SMART PHONE THREATS & COUNTER MEASURES

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TRADITIONAL VS LATEST THREATS

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TRADITIONAL ATTACK & MALWARE BINDING DEMO

Binding malware with a legitimate application hosted over various open market places.

THREATS IGNORED BY A REGULAR SMARTPHONE USER

Threats associated with the highly portable devices which can impair sensitive information in the Smart phone.

INTRODUCTION TO SMART PHONE THREATS

Statistics of smart phone Users in Pakistan

Date	Android	iOS	Unknown	Nokia Unknown	Series 40	Windows	Symbian OS	BlackBerry OS	Samsung	LG	Linux	Other
2018-11	90.15	4.29	1.11	2.01	1.16	0.57	0.47	0.07	0.08	0.01	0.04	0.02
2018-12	91.17	4.13	0.87	1.73	0.97	0.53	0.41	0.06	0.07	0	0.04	0.03
2019-01	91.47	4.04	0.78	1.71	0.96	0.47	0.38	0.05	0.07	0.01	0.03	0.02

Reference: http://gs.statcounter.com/os-market-share/mobile/pakistan

Introduction to smart phone threats

Ubaid Jafri

Smart phones horizon increases after the year 2010. and at current stage there are more smart phones then PC's in the market today , and they are the most connected devices we carry today.

Damages

Accessing User Privacy

Intentionally penetrated into the smart phone and access user (Contacts, SMS, Call Logs. Videos, Pictures, Storage, etc)

Tracking Location

Tracking user current location and IP address along with Local network details

Recoding Conversation during roaming

By intruding into user cell phone, one may be able to record microphone even if the cell phone is not being used or locked

Stealing Sensitive Info

Activity would allow an attacker to steal sensitive information from cell phone e.g. (OTP, username/passwords, logged in user credentials,

Breaking Into Network

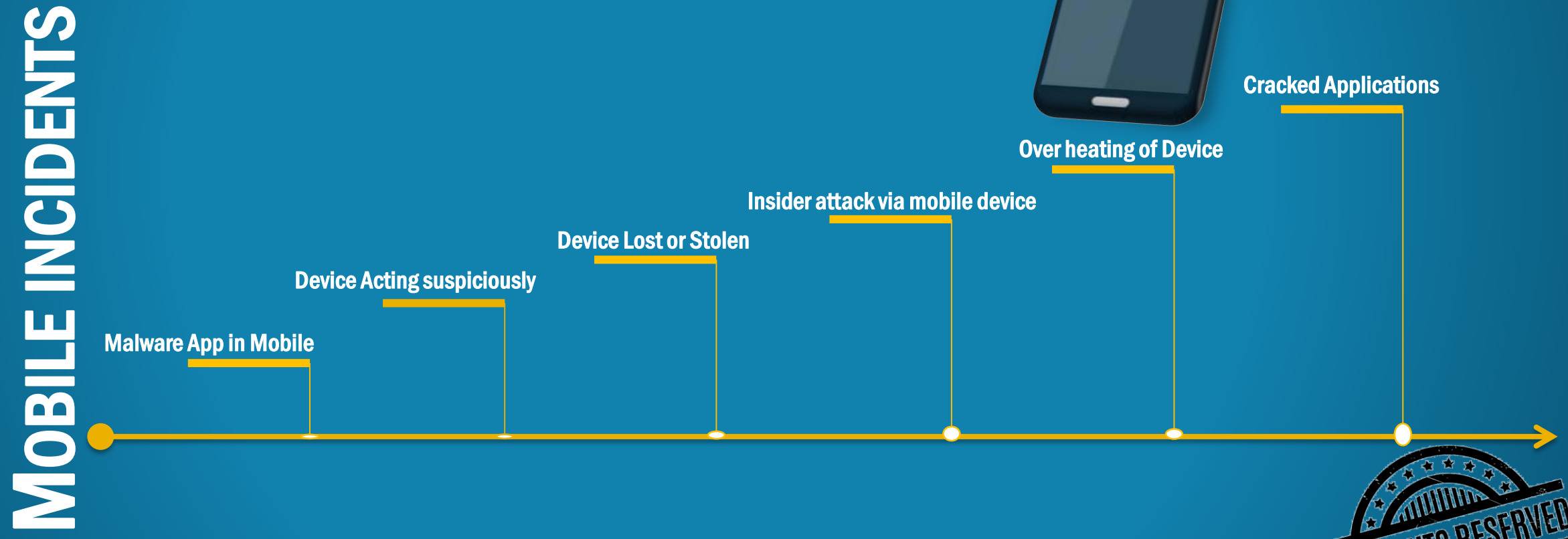
Accessing Interconnected nearby devices, exploiting network devices.

Intercepting Text Messages

Ability to send SMS from the cell phone in case of devices compromised.

Introduction to smart phone threats – Common Mobile Incidents

There are numbers of possible scenarios a user may encounter when responding to a mobile incident.

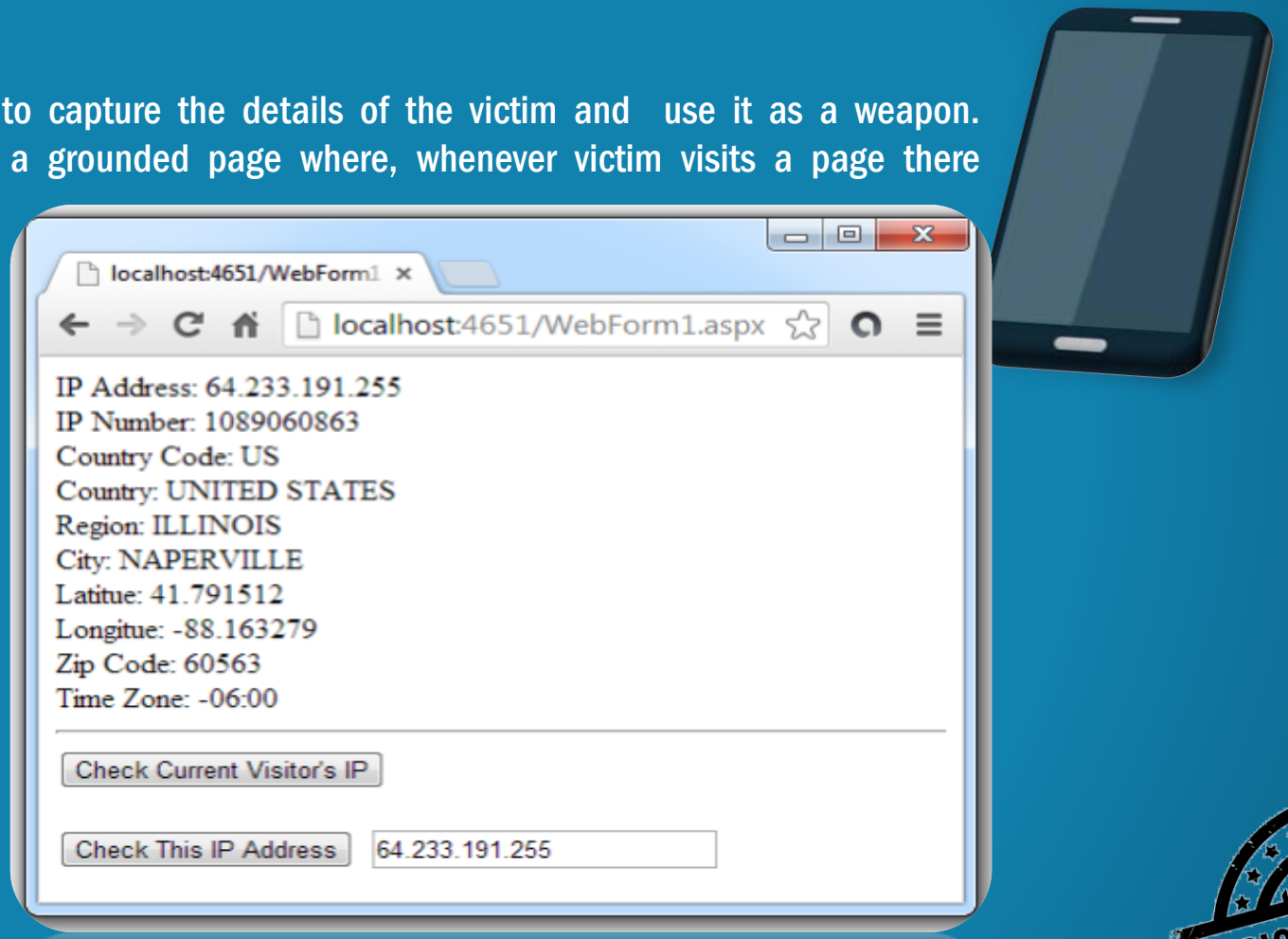


TRADITIONAL VS LATEST THREATS

TRADITIONAL VS LATEST THREATS

Traditional Threat

Unlikely traditional threats were used to capture the details of the victim and use it as a weapon. Traditional threats could be a simple a grounded page where, whenever victim visits a page there information stored in a text file or email.



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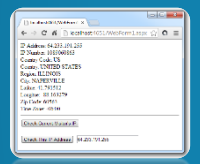
DEMONSTRATION OF TRADITIONAL SMART PHONE ATTACK

Traditional Attack Demonstration

Crafting a malicious web link for victim &
Hiding actual link with URL shorteners



Send the Malicious link
using different channels

Malicious Link Will Instantly Fetch:

- ✓ Public IP Address of the victim
- ✓ Device Model
- ✓ Version Information
- ✓ Cell Phone Current Location

DEMONSTRATION OF
MALWARE BINDING

Demonstration Of Latest Cyber Attack

Binding malware with a legitimate application hosted over various open market places.

Send the Malicious link

Malicious App Contains:

- ✓ Reverse Back Connection
- ✓ Intruder IP
- ✓ Intruder Port

Malicious App Will Intrude:

- ✓ SMS (Dump, Send/Receive), Call Log, Gallery, Camera, Mic, Contact Directory, Location Tracking, File Uploading, etc

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THREATS IGNORED BY A REGULAR SMARTPHONE USER

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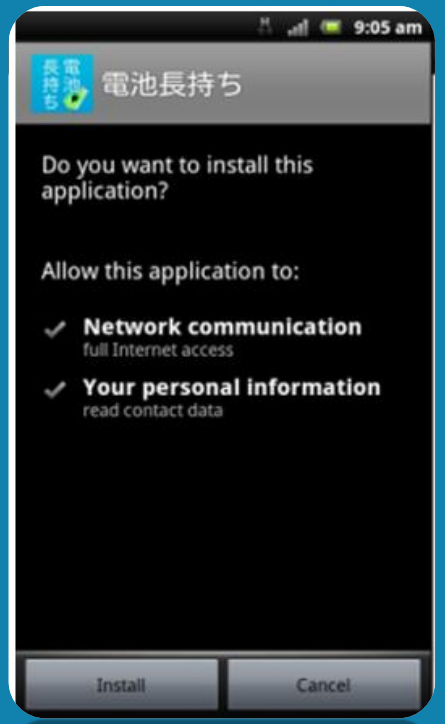
- **Third-Party Applications:**
  - ✓ Never download applications from third-party forums like:
    - ➢ PureAPKs
    - ➢ BlackMart
    - ➢ FreeAPKs, etc
  - ✓ Although these forums provide the feasibility to download applications for free but the integrity of many of these applications is affected, which can lead to breach of sensitive data.
- **Malicious Links:**
  - ✓ Never click / tap on any links received via emails or social media forums. Malicious links include:
    - ➢ http://ow.ly/d9AV30jRJWJ
    - ➢ tinyurl.com/y6wzdc4q
    - ➢ bit.ly/2xTleYF
  - ✓ These links redirect the user to malicious websites resulting in users to download the virus file and then affecting the victim's user.
- **Storage Password in Third-Party Apps:**
  - ✓ Never store passwords in third-party applications as these applications can store the sensitive data without any protection.
- **Social Engineering Attacks:**
  - ✓ Never access any link advertised as providing free products in form of offers / coupons.

Threats ignored by a regular smartphone user Contd..

- **Downloading Fake Applications:**

  ✓ Fake applications like battery saver pose to be helping users improving their battery performance. However these applications have malware bind with them and are causing the data leakage from smartphones.



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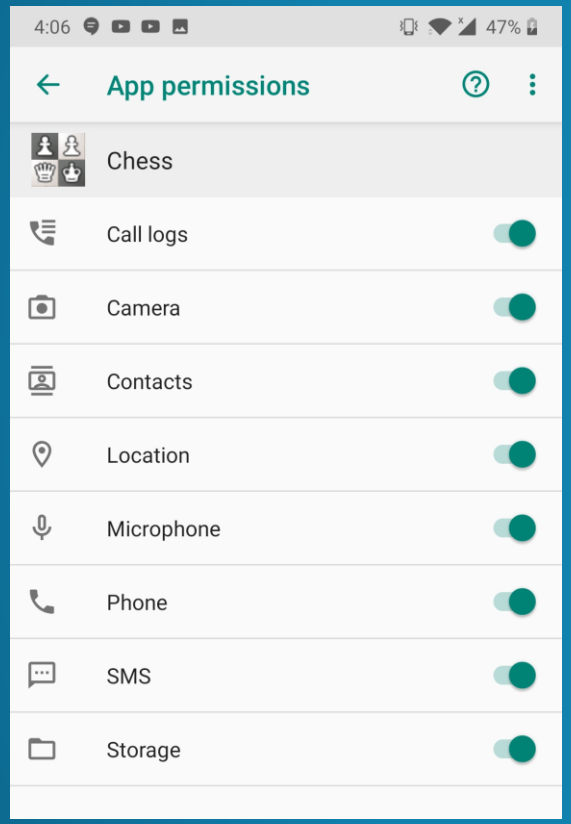

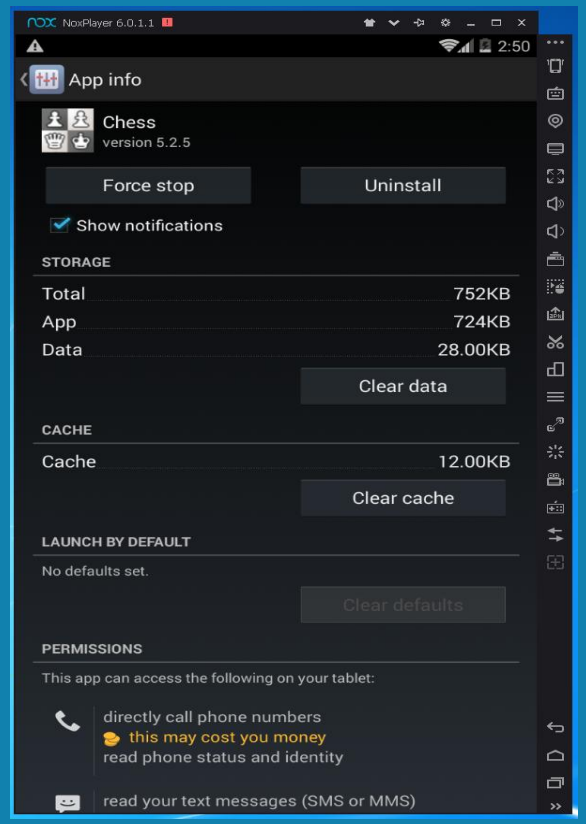

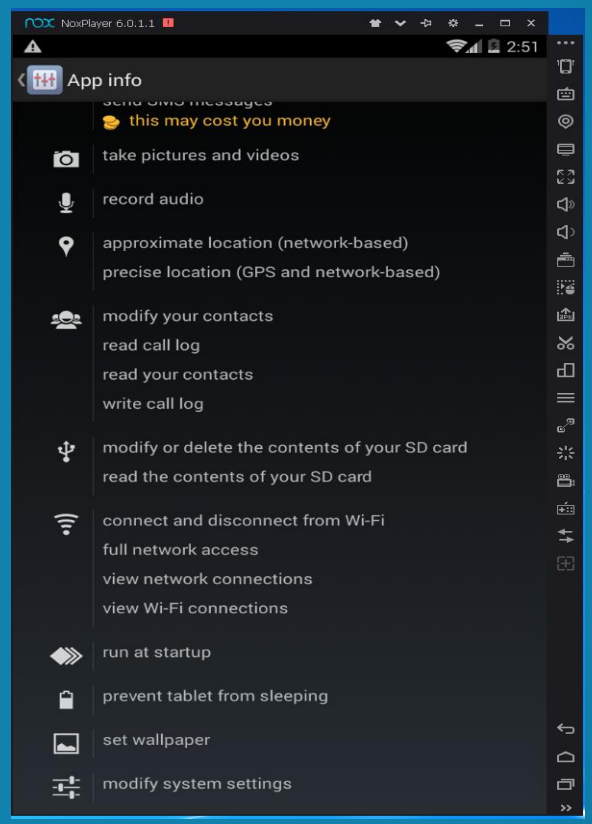

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