



RESEARCH ARTICLE

A Secure Decentralized Cloud Computing Environment over Peer to Peer

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Abstract— Cloud computing platform is a set of scalable large-scale data server clusters, it provide computing and storage services to customers. A cloud computing provider or cloud computing service provider owns and operates live cloud computing systems to deliver service to third parties. The barrier to entry is also significantly higher with capital expenditure required and billing and management creates some overhead. Nonetheless, significant operational efficiency and agility advantages can be realized, even by small organizations, and server consolidation and virtualization rollouts are already well underway. Cloud computing systems provide large-scale infrastructures for high-performance computing that are “elastic” since they are able to adapt to user and application needs. Cloud computing platform is a set of scalable large-scale data server clusters. The cloud storage is a relatively basic and widely applied service which can provide users with stable, massive data storage space. Research shows that the architecture of current cloud computing system is central structured one; all the data nodes must be indexed by a master server which may become bottle neck of the system. In this project, the proposed new cloud storage decentralized architecture (no centralization is there, that's why it's designed in Peer to peer) and designed a prototype system. The system based on the new architecture has better scalability and fault tolerance and proposed system designed a cloud based environment where request and response is taking place between client and chunk servers through Gateway. Anyone can take multiple chunk servers as well as multiple clients in the proposed system, this environment (client) can make request for deploying a web-service and also in this proposed system, it's implement the cross-technology platform using the cloud based environment and at last proposed an algorithm with the help of “Advance Encryption Standard” which is going to provide security in the form of encryption and decryption in the cloud based environment.

Key Terms: - Cloud computing; fault tolerance; P2P; multi-agent systems; virtualization; encryption; cluster; server storage

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