Abstract

Cloud computing is a paradigm in high performance computing, focuses on provisioning ubiquitous computing with the help of Software and/or Hardware Virtualization. In Mobile Cloud Computing (MCC), mobile/portable devices access cloud resources through wireless communication(GPRS/3G/WiFi etc). MCC enhances the mobility of the cloud user which solves cloud computing issues such as Unreliability, Quality-of-Service (QoS), etc. Recently QoS has emerged as a one of the challenging issue in MCC which impact to the large number of mobile users and businesses. The QoS in MCC degrades mainly due to its limited bandwidth, network congestion, user mobility, etc. In this paper, we have proposed a mobile cloud computing framework that facilitates the mobile client to access cloud services with a high degree of QoS based on the network condition of the connection. We proposed a new QoS based mobile cloud computing framework. Back Propagation Neural Network (BPNN) is being used for predicting and selecting appropriate cloud service for the mobile client. We have implemented the proposed framework taking QoS parameters: Packet Delivery Ratio (PDR), Transmission Rate, and Delay in a mobile cloud computing environment. At the end, we have compared our model
with the random selection approach and it shows that the proposed model gives better performance.

References

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Index Terms

Computer Science  Distributed Systems

Keywords

Cloud Computing, Mobile Cloud Computing, Back Propagation Neural Network, QoS, Cloud Service