Sharing infrastructure resources securely in social networks

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ABSTRACT

To run the application in the social network we need infrastructure which is provided by cloud service provider. Due to sharing of resources user can get access without any software installed. Because of sharing user can interact with each other. To avail this we need to allocate this resource for the betterment of user. Due to allocation, it defines how resources are allocated to social networks and cloud computing which helps to effectively utilized in the presence of user sharing.

Keywords: Social networks, Resource allocation, Cloud infrastructure.

1. INTRODUCTION

The aim of Social Cloud is to provide a mechanism for resource sharing. There is a relationship between user social networks though Gmail, Chatting, Whatsapp. The main aim of this system is to share the resource rather than selling the resources. There is an agreement between WhatsApp and Facebook for sharing in social networks. In the recent convention of Europe on opt-in basis has decided to secure the privacy of personal data by using face recognition. After the opt-in, the marketer will keep on sending the material or messages until the recipient chooses to opt out.

Simultaneously, the owner of a social network is to share the resource for friend circle for the increase market space. The structure of SN is based on the trust between friends. On belief of a number of friends enroll their data on the social network. Same way social service can be applied to Feedback System in the educational field. It uses databases to increase the quality of institute, also get information related departments, campus selection. Also gives details of various courses available with national accreditation.

The web search engine portal provides useful information for these people those looking for the quality purpose on the web.

If the search engine is not able to provide convenient data to the user then Personalized web search (PWS) is user to provide best search result which is useful for individuals. User information has to be collected and investigated to figure out the user purpose behind the issued query A set of users of a social network bring about resource sharing through support. Coordination system assists in cooperation among users.

2. ABOUT THE SYSTEM

Cloud computing technologies use a variety of applications like storage and file sharing which provide trust to the end user. For example, Apple iCloud which provides is a cloud-based file-syncing and storage solution that enables users to store files in the cloud. The stored files are automatically synced to all devices in the account including both Windows and Mac PCs. The service comes with offerings such as the iCloud Photo Library and iCloud Drive, where you can keep all your files stored securely and updated everywhere. The Family Sharing feature lets you easily photos, movies, music and more with your family members. Find My iPhone helps you find your Apple device if you lose it.

Loud is built with industry-standard security technologies, employs strict policies to protect your information, and is leading the industry by adopting privacy-preserving technologies like end-to-end encryption for your data.
Cloud secures your information by encrypting it when it's in transit, storing it in iCloud in an encrypted format, and using secure tokens for authentication. For certain sensitive information, Apple uses end-to-end encryption. This means that only you can access your information, and only on devices where you’re signed in to iCloud. No one else, not even Apple, can access end-to-end encrypted information.

2.1 End-to-end encrypted data

End-to-end encryption provides the highest level of data security. Your data is protected with a key derived from information unique to your device, combined with your device passcode, which only you know. No one else can access or read this data.

These features and their data are transmitted and stored in iCloud using end-to-end encryption:
- iCloud Keychain (Includes all of your saved accounts and passwords)
- Payment information
- Wi-Fi network information
- Home data

To use end-to-end encryption, you must have two-factor authentication turned on for your Apple ID. To access your data on a new device, you might be required to enter the passcode for an existing or former device.

2.2 Two-factor authentication

Apple recommends that you turn on two-factor authentication for your Apple ID. With two-factor authentication, your account can only be accessed on devices you trust, like your iPhone, iPad, or Mac. So when you want to sign in with your Apple ID on a new device for the first time, you need to provide two pieces of information—your password and the six-digit verification code that's automatically displayed on your trusted devices.

The main objective of resource allocation is to communication, cooperation, and coordination. But the disadvantages of the existing system like Twitter, LinkedIn, and Facebook are lack of security & privacy, a large amount of Data transmission across the social network is not possible and is uneconomical. Here, we propose a system (Social Compute Cloud) by integrating the advantages of cloud computing and social networks. The advantage of this system is that resource sharing is possible and is allocated to users based on preference. It facilitates sending of a large amount of data across social networks. It provides more security and privacy.

2.3 Use of secure tokens for authentication

When you access iCloud services with Apple’s built-in apps authentication is handled using a secure token. Using secure tokens eliminates the need to store your iCloud password on devices and computers.

3. LITERATURE REVIEW

Here we used some basic concepts from the following papers.

1) A Survey of Cloud Computing and Social Networks in 2013
   This paper explains the concept of Cloud computing which shifts the computing resources to a third party, eliminating the need to purchase, configure and maintain those resources. As a result of which operational costs in software, hardware, and human effort are lowered and many companies are considering the use of cloud services. This paper focuses on the current issues in cloud computing and social networks and how these technologies are being used together.

2) On Sharing Infrastructure Resources using Online Social Networks in 2015
   This paper introduces concepts for Online Social Network (OSN) and Cloud computing. An Online Social Compute Cloud is intended to empower access to flexible figure abilities given through a cloud fabric built over resources which are provided by socially connected users. An OSC is provides virtualized resources that secure access to contributed resources which include CPU time, memory and disk/storage of user through which they are able to execute programs and applications.

   This paper gives a survey of MCC which integrates the cloud computing into the mobile environment and overcomes obstacles related to the performance (e.g., battery life, storage, and bandwidth), environment (e.g., heterogeneity, scalability, and availability), and security (e.g., reliability and privacy) discussed in mobile computing. It discusses the advantages of cloud computing like improving data storage capacity and processing power. Improving reliability, dynamic on-demand provisioning of resources on a fine-grained, self-service basis etc.

4) Social Based Volunteer Computing For Sharing Cloud Resources
   This paper focuses on a system (Social Compute Cloud) by integrating the advantages of cloud computing and social networks. A Social Compute Cloud is a platform for sharing infrastructure resources within a social network. Users can download and install a middleware, leverage their personal social network via a Facebook application, and provide resources to, or consume resources from, their friends through a Social Clearing House. The two advantages of this system i.e. Users should not have to pay for the services offered by a Social Cloud platform and the resources should be allocated in users based on preference have been exploited to develop our proposed system.
4. CONCLUSION

Social Compute Cloud provides a platform in a friend to maintain a social relationship. To achieve this enable the sharing of infrastructure resources. If any friend wants some resource then others can make available this resource from virtualized resource to run the program.

Using our implementation, users are able to execute programs on virtualized resources provided by their friends resource supply and demand do not fit to a batch allocation model EC2 encourages scalable deployment of applications by providing a web service through which a user can boot an Amazon Machine Image (AMI) to configure a virtual machine, which Amazon calls an "instance", containing any software desired. A user can create, launch, and terminate server-instances as needed, paying by the second for active servers – hence the term "elastic". EC2 provides users with control over the geographical location of instances that allows for latency optimization and high levels of redundancy.

5. REFERENCES