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CYSE 200T

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<div align="center">SCADA Systems</div>

Supervisory Control and Data Acquisition (SCADA) systems are an important part of infrastructure systems. They are able to provide real-time data acquisition, automate control processes, and collect vast amounts of data, and most importantly they help ensure the safety of operations (SCADA Systems). SCADA systems are becoming increasingly vulnerable to cyber-attacks because they are being integrated to IT networks while also including legacy systems that are decades old.

The Siberian pipeline explosion in 1982 is believed to be the first cyber incident of SCADA systems where a malicious user injected a trojan horse into the SCADA system to modify the operations of valves and pumps (Alanazi et al., 2023). Another incident happened because an attacker gained unauthorized access through a dial-up modem. Many of these attacks to SCADA systems were due to malware such as trojan horses and worms. There can be other threats including outdated software, weak authorization, and wireless access points.

There are many ways to help protect SCADA systems from cyber-attacks. One of them would be to keep operating systems up to date since a significant number of SCADA systems have not had their operation system patched for a long time (Alacala, 2021). These systems also have basic authorization and authorization so configuring authentication per user and having logging controls would make these systems better secured. SCADA systems can also have

regular data backups so if any cyber-attack were to happen there can quickly be a fix and minimize any damage.

SCADA systems are vital for the management and operation of critical infrastructure. They help provide monitoring, control, and data collection. This makes these systems an attractive target to cyber-attacks which is why it is important to protect SCADA systems from potential threats and to ensure the safety of society.

References

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