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The SCADA System

In the write-up, I will be using the article "*SCADA System,"* to tell you about the SCADA System and for what it is used. It will explain the vulnerabilities associated with critical infrastructure systems. Also, will explain the role SCADA applications play in mitigating certain risks.

Vulnerabilities with Critical Infrastructure System

Critical Infrastructure are those systems and assets that are so vital that their incapacitation or destruction would have a debilitating effect on security, the economy, public health, public safety, or any combination (*Critical Infrastructure Systems*, n.d.). Critical infrastructure has various threats and vulnerabilities that can compromise its functionality and security. The vulnerabilities can be intentional or unintentional, natural, or man-made, physical, or cyber. The most common sources of vulnerability are natural disasters, public health emergencies, malfunctions, cyber-attacks, and terror attacks (Johnson, 2019).

The roles SCADA System play to reduce these risks.

Supervisory control and data acquisition is an automation control system that is used in industries that may use energy, oil, gas, water, power, and a lot more (Krambeck, 2015). The SCADA System does not control the processes in real time it usually refers to the system that coordinates the processes in real time. The HMI (Human Machine Interface) is linked to the SCADA system's databases to provide the diagnostic data and manage information and tending information. It also helps with maintenance procedures and troubleshooting guides. Programmable logic controllers (PLCs) control the flow of cooling water, which will set off alarms if the systems change and be recorded and displayed. Remote terminal unit connected to the physical equipment, by converting and sending the electrical signals to the equipment, like closing/opening a value or setting the speed of a pump.

Conclusion

In conclusion, the SCADA System can help reduce the threats and vulnerabilities in critical infrastructure systems in an industry. The SCADA System can provide numerous benefits over manual labor. Instead of using humans to check for errors throughout the plant, grid, or pipeline, SCADA uses its system that can detect problems in the system, and rapidly adjusts the system from creating an outage (Krambeck, 2015).

References

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