

How people can  
profit from you on  
the internet

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# Results of insecure online activity

- ▷ identity theft
- ▷ loss of financial resources
- ▷ loss of important data
- ▷ potential DOS attacks

# Identity Theft

## ▷ definition

- use someone else's identity deliberately
- use other people's identity
- coined in 1964

# Identity theft

- ▷ objectives
  - gain financial advantage
  - access your bank account or credit card
  - assume your identity
  - obtain passwords
  - access codes
  - get card numbers

# Identity theft

## ▷ countermeasures

- request regular Schufa records
- change passwords regularly
- watch out for phishing attempts
- do not reveal your identity by phone or e-mail
- protect personal information
- be cautious

# Identity theft

- ▷ how to react
  - keep calm
  - report to the police
  - contact a lawyer
  - change passwords immediately

# Potential loss of data

- ▷ loss of important data
  - unrecoverable
  - modified in malicious ways
- ▷ examples
  - medical databases
  - business databases



# Ransomware

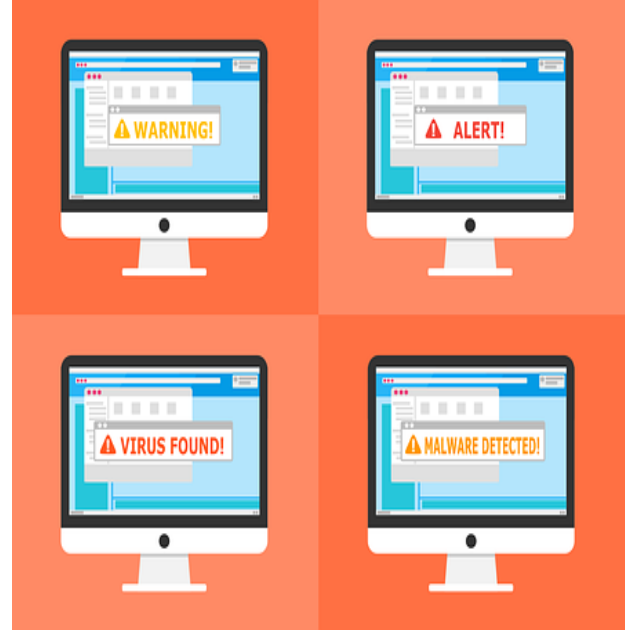
- ▷ work pattern
  - encrypts and/or threatens to publish private data
- ▷ effect
  - cannot use data anymore
- ▷ objective
  - gain money

# DOS attacks

- ▷ work pattern
  - usage of malicious software to stop internet access
- ▷ objective
  - outdated routers, faulty routers, ISPs

# Malware

- ▷ viruses, computer worm, etc.
- ▷ impairment of systems
- ▷ collection of important data
- ▷ disclosure of traces



# Adware

## ▷ definition

- software to spread advertising
- automatic fade-in
- downloads are started

# Adware

## ▷ work pattern

- runs program automatically
- not possible to shut down
- used to spy someone (cookies)

# Adware

## ▷ effects

- advertising banners
- advertising Pop-Ups
- free software
- counter funding through banners

# Adware

## ▷ solutions

- prevent wrong downloads from unreliable source
- scan data for malware
- avoid installation of suspicious programs
- reject adware “Adaware”

# Computer worm

## ▷ definition

- harmful, autonomous program routine

## ▷ work pattern

- malicious code that duplicates automatically



# Computer worm

## ▷ problems

- show messages on display
- delete data
- slow down network
- decrease performance of system

# Computer worm

## ▷ solutions

- do not insert an unknown usb-stick
- do not open a suspicious email attachment
- use trustworthy websites
- use up-to-date anti virus program

# Viruses

## ▷ effects

- damage computers
- damage programs
- compromise data



# Viruses

## ▷ problems

- execution of viruses when operating the program
- infection of hardware and software
- destruction of data
- alteration of numerical values in spreadsheets



# Viruses

## ▷ solution

- use up-to-date anti virus program
- use trustworthy websites
- use newest browser
- do not open an unknown program



# Trojan

- ▷ work pattern
  - virtual function
  - harmful function
  - backdoor program

# Trojan

## ▷ effects

- cause damage from “inside”
- enables remote access to computer to gain:
  - remote control
  - access to information
- spy passwords by keylogger



# Trojan

## ▷ solution

- do not open a suspicious email attachment
- prevent wrong downloads from unreliable source
- use up-to-date anti virus program
- use up-to-date OS



# Social Engineering

- ▷ definition
  - social engineering refers to psychological manipulation
  - social hacking

# False advertising

- ▷ work pattern
  - use of misleading, false, or unproven information
- ▷ objective
  - advertise products to consumers

# Examples

- ▷ photo retouching
- ▷ fees
- ▷ misleading health claims

# Phishing

- ▷ definition
  - use e-mail links to redirect users to false websites
- ▷ objective
  - attempt to obtain sensitive information

# Phishing

## ▷ solution

- use spam filter
  - disable html view
  - use common sense
  - watch out for encryption of real bank sites
- Think before you click!

# Anti-virus

## ▷ definition

- finds/removes infected files
- protects from malware, viruses, Trojans...
- scans files in background or scheduled

# Anti-virus

## ▷ Work pattern

- scans software
- stops infected files from execution
- pushes infected files into quarantine

# Virus Definition

- ▷ contains set of instructions
- ▷ expanded by updates
- ▷ antivirus software depends on it



# Tipps

## ▷ use

- only one antivirus tool
- another anti-malware tool

## ▷ run

- one in the background
- one on-demand
- bootable antivirus tool

## ▷ create several backups/system-images

# Recommendations

- ▷ for normal users
  - suitable browsing habits
  - common sense
  - up-to-date software

# Firewalls

- ▷ definition
  - protect your computer from unauthorized access
  - prevent attacker from saving malware on your pc

# Firewalls

- ▷ work pattern
  - monitors and controls network activities
  - filter your internet activities
  - protect your network

# Encryption methods

Name	level of security
WEP	uncertain and not recommended
WPA	safer
WPA2	the safest

# Password and Location

- ▷ change standard password
- ▷ choose a safe password

Thank you for  
your attention!