A Study on Cloud Computing Quality of Service for Big Data: Contribution to Computation

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Abstract

Big data is one of the major pioneering technologies of our time. Big data is not only used to refer to the recent massive data growth in various sectors but also to describe a new computing model capable of managing efficiently and accurately the new generation of data sets whatever their volumes, types or characteristics. Running big data inside an organization can be a challenging mission as a consequence to the required infrastructure implementation and management higher cost. From this perspective, cloud computing radiates as a strong candidate to host and manage big data workloads efficiently and at a reduced price. On the one hand, cloud computing is a robust Information Technology solution acclaimed with it extensive computing abilities. On the other hand, moving big data to the cloud can be very complex due to Quality of Service criteria defined between the provider and the end-user. On this context, cloud computing platforms need to be re-evaluated and re-examined to offer a resilient foundation for big data storage and processing. Furthermore, cloud computing QoS stipulations has to be defined, weighed and mapped rationally to big data characteristics in order to highlight the most significant parts that requires specific consideration or optimization in pursuance of a cloud
computing service dedicated for big data or big data as a service.

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Index Terms

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Keywords

Big Data, Cloud Computing, Quality of Service, Service Level Agreement, Resources Scheduling.