

Social Cloud Computing: Resource Sharing Using Preference Based Technique

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ABSTRACT: With the increasingly ubiquitous nature of Social networks and Cloud computing, users are starting to explore new ways to interact with, and exploit these developing paradigms. Social networks are used to reflect real world relationships that allow users to share information and form connections between one another, essentially creating dynamic Virtual Organizations. . Here we use Matching algorithm to matches the user's friend. The user's friends are given request to uses the remaining memory. By using the Preference matching technique to matches which user will give request as earlier to the user to access the remaining space in the server. Based on the priority only allocates the remaining space to other user.To allocate remaining space to the requestor based on the preference based techniques.**Index Terms:** Virtual Algorithm, Matching Algorithm

I. INTRODUCTION

Social Cloud is an amalgamation of Cloud Computing, Volunteer Computing and Social networking .In other words, Social Computing is the collaborative and interactive nature of online behavior. Since computing has increasingly been assumed to be online, online behavior has increasingly assumed to be social. Social networking has become an everyday part of many peoples' lives as evidenced by the huge user communities. Some communities even exceed the population of large countries, Cloud computing has garnered praise for many reasons. A social compute cloud is" a resource and services sharing framework utilizing relationships established between members of a social network".

The structure of a Social Network is essentially a dynamic virtual organization with inherent trust relationships between friends. A social compute cloud is" a resource and service s sharing framework utilizing relationships established between members of a social network".The structure of a Social Network is essentially a dynamic virtual organization with inherent trust relationships between friends.

If the cloud server allocate some memory space for one particular user, the user uses the memory, there are small memory spaces remaining in the allocated memory. For example Social Storage Clouds can be used to store/share data and information (for example academic papers, scientific workflows, datasets, and analysis) within a community.

There are a number of advantages gained by leveraging Social networking platforms, in particular gains access to huge user communities, can exploit existing user management functionality, and rely on pre-established trust formed through user relationships huge user communities, can exploit existing user management functionality, and rely on pre-established trust formed through user relationships.

1.1 BRIEF HISTORY OF SOCIAL COMPUTING

Social networks are so popular. Nine of the twenty most popular sites on the web are for social networking. The top ten online social networking websites have more than 650 million of unique visitors per month in total. There are multiple instances of Social network and Cloud computing integration.

However, most examples use Cloud platforms to host Social networks or create scalable applications within the Social network. For example, Facebook users can build scalable Cloud based applications hosted by Amazon Web Services. Social Clouds use social networks as mechanisms for efficient collaboration, as users leverage their existing networks to share capabilities and resources. To help define the context of a Social Cloud and the roles of trust, it is briefly describes the structure of a Social Cloud as a sequence of social and cognitive processes. The main design of Social Cloud is very simple, where complexities are hidden in design choices and options.

In Social Cloud, the computing overlay is bootstrapped by the underlying social structure. The series of recently reported Views show potential of Social Cloud to act as complimentary to other computing paradigms such as volunteer computing, Cloud computing or Grid computing. In Cloud computing, provider and consumer are beneficiary, in Grid computing, virtual organization members take benefit form resource sharing whereas in Volunteer computing, scientific projects benefited by voluntarily shared resources.

II. SYSTEM ANALYSIS

EXISTING SYSEM

Social networks are used to reflect real world relationships that allow users to share information and form connections between one another, in the form of static way.

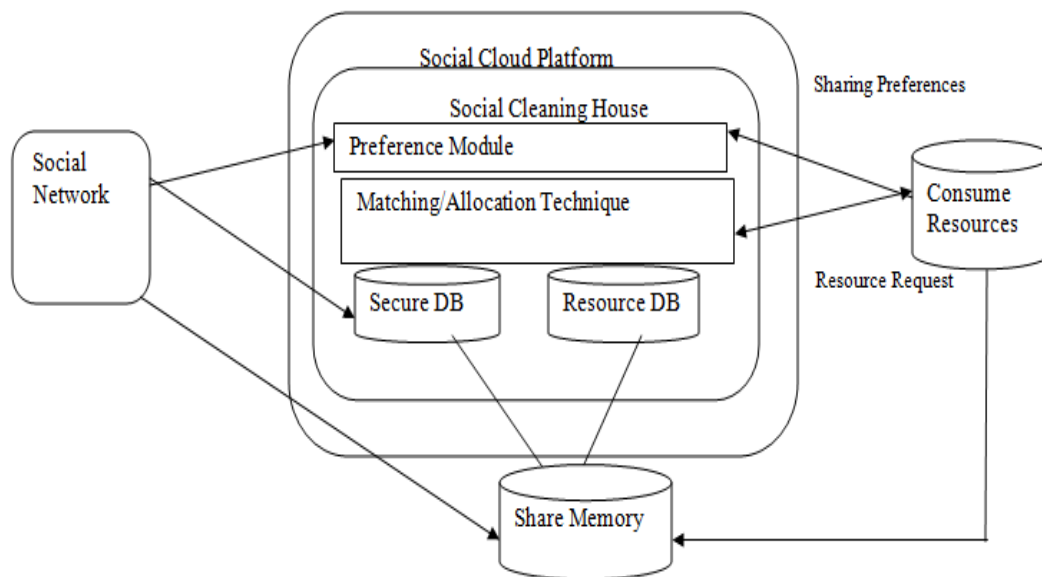
PROPOSED SYSTEM

We are currently living in the age of communication where millions of people are connected through the Internet. The rapid growth of these social networks has given rise to marketing and customer relationship opportunities for businesses, and large datasets for analytics. In the cloud server will allocate virtual memory to the different server

2.1 ADVANTAGES OF PROPOSED SYSTEM

1. In this we use Allocation technique to allocate the remaining memory to the user's friend.
2. The above process will based on the Preference based Technique to allocate the remaining space to the first requester.

3. SYSTEM ARCHITECTURE



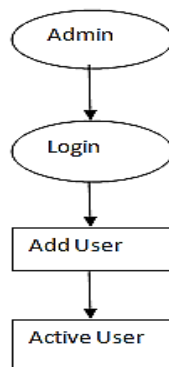
Architecture Diagram

III. MODULES

3.1.1 ADMIN AUTHENTICATION

This module explains the Admin process in this project. Admin must have some memory for his/her organization. And the admin will allocate memory for every registered user. And if any user need additional memory, admin will give allocate the space for the remaining user's memory, based on the priority.

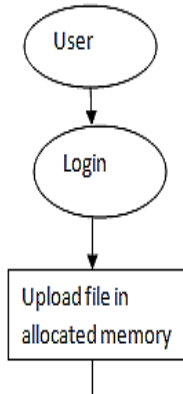
Admin:



Admin Authentication Module

3.1.2 USER AUTHENTICATION

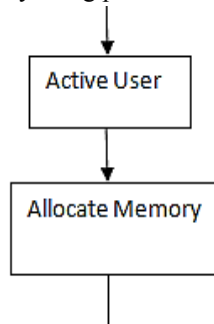
This module explains the user part in this project. In this user have some memory space in the cloud. If a user wants to access the space or data which is stored in a cloud, he/she should register their details first. These details are maintained in aDatabase. If the user is an authorized user, he/she can access the data, by using userId and password, which has been stored by database.



User Authentication Module Diagram

3.1.3 USER SPACE ALLOCATION

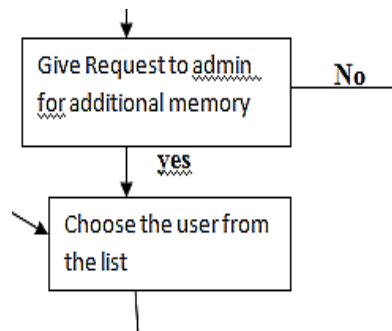
Every registered user has some memory space in the cloud server. If the user wants to access the memory space he/she must login to the Cloud server. The registered user may use some spaces in the Cloud server. The remaining memory will be in the same server. So the registered user may allocate the remaining memory to the user’s friend based on the priority using preference technique.



User Space Allocation Diagram

3.1.4 FILE ACCESS DETAILS

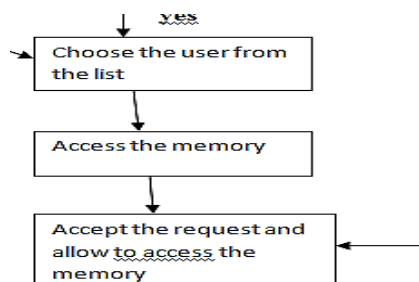
After allocate the file, the registered user may upload the file in the allocated space, and view the files and download the files. If any user needs additional memory, he/she will give request to the admin. Admin will check the remaining user’s memory details in the database and then show the list to the requested user’s database.



File Access Details diagram

3.1.5 SHARING ACCEPTANCE

In this module explains the sharing acceptance of the user from user's friend. It means the user's friend may share the memory in the server. And then the memory will be added to the requested user's database, at the same time given user's memory will get reduced. If the give users need his/her memory again he/she give request to the admin to retrieve the memory.



IV. SYSTEM TESTING

Testing is performed to identify errors. It is used for quality assurance. Testing is an integral part of the entire development and maintenance process. The goal of the testing during phase is to verify that the specification has been accurately and completely incorporated into the design.

4.1 Validation Testing

Validation test succeeds when the software functions in a manner that can be reasonably expected by the client. Software validation is achieved through a series of black box testing which confirms to the requirements. Black box testing is conducted at the software interface.

4.2 Performance Testing

Performance testing determines the amount of execution time spent in various parts of the unit, program throughput, and response time and device utilization of the program unit. It occurs throughout all steps in the testing process.

4.3 User acceptance Testing

Final stage, before handing over to the customer which is usually carried out by the customer where the test cases are executed with actual data. The system under consideration is tested for user acceptance and constantly keeping touch with the prospective system user at the time of developing and making changes whenever required.

4.4 Black Box Testing

Black Box Testing is testing technique having no knowledge of the internal functionality/structure of the system. This testing technique treats the system as black box or closed box. Tester will only know the formal inputs and projected results.

4.5 White Box Testing

White Box Testing – Java using JUnit and Eclipse is designed for students seeking entry into rapidly expanding market of professionals who can understand, debug, and develop Java code in addition to being able to test application components using industry leading framework like JUnit.

V. CONCLUSION AND FUTURE ENHANCEMENT

CONCLUSION

This project is focused on methods for the allocation of resources within a social cloud. However, once users have been allocated one or more resources, they need to use their social cloud to create dynamic clouds and build distribute applications. We have presented a social compute cloud: a platform that enables the sharing of infrastructure resources between friends via digitally encoded social relationships. Using our implementation, users are able to execute programs on virtualized resources provided by their friends. To construct a social compute cloud, we have extended Seattle to access users' social networks, allow users to elicit sharing preferences, and utilize matching algorithms to enable preference-based socially-aware resource allocation.

FUTURE ENHANCEMENT

As future work, we will include additional ways to select for users to provide their preferences, as well as methods to detect them automatically from their social network.

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