

Taxonomy of Threats and Vulnerabilities in Smart Grid Networks

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Abstract : Electric power is a fundamental necessity in the 21st century. Consequently, any break in electric power is probably going to affect the general activity. To make the power supply smooth and efficient, a smart grid network is introduced which uses communication technology. In any communication network, security is essential. It has been observed from several recent incidents that adversary causes an interruption to the operation of networks. In order to resolve the issues, it is vital to understand the threats and vulnerabilities associated with the smart grid networks. In this paper, we have investigated the threats and vulnerabilities in Smart Grid Networks (SGN) and the few solutions in the literature. Proposed solutions showed developments in electricity theft countermeasures, Denial of services attacks (DoS) and malicious injection attacks detection model, as well as malicious nodes detection using watchdog like techniques and other solutions.

Keywords : smart grid network, security, threats, vulnerabilities

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