

NG9-1-1 Voice Security Issues and Can SHAKEN/STIR Help?



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SecureLogix Introduction



- Based in San Antonio, Texas
- Focused on call authentication, spoofing, robocalls, and TDoS
- Our solutions provide a “Voice/Call Firewall”
- Working with DHS S&T Directorate on voice security
- Strategic partnerships with Verizon and AT&T

NG9-1-1 Voice Threats



TDoS

**Prevent Contact
Center Customer
Access**

**Significant Threat to
9-1-1 and other
Contact Centers**



Robocalls &
Voice Spam

**6 Billion
Robocalls
Per Month**

**Affects 9-1-1 if
too aggressive or
on admin lines**



Spoofing &
Authentication

**Enabler for Many
Attacks**

**Spoofing is used
for SWATting
attacks**



Harassing Calls

**Broad class of calls
designed to harass**

**Conferencing and
other confusing
calls**

Recent TDoS Attacks

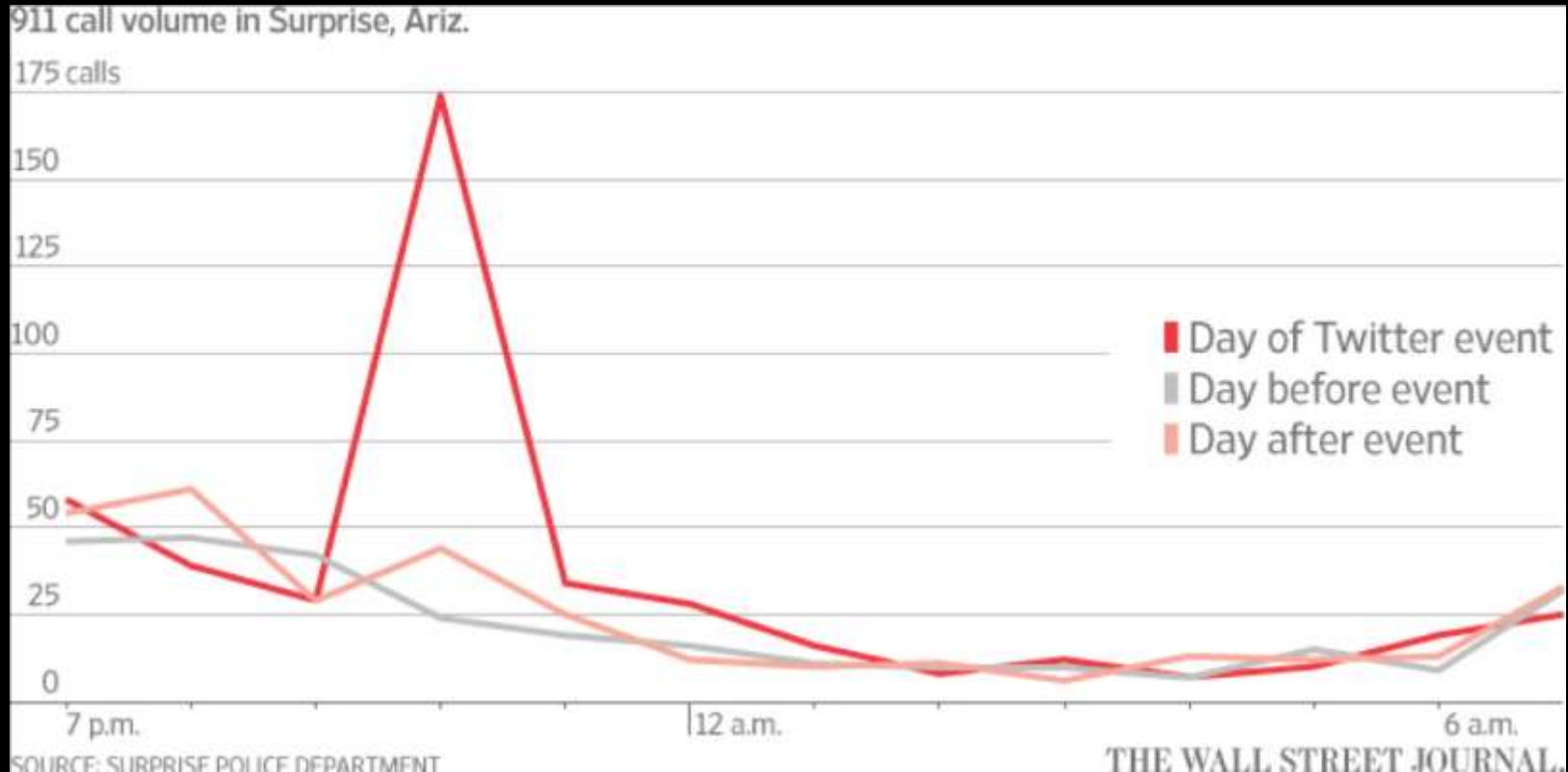
- TDoS attack against D.C. 9-1-1:
 - About 6,000 calls
 - All from the same source number
 - Recorded calls with bible verses
- TDoS attacks against counties in D.C. and South Florida:
 - Targeted the administrative phones and police department
 - About 6,300 calls in one case using spoofed source numbers
 - Calls were dead air, recorded message, or Arabic language
 - Conferencing calls to intentionally confuse attendants

Affected Areas

- Palm Beach County NG9-1-1 and Sheriffs office
- Washington D.C. 9-1-1
- Farmington Hills 9-1-1
- City of Miami
- Howard County, Maryland
- Montgomery County, Maryland
- Other counties in Maryland/Virginia
- Other parts of the country



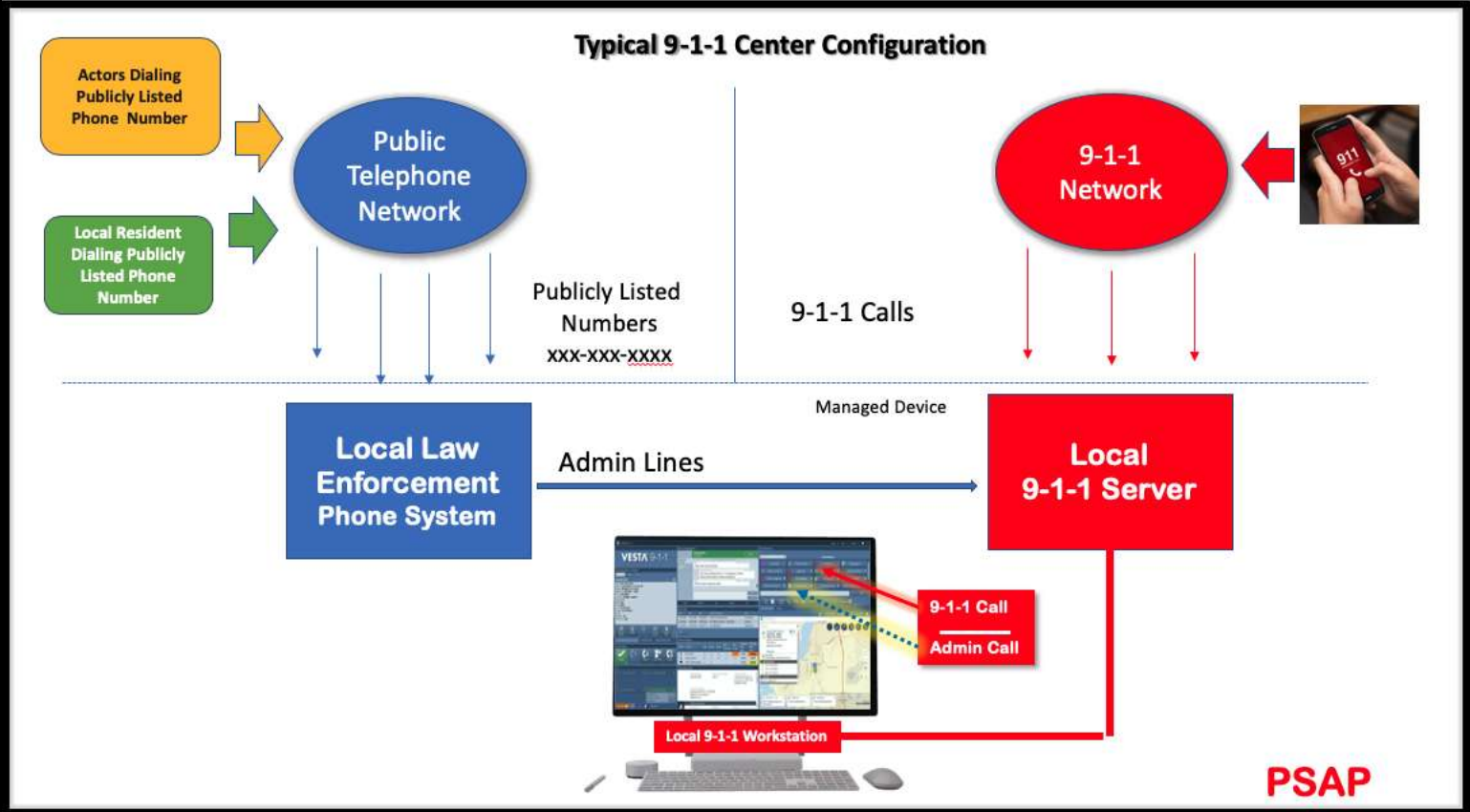
Mobile Botnet



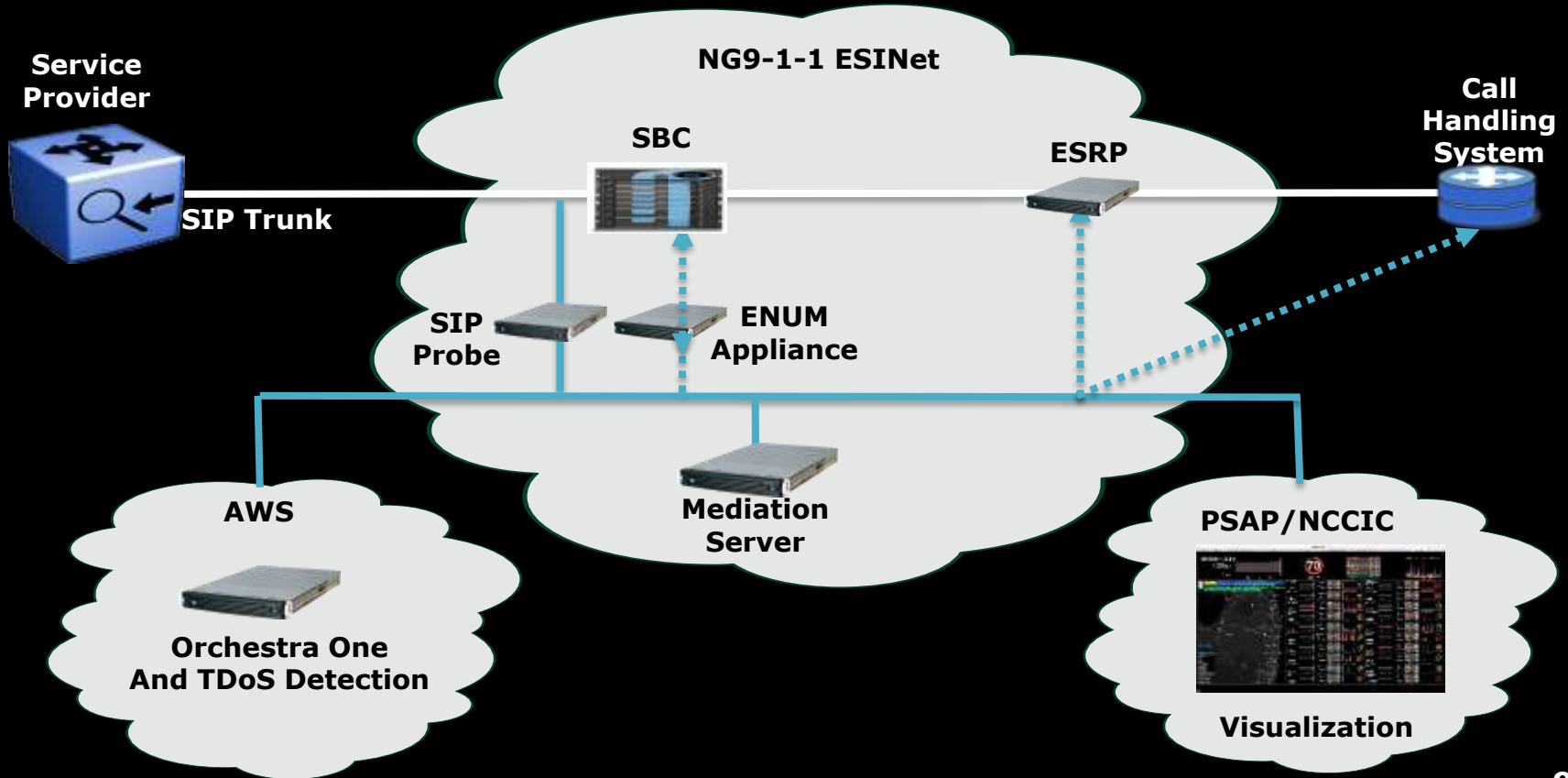
Compromised PBX

- Compromised PBX used to make local 9-1-1 calls
- Local and hosted PBXs can be used to make 9-1-1 calls
- Hairpinning and transfers
- This can also be done with SIP/VoIP

Admin Line Attacks



NG9-1-1 – Architecture



SHAKEN/STIR

- NG9-1-1 transition occurring slowly
- Many NG9-1-1 deployments still use TDM to service provider
- It is difficult to spoof numbers and get calls into NG9-1-1
- It will help with VoIP calls
- It will help significantly with admin line calls

- NG9-1-1 analytics will be essential
- Visualization and options for call treatment will be essential

Contact Info

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