Abstract

The fluctuating demands of software and hardware IT infrastructure have resulted in Cloud Computing to be the fastest growing trend in the Information Technology industry. From a business perspective, organizations adopt cloud computing as they no longer need to buy or maintain expensive and energy-draining equipments. IT administration including licensing issues, software updates and IT security management, all are taken care by the cloud service provider. Removal of this administrative burden allows organizations to concentrate on their core business and be more productive. These characteristics have increased Cloud Computing market share but along with the complexity of cloud has also increased. Now it has becomes
more difficult to develop an efficient and highly flexible cloud platform. As web is moving
towards Web 2.0 (Semantic Web), it is shifting towards representing things as per their
meaning (semantic representation). Cloud Computing is totally based on internet for any
possible functioning. It thus becomes mandatory for cloud computing to adopt itself according
to the future trends. This paper presents an Ontology based Cloud Framework. The framework
demonstrates that by using ontology based architecture cloud can be easily accessed and
updated using semantic web queries and the administrative burden of the cloud provide can be
reduced considerably.

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Index Terms

Computer Science
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Keywords

Cloud Computing  Ontology  Semantic Web