Investing in Identity: NIST's Digital Identity Roadmap

Ketan Mehta

mDL Project Lead
NIST

Andy Regenscheid

PIV Technical Lead
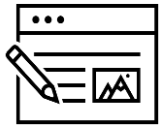NIST

Ryan Galluzzo

Identity Program Lead
NIST

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What is NIST's Identity Program?

A multi-disciplinary team of IAM Experts, Cryptographers, Mathematicians, Privacy Engineers, Policy Advisors, Usability Specialists, and Biometrics Experts who…

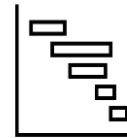**Create Guidance**

Develop Standards

Conduct Foundational & Applied Research

Enhance Metrology

Enable "Transition to Practice"

NIST's IAM Roadmap codifies the work of this program and provides principles, objectives, and activities to guide efforts in the coming years…
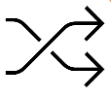
What Are Our Guiding Principles?

Enhance Security & Privacy

Foster Equity & Individual Choice

Promote Usability & Accessibility

Enhance Interoperability & Standardization

Improve Measurement & Transparency

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What Are Our Objectives?

➢ **Accelerate implementation and adoption of mDL and user controlled digital identities**

➢ Expand and enhance biometric and identity measurement programs

➢ Promote technologies that enable authoritative attribute validation

➢ Advance secure, private, usable, and equitable identity proofing and fraud mitigation options

➢ Accelerate the use of phishing resistant, modern multi-factor authentication

➢ **Modernize Federal PIV guidance and Infrastructure**

➢ Advance dynamic authorization and access control schemes

➢ **Promote greater federation & interoperability of identity solutions**

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Accelerating implementation and adoption of mDL and User Controlled Identity

Why It Is Important

➢ Aligning to trends in identity moving towards cryptographically verifiable credentials

➢ Promoting greater user control and new models for improvement of privacy and selective disclosure

➢ Evaluating new modes of identity based on ubiquitous technology (i.e., mobile devices) moving from mDL to other interoperable credentials

➢ Aligning to national efforts to focus on such credentials – such as the National Cybersecurity Strategy

What We Are Doing?

➢ Engaging in the development of international standards to support interoperability and cross border capabilities - ISO/IEC 181013 series and ISO/IEC 23220 series

➢ Engaging with Federal, State, and Local governments to identify use cases and challenges related guidance on mDL and digital credentials

➢ Developing projects within the NCCoE to demonstrate how to integrate mDL and other credentials into unattended and online workflows. *Collaborators Wanted!*

➢Developing guidance and resources to fill gaps in international standards, particularly around privacy and security of mDL and digital credential deployments

Modernizing Federal PIV Guidance & Infrastructure

Why It Is Important

➢Its been nearly 20 years since HSPD-12 called for a common identification standard for federal employees and contractors, leading to the Personal Identity Verification (PIV) card

➢New government use cases and systems

➢New standards and technologies have been developed

➢New threats have evolved, emphasizing importance of phishing-resistance authentication mechanisms

What We Are Doing

➢ Revising PIV standards and guidelines to accommodate new technologies, use cases, and mission needs.
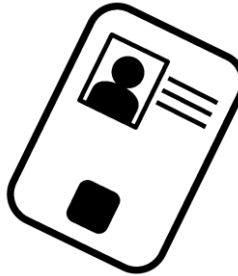
➢ Facilitating adoption of new, phishing-resistant authenticators as Derived PIV credentials (e.g., W3C WebAuthn and FIDO)

➢ Promoting use of federation protocols and architectures to integrate PIV with applications and support interagency acceptance.

➢ Developing guidance, resources, and standards profiles to ease agency and vendor implementation of the new PIV suite.

➢ Preparing for a future migration to quantum-resistant cryptography.

Promoting Greater Federation & Interoperability of Identity Solutions

Why It is Important

➢Maximizing Convenience, Cost, and Customer Experience

➢Avoiding a world with 100 passwords being traded for 100 wallets

➢Promoting commerce and economic engagement between global markets

➢Enabling the flow of information and people in a trusted and secure way

➢Promoting democratic values and principles

What We Are Doing

➢Engaging in cross border and international pre-standardization research through the Trade and Technology Council and government engagement

➢Mapping standards and guidance to building towards mutual recognition and international; acceptance of credentials based

➢Improve and clarify the federation requirements in the Digital Identity Guidelines and develop updated supporting implementation guides

➢Engage with standards bodies and in specification development create or update government profiles where needed (e.g., OIDC, Oauth, SAML)

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Ways to Get Involved

Comment on our Roadmap! The comment period has been extended to June 16th – send input to Digital_Identity@nist.gov !
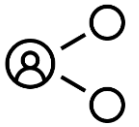
Engage at the NCCoE! From communities of interest to actual project participation there are multiple pathways to participate.

Participate in our Workshops! We have multiple events throughout the year to gain feedback, input, and insights from the community at large!

Email us and just say "hey!" We can be reached at dig-comments@nist.gov or email me directly at ryan.galluzzo@nist.gov

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THANK YOU!

Where to Find our Work

NIST Digital Identity Guidelines

- [IAM Roadmap](#) *NEW!*
- [NIST SP 800-63-4](#) *NEW!*
- [NIST SP 800-63-3](#)
- [Implementation Resources](#)
- [FAQ's](#)

NIST PIV Guidance

- [NIST SP 800-217](#) *NEW!*
- [NIST SP 800-157-1](#) *NEW!*
- [FIPS 201-3](#)
- [Full Document Set](#)

NIST Face Recognition Vendor Test

- [FRVT 1:1](#)
- [FRVT 1:N](#)
- [FRVT Morph](#) *New!*
- [FRVT PAD](#) *New!*
- [FRVT Demographic Effects](#)

National Cybersecurity Center of Excellence

- [Digital Identities: Mobile Driver's license](#) *NEW!*
- [Implementing A Zero Trust Architecture](#) *NEW!*
- [Public Safety/First Responder: Mobile App SSO](#)