National Cybersecurity Center of Excellence (NCCoE)
Energy Sector

Energy Provider Community of Interest

28 February 2017

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

NCCoE NATIONAL CYBERSECURITY CENTER OF EXCELLENCE

Agenda

- NCCoE Energy Sector Planned Activities
- Overview of NCCoE for New Members
- Status of Energy Sector (and related) Projects
- EPC Open Discussion / Comments / Questions

NCCOE ENRGY SECTOR PLANNED ACTIVITIES

- ICRMC – Toronto, ON 03/02/17- 03/03/17
  (International Cyber Risk Management Conference)

- OSIsoft Annual User Conference, 03/20/17 - 03/23/17
  San Francisco, CA

- American Council for Technology (ACT) and Industry Advisory Council (IAC), Cybersecurity Community of Interest Monthly Meeting 04/28/2017

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

NIST ITL

The NCCoE is part of the NIST Information Technology Laboratory and operates in close collaboration with the Computer Security Division. As a part of the NIST family, the center has access to a foundation of prodigious expertise, resources, relationships and experience.

PARTNERSHIPS

Established in 2012 through a partnership between NIST, the State of Maryland and Montgomery County, the NCCoE meets businesses' most pressing cybersecurity needs with reference designs that can be deployed rapidly.

NIST CYBERSECURITY THOUGHT LEADERSHIP

- Cryptography
- Identity management
- Key management
- Risk management
- Secure virtualization
- Software assurance
- Security automation
- Security for cloud and mobility
- Hardware roots of trust
- Vulnerability management
- Secure networking
- Usability and security

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

**Sponsored by NIST, the National Cybersecurity Federally Funded Research & Development Center (FFRDC) is operated by the MITRE Corporation*

- NCCoE
- National Cybersecurity FFRDC*
- Tech firms
- Industry
- Academia
- Government
- Project managers
- Project-specific collaborators
- National Cybersecurity Excellence Partners (NCEP)

END USERS

Work with center on use cases to address cybersecurity challenges

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

ENGAGEMENT & BUSINESS MODEL

 DEFINE + ARTICULATE Describe the business problem	Define business problems and project descriptions, refine into a specific use case
 ORGANIZE + ENGAGE Partner with innovators	Collaborate with partners from industry, government, academia and the IT community on reference design
 IMPLEMENT + TEST Build a usable reference design	Practical, usable, repeatable reference design that addresses the business problem
 TRANSFER + LEARN Guide users to stronger cybersecurity	Set of all material necessary to implement and easily adopt the reference design

Cybersecurity solutions that are:

based on standards and best practices

usable, repeatable and can be adopted rapidly

modular, end-to-end and commercially available

developed using open and transparent processes

matched to specific business needs and bridge technology gaps

The NCCoE seeks problems that are:

- Broadly applicable across much of a sector, or across sectors
- Addressable through one or more reference designs built in our labs
- Complex enough that our reference designs will need to be based on the combination of multiple commercially available technologies

Reference designs address:

- Sector-specific use cases that focus on a business-driven cybersecurity problem facing a particular sector (e.g., health care, energy, financial services)
- Technology-specific building blocks that cross sector boundaries (e.g., roots of trust in mobile devices, trusted cloud computing, software asset management, attribute based access control)

PROJECT PHASES

Supply Chain – we are here

Manufacturing BAD – we are here

IdAM and Situational Awareness – we are here

Pre-Process
We strategically identify, select, and prioritize projects that align with our mission.

P1: Concept Analysis
We partner with industry to define, validate, and build business cases for the most challenging cybersecurity issues.

P2: Develop Use Case
Using a collaborative method with industry partners, we develop a full Use Case that outlines a plan for tackling the issue.

P3: Form Build Team
We unite industry partners and technology companies to build a qualified team to execute the Use Case.

P4: Design & Build
The Use Case team plans, designs, and builds the system in a lab environment and documents it in the Practice Guide.

P5: Integrate & Test
The team test the system and make refinements as necessary. The system may be validated by our partners. The final solution system is documented in the Practice Guide.

P6: Publish & Adopt
We, alongside our partners, publish, publicize and demonstrate the Practice Guide. This solution provides a reference architecture that may be implemented in whole or in part.

ENERGY SECTOR PROJECT STATUS

- **Situational Awareness SP 1800-7 (a,b,c)**
  - Released public draft - 02/16/2017
  - Comment period open until - 04/17/2017
  - https://nccoe.nist.gov/projects/use_cases/situational_awareness

- **Cybersecurity for Manufacturing**
  - Behavioral Anomaly Detection (BAD)
  - Final project description (PD) - 03/2017
  - Federal Register Notice - 03/2017
  - https://nccoe.nist.gov/projects/use_cases/capabilities-assessment-securing-manufacturing-industrial-control-systems

- **NCCoE Supply Chain (SC) Sub Working Group (SWG)**
  - Last call held on 02/24/2017
  - Discussed numerous possibilities for use cases from various members (O&G, SDLC)
  - Initial goal was to have one or more use cases by 03/2017, and that has been achieved
  - Future activity – prioritize use cases, all are good ideas with technology as a basis

- **Identity and Access Management SP 1800-2 (a,b,c)**
  - Projected release of final - 03/2017
  - https://nccoe.nist.gov/projects/use_cases/idam

EPC OPEN DISCUSSION

- Questions/comments

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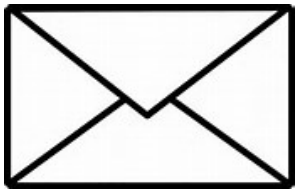

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Thank You