

12 October 2025

## SCADA Systems and their Critical Role

SCADA systems help control vital infrastructure all around the world including water treatment, gas, waste management, and wind farms. Their security is undoubtedly crucial, so it is critical that the systems get the highest defenses currently available. That said, a lot of SCADA system implementations lack security at the most essential levels, and assume that their ‘off the grid’ nature gives them security. This assumption may lead to breaches of vital infrastructure or the taking down of said infrastructure, so it is important that these systems get secured in every way possible, not just isolating them from the open internet with things like VPNs. It needs to be assumed that an attacker will go to any lengths necessary to infiltrate a system, including going there in person and gaining physical access to a system. SCADA users need to be aware that these threats exist and are real, and how to mitigate them.

### Works cited

“SCADA Systems” <http://www.scadasystems.net>