

Annual Review: **Protecting the nation's 911 system from cyber threats - Present and Future**

Karthik Balasubramanian Karthik Consulting, LLC

ciri.illinois.edu





The Problem

- The US 911 system (Public Safety Answering Point (PSAP)) is an essential part of the critical infrastructure of the United States, that spans several National Critical Functions, and needs to be protected from cyber-attacks.
- CISA Emergency Communications Division (ECD) and the Emergency Public Safety Sector and more specifically PSAPs across the nation are intended to be the primary beneficiaries of this project
- Propose criteria for categorizing and developing a curated "PSAP Profile", using the NIST SP 800-53A controls and Cyber Security Framework (CSF) to measure and track the cybersecurity posture of PSAPs.
- Conduct consultative PSAP profile based "pilot" assessments of PSAPs





What Will Success Look Like?

- Following the CSF, conduct research and publish a curated list of tailored NIST SP 800-53A controls for measuring and monitoring the security posture and cybersecurity maturity of PSAPs
- Implement the PSAP Profile in the Cybersecure Dashboard (CSD) tool
- Conduct PSAP Profile based "pilot" assessments
- Understand the unique requirements of PSAPs migrating to NG911 and update the PSAP Profile, as necessary





Benefits

- As the PSAP threat landscape rapidly changes so does the urgency to secure and improve this critical infrastructure. This project addresses the Goals and Objectives identified in the CISA Strategic Intent document (published in August 2019) by proposing to enhance the current and ongoing security and resilience of the PSAP ecosystem
- Create a more secure nation-wide PSAP system through the PSAP Profile and mapped cybersecurity controls.
- The 6000+ PSAPs and the 1000+ federal/DoD PSAPs can benefit from the PSAP Profile to help understand and track their cybersecurity posture and risks.



Accomplishments

- Phase 1 research of PSAPs completed and final report published
- PSAP Profile published and approved by CIRI/CISA/DHS S&T
- PSAP profile implemented in the Cybersecure Dashboard tool
- PSAP Profile based "Pilot" assessments completed
- Phase 2, further research to understand the unique requirements of PSAPs migrating to NG911 completed





Activities Remaining

- Analyze the results from the Phase 2 research of PSAPs migrating to NG911
- Update the PSAP Profile, as needed, to support NG911 type PSAPs
- Publish the final report
- Publish the updated PSAP Profile curated list of NIST SP800-53A controls