

SECURITY ISSUES AND PERFORMANCE OF ONLINE SOCIAL NETWORKS

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Abstract- Using Social media is one of the trending things in the world today. They facilitate people to share each and every activity, their interests, and their circle of acquaintance with their family, friends, or even the unknown. These new media win the trust of consumers by connecting with them at a deeper level. With so much sharing, hackers and thieves have found very easy ways to steal personal information through these networking sites. This calls for advances in security protocols to safeguard against hackers. This paper discusses about the concepts of social media marketing, social media marketing strategies, and their security. We will also discuss some of the privacy and security concerns, attacks and their respective prevention techniques. In this paper we propose architecture for secure request response exchange of data between users.

1. INTRODUCTION

Social Media is the trend in the world now. The social media has brought a large change in communication between consumers and marketers. This has changed the marketing strategies and also made an impact on decision making by the customers. Every business, from a large industry to a small local shop are rapidly adapting social media marketing. Most of the company today are using email, online communities, blog marketing and websites for their interaction with their customers. Many of the marketing campaigns are done to a wide range of customers through social network. In today's date, Facebook is the leading social networking sites and which has more number of user. People share each and every activity, interest and their time spent with family, friends and this can be seen even by unknowns. There is no doubt that all the internet users are part of social networks and trend is absolutely increasing year by year. Most of the social network users post risky information. They are unaware of their privacy or maybe not concerned about their posted information's security. It is one platform for many users to post their day to day life like the places they have visited, food they have eaten etc. With so much sharing, hackers and thieves have found very easy ways to steal personal information through these networking sites. Many of the private and personal information are leaked by attackers by hacking social networking sites. This calls for advances in security protocols to safeguard against hackers.

2. SOCIAL MEDIA AND SOCIAL MEDIA MARKETING

Social media refers to the means of interactions among people in which they create, share, and/or exchange information and ideas in virtually built communities and social networks. The meaning of the term 'social media' can be constitute from two words. Media generally refers to advertising and the communication of ideas or information through publications/channels. Social implies the interaction of individuals within a group or community. Taken together, social media simply refers to communication/publication platforms which are generated and sustained by the interpersonal interaction of individuals through the specific medium or tool. Social media is today's most transparent public forum to discuss public relations and also to enhance friendship. Social networking takes place in an environment which is called as social media. Social media, is a two-way street that gives you the ability to read and communicate too. Social Media makes the transfer of message, photos, videos and audio, and also article and information among internet users. It has changed the way in which consumers make decisions. A successful campaign can be done to attract customers via social media. Before social media was just used to be in touch with their family or friends. But now, everything and anything is possible using social media. Not only photos or text messages, audio call to video call, also advertising of the product is also possible. People can visit site of their favourite company and all information about their present and upcoming product. Now a days, these sites also provide online buying of the customer's favourite product sitting back at home using new technologies which is more easier than time consuming typical style. With this, social media has created a forum for the interaction between customers and retailers online. Since diversified people use social media, there is much scope to reach all age and kind of people. It also provides growth in the business, since online shopping services attract many people.

Social Media Websites:

1. Social networking sites- Facebook, Google Plus.

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2. Micro-blogging sites- Twitter.
3. Publishing tools- WordPress, Blogger.
4. Collaboration tools- Wikipedia, WikiBooks.
5. Rating/Review sites- Amazon ratings.
6. Photo sharing sites- Flickr, Instagram, Pinterest.
7. Video sharing sites- YouTube, Vimeo.
8. Personal broadcasting tools- Livestream.

Any website which allows user to share their content, opinions, views and encourages interaction and community building can be classified as a social media.

Popular Social Media Tools and Platforms:

1. Facebook: It is the leading social networking sites and which has highest number of users. It is one of the best mediums for connecting people around the world. Estimation says that more than a million business advertise on Facebook .
2. Google Plus: It is a internet based social network of Google. It has features same as Picasa photo storing and sharing platform. We can search a content within Google plus and it also has an online photo editor.
3. Twitter: It is the No.1 micro blogging site. A social networking/micro-blogging platform that allows people in groups or individual to post short messages.
4. WordPress: It is an open source content management system. It is blogging platform hosted online by automatic. It is used by bloggers.
5. Blogger: it is a blog-publishing service that allows multi user blogs with time-stamped entries. Blogs are hosted by google.
6. Wikipedia: it is a free online social media, created and edited by volunteers around the world and hosted by Wiki Media foundations.
7. WikiBooks: It is a wiki-based Wikimedia projects hosted by wiki media foundation for the creation of free content E-Book text books.
8. Amazon Ratings: it is Amazon's standard star rating for a product. You can rate and comment on individual features of that product.
9. Flickr: Its web service and website for an image and video hosting. It is a popular website for users to share and embed personal photographs.
10. Instagram: It is a mobile and internet based free photo and video sharing application that allows users to apply digital filters, frames and special effects
11. Pinterest: It is a web and mobile application for sharing and categorizing images found online. It is designed to discover information on web mainly utilizing images and videos and gifs.
12. YouTube and Vimeo: Youtube is an video sharing website where millions of videos have uploaded and shared. Vimeo is also an video sharing platform where artists who have been able to use vimeo as a way to share and promote their work.
13. Livestreams: Video live streaming platform that allows the user to broadcast their videos and events to multiple devices such as web, IOS, android etc.

3. PRIVACY ISSUES

Privacy Issues are:

3.1 Security risks

Since social networking sites are the mostly used, it also has security risks associated with it. Security risks are increasing tremendously with the increase in use of social media. Most of the social networking sites as for personal information like user name, email etc in different social networking sites like facebook, twitter, LinkedIn etc. If there is lack of strong security techniques implemented then the personal data given is not secure.

3.2 Identity Theft

Attackers attach social media in different ways. Some of them attack by asking the user's permission or faking them. They ask permission to access the personal information and the user unknowing will allow to access. Then they acquire all the personal information and use it as they want. Attackers misuse the information easily without the user's knowledge.

3.3 Phishing

The main purpose of phishing is to harm economically. The attackers hack the personal information of the user by different means and retrieve personal information like the account number or the balance in the account so as to misuse it for his benefits.

3.4 Profiling Risk

Profiling risk is the risk associated with profile cloning. Attackers here make a second profile that looks exactly like the original one and try to fake people. They may even send requests to user's friends fooling them that it's the user's profile.

3.5 Fake Product Sale

The attacker may advertise a fake product in social networking site and try to sell it. They may ask for double amount or even by availing huge discounts. When the user tries to buy the products their payment information may go to the attackers. From which attackers can get profile information like account number, password etc which can be misused further.

4. PREVENTION STRATEGIES

There are so many prevention strategies. Some of them are:

1. User should not give all personal information. He should always think before he enter any information whether to add that information or not. User should always limit the amount of personal information that he post on social networking sites.
2. User should always know that whatever he add in his personal information can be accessed by anyone. That is why he should think before he post any information. Even the photos in social networking sites are public, hence he should not post his personal photos which can be utilized by others.
3. While in one way social networking sites are used to connect with friends. There is a second way where we find new friends everyday. User should be clever enough to think before accepting stranger's request. Sometimes people may even fake by using or cloning other's profile. Beware of those strangers who try to be extra friendly to the user.
4. User should not believe everything that is posted in social networking sites. It may be strangers who send friend request or even a product that is been sold online through some website. User should cleverly identify if the person or the product is fake. There might be misleading information also which may then put user in trouble.
5. Make sure that user has proper privacy settings. Always check the default setting in the site. It might not be in user's favour always. Try to avoid application usage if the user finds it suspicious.
6. User should make sure that the passwords given is very strong. Some website don't allow weak passwords. They ask the user to have both upper case and lower case alphabets including digits and also special characters. Also use an Anti-virus software which will protect user's computer against known viruses
7. Online friends should not be considered as real friends unless you have met them personally or have spent some time together. Beware of other than these friends. Always try to avoid them and don't message them if it not necessary. Also tell them frankly if you are not comfortable.

5. ARCHITECTURE

Figure below is the architecture of social networking site. It has 6 components like secret visitor, friend, social media user, application, database, virtual database (using view). This architecture gives the overview of working of social networking sites. We can also call it as Request-Response Architecture. This allows users to give permission or take back permission by accepting the request. This below architecture has 2 databases which provides two different information about the user. One is the actual database which is shown to user's friends and another is a virtual database which only contain basic information which cannot be misused which is shown to the unknown or secret visitors. Hence secret visitor cannot retrieve the personal information of the user. If the user wants to accept the request then he can choose the type of data he wants to show to that particular friend. he can either reveal him all the personal information if he is a trusted friend or he can just show the basic information. When there is a architecture then there is both advantage and disadvantage comes with it. Benefits of this architecture is that the user can feel safe since he's only revealing all his information in front of a trusted friend. User can customize his/her profile according to his wish. Drawbacks of this architecture is that there is a need for huge memory for both databases. There is also a chance that a trusted friend is sharing the information that the user revealed to the attacker knowingly or unknowingly. And also that even with the basic information the attacker can do profile cloning. Hence the architecture has both pros and cons.



6. CONCLUSION

This paper has revealed that for business sector social media will be very important and usage of social media is potentially benefits for their business. Business through social media has brought great impact in grabbing customers and increased profits. Business organisations should be interested not only in creation of relations with customers but in their strengthening and development as well, and to look for new ways to increase customer loyalty. Social media is rapidly transforming interactions and ways of communication in society, therefore business sector has to judge importance of social media appropriately and utilise it for communication with users. In the end, the only solution to social network privacy and security issues is to have some knowledge of hacking techniques. Do not post anything which is very precious and secretes always hide things from strangers. Before accepting all the friend request verify it and simply do not add everyone to the friend list. System should be clean and update. While using internet keep in the sense and never jump to the conclusion. And remember, there are no free lunches in this world. Social media is used by all the individual and business purpose. Today, its impossible to imagine with out social media from this online world. Blogging is very effective for organization branding and growth. Today social media is social media have exponential potential.

7. REFERENCES

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