



Security and Privacy issues in Social Network Services : An Overview

S.Thiraviya Regina Rajam¹ and S.Briito.Ramesh Kumar²

Research Scholar, St. Joseph's College (Autonomous), Tiruchirappalli¹

Associate Professor in Computer Science, St. Joseph's College (Autonomous), Tiruchirappalli²

Abstract: In the era of Internet technologies, social networking websites has witnessed thriving popularity. Computer mediated communication has changed the rules of social interaction and communication. Most social networking sites like Orkut, Facebook, Google+, Twitter etc. facilitates user's with the features like online interaction, sharing of information and developing new relationships etc. Online interaction and sharing of personal information in social networking sites has raised new privacy concerns. So, it requires an exploratory insight into user's behavioural intention to share information. The task resource manager is to identify better method to provide effective protection to improve security. This paper analyses security and privacy issues in social networking sites. The main aim is to enhance the user security and privacy which is the most important for the social network services. This paper is a survey which is more specific to exposes the social networks service models and issues in in network environment with respect to enhancement of security.

Keywords: Social Network, Security, privacy, Quality of Service(QoS) and Security Mechanism

I. INTRODUCTION

In the recent years, user's participation in the social networking sites has moved from its niche phenomenon to its highest level of mass adoption. The rapid growth of social networking sites under web 2.0 such as Facebook, Orkut, Google+, Twitter etc. facilitates million of individuals to build a public or semi-public profile with in a bounded system. Facebook has become most accessed website in the cyberspace today. Facebook statistics shows that it has 1 billion active user's as of October 2012 with 552 million daily active user's in average in June 2012 [1]. The active participation in social networking sites have changed the way people build their online personal network for computer mediated communication [2] [3]. The primary objective of social networking user's is to make connections, communication and maintain relationships. But latest trends shows social networking sites like Facebook is reshaping the way people communicate

Social Networks has lot issues to discuss in the network environment. But this paper concentrate the unsolved issues like security, trust and privacy. The new mechanism will solve the issues. This paper describes the Social Network Models and also security which is one of the key attribute for resource provisioning. section II contains the QoS issues, section III explains the background and related works. We conclude on section IV along with references.

II. ISSUES IN NETWORKS QOS

A. Security:

Network security addresses both physical and logical security issues across all the different service models of

software, platform and infrastructure. It also emphasizes about the delivery of services through service models. Network security comprises a broad range of security constraints from an end-user and provider's perspective, where the end-user will always prioritize the provider's security policy. That is the user always has a concern over how and where their data is stored and who has access to that data etc. A network service provider, on the other hand, takes care of these security issues ranging from physical security of the infrastructure to the access control mechanism, intrusion and detection mechanism and also the execution and maintenance of security policy.

B. Availability:

Availability is the degree to which a system or component is operational and accessible when required for use. In software engineering, availability is measured in terms of mean time between failures and mean time to repair. High availability typically is addressed by means of replicating servers and storage [22]. When a job is submitted to a Network resource, the resource is said to be unavailable in one of the following situations:

- A part of service of the resource is denied to the user.
- The resource is shut down.

C. Trust:

Trust is considered as the 'assurance' and confidence that people, data, entities, information or processes to function or behave in expected ways. Trust may be human to human, machine to machine or machine to human. At a deeper level,



trust is regarded as a criteria towards security or privacy objectives.

D. Privacy

Privacy is an important component of trust. The key issue is to enhance privacy by improving security. Security strategy is adopted in network environments to enhance privacy.

III. BACKGROUND

This section presents the existing security concepts, models, framework, algorithm and protocols.

Related works on social networks

Shijen et al [4] proposed method of detect collusive fraud group in online auctions. This method adopted two algorithm. The k-core clustering algorithm used to collect real auction cases and potential collusive fraud groups, and to discover the critical accounts of the groups by page rank algorithm. The auction fraud algorithm used to evaluate the risk of each accounts the group.

JichangZhiao et al[5] investigated the relationship between the strength and information propagation in online social networks. The empirical study proves three interesting finding strategies: the information pushing strategy, cost intensive strategy and the random selection strategy. The author explains by characterizing weak ties into positive & negative one and reveal the special bridge effect of positive weak ties.

A framework for exploring organizational structure in dynamic social networks proposed by Jangtao Qui et al [6]. The framework combines two algorithm: Page Rank and Random Walk. These two algorithm used to derive the community tree from social networks. The new tree learning algorithm developed to explore the organization structure dynamic social networks. Java language software was used for implementation.

Jeremy Pitt et al [7] proposed interleaving multi agent system & social networks for organized adoption. The open system has three models: Norm governed system: rule of social order, an opinion formation: rule of social exchange, mechanism design: rule of social choice. The logical model of the voting protocol used for computational formation.

RachaAjam et al[8] address the privacy issue in mobile social networks. The author explains about the idea of Mobile Social Networks Application and Location Based Applications. The Mobile Social Networks includes three approaches: Identity Server and Anonymous identifier, Virtual Individual Server for Mobile Services and Re-socializing social networks. These three approaches comparison evaluated on their performance such as

flexibility, operation protection, user anonymity and dependency.

The privacy enhancing social network mechanism proposed by Iain Parris et al[9]. The mechanism analysis of the privacy risk in social network routing. There are two complementary method: statisticulated social network routing and obfuscated social network routing. The performance evaluated by trace driven simulation parameter methods. And also they used three metrics: delivery ratio, delivery cost and delivery delay.

A system to filter unwanted messages from Online Social Networks(OSNs) user walls proposed by Macro Vanetti[10]. The key idea of the proposed system is support for the content based used preferences. The system allows OSNs users to have a direct control on messages posted on their walls. This is achieved through a flexible rule based system that allows users to customize the filtering criteria to be applied to their walls. Machine learning based text classification method used to detect automatically assign with each message a set of categories text contents.

MohdIzuan et al[11] presented systematic analysis of various risk to privacy in publishing of Social Network Data. These analysis includes three threat analysis: Data Representation, Background Knowledge and data mapping. The privacy breaches classified into identity disclosure attacks, sensitive link disclosure and sensitive attribute disclosure. The process of retrieving information from Online Social Networks(OSNs) using Multi Agent System(MAS) proposed by Rugayya Abdulrahman et al[12]. This paper provides a method to investigate situation which require a continuous observation of the user profile in order to track the changes that could help in understanding the structure of the OSNs. Online Social Retrieval algorithm used to speed up the extraction process of retrieval information. MySpace was selected domain for the purpose of experiment

IV. CONCLUSION

Social Networks has its own merits and demerits. Generally services are managed by the provider.

This paper gives a brief survey on security privacy issues of social network services enhancement through resource provisioning in network security environments. The study shows that issues directly affect the systems. Thus a security environment is to be achieved by improving the stronger security and increased privacy is possible. Efficient access control mechanism helpsto achieve high performance. Thus the study illustrates that effective resource utilization can be achieved with the help of security techniques

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BIOGRAPHIES



Thiraviya Regina Rajam S is doing her research in the Department of Computer Science, St. Joseph’s College (Autonomous), Tiruchirappalli, Tamil Nadu, India. She has 13 years of teaching experience. She has attended many International and National Conferences, and also various Seminar and Workshops.

Her broad area of research is ‘Networking’. She is presently working on security and privacy Issues in Networking. Her area of interest is Software Engineering, Data Structures and Algorithms, Unified Modeling Language, Computer Graphics and Mobile Computing.



Dr. Britto Ramesh Kumar S is an assistant professor of Computer Science at St. Joseph’s College (Autonomous), Tiruchirappalli. His research interests include software architecture, wireless and mobile technologies, information security and Web Services. He has

published many journal articles and book chapters on the topics of Mobile payment and Data structure and algorithms. His work has been published in the International journals and conference proceedings, like JNIT, IJIPM, IEEE, ACM, Springer and Journal of Algorithms and Computational Technology, UK. He awarded as a best researcher for the year 2008 at Bishop Heber College, Tiruchirappalli. He guides 8 Ph.D. research scholars and has completed a minor research project. He visited the countries like China, South Korea and Singapore.