

Cybersecurity in Cloud Computing Context

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Abstract

In recent years, traditional information security has been challenged by the emergence of cybercrime and cyberwarfare, which are growing rapidly. Security breaches have evolved from opportunistic attacks by individuals to targeted attacks attributed to organized crime and or hostile acts between nation states. Cybersecurity requires business decisions, planning and strategic guides for implementation. Enterprises should develop a comprehensive business case that outlines risk and rewards, cost and benefit and the long term perspective on maintaining cybersecurity as a concept and process.

Cloud computing represents an emerging paradigm of computing that replaces computing as a personal commodity by computing as a public utility. It offers all the advantages of a public utility system, in terms of economy of scale, flexibility, convenience but it raises major issues, not least of which are: loss of control and loss of security. The best way to predict future computing trends is to look at recent developments and their motivations. Organizations are moving towards outsourcing their data storage, computation, and even user desktop environments. This trend toward cloud computing has a direct impact on cyber security: rather than securing user machines, preventing malware access and managing removable media, a cloud-based security scheme, must focus on enabling secure communication with remote systems. This change in approach will have profound implications for cyber security research efforts.

Index terms: cybersecurity, cloud computing, information security

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