

Cybersecurity Before the Budget

Subtitle if applicable

Scott Reynolds, PE, CAP^{1*}

¹Johns Manville, 717 17th St. Denver, CO 80202

(*Email: scott.reynolds@jm.com and Phone: +1 303-978-3540)

SUBMISSION TYPE

30 minute presentation

6-12 page paper plus 30-minute presentation

3 foot wide x 4 foot high large format poster

KEYWORDS

Cybersecurity, IEC 62443, Segmentation, Remote Access, Fundamentals, Defense in Depth

ABSTRACT

This presentation will provide an overview of the fundamental changes that any facility with a control system can make to start becoming more secure. The intent is to incrementally improve security while the facility is working towards a more robust cybersecurity program for control systems leveraging standards such as IEC/ISA-62443. The other intent is to provide actionable responses to “We cannot afford to address Industrial Cybersecurity this year”.

Cybersecurity can be strengthened by taking small steps. Leveraging the concept of defense in depth, facilities can start to create and improve security. Every system can find simple improvement on different layers of security even when there is little to no budget. Some of these potential improvements include:

- Segmentation between corporate and production systems
- Securing remote access
- Securing controllers
- Individual username and password
- Operating System updates and Antivirus software

Each topic will include how to accomplish the security improvement, the benefits of each solution and estimate of cost and time to complete using a model plant with 3 servers, 5 workstations, and 15 PLCs. The presentation will conclude that even if there is no money, there are still steps you can take to improve security on industrial systems.

ABOUT THE AUTHORS

Scott Reynolds, PE, CAP is currently the Industrial Systems Manager for the IT Department for Johns Manville. He has over 10 years of experience working with IT infrastructure in control systems, including water and wastewater facilities. In his current role, his team develops and deploys IT infrastructure,

including industrial cyber security, in over 40 manufacturing facilities worldwide. He is also a District Vice President for the International Society of Automation.