

National Cybersecurity Center of Excellence

Workshop on Security for IPv6 Enabled Enterprises

June 13, 2019



Emergency Procedures for NCCoE Visitors

Evacuation Emergencies

What is an Evacuation Emergency?

- Fires
- Explosions
- Earthquakes
- Indoor toxic material releases
- Indoor radiological and biological accidents
- Workplace violence

What Will Happen During an Evacuation Event?

- A building-wide alarm will sound
- Verbal instructions over the building's public address (PA) system will follow shortly after the alarm
- Exit the conference room and head for the nearest exit (**Red Signs – Upper Right Map**)
- If the Security Guard is close by and accessible, ask for further instruction
- Once outside the building, swiftly walk toward the designated meeting area near the posted sign stating "Evacuation Meeting Area" (**Yellow Sign – Lower Right Map**)

Shelter-In-Place (SIP) Emergencies

What is a Shelter-In-Place Emergency?

- Severe weather (hurricanes, tornadoes, etc.)
- chemical, biological, or radiological contaminants released into the environment

What Will Happen During an Evacuation Event?

- A building-wide alarm will sound
- Verbal instructions over the building's public address (PA) system will follow shortly after the alarm
- Exit the conference room and head for the nearest SIP hallway or room (**Yellow Signs – Upper Right Map**)
- If the Security Guard is close by and accessible, ask for further instruction



> Agenda

- | | |
|---------------|--|
| 09:00 – 09:15 | Welcome & Introduction to NCCoE
<i>Kevin Stine, NIST</i> |
| 09:15 – 09:30 | Identifying and Removing Barrier to IPv6 Development
<i>Doug Montgomery, NIST</i> |
| 09:30 – 10:45 | Enterprise Challenges <ul style="list-style-type: none">• IPv6 Motivations and Obstacles
<i>Lee Howard, Retevia</i>• IPv6 Adoption at a Large Enterprise
<i>John Burns, Wells Fargo</i> |
| 10:45 – 11:00 | BREAK |
| 11:00 – 12:00 | Enterprise Challenges <ul style="list-style-type: none">• Microsoft Corporate Network: Journey to IPv6
<i>Dawn Bedard, Microsoft</i>• DoD IPv6 Context and Way Ahead
<i>Col. Keith Repik, DoD</i> |
| 12:00 – 12:15 | BREAK |
| 12:15 – 1:00 | Breakout Sessions – Identifying Barriers to Deployment
<i>Participants will break into groups of 8-10</i> |
| 1:00 – 1:30 | Readout, Discussion and Next Steps |



National Institute of Standards and Technology



> National Institute of Standards and Technology



NIST is a bureau under the Department of Commerce. NIST's mission is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.

NIST runs a number of laboratories to assist in its mission.

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Measurement
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Physical
Measurement
Laboratory



NCCoE



> NCCoE Mission

Accelerate adoption of secure technologies: collaborate with innovators to provide real-world, standards-based cybersecurity capabilities that address business needs



Engagement and Business Model

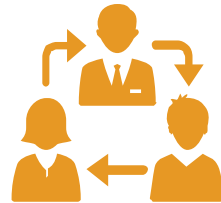
DEFINE



OUTCOME:

Define a scope of work with industry to solve a pressing cybersecurity challenge

ASSEMBLE



OUTCOME:

Assemble teams of industry orgs, govt agencies, and academic institutions to address all aspects of the cybersecurity challenge

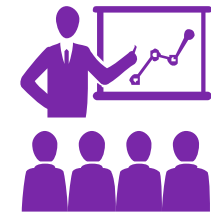
BUILD



OUTCOME:

Build a practical, usable, repeatable implementation to address the cybersecurity challenge

ADVOCATE



OUTCOME:

Advocate adoption of the example implementation using the practice guide





Workshop on Security for IPv6 Enabled Enterprises



› Goals and Objectives

- **Motivations**

- IPv4 Address space has become a highly constrained resource in the Internet.
- Demand for addresses continues to grow (e.g., mobile networks, IoT, cloud / virtualization)
- USG has a strong commitment to IPv6 adoption.

- **Challenges**

- Lag of adoption of IPv6 in the enterprise
- Security concerns are often cited as barrier – maturity of products, lack of guidance, lack of documented deployment experience.

- **Objectives**

- Identify challenges in secure IPv6 deployment in enterprises
- Explore a plan for developing an NCCoE project to help accelerate the adoption on IPv6 across the enterprises

> NCCoE Project Purpose and Scope

- Purpose

- Demonstration project of secure IPv6 deployment in realistic scenarios using commercial products.
- Two phases – IPv6-Everywhere and IPv6-Only.
- Exercise and evaluate existing security guidance (e.g., NIST, IETF, others). Develop detailed NCCoE practice guides to augment.

- Identify key IT components that will be impacted such as:

- Identity and access management systems
- Access control and policy enforcement systems, threat intelligence and reputation systems
- Virtual private networks and remote access technologies
- Firewalls and intrusion detection / protection systems, end-point security systems
- Security incident and event management systems
- Core network infrastructure systems (e.g., switching, routing, naming) and associated monitoring and management systems

- Identify key use cases to evaluate:

- Desktop to on premise service access, Enterprise access to cloud-based services, Remote access to enterprise services