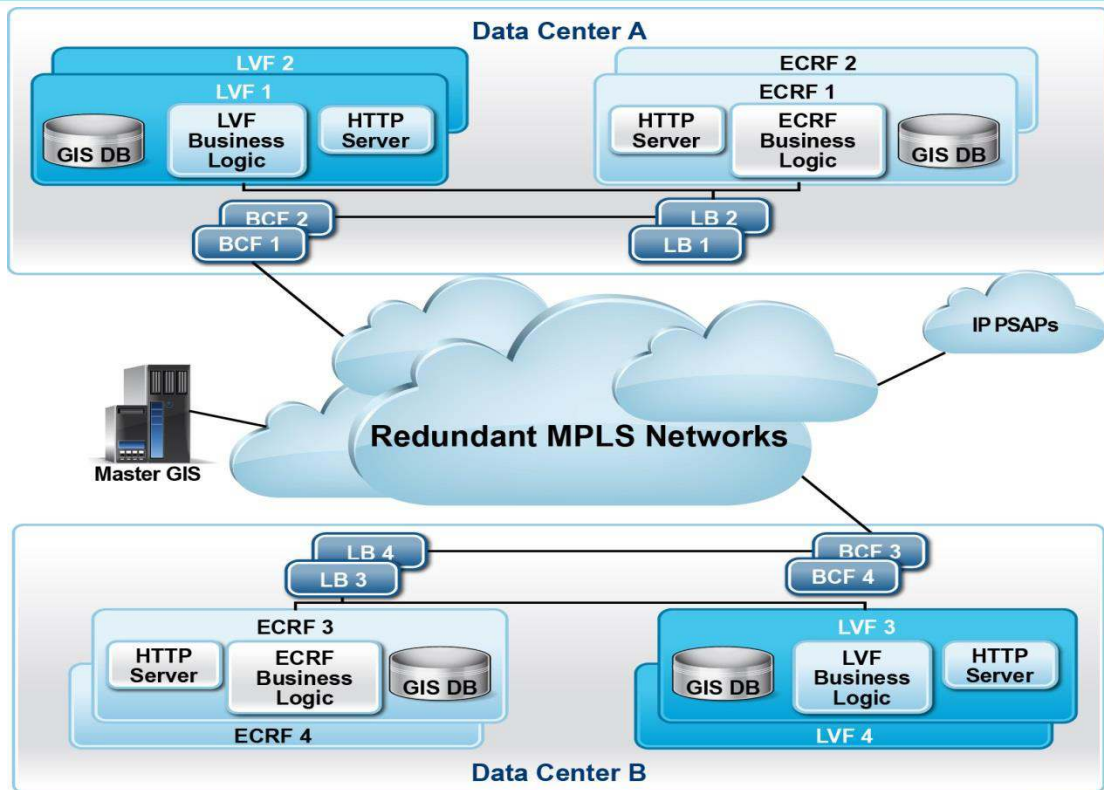# Networking

- ## Last Mile
  - – Fiber / Copper

- ## State and Local networks

- ## LEC
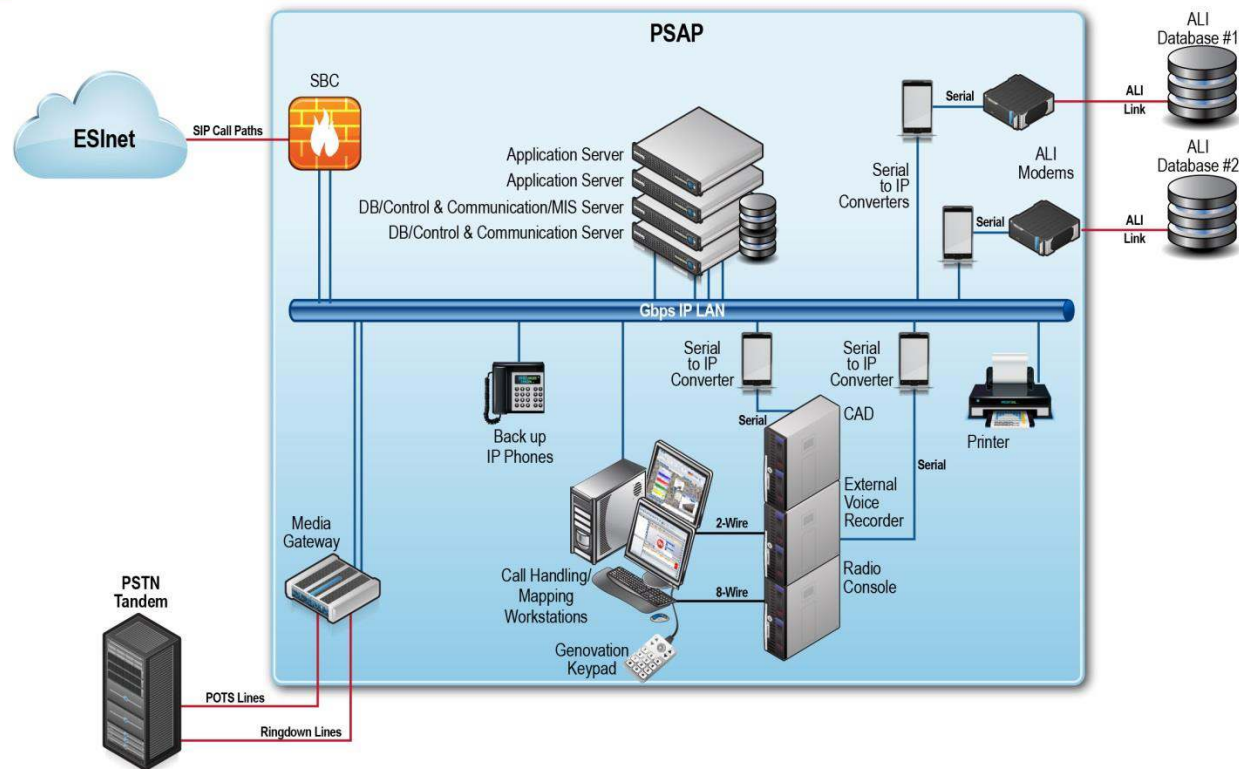 - – IP
  - – MPLS
  - – TDM

Call Routing Functions

- Sole Source
- Multi-Vendor
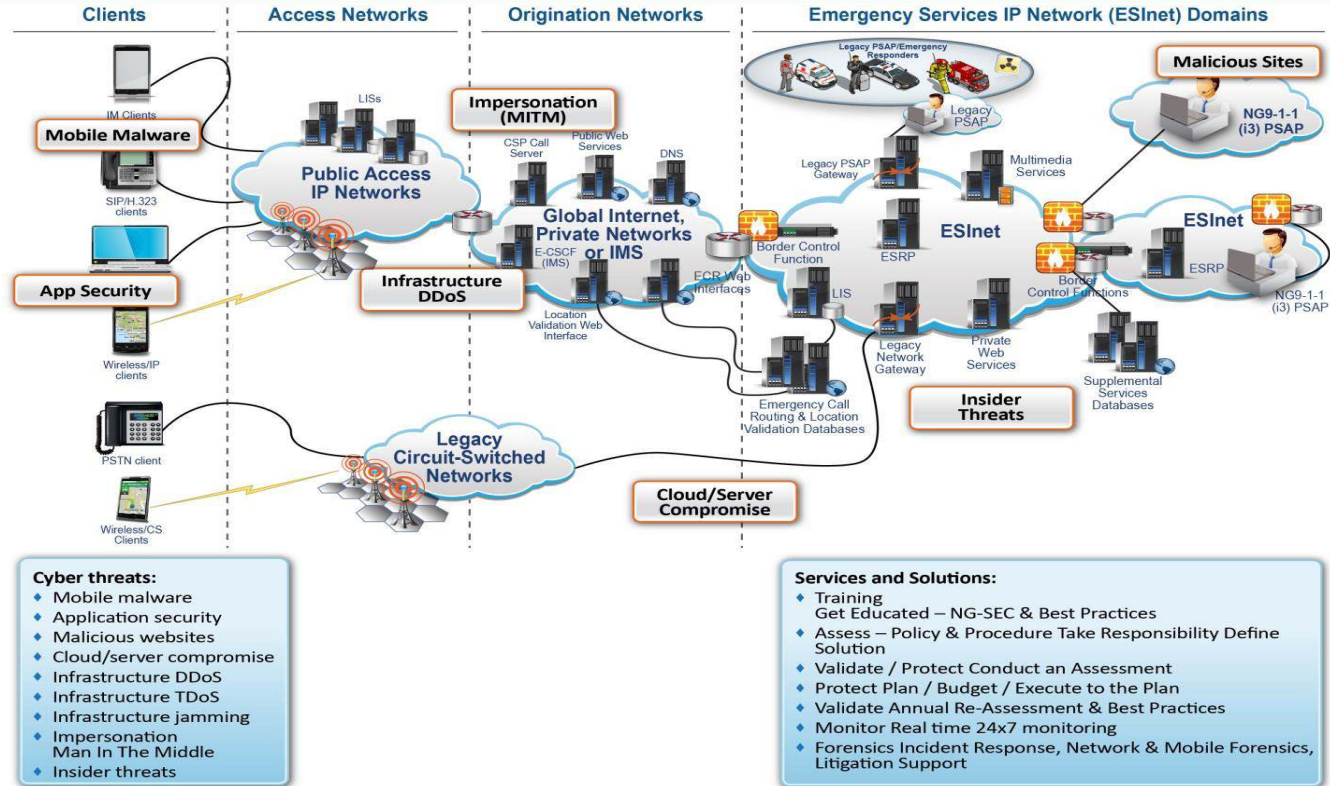- Partial or Full
- Transitional configurations

Call Handling and PSAP Functions

- Sole Source

- Multi-Vendor

- Legacy/ Native SIP

- Host/Remote or Local
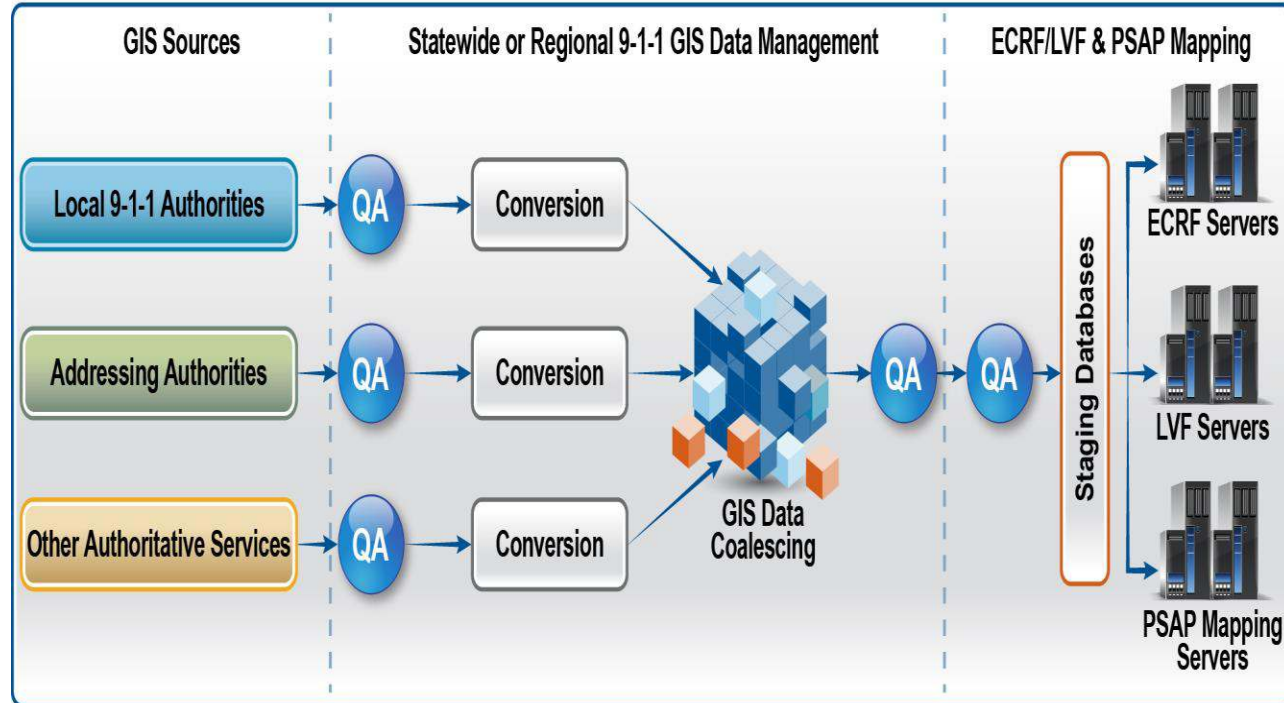
Security: Who's on first?

- Network
- Core
- Local PSAP

Clients   **Access Networks**   **Origination Networks**   **Emergency Services IP Network (ESInet) Domains**

Legacy PSAP/Emergency Responders

Malicious Sites

IM Clients
LIS
Impersonation (MITM)
Legacy PSAP
NG9-1-1 (i3) PSAP

Mobile Malware
CSP Call Server
Public Web Services
DNS
Legacy PSAP Gateway
Multimedia Services

SIP/H.323 clients
Public Access IP Networks
Global Internet, Private Networks or IMS
ESInet
ESInet

App Security
E-CSCF (IMS)
Border Control Function
ESRP
ESRP

Infrastructure DDoS
ECR Web Interfaces
LIS
Border Control Functions
NG9-1-1 (i3) PSAP

Wireless/IP clients
Location Validation Web Interface
Legacy Network Gateway
Private Web Services
Supplemental Services Databases

PSTN client
Legacy Circuit-Switched Networks
Emergency Call Routing & Location Validation Databases
Insider Threats

Wireless/CS Clients
Cloud/Server Compromise

Cyber threats:
- Mobile malware
- Application security
- Malicious websites
- Cloud/server compromise
- Infrastructure DDoS
- Infrastructure TDoS
- Infrastructure jamming
- Impersonation Man In The Middle
- Insider threats

Services and Solutions:
- Training
  Get Educated – NG-SEC & Best Practices
- Assess – Policy & Procedure Take Responsibility Define Solution
- Validate / Protect Conduct an Assessment
- Protect Plan / Budget / Execute to the Plan
- Validate Annual Re-Assessment & Best Practices
- Monitor Real time 24x7 monitoring
- Forensics Incident Response, Network & Mobile Forensics, Litigation Support

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GIS: SI Functions

- Locally
- Regionally
- In house or external

NG9-1-1 GIS Provisioning System Overview

GIS Sources	Statewide or Regional 9-1-1 GIS Data Management	ECRF/LVF & PSAP Mapping

- Local 9-1-1 Authorities → QA → Conversion
- Addressing Authorities → QA → Conversion
- Other Authoritative Services → QA → Conversion

GIS Data Coalescing → QA → QA → Staging Databases → ECRF Servers, LVF Servers, PSAP Mapping Servers

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Operational Considerations

- Congratulations, now what's next?