
What are smart grid communication technologies & protocols?
In a sophisticated smart grid architecture, different networks demand various communication technologies and protocols to deliver reliable and secure data or power to utilities and users. In the following sections, we will describe smart grid communication technologies and few numbers of well-known protocols. Fig. 3.

Are smart grid networks secure?
Several other surveys discussed the security of smart grid infrastructure and provided various cyber-attack classifications on smart grid networks. These surveys only classified attacks in terms of the security requirements, such as confidentiality, integrity, and availability.

What happens if a microgrid is attacked?
For microgrids and ESSs used for backup power,an attack to a storage system might result in increased costs of operation and power outages.

Are filtering-based techniques effective in detecting cyber-attacks in a smart grid?
Filtering-based techniques represent another common category for cyber-attack detections in a smart grid. This survey will discuss two main techniques in this category, namely threshold-based and bloom filtering techniques. Several studies evaluated the efficiency of threshold-based techniques in detecting cyber-attacks in any system.

Securing this end-to-end communications pathway--which is essential for reliable grid operations--involves preventing unauthorized access and monitoring traffic to identify anomalous ...

Motivated by this need for increased cyber-physical security and economic confidentiality, we are developing techniques to obfuscate sensitive design information in power system models without ...

With the increasing reliance on smart grid technologies, it is ...

J. Appiah-Kubi and C. -C. Liu, "Decentralized Intrusion Prevention (DIP) Against Co-Ordinated Cyberattacks on Distribution Automation Systems," in IEEE Open Access Journal of Power and ...

Can power grids be used to study resilience? The review is accompanied by some simulations on benchmark

and real power grids to show the applicability of these concepts in studying resilience.

Cyber-attacks in a power system can compromise confidentiality, integrity, and availability (CIA) security standards by targeting physical systems via reconnaissance, ...

However, this infrastructure can be subjected to cyber-attacks that can violate the availability, integrity, confidentiality, and accountability of smart grid"s security requirements. For example, a cyber-attack ...

With the increasing reliance on smart grid technologies, it is imperative to address the potential cybersecurity risks and protect the confidentiality of sensitive data. This research focuses...

MISO intends this Guidance to be part of MISO"s communication of its data security and data protection to protect the confidentiality and integrity of Real-time Assessment and Real-time monitoring data ...

Disruptions to the power grid can affect multiple sectors, including industry, government, security forces, and others. Therefore, attacks to the power grid can serve as a proxy to indirectly disrupt targets that ...

In a smart distribution power grid, cost efficient and reliable communication architecture plays a crucial role in achieving complete functionality. There are different sets of ...

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