SCADA System write- up

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BLUF

This write-up will go into depth of the vulnerabilities that are associated with critical infrastructure systems and the role that SCDA applications, have in lightning this risk of occurring. There are many vulnerabilities that are associated with critical infrastructure systems due to the fact of, unauthorized access, such as human access or others such as viruses that effect the controller host machine (SCADA Systems). Another vulnerability would be an attacker gaining control over the systems and network of industrial control systems, such as transportation, financial, and healthcare services (Labus,2022). The roles in which SCADA applications play in mitigating this risk is, by allowing only approval of authorized user, and avoid unauthorized changes to packets (SCADA System Is Secure,2019).

Vulnerabilities in critical infrastructure

The vulnerabilities associated with critical infrastructure systems, can not only be costly but also challenge our way of life (Labus,2022). The ability to deny access to resources that are essential to life, can be a huge threat to any country's economy. Infrastructure system control majority of physical processes (SCADA Systems). This could effect the supply chain for medications and various products to get distributed, such as a example of the covid 19 vaccine getting distributed around the world (Labus,2022). Another vulnerability that is associated with critical infrastructure, that it can lead to internet connection reliability, security and latency.

SCADA mitigating tactics

The mitigation tactics that are used to protect infrastructure systems from falling victim to cybersecurity terrorism/ attacks, is by setting up industrial VPN's and firewall solutions for

SCADA networks (SCADA Systems). Another mitigating tactic would be to provide funding and guidance, to help agencies adopt proactive potential (Labus,2022). Another tactic is whistling solutions to be implemented due to their ability to provide unauthorized access change (SCADA Systems).

Conclusion

In conclusion there are many vulnerabilities that are associated with critical infrastructure that can affect society in many ways that could be costly and create bad consequences. (SCADA Systems) These important aspects of life can be all be challenged and denied if fell into the wrong hands (Labus,2022). That is why SCADA systems have a mitigation tactic to preventing these attacks from occurring more often then other, with firewalls being deployed and VPNS. Other organizations also help each other out by providing the best tactics to one another for the best success, in a risk of cybercrime.

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Labus, H. (2022, March 11). *The massive impact of vulnerabilities in critical infrastructure*. Help Net Security. Retrieved March 19, 2023, from https://www.helpnetsecurity.com/2022/03/15/critical-infrastructure-security/#:~:text=The%20digitalization%20of%20critical%20infrastructure,being%20compromised%20as%20collateral%20damage.