International Journal of Emerging Technology in Computer Science & Electronics (IJETCSE)
ISSN: 0976-1353 Volume 19 Issue 2 – JANUARY 2016.

SCC: PREFERENCE BASED MATCHING FOR RESOURCE SHARING AND CONTENT FILTERING IN SOCIAL NETWORKS

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***Abstract*--All over the world people are communicating by using social networks. Users establishing social relationship, exploring information, creating communities and sharing content. Present research includes and simplifies one main feature for users to share their own services and resources and content via social networks. We propose a social compute cloud which provides cloud infrastructure through relationship of friends. In this, resource holder it means user provides virtualized containers on their personal computer or smart device to their social network. But unfortunately it is very difficult to find users willing to share their resources and posting content is also displayed there is no user content based preference. To overcome this problem we use introduce preference based matching to social cloud resource allocation and for content filtering, text classifier technique is used to filter the posted content in social network.**

Keywords:Preference based matching, Text classification technique, resource sharing and content filtering

I. INTRODUCTION

Cloud computing has garnered praise for many reasons, most notably due to its ability to reduce overheads and costs for consumers by leveraging economies of scale to provide infrastructure, platforms and software as services. Infrastructure providers such as Amazon Elastic Compute Cloud (EC2) rid users of the burdens associated with purchasing and maintaining computer equipment; instead compute resources can be out-sourced to specialists and consumers can obtain access to an "unlimited" supply of resources. Despite its benefits, many businesses and end users are put off by an array of (perceived) uncertainties, as identified in numerous studies. Two key issues are the notions of trust and accountability between resource consumers and providers. In this context, trust and accountability encapsulate several different aspects such as security, privacy, ethical practices, transparency, protection of rights, and issues concerning compensation. Addressing these concerns is a significant undertaking, and consequentially, many international research programs have emerged, covering issues such as provider certification and service level agreements. Cloud computing can be simply defined as sharing of computing resources that may be either hardware/software which are serviced over the internet."Cloud computing is named so because of the utilize a cloud shaped representation as a notion for specifying difficult infrastructure in system models. Cloud is mainly an expansion to the OOP concept of abstraction. It hides the complex operational details from the end users. The end users are provided with an interface, which just receives the inputs and delivers the outputs. This complete background process of processing the input is hidden from the end user.

A social cloud is "a resource and service sharing framework which uses relationships between members of a social network". Based on these relationships established which are digitally encoded, a dynamic environment can be created which resembles a cloud-like scenario. Due to the extent use of social networks, we take this as a platform for resource sharing using the concepts of cloud computing. We make use of Seattle which acts as a middleware. Seattle works on end users system on diverse platforms in safe manner. Users install and run Seattle with no impact on security and performance. So, by the use of Seattle each user executes this in a virtual machine without affecting the other processes in the end user system. As we use the social networks as a platform we need to have certain preference based on with whom their resources can be allocated to and from whom they can consume. We also have used content filtering technique that will filter out unwanted contents that are posted.

II. MOTIVATION

The main motivation of the project comes from thesocial clouds and social networking sites. When the user wants to make his resource to be shared within somebody in social network and also prevent abuse contents to be posted on the users wall we provide these with preference based matching and text classifier technique.

III. CONTRIBUTIONS

In this paper, we mainly focus on the user preference and content filtering and how it is going to be viewed in the end user for sharing by preference in social cloud and how the content is filtered which is described to be abuse.

IV. EXISTING SYSTEM

Existing system proposed a social compute cloud which enables the sharing of resources between friends via social relationships. This enables the users to execute programs on virtualized resources provided by their friends.
The existing system focuses on how social networks influence the construction of cloud computing infrastructures and how resources can be allocated among users. Hence, they proposed a hybrid approach which improved reliability and availability using services like Amazon S3.

V. DISADVANTAGES

- There is no preference considered for resource sharing among users in social network.
- There is no content based preference..
- It does not remove unwanted content among users of social network

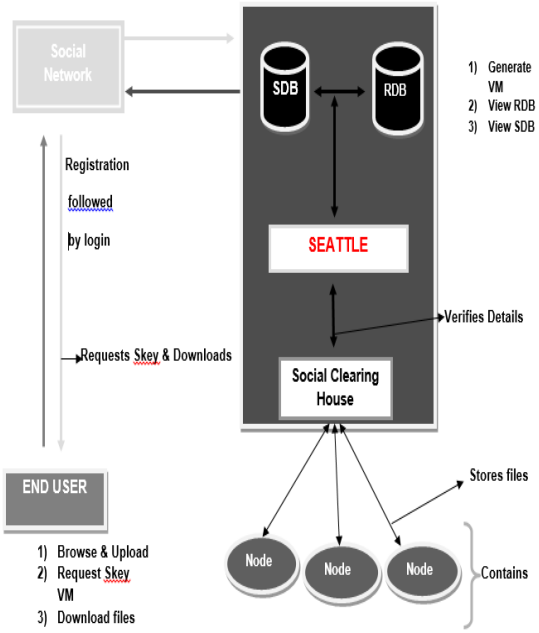
VI. PROPOSED SYSTEM

We In proposed system, we propose an enhanced resource sharing in social cloud and provide service sharing framework, utilizing relationships established between users of a social network. Users will have explicit preferences with whom their resources can be allocated to, and from whom they can consume resources. To support user preferences, we use preferencebased resource allocation which provides effective resource allocation. For content filtering machine learning approach named as content filter classifier which removes unwanted content based on user preference.

VII. ADVANTAGES

- Resource sharing among users in social network is made effective.
- It removes unwanted content among users of social network.
- It enables less communication overhead.

VIII. PROPOSED ARCHITECTURE



System architecture

IX. ALGORITHMS AND TECHNIQUES

Algorithm: **Text Classification Algorithm:**

//P-Preference
//C-Category
//d-Document
//T-Term

Input:
User preference P
Output:
Filtered Content based on user preference.
Procedure:

- Initially we define certain words to form a category c.
- Each rule is classified by positive literals t ∈ d where T is a conjunction of terms t1 ^ …. ^ tn and d is document.
- A decision matrix is created where each aij will be assigned a value from {0,1}
  - A value of 1 for aij indicates a decision that dj belongs to ci
  - While a value of 0 indicates a decision that dj does not belong to ci.
- a set P of positive examples consisting of ground logical facts of the form d ∈ c, I.e., document d belongs to category c, given P,

- the set N of negative examples consists of the facts d ∈ c that are not in P

X. MODULES

Here the following are the three modules that are used in the proposed system.

1. Social cloud platform
2. Social Network
3. Node Manager
4. End user

1. Social cloud platform:

Here in this module, authorized user can perform the following functions.

Create VM: Here an authorized user can create a virtual machine, which requires the user to specify the total memory and also threshold memory.

View SDB: Here an authorized user is allowed to view the social database which displays all the users who are registered in the social network.

View RDB: Here an authorized user is allowed to view the resource database which contains all the information regarding the total nodes and their corresponding memory status.

Block List: Here an authorized user is allowed to view all the unauthorized users who attempted to access the files to whom they were not permitted.

2. Social Network:

Here in this module, authorized user can perform the following functions.

View all users: Here an authorized user is permitted to view all users who are registered with the network.

Give access to SCP: Here an authorized user is displayed with the list of all users who are registered with network and user can individually give access permissions to each list of users to access his resource.

View groups: Here an authorized user is allowed to view all groups that define each node that belongs to each group.

3. Node Manager:

This module consists of all nodes that are within the network and also provides a functionality to view the details of each node.The node manager ensures that users have the appropriate credentials to interact with a particular VM running on the host system.

View Node Details: The user can view the details of each node that will display the total memory and the remaining memory.

***4.End User*:**The following are the functionalities that are used by the end user.

Browse Files: Here a user can browse for the files that he wants to be stored in a virtual machine.

Upload: Here a user is allowed to upload a file onto a virtual machine which is registered on the network.

Download: Here a user can download a file from his node if the content owner has specified the file as shared.

Comment: Here a user is allowed to comment on other user's wall. The comment will be posted on if it doesn't have the set of words that are specified with the block of words that are to be filtered.

Add word: Here a user can add a word of his choice that he feels abusive and can define it under each category.

XI. CONCLUSION

In this we have presented a preference based matching which will consider users preference in sharing their resources. This will ensure users willingness in sharing their resources. The proposed system has a social compute cloud which provides cloud infrastructure through relationship of friends. In this, resource holder it means user provides virtualized containers on their personal computer. The basic sharing concept when applied to a social network faces multiple issues in managing the owner's willingness. Consider an example where in there are 100 friends for a user of which they will be classified into groups. When this user shares some resource then he may be willing to share it with particular friend. So, ours proposed preference based matching is used to take the users willingness and then implementing it accordingly with the users preferences to access the cloud platform.

The other main feature that is presented is a content filtering technique which will filter the words that are described to be abuse by the user. In social networks, we come across many posts that are abuse which will be posted by other users. To overcome this we implemented a content filtering technique that will take all words that a user feels to be abuse and categorize each word into categories. This technique ensures that no post containing the described set of words will not be posted onto the walls of the user.

As future work we can implement multiple ways of taking users preferences by defining the preference ranking while allocating the resources. This can be automatically mined by the strength of the relationship. We can introduce redundancy concept across multiple cloud storage platforms in case of cloud failures such that availability of the resource is maintained.

REFERENCES

[1] CSimon Caton, Christian Haas, Kyle Chard, Kris Bubendorfer and Omer F. Rana, "A Social Compute Cloud: Allocating and Sharing Infrastructure Resources via Social Networks," "IEEE Trans. Services Computing, VOL. 7, NO. 3, JULY-SEPTEMBER 2014

[2] KK. Chard, K. Bubendorfer, S. Caton, and O. Rana, "Social Cloud Computing: A Vision for Socially Motivated Resource Sharing," IEEE Trans. Services Computing, vol. 5, no. 4, pp. 551-563, Jan. 2012.

[3] Kejun Dong and Yi Shen "A Hybrid Content-Based Filtering Approach: Recommending Microbloggers for Web-Based Communities" IEEE Trans. Services Computing, no. 3, pp. 1254 - 1258, Aug. 2013.

[4] K. John, K. Bubendorfer, and K. Chard, "A Social Cloud for Public eResearch.," Proc. Seventh IEEE Int'l Conf. Science, 2011.

[5] A. Thaufeeg, K. Bubendorfer, and K. Chard, "Collaborative eResearch in a Social Cloud," Proc. IEEE Seventh Int'l Conf. E-Science (e-Science), pp. 224-231, Dec. 2011.

[6] M. Armbrust et al., "A View of Cloud Computing," Comm. ACM, vol. 53, no. 4, pp. 50-58, 2010.