

Study of Mobile Attacks on Different Platform and Its Solutions

Mohdshadab Shaikh

Research Scholar, MCA

Thakur Institute of Management
Studies, Career Development &
Research (TIMSCDR)

Digna Parmar

Research Scholar, MCA

Thakur Institute of Management
Studies, Career Development &
Research (TIMSCDR)

Vinita Gaikwad

PhD Director

Thakur Institute of Management
Studies, Career Development &
Research (TIMSCDR)

ABSTRACT

Today, in the increasing dependence on information and communication technologies, especially the Internet and mobile, for communications, one of the biggest problems the world unknowingly facing is that of cybercrimes. When it comes to mobile security, most mobile devices are a target waiting to be attacked. However, security controls are not always implemented on mobile devices, and it is unclear whether consumers are aware of the importance of enabling security controls on their devices. Even common people are not aware about in how many ways their mobile handheld devices can be hacked. There are various types of mobile operating systems available in mobile devices, every mobile operating system have their own security issues.

General Terms

Hacking, Mobile Attack.

Keywords

Mobile phones, hacking, cell phones attacks.

1. INTRODUCTION

Mobile phone security has become rapidly important in mobile computing. Because all the personal and business information nowadays stored in Smart phones [4]. Nowadays Smartphone is a communication tools for personal and business purpose, but also its used for planning and organizing their work and private life. Technologies have become the life line in the organization for communication and therefore they have become the source of new risks. Indeed, Smartphone store a good amount of confidential information to which access must be controlled to protect the privacy of the user and the confidential information of the company. All Smartphone are preferred targets of attacks. These attacks exploit weaknesses related to Smartphone that comes by default for communication like SMS, MMS, Wi-Fi, Bluetooth and GSM, which is global standard for mobile communications. There are also attacks that can happen from the web browser and operating system.

2. TYPES OF MOBILE ATTACKS & ITS SOLUTIONS[1]

1) Attack based on SMS and MMS

Attackers can also hack mobile phones to get details SMS and MMS of the users. Which is very confidential data?

2) Attacks based on the GSM NETWORKS

An attacker can try to eavesdrop on Wi-Fi communications to derive information like user's username & password [7].

3) Attacks based on vulnerabilities in software application other attacks are based on flaws in the OS or applications on the phone.

a) Web browser[6]

b) Operating system

4) Attacks based on hardware vulnerabilities:

a) Electromagnetic Waveforms

b) Juice Jacking

c) Password Cracking

d) Malicious software (malware)

3. SOLUTIONS

1. Use of encryption and decryption technology
2. Use of firewall technology
3. Don't access public hot spots
4. Make sure that identifier broadcasting is off
5. Protecting the confidentiality
6. Preventing alteration of intercepted communications
7. Signal-hiding techniques
8. Securing wireless access points
9. Countermeasures to secure wireless access points
10. Eliminate rogue access points
11. Secure configuration of authorized access points

4. METHODOLOGY OF THE STUDY

This research is about how many people know about mobile hacking and its solutions related to it. Investigation of the hackings types and study of solution techniques. A organized survey form was outlined and dispersed to the technical and non-technical people of various ages. This review was directed at taking after spots.

5. RESULTS AND DISCUSSION

The point of the survey is to find the ratio of the people who is aware about mobile hacking or not. To concentrate on the issues and difficulties publics confront while facing any kind of mobile attacks. Thus, the goal here is to show the statistics of mobile hacking and its solutions. So to study this, we gathered the factual information by taking a survey among the different type of technical and non-technical people. This implies most extreme number of users were between the ages of 21 - 27 years. [3]

5.1 Survey of Non-Technical People

Firstly, we got some information about non-technical (Non-IT) people who don't know much about mobile hacking. Only 55% people are aware of mobile attacks. An aggregate 45% people don't know anything about mobile hacking. Implies non-IT people don't know more about hacking and its solutions stuff. Its shows the lack of knowledge [3].

Do you anything about Mobile Hacking? (40 responses)

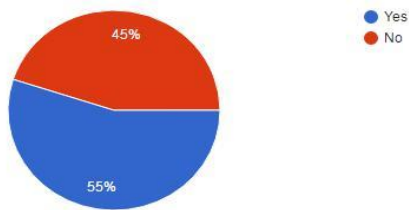


Figure 4.1: Pie chart of Non-Technical mobile users related to mobile hacking

4.2 Survey of Technical People

As per study IT people know more about mobile hacking. We have taken a survey of users were between the ages of 21 - 27yeras.

Do you anything about Mobile Hacking? (40 responses)

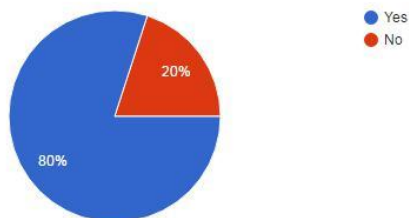


Figure 4.2: Pie chart of Technical mobile users related to mobile hacking

This study uncovers ratio of IT people knowledge. 80% IT people know about mobile hacking and a less than 20% users doesn't know anything about it.

4.3 What type of hacking people know?

Bigger part of the 80 respondents, 40 technical and 40 non-technical people know more about virus attack and phishing attacks. People don't know about other type of mobile hacking which is more dangerous than other attacks.

What type of mobile hacking you know? (40 responses)

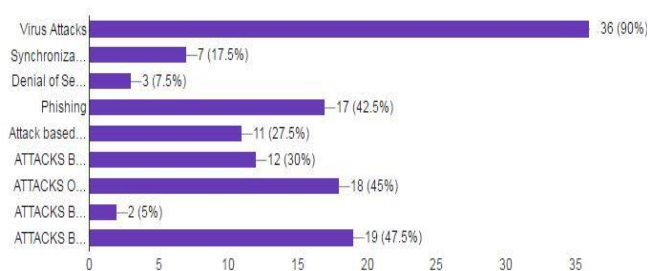
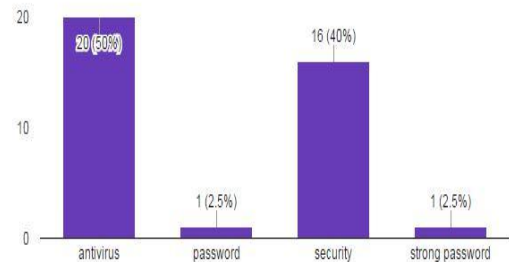


Figure 4.3: What type of hacking people know

4.4 How to prevent your cell phone from being hacked?

According to come about, mostly people think antivirus is the only solution about mobile hacking. But there are also other solution which helps users in every different possible ways to make their mobile phones more secure.

How to Prevent Your Cell Phone from Being Hacked? (38 responses)



6. CONCLUSION AND FUTURE SCOPE

This study highlights that people are not aware about mobile hacking. Every mobile phone collects and store large amount of confidential data which can be hack easily by hackers. Protection of every mobile phone is important because everyone have their own privacy. Some people even carry their all private business details in their phones if it will leak into public which can create very big problem. So the conclusion is everyone should know about the mobile hacking and its precautions. We cannot predict the future of mobile hacking it can keep on increasing or decreasing depends upon the upcoming latest security technologies.

The amount of malware targeted at mobile devices raise by 155 per cent in the past year according to a new study by Juniper Networks [5]. Future of this research is never ending. As technology will grow in mobile phone world simultaneously hackers will invent latest hacking tools and tricks to hack. The only way to resolve this problem is to acknowledge users about mobile attacks.

7. REFERENCES

- [1] Symantec, Internet security threat report 2013, Vol.18, April 2013.
- [2] Global Platform Device Technology, TEE Client API Specification Version 1.0, July 2010.
- [3] He W. , “ A Survey of Security Risks of Mobile Social Media through Blog Mining and an Extensive Literature Search ” Information Management and Computer Security , 21 (5) , pp. 381 – 400 (2013) .
- [4] Huang S. The South Korean Fake Banking AppScam. <http://www.trendmicro.com/cloudcontent/us/pdfs/security-intelligence/white-papers/wp-the-south-korean-fake-banking-app-scam.pdf> (Feb. 2015)
- [5] G. Morgan , “ Mobile malware rises by 155 per cent as Android platform risks grow ” , <http://www.v3.co.uk/v3-uk/news/2153026/mobilemalware-rises-155-cent-android-platform{###}risks-grow> (Feb. 2012) .
- [6] C. Amrutkar, P. Traynor, P. van Oorschot, "An empirical evaluation of security indicators in mobile web browsers", IEEE Transactions on Mobile Computing, vol. 99, pp. 1, 2013.
- [7] "Mobile cyber threats", Kaspersky Lab and INTERPOL Survey Reports,[online] Available: <http://media.kaspersky.com/pdf/Kaspersky-Lab-KSN-Report-mobile-cyberthreats-web.pdf>.