

IEEE PES TECHNICAL MEETING: Smart Grid Energy and Cybersecurity



Speaker: Jeffrey L. Hahn, PE, CISSP, Cyber Security Manager, GE
Digital Energy

Date: Tuesday, April 21, 2015

Time: Refreshments start at 6:00 pm, talk commences at 6.30 pm

Location: 442 Curry Student Center @ Northeastern University, 360
Huntington Ave, Boston, MA 02115

Abstract:

The electric grid is critical to the economic and physical well-being of a nation, and emerging cyber threats targeting the grid highlight the need to integrate advanced cybersecurity to protect these critical assets. Cybersecurity must address not only deliberate attacks launched by disgruntled employees, agents of industrial espionage, terrorists, and other adversaries, but also inadvertent compromises of the information infrastructure due to user errors, equipment failures, and natural disasters. Security must be included in all phases of the system development life cycle, from design phase through implementation, maintenance, and disposition. Systems for critical applications need to withstand cybersecurity events with no loss of critical function. The agenda for the talk will be focused on:-

1. Identify the problem
2. Briefly discuss the threat/risk
3. Demonstrate and provide examples of the attack, and
4. Share how to defend against an attack or mitigate/lessen the consequences.

For the demonstration, the speaker will actually show the steps that an attacker could take and do some of the things he would do. This, of course, is dependent on how kind the demo gods are – live demos are always risky. It will be a fast paced talk and most of the available time will be spent on sections 3 & 4, the demo and defense.

Biography:



Jeffrey Hahn is GE's Digital Energy Cyber Security Manager. Jeff is responsible for ensuring cybersecurity is built into the products that enable and operate the smart grid. This includes developing and implementing a secure development lifecycle, which includes developing a risk based approach for each product that includes software/firmware analysis, product security testing, and including security features required by customers, industry standards and government regulations.

Prior to joining GE, Jeff worked at the Idaho National Laboratory (INL), where he developed and led the training program for the US Department of Homeland Security, Industrial Control Systems – Cyber Emergency Response Team (ICS-CERT). The flagship of the training courses, affectionately dubbed the red team/blue team training, provided intensive hands-on training in discovering who and what is on the network, identifying vulnerabilities, learning how those vulnerabilities may be exploited, and provided defensive and mitigation strategies for industrial control systems. These skills were then applied in a 12 hour exercise where the red team attacked, and the blue team defended an actual control systems environment.

Jeff is a professional engineer and a certified information systems security professional, and has over 28 years of experience in both the private and public sector. He holds a bachelor's degree in mechanical engineering from Brigham Young University.

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