Energy and Green IT Resource Management Analysis and Formation in Geographically Distributed Environmental Cloud Data Centre

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Abstract

On-demand Cloud Computing (CC) offers users worldwide access to computing resources. It has two components; Sustainable IT is a complicated matter. The first and most complex issues are energy efficiency and the energy ratio of the IT environment. Secondly, there is the utilization of renewable. These two have to be dealt with. An application design plays a significant role in CC, while an efficient application structure may increase cloud data centres' energy efficiency and viability. However, cloud data centres consume a considerable amount of energy and leave a significant carbon footprint on an ecosystem. Data centres account for 1.98% of the global emission of $CO2$, just like aviation. Therefore, it is unavoidable for distributed cloud data centres to have energy and carbon-efficient technology. Cloud providers should also meet their required service quality while efficiently allocating computing resources to users. The main aim of this paper is to deal with the energy

Implementation of New Secure File Transfer Protocol Using Triple-DES and MD5

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Abstract

There are several ways to transfer files from one computer system to another or from one user to another. But they are less secure. Secure File Transfer Protocol (SFTP) aimed at developing a secure file transfer system for fast and secure file transmission. This is a WinForms application in which, software on one system communicates with software on another remote system. It prevents passwords and other sensitive information from being transmitted in the clear over the network. Here the data as well the key used for the encryption will be encrypted by a software key. The 32-byte long private key is generated by SFTP, from the data and personal information of the user. It is again encrypted by using the static software key of SFTP and sent it along with the data. Software key and the sender's private key are hidden from the clients, so it provides more security to the data. This key is required to decrypt the data at the receiver. SFTP allows for the search of remote files and lock of files on a range of remote systems. Add-on directory listings and screen share are shown in an SFTP client. SFTP provides an interactive screen sharing between clients.

Keywords:-Security, Encryption, File Transfer, MD5, Secure Shell, DES.

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Flow-based anomaly intrusion detection using machine learning model with software defined networking for OpenFlow network

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Highlights

- Priority-based model using SDN to control the flow of data packets over the network.

- Detection of normal and abnormal traffic data transmission to identify the anomaly intruder.

- The utilization of bandwidth for priority-based applications with minimal cost.

- ML-based RF model was considered to detect network interference within SDN.

- QoS forward approach is to employ global for end-to-end overlay link among hosts.

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