National Cybersecurity Center of Excellence

Joshua M Franklin

Technical Guidelines & Development Committee
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ABOUT THE NCCOE

VISION

ADVANCE CYBERSECURITY

A secure cyber infrastructure that inspires technological innovation and fosters economic growth

MISSION

ACCELERATE ADOPTION OF SECURE TECHNOLOGIES

Collaborate with innovators to provide real-world, standards-based cybersecurity capabilities that address business needs

GOAL 1

PROVIDE PRACTICAL CYBERSECURITY

Help people secure their data and digital infrastructure by equipping them with practical ways to implement standards-based cybersecurity solutions that are modular, repeatable and scalable

GOAL 2

INCREASE RATE OF ADOPTION

Enable companies to rapidly deploy commercially available cybersecurity technologies by reducing technological, educational and economic barriers to adoption

GOAL 3

ACCELERATE INNOVATION

Empower innovators to creatively address businesses' most pressing cybersecurity challenges in a state-of-the-art, collaborative environment

STAKEHOLDERS

SPONSORS

Advise and facilitate the center's strategy

| White House | National Institute of Standards and Technology | U.S. Department of Commerce | U.S. Congress | Montgomery County | State of Maryland |

TEAM MEMBERS

Collaborate to build real-world cybersecurity capabilities for end users

NCCoE   Tech firms   Academia   Project managers   National Cybersecurity Excellence Partners (NCEP)

NIST ITL   Industry   Government   Project-specific collaborators

END USERS

Work with center on use cases to address cybersecurity challenges

- Business sectors
- Academia
- Cybersecurity IT community
- Individuals
- Government
- Systems integrators

Standards-based
Apply relevant local, national and international standards to each security implementation and account for each sector's individual needs; demonstrate reference designs for new standards

Modular
Develop reference designs with individual components that can be easily substituted with alternates that offer equivalent input-output specifications

Repeatable
Enable anyone to recreate the NCCoE builds and achieve the same results by providing a complete practice guide including a reference design, bill of materials, configuration files, relevant code, diagrams, tutorials and instructions

Commercially available
Work with the technology community to identify commercially available products that can be brought together in reference designs to address challenges identified by industry

Usable
Design usable blueprints that end users can easily and cost-effectively adopt and integrate into their businesses without disrupting day-to-day operations

Open and transparent
Use open and transparent processes to complete work, and seek and incorporate public comments on NCCoE documentation, artifacts and results
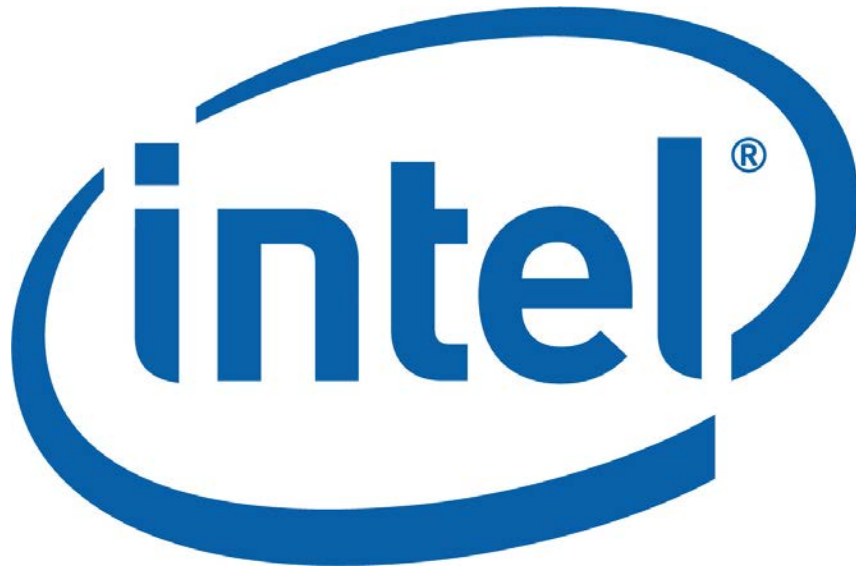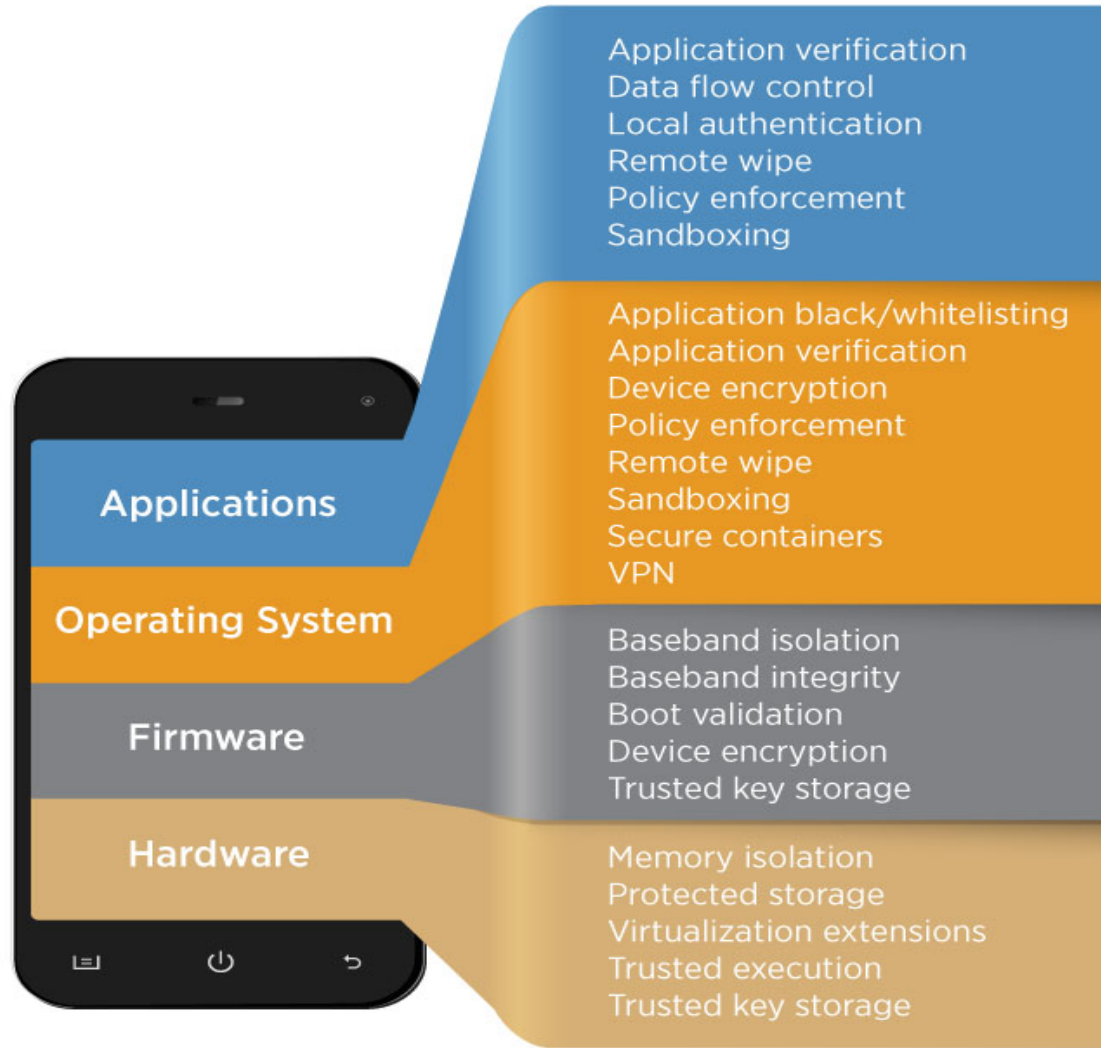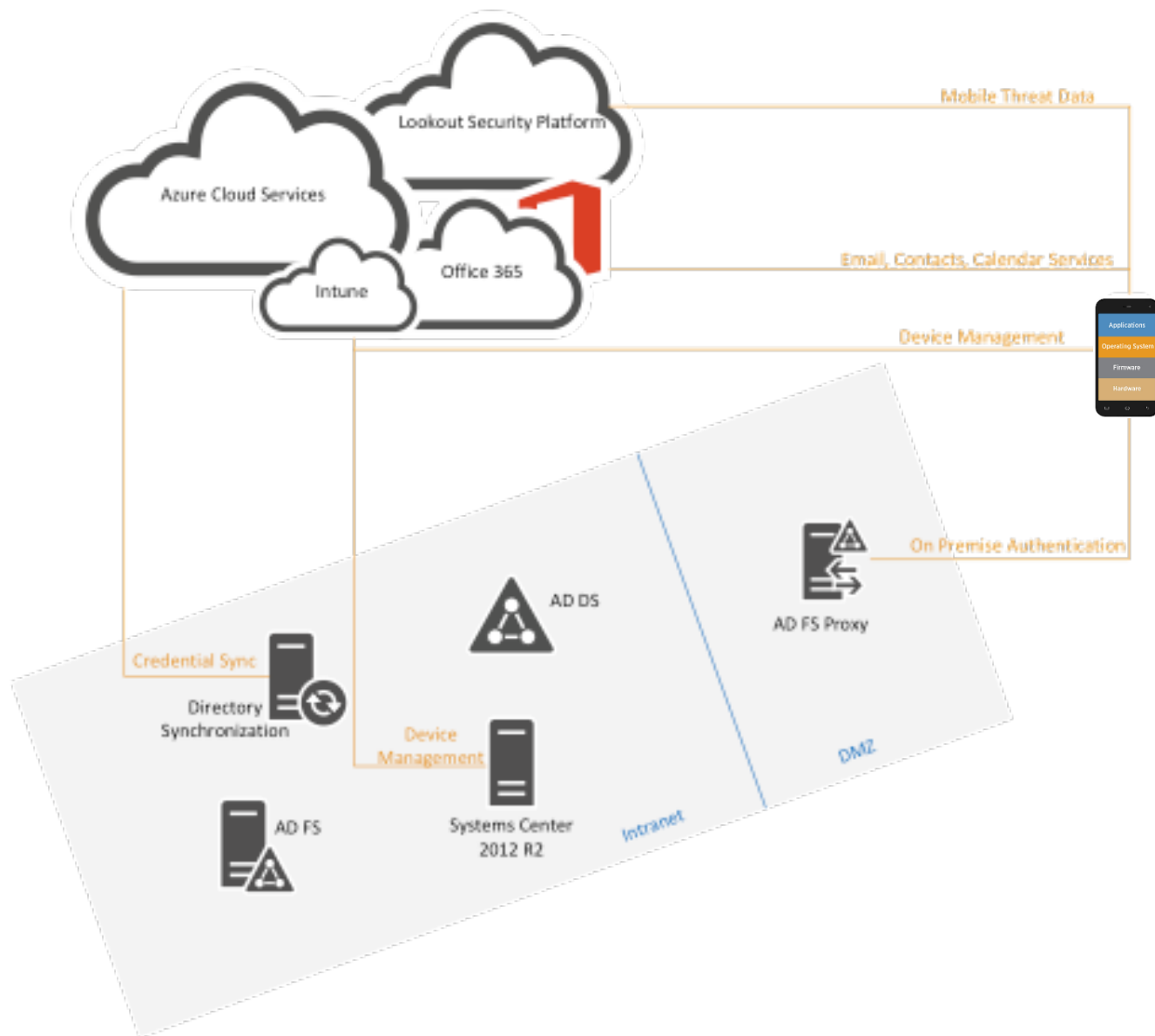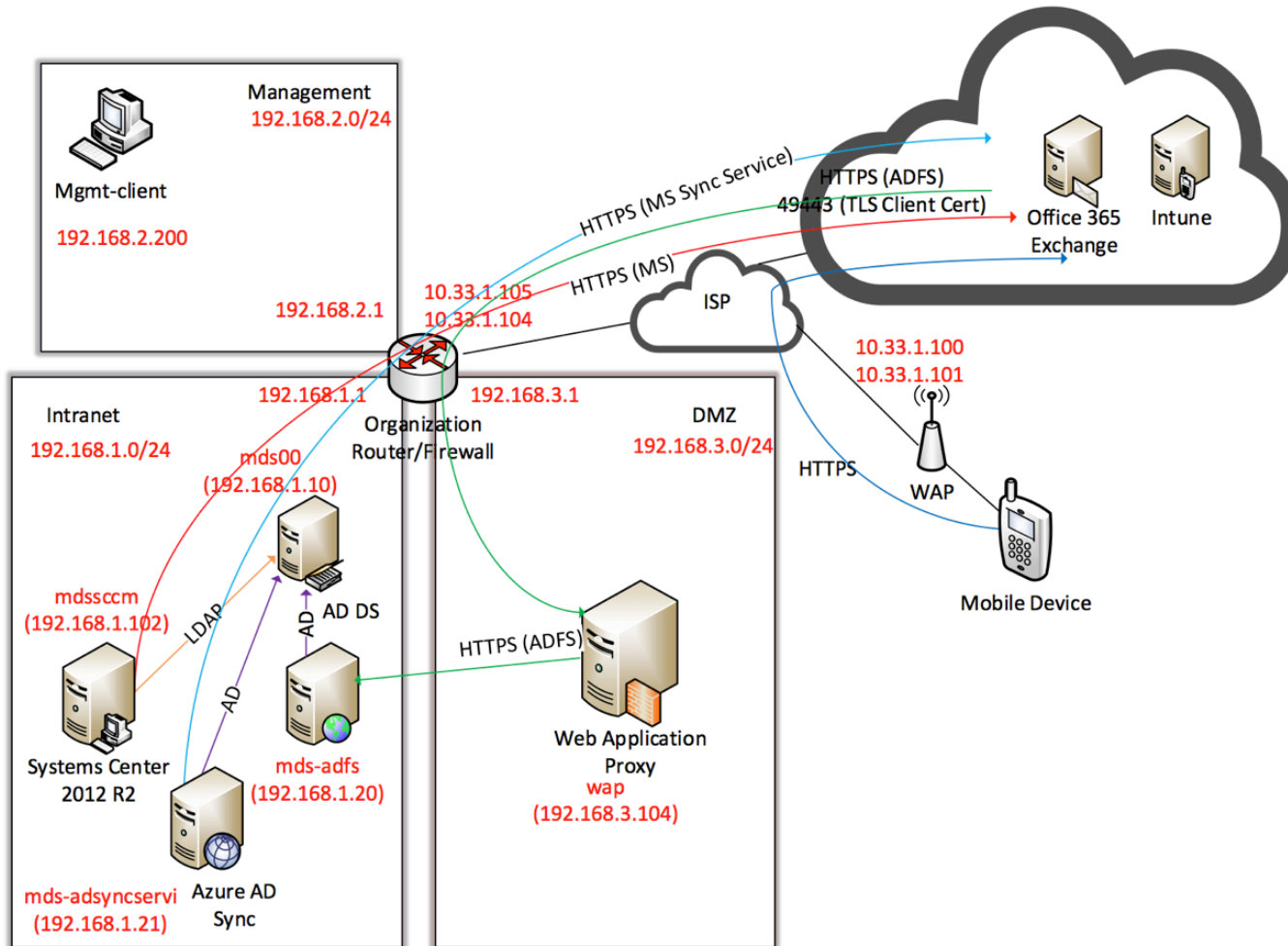
MOBILE SECURITY

To demonstrate commercially available technologies that provide protection to both organization-issued and personally-owned mobile platforms, thereby:

‣ **Securely enable basic email, calendar and contacts**

‣ Enabling users to work inside and outside the corporate network with a securely configured mobile device

‣ Allowing for granular control over the enterprise network boundary

‣ Minimizing the impact on function

Applications

Application verification
Data flow control
Local authentication
Remote wipe
Policy enforcement
Sandboxing

Operating System

Application black/whitelisting
Application verification
Device encryption
Policy enforcement
Remote wipe
Sandboxing
Secure containers
VPN

Firmware

Baseband isolation
Baseband integrity
Boot validation
Device encryption
Trusted key storage

Hardware

Memory isolation
Protected storage
Virtualization extensions
Trusted execution
Trusted key storage

APPLICATION TO VOTING

- Architect and build an elections deployment

  - Document the process, show how it's done – step by step

  - Election officials across the nation could benefit

- Need to decide which systems to focus on

  - Epollbooks, vote capture & tabulation, voter registration

- Need the right players to participate

  - Would manufacturers sign *Cooperative Research and Development Agreements* (CRADAS)?

- Only worth it if election officials are able to use the output.
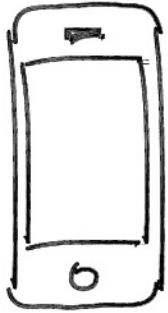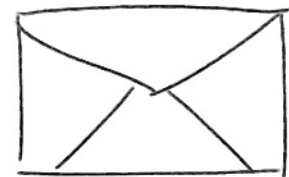
240-314-6800

josh@nist.gov

Participate

http://nccoe.nist.gov

9600 Gudelsky Drive
Rockville, MD 20850