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SCADA SYSTEMS

Scada systems are industrial devices with multiple uses including monitoring and controlling industrial devices of many types, the most common implication is alarm systems, but this is not the only use. SCADA stands for supervisory control and data acquisition, Scada systems are fictitiously believed to be safe from cybersecurity threats, however this is not true. The false beliefs stem from the Scada systems not needing an internet connection and being a physically secured device, it would seem that the Scada system would be safe, but due to how much control a Scada system may have on the daily operations of an industrial business, this makes them prime targets for exploitation. Industrial infrastructure generally being weak and vulnerable does not help the safety of the Scada system either.

The two major threats to Scada systems are accessing the systems via packet access and causing an infiltration from that breaching point, or unauthorized access through a worm or virus or gathering a known users credential’s and infiltrating and hijacking the system, both threats can very easily wreak havoc on the entire system and cause complete infrastructure to be controlled like oil pipelines, streetlights, sewage networks, and other essential infrastructure to be hijacked. The solutions that are developed to safeguard the Scada systems are VPN servers being implemented and firewalls based on TCP/IP framework. Whitelisting has also been implemented to help mitigate risk.

While Scada systems may seem very primitive in the grander schemes of new technological systems, they are still the access points to many important infrastructure pieces to our world, because of this it’s important that we protect all our systems and be cautious of any potential risk to a system that could be potentially exploited to ill gotten gains or leverage. Any system can become a victim to its own creation depending on how it is exploited, so safeguarding every possible entry point is necessary, especially for big pieces of infrastructure like that the SCADA system protects.

Sources:

“Learn All about SCADA Systems: What Is SCADA? | SCADApedia.” *SCADA International*, scada-international.com/what-is-scada/#:~:text=Supervisory%20Control%20and%20Data%20Acquisition.

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