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Cybersecurity for OT

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Evolution of the cyber threat landscape

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Digital Information Processing | **Digital Connectivity** | **Digital Automation and Intelligence**

1950s – 1960s
Military, governments and other organizations implement computer systems

1970s
Home computer is introduced

1980s
Computers make their way into schools, homes, business and industry

1990s
Digital enhancement of electrification and automation

1991
The World Wide Web becomes publicly accessible

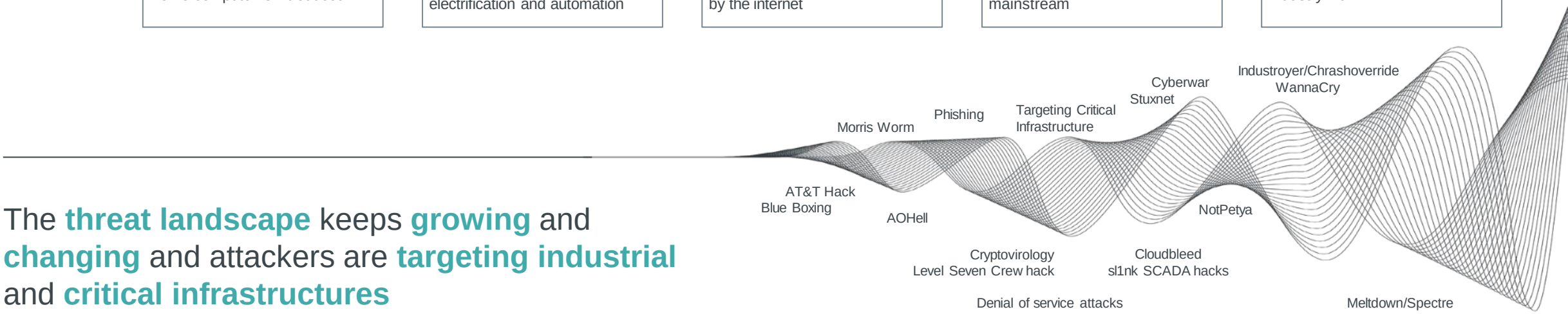
1999
The globe is connected by the internet

2000s
Mobile flexibility

2010s
Cloud computing enters the mainstream

2015
Internet of Things, Smart and autonomous systems, Artificial Intelligence, Big Data

2020s
Industry 4.0



The **threat landscape** keeps **growing** and **changing** and attackers are **targeting industrial** and **critical infrastructures**

Challenges are similar but reality is very different in IT and Industrial (OT) Security

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IT Security		Industrial Security
Confidentiality		**Availability and Safety**
3-5 years	**Asset lifecycle**	20-40 years
Forced migration (e.g. PCs, smart phone)	**Software lifecycle**	Usage as long as spare parts available
High (> 10 “agents” on office PCs)	**Options to add security SW**	Low (old systems w/o “free” performance)
Low (mainly Windows 10)	**Heterogeneity**	High (from Windows 95 up to 10)
Standards based (agents & forced patching)	**Main protection concept**	Case and risk based

Industrial Security concept
Defense in depth – based on IEC 62443

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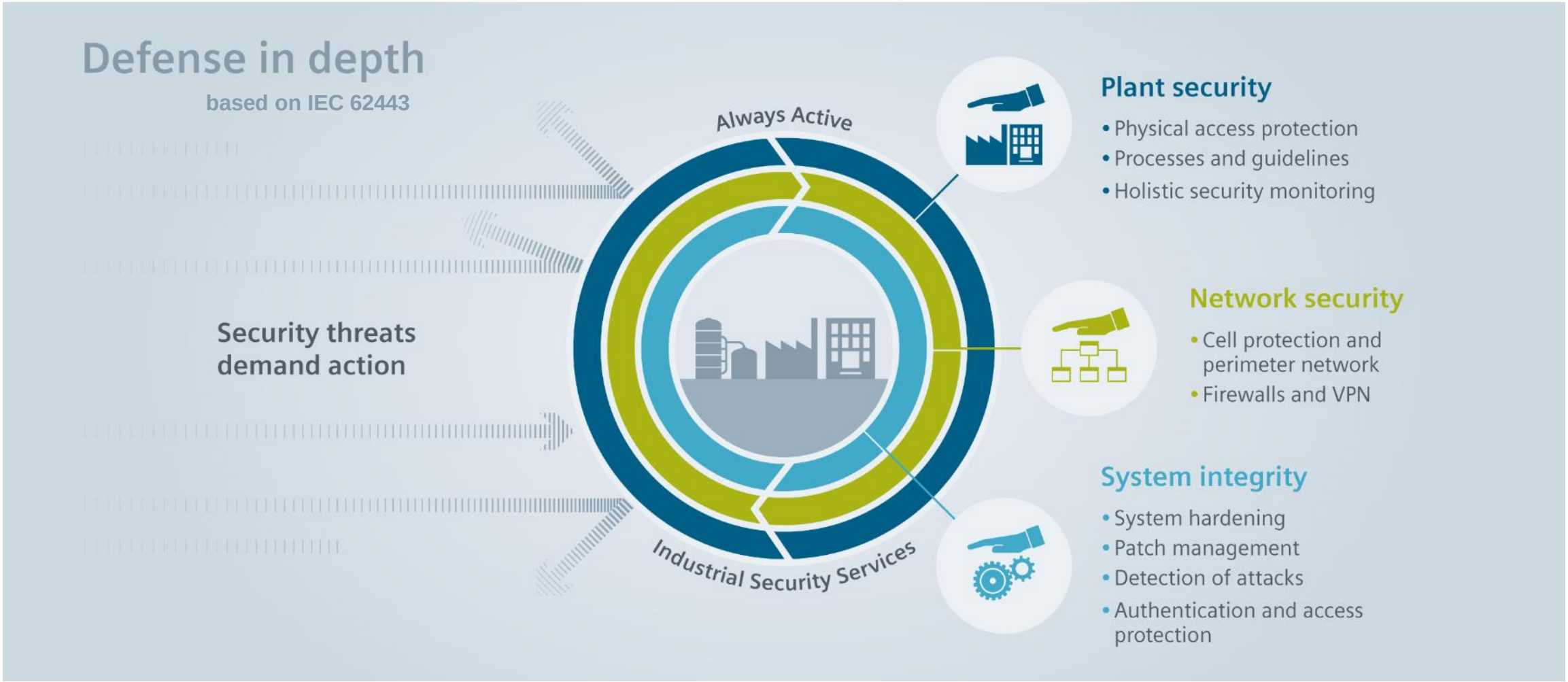

Industrial Security concept

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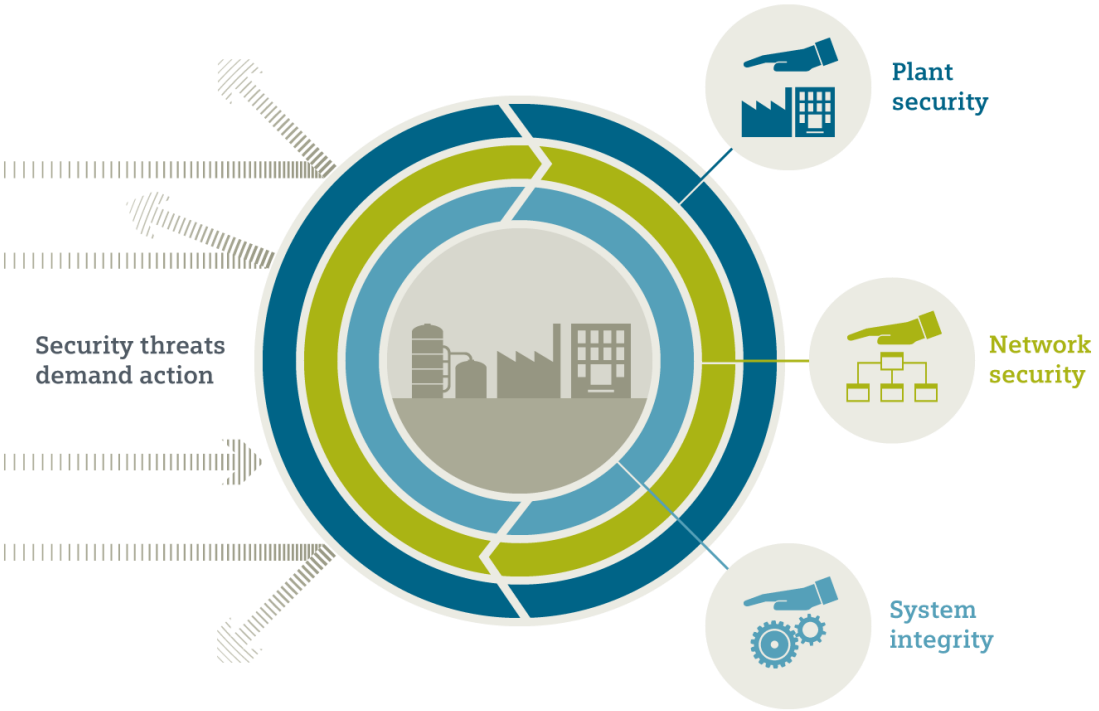
The security concept – “Defense in depth”



Products and systems offer integrated security

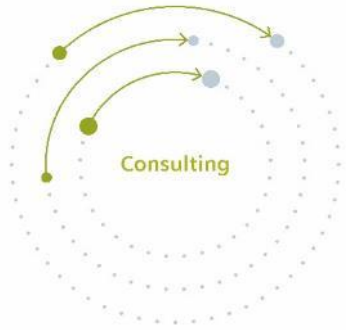
Know-how and copy protection

Authentication and user management

Firewall and VPN

System hardening, continuous monitoring and anomaly detection

Siemens Industrial Security Services



Industrial Security Services
End-to-end approach

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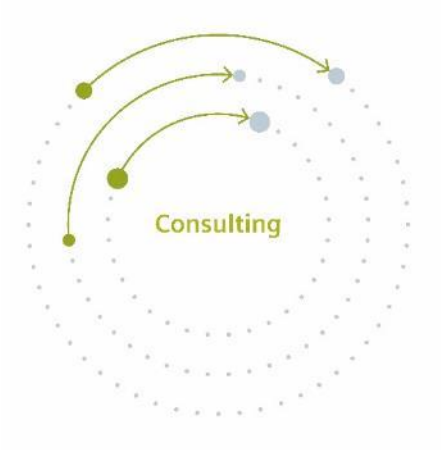

Security Consulting (Planning)

Evaluation of the current security status of an industrial environment

- Security Assessments
- Scanning Services
- Industrial Security Consulting

Security Implementation

Risk mitigation through implementation of security measures

- Security Awareness Training
- Automation Firewall
- Endpoint Protection

Security Optimization (Monitoring)

Comprehensive security through managed services

- Industrial Anomaly Detection
- Industrial Security Monitoring
- Remote Incident Handling
- Industrial Vulnerability Manager
- Patch Management

Industrial Anomaly Detection
Dashboard

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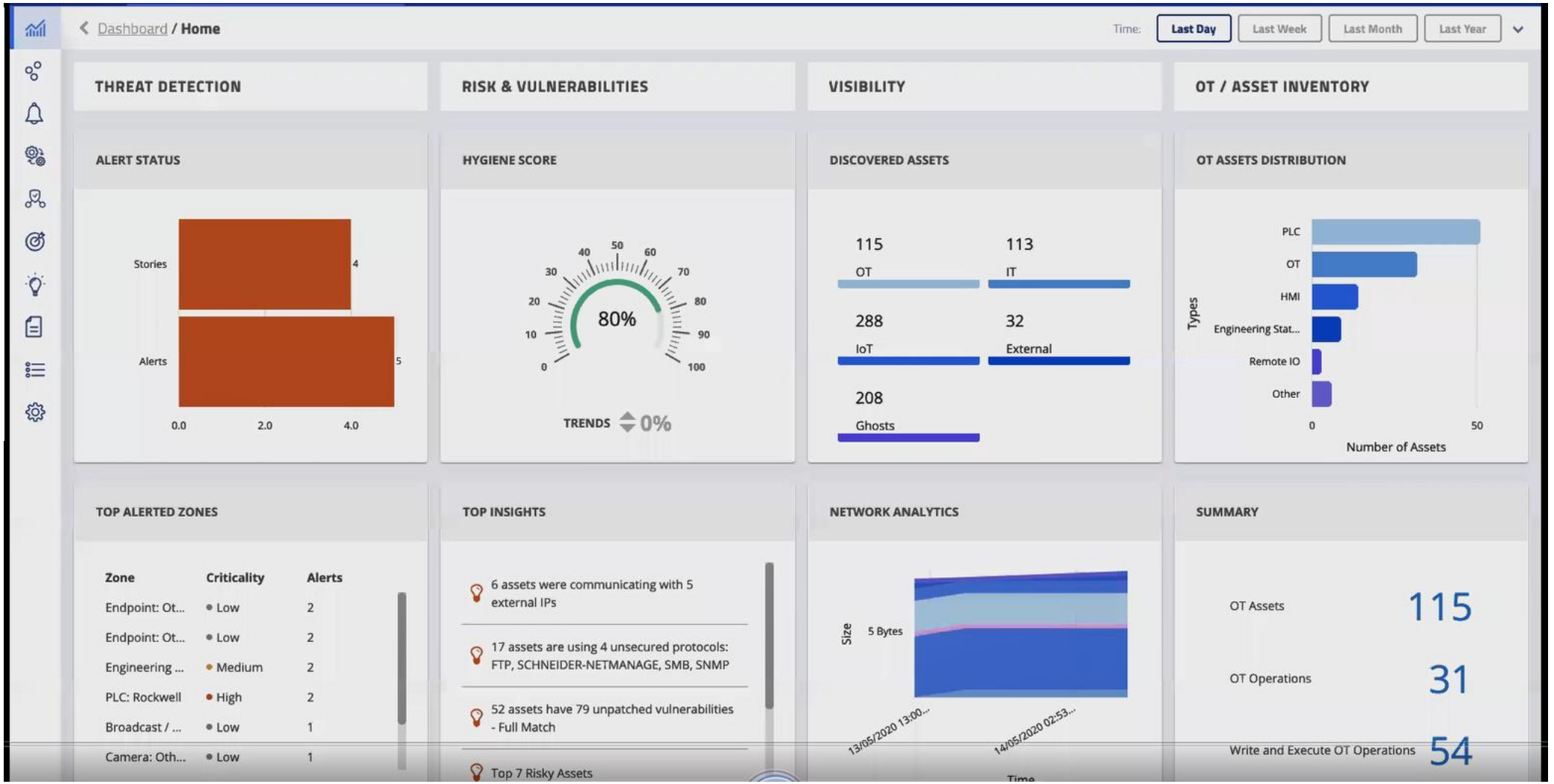
- Dashboard
- Assets view
- Alerts view
- OT Audit view
- Policies & Zones
- Attack vector
- Insights view
- All reports
- Activities
- Configuration



Industrial Anomaly Detection
Assets view / Network Graph

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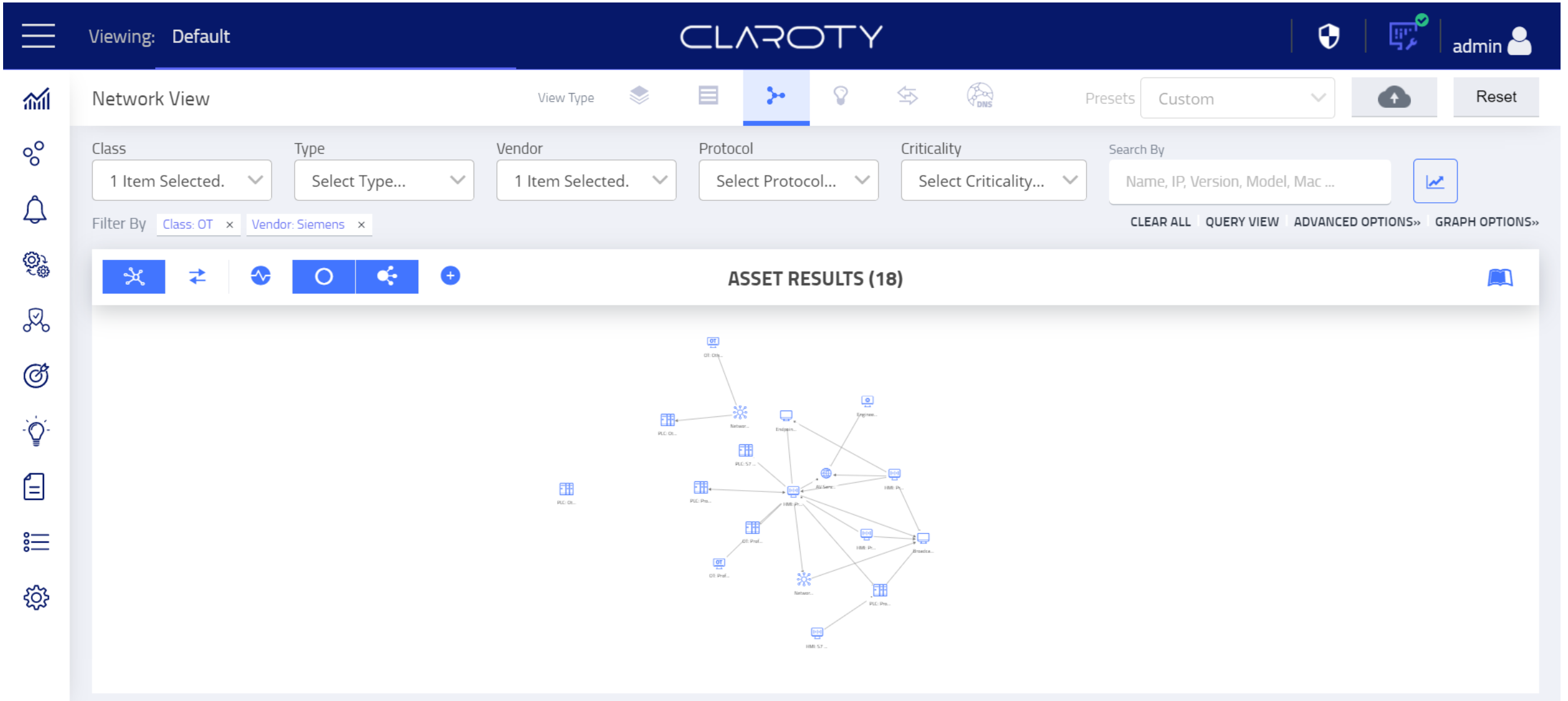

Industrial Anomaly Detection
Alerts view

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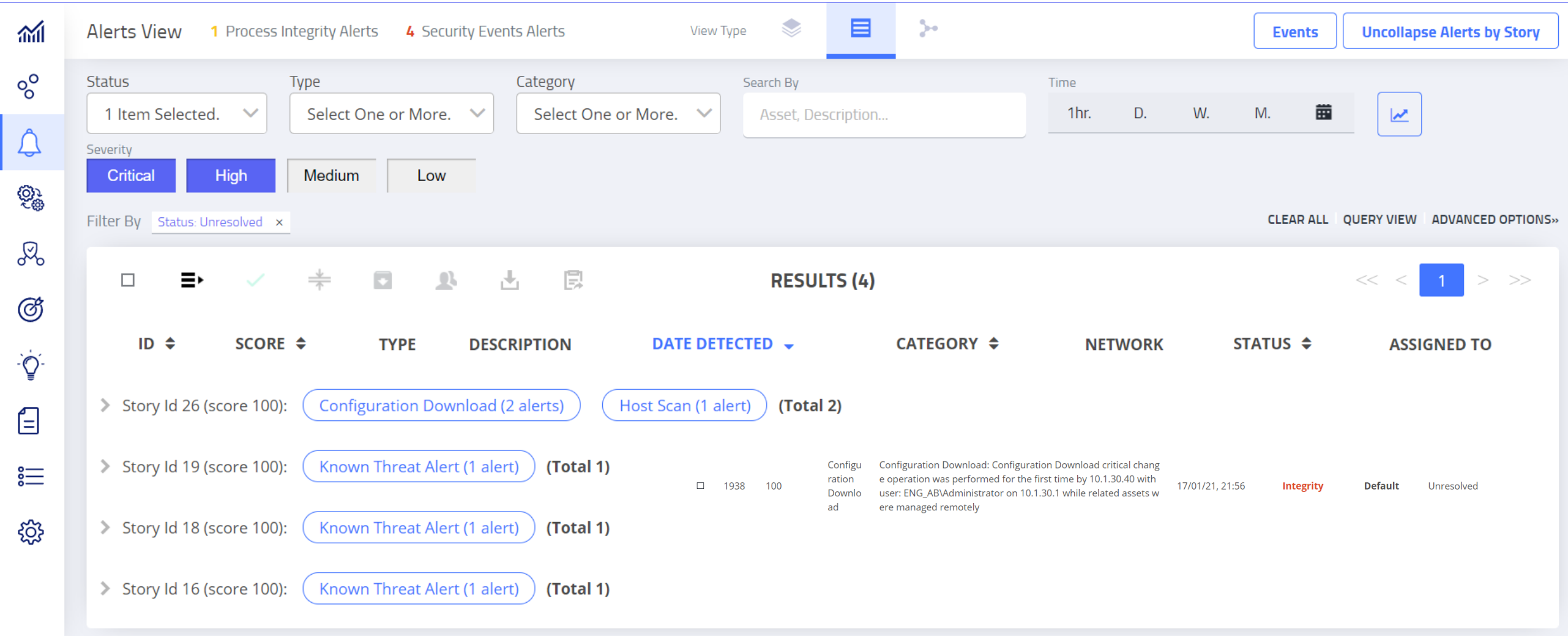

Industrial Anomaly Detection
Insights view

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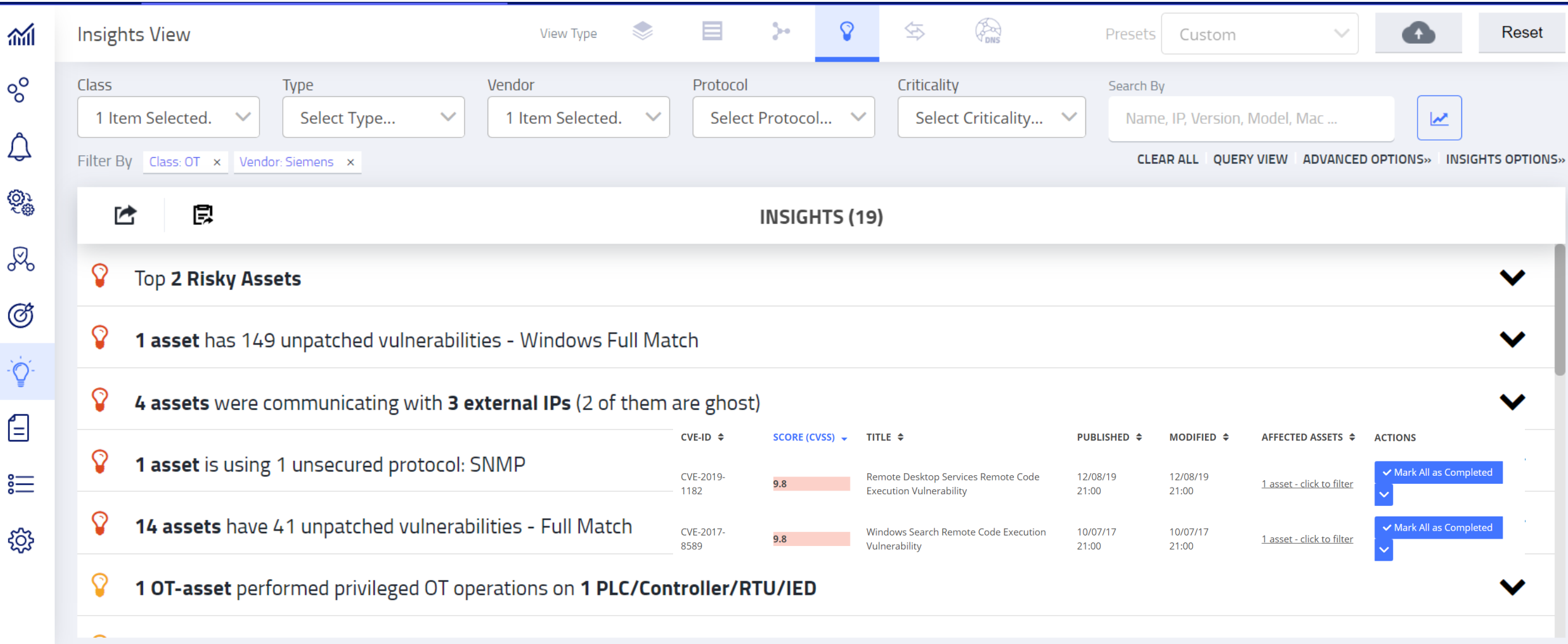

Contact Information

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