



CAE Tech Talk



National Centers of Academic Excellence

10 Nov 2016

Buffer Overflow – Prevention and Defense (1:10-1:50 pm ET)

and

Virtualizing Industrial Control Systems Testbeds for Cybersecurity Research

(2:00-2:40 pm ET)

Mark your calendars and come join your friends in the CAE community for a Tech Talk. We are a warm group that shares technical knowledge. CAE Tech Talks are free and conducted live in real-time over the Internet, so no travel is required. You can attend from just about anywhere (office, home, etc.) Capitol Technology University (CTU) hosts the presentations using their online delivery platform (Adobe Connect) which employs slides, VOIP, and chat for live interaction. Just log in as "Guest" and enjoy the presentation(s).

Below is a description of the presentation(s) and logistics of attendance:

Date: Thursday 10 Nov 2016

Time: 1:10-1:50 pm ET

Location: https://capitol.adobeconnect.com/cae_tech_talk/

Just log in as "Guest" and enter your name. No password required.

Title/Topic: Buffer Overflow – Prevention and Defense

Audience Skill Level: Beginner

Presenter: James (Dept. of Defense)

Description:

This talk describes the basics of how a buffer overflow works and discusses how they are caused in software, how to prevent them, and newer methods preventing exploitation of buffer overflows.

Date: Thursday 10 Nov 2016

Time: 2:00-2:40 pm ET

Location: https://capitol.adobeconnect.com/cae_tech_talk/

Just log in as “Guest” and enter your name. No password required.

Title/Topic: Virtualizing Industrial Control Systems Testbeds for Cybersecurity Research

Audience Skill Level: All Levels

Presenter: Thiago Alves (University of Alabama Huntsville)

Description:

Performing an extensive security analysis involving experiments with cyber-attacks on a live industrial control system (ICS) is not possible. Therefore, researchers generally resort to testbeds and complex simulations to answer questions related to SCADA systems. However, testbeds might not have all the features of a big and complex ICS.

This presentation goes through the process of virtualizing small physical ICS testbeds to, once in the virtualized environment, scale it up to the size of a real ICS. It also demonstrates some cyber-attacks against one of the physical testbeds and its virtualized counterpart. The results are then compared to identify the fidelity of the virtual testbed.

CAE Tech Talks are also recorded

Recordings of live presentations are posted to the website below:

https://capitol.instructure.com/courses/510/external_tools/66

Pdf versions of the presentations are posted to the website below:

<https://capitol.instructure.com/courses/510/files>

Contact

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For questions on CAE Tech Talk, please send email to CAETechTalk@nsa.gov