PARTNER BRIEF

DRAGOS and ICS VILLAGE

Improving Industrial Cyber Security Awareness and Education

HIGHLIGHTS

- Dragos and the ICS Village helps provide community outreach and support for hands-on global ICS cybersecurity education
- Partners contribute personnel, equipment, software, and funding to support training and events
- Dragos is actively involved with maintaining and updating the portable ICS environment to ensure its up-to-date and relevant for various educational efforts and training scenarios

THE CHALLENGE

There is a generally recognized, global shortage of available talent that understands the breadth of industrial control systems and good cyber security best practices. Furthermore, asset owners and operators of industrial control systems (ICS), as well as policymakers, have limited access to real-world equipment and software for the purposes of hands-on education and training to help develop in-house talent.

Traditional classroom training can sometimes be limited to specific locations or catered to covering certain components, equipment configurations, and vendor offerings that do not offer defenders the opportunity to train on a wide set of options. This type of training is not typically mobile and does not bring in the configurations, software and processes that offer the users a full picture of the possible environments that can be impacted by adversaries.

THE SOLUTION

The ICS Village was founded in 2014 to provide a safe, functional control system that defenders can interact with and develop their skills without any risk of interrupting business operations. The portability of the “ICS wall” increases accessibility to defenders around the world as it travels to various events.

Through sponsorship and by helping the ICS Village acquire, assemble, maintain, and demonstrate ICS controls equipment and software from manufacturers, Dragos is helping drive a shared mission to help industry and policymakers better defend industrial equipment through hands-on awareness, education, and training.

The ICS Village interactive learning approach invites people to get their hands-on equipment to develop their skills. Real industry components are used in training to simulate a realistic automation environment. By using common hardware and software components from different industrial sectors, people are invited to connect to different systems and networks to interact and learn. This provides a low-risk opportunity to understand industrial protocols further while also utilizing security tools such as active scanning and network sniffers to interact with the system and observe the impact on physical operations.

Common industry components used include:

- Programmable Logic Controllers (PLC)
- Human Machine Interfaces (HMI)
- Remote Telemetry Units (RTU)
- Remote I/O (IO)
- Variable Frequency Drives (VFD)
- Actuators

Photos of The ICS Village: The top two pictures are of the ICS wall, bottom left is the inauguration in 2014, and the bottom right is of an ICS training event.

To make the ICS Village more accessible to defenders looking to broaden their ICS cybersecurity skills, it is commonly a part of the annual DEFCON and RSAC security conferences. The current ICS Village events schedule can be found here: https://www.icsvillage.com/events

BENEFITS and IMPACT

BENEFITS	IMPACT
Interaction and training with real-world ICS systems	Hands-on equipment training and experimentation in a safe environment to help build a stronger ICS-focused cybersecurity community.
Increased understanding of the ways to defend ICS equipment	Knowledge sharing from vendors and defenders on the adoption and implementation of ICS cybersecurity for different configurations of equipment and industry use cases
Outreach to a larger global audience on ICS Cybersecurity issues	Portable/Mobile training equipment that reaches out to more ICS cybersecurity stakeholders through various roadshows and events.

For more information, please visit www.dragos.com or contact us at info@dragos.com