



An Efficient and Trustworthy Resource Sharing Platform for Collaborative Cloud Computing

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Abstract:

Software as a Service (SaaS) is an important flavor of cloud computing to provide comprehensive Business emulsion. modernization in cloud computing are foremost to a promising future for cloud association, where wide-reaching spotted distributed cloud resources belonging to diverse organizations or individuals are collectively used in a compliant manner to provide services. —The collaborative cloud computing(CCC) which is collaboratively supported by various organization (Google, IBM, AMAZON, MICROSOFT) offers a promising future for information rescue. Human beings look after to keep things simple by moving the complex feature to computing. As a consequence, we prefer to go to one or a limited number of sources for all our information needs. In contemporary scenario where information is replicated, modified (value added), and scattered geographically; retrieving information in a suitable form requires lot more effort from the user and thus difficult. For instance, we would like to go directly to the source of information and at the same time not to be burdened with additional effort. We propose a novel idea to utilize SaaS in the academic sector as an application, cloud campus and also to incorporate collaborative cloud computing (CCC) platform in four tasks: User and Service identity management, overall QoS based resource selection, resource overload control, feedback system.

Keywords – Cloud computing, Education Software as a Service (ESaaS), Cloud campus, Cloud collaboration.

I. Introduction

Nowadays, college systems mainly has construction of campus networks and information management system. The traditional Campus management systems are notable for inefficient communications and duplicative systems and even small universities bear the burden of redundant bureaucracy data and sensitive information. First of all data exchange standards of most colleges are out of date. The lack of national information /technology standards leads to information islands. Campus network cannot be connected to each and there is a difficulty of

sharing resources with others. Second, the problem of management system is obvious, institutional issues and management of institutional issues are main factors of affecting college information system. Cloud computing is a great platform for business applications and serves as a resource pool that constitutes large number of computer resources to serve the needs like data storage and other software services. Cloud collaboration is a newly emerging way of sharing and co-authoring computer files through the use of cloud computing, whereby documents exist uploaded toward central "cloud" for storage, anywhere they can then be accessed by others. modern cloud collaboration technologies comprise permissible users to upload and comment and collaborate on documents and still amend the document itself sprouting the document inside the cloud.

II. Motivation

The greatest motivation behind the inception of campus cloud is to bridge the technology gap between the students and the college resources. The students are not aware of the available resources and thus reduces the utilization of the resources. The way the professionals are groomed in conventional colleges are not meeting the expectations of the outer competitive world. Cloud campus empowers the student to learn on his own terms, at his own pace, wherever and whenever student's wants it. Students enjoy higher mobility as they can easily access educational services using a netbook. Cloud campus takes students beyond the traditional method of student-teacher relationship. Benefits of cloud computing for educational arena are listed below; With cloud computing, colleges can enhance their technology infrastructures to education and industries for research advancements. The extended reach of cloud computing technology enables organizations to teach students through innovative new ways and help them manage projects, assignments and massive workloads. When students educated through cloud campuses enter the corporate workforce they will better understand the value of growing technologies. Cloud computing allows

students and teachers to use applications without manually installing them on their computer. It also allows to access saved files from any computer with a connection to Internet.

III. Problem Statement

The traditional educational systems suffer from redundant workflows and disorganized records are all too common among on-site and paper-based systems. No proper utilization of resources and less communication. To implement an application using collaborative cloud computing platform for campus management system that helps to improve utilization of college resources and to simplify and centralize all the activities, communications and interactions taking place within the campus and offcampus. "cloud campuses are needed to meet India's growing demand for quality education" quoted by Shashi Taroor, minister of human resource department, India [2].

IV Proposed Work

Introducing a CCC platform with integrated Information retrieval from cloud. It can achieve enhanced and joint resources management across distributed resources in CCC. Retrieving information in a suitable form requires lot more effort from the user and thus difficult. For instance, we would like to go directly to the source of information and at the same time not to be burdened with additional effort. This is where, we can make use of learning systems (Neural Network based) that can intelligently decide and retrieve the information that we need by going directly to the source of information. By training the network to start this process the initial weights are chosen randomly. The common type of artificial neural network consists of three groups, or layers, of units: a layer of "input" units is connected to a layer of "hidden" units, which is connected to a layer of "output" units. Which makes recently draws attention upon Internet users and information providers This also, reduces single point of failure and eliminates bottlenecks in the path of information flow, Reduces the Time delay and it provide remarkable ability to overcome from traffic conjection complicated patterns. It makes Efficient information retrieval approach for collaborative cloud computing. Advantages of Background 1. Multi-QoS-oriented resource selection algorithm 2. Increase efficient information retrieval system. 3. Avoid Traffic Conjunction 4. Reduce Time Delay.

Results And Analysis

We tested the proposed work with the cloud campus application. We created server and client applications using web services in service oriented architecture and accessed server via 20 nodes connected in same network with the server and

calculated the working and efficiency of the proposed work. Figure 3 shows overall QoS value obtained from harmony system and our proposed system for same set of values. While harmony takes into account only current QoS value from vendor, our proposed system calculates QoS by weighted average from previous QoS, current QoS and feedback QoS. This helps the user to use service which has maintained standard QoS.

Conclusion:

In this paper, we propose a collaborative cloud computing platform for campus cloud and education sector applications. In CCC, the resource management and reputation management are done for mutual interactions for efficient resource sharing among clouds. The multi-QoS-oriented resource selection module helps users to choose resource providers that offer the highest QoS attributes. The resource overload control module gives preferences for low priced resources. Also, feedback system helps providers keep their reputations high by getting feedback from users to know its performance from time to time and keep updated.

Future Work:

In our future work we address the issues with real time deployment of the research work in large scale, concentrating on the security issues with multi clouds. And also implement load balancing for better efficiency and management of cloud resources.

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