

Survey of Intrusion Detection Systems and Their Assessment of the Internet of Things

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Abstract : The Internet of Things (IoT) has become a critical component of modern technology, enabling the connection of numerous devices to the internet. The interconnected nature of IoT devices, along with their heterogeneous and resource-constrained nature, makes them vulnerable to various types of attacks, such as malware, denial-of-service attacks, and network scanning. Intrusion Detection Systems (IDSs) are a key mechanism for protecting IoT networks and from attacks by identifying and alerting administrators to suspicious activities. In this review, the paper will discuss the different types of IDSs available for IoT systems and evaluate their effectiveness in detecting and preventing attacks. Also, examine the various evaluation methods used to assess the performance of IDSs and the challenges associated with evaluating them in IoT environments. The review will highlight the need for effective and efficient IDSs that can cope with the unique characteristics of IoT networks, including their heterogeneity, dynamic topology, and resource constraints. The paper will conclude by indicating where further research is needed to develop IDSs that can address these challenges and effectively protect IoT systems from cyber threats.

Keywords : cyber-threats, iot, intrusion detection system, networks

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