

Industrial Cybersecurity Resources Summary



Protecting Industrial Automation and Control Systems Starts with Education

If a control system is attacked, or even unintentionally compromised, the result could include regulatory violations, equipment damage, production loss, harm to the environment, and public endangerment. The Automation Federation (AF) is working closely with the National Institute of Standards and Technology (NIST) and the executive branch of the US Government to develop the framework of an executive order to address cybersecurity threats to the nation's critical infrastructure.

The International Society of Automation (ISA), the founding sponsor of the Automation Federation, has developed a comprehensive set of standards and technical reports that address what is needed for the security of Industrial Automation and Control Systems (IACS) at all phases of their life cycle, from design and implementation to operation and support. These standards and ISA's related training courses, books, and technical resources provide direction to product and system designers, systems integrators, and asset owners. ISA's cybersecurity training and technical resources are based on these standards, developed by a committee with representatives from virtually all industry segments and from countries around the world.



**Standards-based
Industry-tested
Expert-developed**

INSIDE

Learn about these Industrial Cybersecurity Resources

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Industrial Cybersecurity Standards

The ISA99 – *Industrial Automation and Control Systems Security* series of standards is a multi-industry initiative applicable to all key industry sectors and critical infrastructure. Developed by a cross-section of international cybersecurity subject-matter experts from industry, government and academia, the ISA99 standards represent a comprehensive approach to cybersecurity. As a result of their global compatibility, ISA99 standards are being adopted by the International Electrotechnical Commission (IEC) and will be referenced as IEC 62443.

■ **ANSI/ISA-99.00.01-2007 - Security for Industrial Automation and Control Systems Part 1: Terminology, Concepts, and Models**

Product ISBN/ID: DOWN4373

ISA Member Price: \$104.00

Affiliate Member Price: \$117.00

Community Member/List Price: \$130.00

http://www.isa.org/ISA99_2007

■ **ANSI/ISA-99.02.01-2009 - Security for Industrial Automation and Control Systems: Establishing an Industrial Automation and Control Systems Security Program**

Product ISBN/ID: DOWN4939

ISA Member Price: \$144.00

Affiliate Member Price: \$162.00

Community Member/List Price: \$180.00

http://www.isa.org/ISA99_2009

ISA Security Compliance Institute

www.isasecure.org

The ISA Security Compliance Institute's mission is to provide the highest level of assurance possible for the cybersecurity of industrial automation control systems. The institute was established by thought leaders from major organizations in the industrial automation controls community seeking to improve the cybersecurity posture of Critical Infrastructure for generations to come. Founding Members include Chevron, ExxonMobil Research and Engineering, Honeywell, Invensys, Siemens, and Yokogawa. Key Technical Members include exida and RTP Corp.

The ISA Security Compliance Institute's goals are realized through industry standards compliance programs, education, technical support, and improvements in suppliers' development processes and users' life cycle management practices. The Institute's ISASecure™ designation ensures that industrial automation control products conform to industry consensus cybersecurity standards, providing confidence to users of ISASecure™ products and systems and creating product differentiation for suppliers conforming to the ISASecure™ specification. ISCI developed ISASecure™ certifications specifications using the framework of the ISA99 Standards Roadmap.

The ISASecure™ Program scope and direction is based on the security life cycle concept for automation controls, organized into three broad lifecycle phases including:

- **Devices and Systems—Conform to ISASecure™ Requirements** (products constructed to secure characteristics and behaviors)
- **Supplier Practices—Product Development Life Cycle** (Design for Security)
- **User Practices—Integration/Deployment, Operations, Life Cycle Management** (Manage for Security)

Join ISA for just \$110 per year and view the standards for FREE! www.isa.org/join

Industrial Cybersecurity Training Resources

Securing your systems is only possible if your employees are knowledgeable and skilled in the latest cybersecurity technologies and trends. Choose from Classroom Training in regional locations around the US; Onsite Training, where ISA's courses and instructors come to your facility; or Online Training, featuring full length courses and web seminars.

Classroom Training Courses:

- **Introduction to Industrial Automation Security and the ANSI/ISA99 Standards (IC32C):** www.isa.org/CYBE/IC32C
- **Using the ANSI/ISA99 Standard to Secure Your Control System (IC32):** www.isa.org/CYBE/IC32
- **Industrial Networking and Security (TS12):** www.isa.org/CYBE/TS12
- **Advanced Industrial Cyber Security (TS13):** www.isa.org/CYBE/TS13

Online Training Courses and Web Seminars:

- **Cybersecurity for Automation, Control, and SCADA Systems (IC32E):** www.isa.org/CYBE/IC32E
- **Cybersecurity Risk Assessment for Automation Systems (IC32CW1):** isa.org/CYBE/IC32CW1
- **Firewalls and Security Zones on the Plant Floor (IC32CW2):** isa.org/CYBE/IC32CW2
- **A Tour of the ANSI/ISA99 Security Standards (IC32CW3):** www.isa.org/CYBE/IC32CW3

Industrial Cybersecurity Publications:

- **Industrial Automation and Control System Security Principles**
Ronald L. Krutz, Ph.D., P.E.
www.isa.org/CYBE/IndAutoCtrSec
- **Industrial Ethernet, 2nd Edition**
Perry S. Marshall and John S. Rinaldi
www.isa.org/CYBE/IndEth
- **Industrial Network Security, 2nd Edition**
David J. Teumim
www.isa.org/CYBE/IndNtwSec

Technical Papers and Presentations

Each year, hundreds of peer-reviewed papers and presentations are delivered at ISA technical conferences around the world. ISA's collection of technical papers includes dozens of titles related to industrial cybersecurity, including:

- **Electronic Security for Manufacturing and Control Systems—An Overview Presentation**
- **Establishing an Effective Plant Cybersecurity Program**
- **Cybersecurity Implications of SIS Integration with Control Networks**
- **Establishing an Effective Plant Cybersecurity Program**
- **Making a Green Grid a Reality without Sacrificing Security—An Overview Of ISA99 & Cyber Security for the Water Or Wastewater Specialist**
- **Applying ISA IEC 62443 to Control Systems**
- **Benchmarking Process Control Domain Security Standards**
- **Case Study: Integrated Perimeter and Critical Infrastructure Protection with Persistent Awareness**
- **Cloud Computing and Social Media: How To Friend Insecurity in Cyberspace**

To purchase ISA's cybersecurity technical papers today—visit isa.org/CYBE/techpapers.

Coming Soon!
Cybersecurity Certificate Programs:
Stay tuned to www.isa.org/training
for the latest news!

Join ISA for just \$110 per year and view dozens of pre-recorded webinars for FREE!
www.isa.org/join
Plus, you'll save 20% on training and publications resources!

Additional Resources for Individuals and Companies

Join the ISA Safety and Security Division

As an ISA member, you'll have a chance to join two technical divisions for free—make one of them the ISA Safety and Security Division, your headquarters for the latest trends and information available regarding industrial cybersecurity. Division members get involved in programming ISA's conferences and symposia, publishing papers and articles, and discussing important topics on ISA's list serves and social media networks. Visit www.isa.org/Community/divatsafety

Review the Work of the LOGIIC Program

The Linking the Oil and Gas Industry to Improve Cybersecurity (LOGIIC) program is an ongoing collaboration of oil and natural gas companies and the US Department of Homeland Security, Science and Technology Directorate. LOGIIC was formed to facilitate cooperative research, development, testing, and evaluation procedures to improve cybersecurity in petroleum industry digital control systems. The program undertakes collaborative research and development projects to improve the level of cybersecurity in critical systems of interest to the oil and natural gas sector. The program objective is to promote the interests of the sector while maintaining impartiality, the independence of the participants, and vendor neutrality. Review the work of this important committee by checking out the links below:

- **Project 1 – Correlation Project**
www.automationfederation.org/logiic1
- **Project 2 – Cybersecurity Implications of SIS Integrations with Control Networks**, Paper
www.automationfederation.org/logiic2paper
- **Project 2 – Cybersecurity Implications of SIS Integration with Control Networks**, Presentation
www.automationfederation.org/logiic2pres
- **Project 3 – Application Whitelisting**, Presentation
www.automationfederation.org/logiic3pres
- **Project 3 – Application Whitelisting**, Public Report
www.automationfederation.org/logiic3report

Attend One of ISA's Upcoming World-Class Events

ISA's technical conferences and division symposia give you a chance to network with peers and learn from the brightest minds in the industry:

- **59th International Instrumentation Symposium**
Wyndham Cleveland at Playhouse Square, Cleveland, Ohio, USA
www.isa.org/iis2013
- **13th ISA LDAR Fugitive Emissions Symposium**
New Orleans Marriott, New Orleans, Louisiana, USA
www.isa.org/LDAR/T2013
- **2013 Communications Division Symposium**
The Melrose Hotel, Washington, DC, USA
www.isa.org/commdivsymp
- **56th ISA POWID Division Symposium**
Rosen Shingle Creek, Orlando, Florida, USA
www.isa.org/powid2013
- **2013 ISA Water/Wastewater and Automatic Controls Symposium**
Crowne Plaza Orlando Universal, Orlando, Florida, USA
www.isawwsymposium.com
- **8th ISA Marketing and Sales Summit**
W New Orleans, New Orleans, Louisiana, USA
www.marketingsalessummit.com
- **ISA Automation Week**
Nashville Convention Center, Nashville, Tennessee, USA
www.isaautomationweek.org