A Social Compute Cloud Allocating and Sharing Infrastructure Resources via Social Networks

Social network platforms have rapidly changed the way that people communicate and interact. They have enabled the establishment of, and participation in, digital communities as well as the representation, documentation and exploration of social relationships. We believe that as 'apps' become more sophisticated, it will become easier for users to share their own services, resources and data via social networks. To substantiate this, we present a Social Compute Cloud where the provisioning of Cloud infrastructure occurs through "friend" relationships. In a Social Compute Cloud, resource owners offer virtualized containers on their personal computer(s) or smart device(s) to their social network. However, as users may have complex preference structures concerning with whom they do or do not wish to share their resources, we investigate, via simulation, how resources can be effectively allocated within a social community offering resources on a best effort basis. In the assessment of social resource allocation, we consider welfare, allocation fairness, and algorithmic runtime. The key findings of this work illustrate how social networks can be leveraged in the construction of cloud computing infrastructures and how resources can be allocated in the presence of user sharing preferences.

Existing System

With the increasing pervasiveness of social network platforms, adoption of social network structures for different types of collaboration is becoming more common. Key examples are: co munity and scientific portals like Polar GRID and ASPEN; social science gateways; social storage systems like Friend store, and omemo.com; network and compute infrastructure sharing web sites such as fon.com; models to share insurance policies amongst social peers (friendsurance. de); and where social networks emerge due via collaboration. McMahon and Milenkovic proposed Social Volunteer Computing, an extension of traditional Volunteer Computing, where consumers of resources have underlying social relationships with providers. This approach is similar to the nature of a Social Compute Cloud, but it does not consider the actual sharing of resources, as there is no notion of bilateral exchange.

Proposed System

In the proposed system, the system presents a Social Compute Cloud: a platform for sharing infrastructure resources within a social network. Using our approach, users can download and install a middleware (an extension to Seattle), leverage their personal social network via a Facebook application, and provide resources to, or consume resources from, their friends through a Social Clearing House. We anticipate that resources in a Social Cloud will be shared because they are underutilized, idle, or made available altruistically.

System Specification

Hardware Requirements

- System : Any Pentium Processor.
- Hard Disk : 40 GB.
- Floppy Drive : 1.44 Mb.
- Monitor : 14' Colour Monitor.
- Mouse : Optical Mouse.

- Ram : 1 GB.

Software Requirements

- Operating system : Windows XP / Windows 7.
- Coding Language : Java (AWT,Swings,Networking)
- Data Base : MS Access / MY Sql.
- IDE : Eclipse - Galileo