NIST Identity, Credential, and Access Management (ICAM) Workshop Outcomes

Bill Fisher – Security Engineer, National Cybersecurity Center of Excellence

#PSCR2019

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Certain commercial entities, equipment, or materials may be identified in this document in order to describe an experimental procedure or concept adequately.

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*Please note, unless mentioned in reference to a NIST Publication, all information and data presented is preliminary/in-progress and subject to change

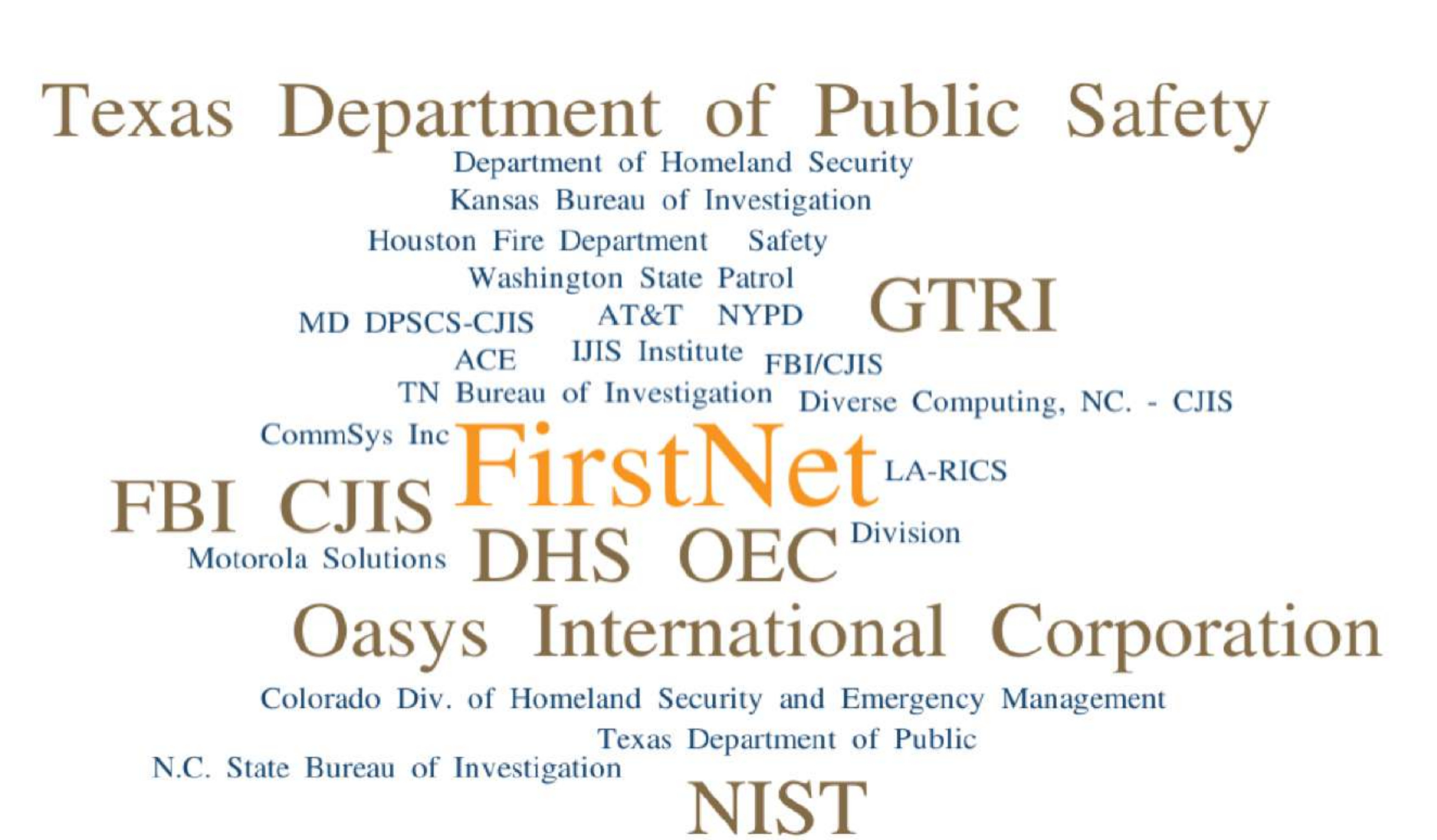
The What?

NCCOE AND PSCR
CYBERSECURITY
WORKSHOP

IDENTITY, CREDENTIAL, & ACCESS MANAGEMENT
APRIL 16 – 17, 2019

- **Topics included:**
  - **Identity, Credential & Access Management (ICAM)**
  - **Authentication**
  - **Federation**
  - **Interoperability**
  - **Information sharing**
  - **Security policy & governance**

The Who?



Texas Department of Public Safety

Department of Homeland Security

Kansas Bureau of Investigation

Houston Fire Department Safety

Washington State Patrol

GTRI

MD DPSCS-CJIS AT&T NYPD

ACE IJIS Institute FBI/CJIS

TN Bureau of Investigation Diverse Computing, NC. - CJIS

CommSys Inc FirstNet LA-RICS

FBI CJIS

Motorola Solutions DHS OEC Division

Oasys International Corporation

Colorado Div. of Homeland Security and Emergency Management

Texas Department of Public

N.C. State Bureau of Investigation

NIST

The Why?

It’s a time of transition…

The Why?

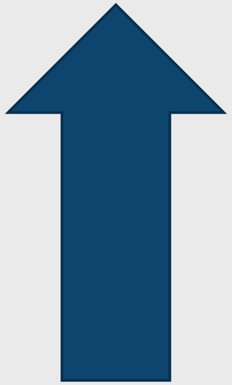
Increase in Software as a service (SaaS) application architectures & Cloud Services

# of mobile applications and data on mobile backends in the cloud

- **Growth in smart phones and tablets**
- **Typical model is client (often a mobile application) on the device accessing data in third party cloud**
- **Common for SaaS offering to give users a new credential (username/password)**

The Why?

Increase in number of credentials managed



# of credential managed by Public Safety Personnel

- **Number of credentials used by public safety first responders will grow as multiple SaaS applications are used in the line of duty**
- **Organizations will need to make sure user accounts in each SaaS resources are updated as the user leaves or changes roles**
- **Challenges with remembering passwords, often leads to password reuse**

The Why?

Continuing need for information sharing

A Proven Resource for Law Enforcement
RISS
WSIN • RMIN • MOCIC • ROCIC • MAGLOCLEN • NESPIN

Powered By
Nlets

LAW ENFORCEMENT
FBI
LEEP
ENTERPRISE PORTAL

SAN DIEGO
ARJIS
Automated Regional Justice
Information Systems

Need for identity infrastructure that supports cross-jurisdictional information sharing

The Why?

And Interoperability!

MICHIGAN STATE POLICE
CITY OF FIRE DEP SEATTLE
SEATTLE EST. 1869 POLICE
SERVICE PRIDE DEDICATION
DEPARTMENT OF JUSTICE FEDERAL BUREAU OF INVESTIGATION
FIDELITY BRAVERY INTEGRITY
ANGELES FIRE DEPARTMENT FOUNDED 1886
BALTIMORE CITY POLICE
EVER ON THE WATCH
ST. LOUIS FIRE DEPARTMENT JUSTIFIABLY PROUD 1857
HARLINGEN POLICE
HONOR COURAGE INTEGRITY
TEXAS 1910
IJIS Institute
WAUWATOSA FIRE DEPARTMENT
FIRE RESCUE
S.F.F.D.
LANCASTER EMS
NEW ORLEANS EMS
METROPOLITAN POLICE
JUSTITIA OMNIBUS
DISTRICT of COLUMBIA
ALAMEDA POLICE

18,000 organizations in Law Enforcement alone.

What we’ve already done!

NIST SP1800-13 draft version 2 published May 29th, 2019

DRAFT

NIST SPECIAL PUBLICATION 1800-13A

Mobile Application Single Sign-On

Improving Authentication for Public Safety First Responders

Volume A:
Executive Summary

Paul Grassi
Applied Cybersecurity Division
Information Technology Laboratory

Bill Fisher
National Cybersecurity Center of Excellence
Information Technology Laboratory

Santos Jha
William Kim
Taylor McCorkill
Joseph Portner
Mark Russell
Sudhi Umarji
The MITRE Corporation
McLean, VA

April 2018

DRAFT

This publication is available free of charge from:
https://www.nccoe.nist.gov/projects/use-cases/mobile-sso

NIST National Institute of Standards and Technology U.S. Department of Commerce

NCCoE NATIONAL CYBERSECURITY CENTER OF EXCELLENCE

- Technical Decisions
- Trade-offs
- Lessons Learned
- Build Instructions
- Functional Tests

What we heard…

What we heard…

Community is resource constrained:

- **Limited time to focus on ICAM challenge, have to do their day jobs, need a driver and/or forcing function**
  - **One potential idea proposed by the attendees: Need for federal governance / program office**
- **Limited expertise, especially at smaller local and tribal public safety organizations**

What we heard…

Community needs vision & mission for ICAM!

- Vision to be defined…
- Mission – something around the lines of: "Getting the right data to the right people at the right time with the right protections and only if its for the proper reason and in an efficient manner"

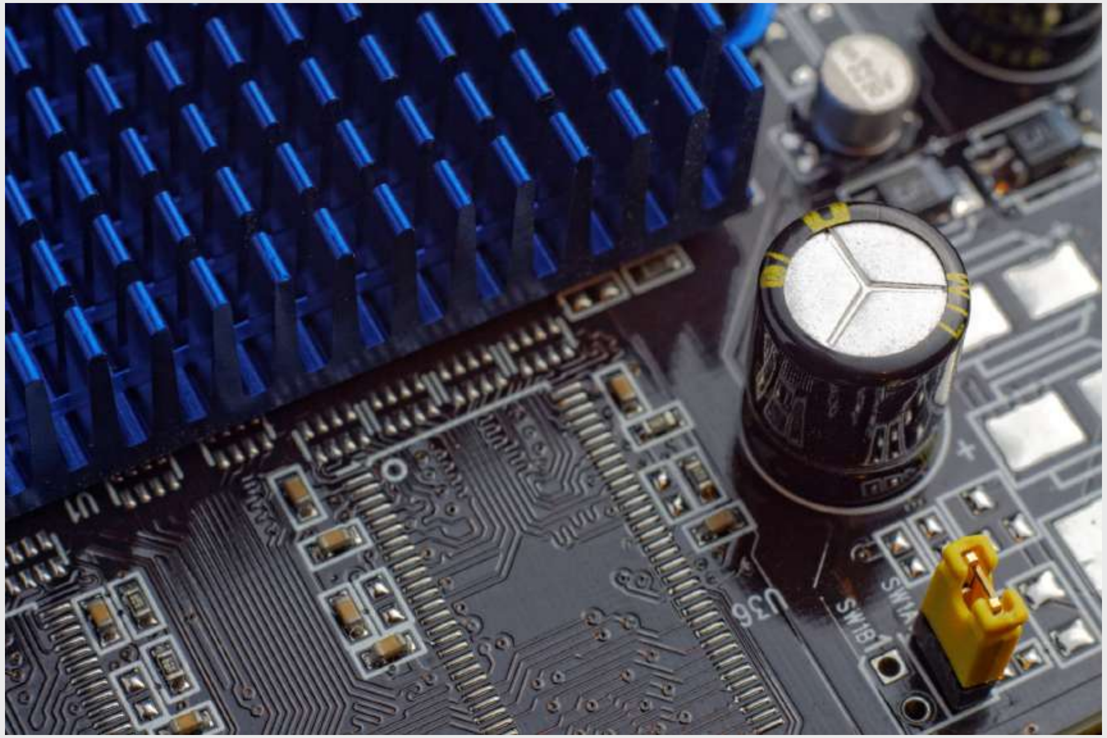
One potential vision/need is a "Google" for public safety – the ability to quickly access information from public safety databases across the country using plain language and partial information

Red Ford Truck Florida TAG ***

What we heard…

Challenge of legacy technology and architectures:

- Message switches
- Queries and keys
- Inability to integrate with Federation standards
- Access is based on Originating Agency Codes (ORIs)
  - Which does not support role based access



What we heard…

Need for cross jurisdiction collaboration and interoperability:

- Organizations need buy in from data owners who will need to conduct risk assessments to decide what policies need to be enforced
- Subsequently the community will need to decide on data categorization issues:
  - Data tagging
  - Attribute creation
  - Dissemination standards

What we heard…

There is a "culture of wanting more information":

- **Organizations want information but don't want to share**
- **Fear, uncertainty, and doubt around adoption cloud technologies**
    - **Despite CJIS certified CSPs and Nlets cloud pilots**
- **Need for trust frameworks so organizations know how shared data is protected**

What we heard…

Funding is a challenge, but PSOs can:

- **Look for alternative funding avenues within state/county/city where data collected by law enforcement is also useful. Department of Transportation was cited as an example in Kansas**
- **Join up with other neighboring jurisdictions to gain economies of scale for purchasing**
- **Include security requirements as part of infrastructure upgrade procurements**
- **Take advantage of federal funding and grants**

What’s next?

What’s Next…

DRAFT NISTIR 80XX

NIST CYBERSECURITY FOR PUBLIC SAFETY

WORKSHOP – SUMMARY OF FINDINGS

- Agenda
- Summary of each presentation
- Additional details on what we heard
- Recommendations from community
- Next Steps

DRAFT NISTIR 8014

DRAFT NISTIR 8014

Considerations for Identity Management in Public Safety Mobile Networks (DRAFT)

Nelson Hastings
Joshua Franklin

NIST
National Institute of Standards and Technology
U.S. Department of Commerce

What’s Next…

Cultivate community of interest

Continued engagement with the Public Safety First Responder Community

- Federal, State & local, NLETs, CJIS, DHS, NEMSIS, NFPA, etc…
  - What events should we be attending?

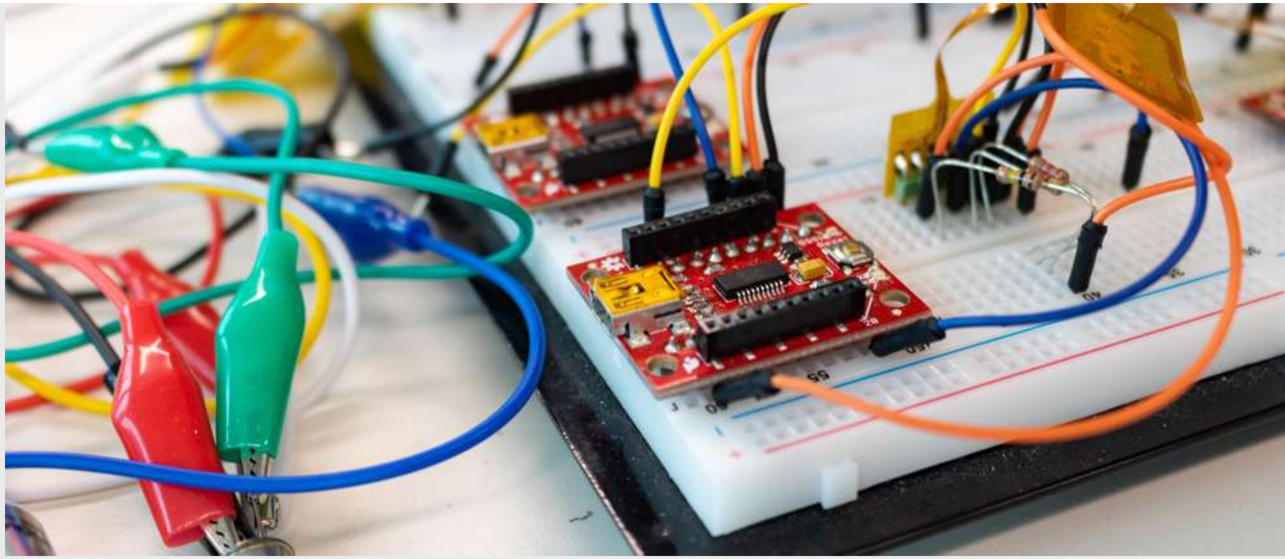
Potential PSCR funding opportunities

Open Innovation funding to help catalyze gap areas within industry

- **Which gaps should we be focusing on?**

New Federated ICAM Projects

- Provide proof of concept federation, authentication, and mobile technologies that meet public safety requirements
- Produce documentation to educate public safety organizations on ICAM topics and technology adoption
- Identify technological and functional gaps in existing capabilities, facilitating innovative solutions and feedback to standards organizations
- Provide detailed build documentation and best practices
- Support the creation/adoption of policies and standardization



New Lab and Funding for FY19-20

New Areas of Collaboration Across NIST

PULLING
THE
FUTURE
FORWARD

OMB M4-04

Opened up federal requirements for authentication beyond PIV cards

Update to (Federal Information Processing) FIPs Requirements

New FIPs requirements to support OMB M4-04

New NCCoE projects

Specific to ICAM technologies such as FIDO 2.0

Questions?

Contact Us!

PSFR-NCCoE@nist.gov

THANK YOU

#PSCR2019

Come back for the

Next Session

1:35 PM