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CYSE-200

SCADA Systems Role and Critical Infrastructure Security Concerns

BLUF

What is critical infrastructure? Critical infrastructure refers to the systems, facilities, and assets that are vital for the functioning of society and the economy. Critical infrastructure faces various threats that can disrupt its operations and pose risks to public safety, security, and economic stability.

Critical Infrastructure

These critical infrastructures are extremely important. If there are any disruptions, it would affect safety, security, health, or economic stability.

Some examples of infrastructure sectors include:

* Health care

* Transportation

* Water and wastewater systems

* Many more systems that society relies on daily (IBM,2023).

These systems are important, so they are often targeted. Many hackers try to disrupt them from gaining access.

SCADA (Supervisory Control and Data Acquisition)

Many of these systems rely on SCADA. This technology helps organizations manage systems and respond quickly to potential problems (IEEE Public Safety Technology, 2020). SCADA systems let operators monitor equipment collect data from sensors and control processes remotely. While this technology makes things more efficient and automated, it also creates cybersecurity concerns when systems are connected to networks. The security of SCADA-based systems is still a question. Some people mistakenly think that SCADA networks are safe because they are physically secure. Others wrongly assume that SCADA networks are safe because they are not connected to the Internet (SCADA Systems, n.a.). This system helps limit attacks.

Conclusion

Critical infrastructure systems are necessary for daily life, so there is an increase in hacking as technology is upgrading. SCADA systems play an important role in monitoring and controlling infrastructure operations to help prevent interruptions to help reduce the risk of essential systems being hacked and provide extra protection and fast responses.

References

IBM. Critical Infrastructure. Ibm.com. https://www.ibm.com/think/topics/critical-infrastructure.

IEEE Public Safety Technology. (2020). Cybersecurity of Critical Infrastructure with ICS/SCADA Systems.

“SCADA Systems.” SCADA Systems, www.scadasystems.net.