SCADA Systems and their importance

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A SCADA is an abbreviation for "Supervisory Control and Data Acquisition". Its main job is to be a main gateway for certain processes around the workplace, for example, there may be some in an airport, a ship, or a space station (SCADA Systems). These places all have processes that although can be done by humans, may not have enough of a workforce to do so. The SCADA system is linked to operations that it can then control and monitor from there. Often there is someone at it's HMI, or Human Machine Interface to control the operations around the facilities (Citation).

The United States has 16 infrastructure systems that are critical to the integrity of the U.S; if one were to be tampered with in any way there could be massive damage done (Critical Infrastructure Sectors). A SCADA system is capable of preventing that. Because it is controlled by a human, it can be monitored almost 24/7 and throughout that monitoring, there is a higher chance to successfully catch any form of tampering. It also has good communication methods that help keep it from responding too late to a situation.

The SCADA system doesn't come without its hazards. They are targets for cyberterrorism and cyberwarfare attacks (SCADA Systems). If a SCADA system is destroyed, not only will it go down but other areas may be taken down as well.

In Conclusion, a SCADA system is a necessary component to keeping a facility in check, without out, potential risks like human tampering, viruses, etc are able to get into software and hardware and result in massive amounts of damage. It may come with its risks, but the benefits of having it outweigh its negatives.

Citations

Critical Infrastructure Sectors. (n.d.). CISA. https://www.cisa.gov/topics/critical-infrastructure-security-and-resilience/critical-infrastructure-sectors

SCADA Systems. (n.d.). *SCADA Systems*. Google Documents. https://docs.google.com/document/d/1DvxnWUSLe27H5u8A6yyIS9Qz7BVt_8p2WeNHctGVboY/edit?tab=t.0