



Basic Computer Security Practices

Security Awareness

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Center for Economic Development

Prepared by: J. Joshua Brown



“Estimates for losses due to viruses are in the billions of dollars. These losses include financial loss as well as lost productivity.”

Source: CompTIA A+ Complete Study Guide (2009)



Overview

What is Information and Computer Security?

“My Top 10 List” of Best Computer Security

Practices

Protecting Restricted Data

Additional Resources



What is Information and Computer Security?





... the protection of computing systems and the data that they store or access.

Desktop computers

Confidential data

Laptop computers

Restricted data

Servers

Personal information

Smart Phones

Archives

Flash drives

Databases

Networks





Why do you need to learn about computer security?

Isn't this just an IT Problem?

Everyone who uses a computer should understand how to keep his or her computer and data secure.



Best security practices follow the “90/10” rule

- *90% of security safeguards rely on us – the user - to adhere to best computing practices*
- *10% of security safeguards are technical (i.e., your anti-virus software, firewall, etc.)*



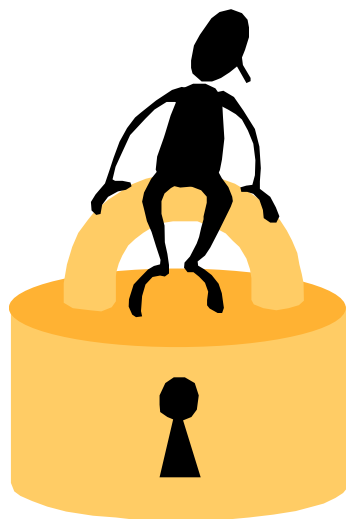
What are the consequences of ignoring best practices?

- Having to recreate lost data
- Identity theft
- Data corruption or destruction
- Unavailability of vital data
- Bottom-line: loss of time and money



“My Top Ten List”

Best Computer Security Practices



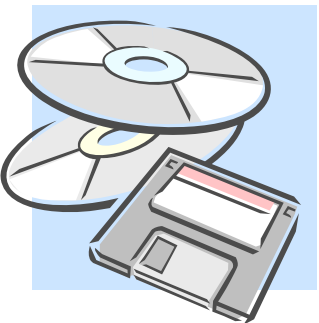


1. Make sure your computer has anti-virus, anti-spyware and firewall protection. Be sure to install updates for your anti-virus and anti-spyware programs to keep your computer protected from the new threats.

2. install security patches for your operating system and keep your programs up-to-date.



3. Be sure to encrypt sensitive data that is on portable devices such as DVDs and flash drives. I recommend SafeHouse for encrypting data.



4. Back-up your data.

- *Make backups a regular task.*
- *Backup data to removable media such as portable hard drives, CDs, DVDs, or a USB flash drive.*
- *Store backup media safely and separately from the equipment. Remember, your data is valuable.*

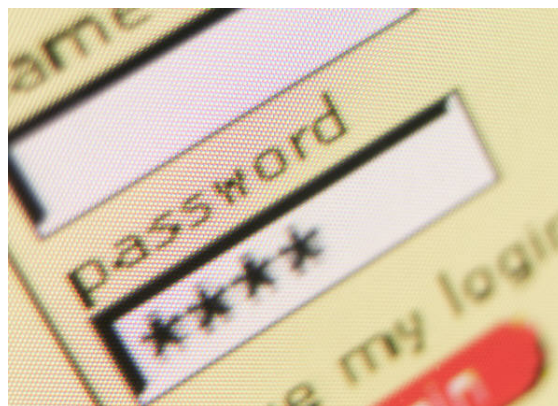


Data Backups

- How effective would you be if your email, word processing documents, excel spreadsheets and contact database were wiped out?
- How many hours would it take to rebuild that information from scratch?
- Backups are not just for a malicious issue, because computer hardware can fail.



5. Use cryptic passwords that can't be easily guessed and protect your passwords - don't write them down and don't share them! Make your security questions difficult to guess as well





6. Practice safe e-mailing

- *Don't open, forward, or reply to suspicious e-mails*
- *Don't open e-mail attachments or click on website addresses*
- *Delete spam*



Phishing E-mail Scam

Phishing is the process of attempting to acquire sensitive information such as usernames, passwords and credit card details by masquerading as a trustworthy entity in an electronic communication.



- The Nigerian e-mail is an example of an advance-fee fraud in which the target is persuaded to advance sums of money in the hope of realizing a significantly larger gain.
- To date an estimated 41 billion has been reported lost to the Nigerian e-mail scam.



You receive an e-mail with an attachment from the “Nigerian Lottery” stating that you need to open the attachment. What should you do?

- a) Follow the instructions
- b) Open the e-mail attachment
- c) Reply and say “take me off this list”
- d) Delete the message



- No reputable company will ask you for passwords, credit cards, or any personal info via Email
- If it sounds too good to be true, it probably is
- You cannot get the money out of Nigeria, period.



7. Practice safe Internet use.

- *Accessing any site on the internet could be tracked back to your name and location.*
- *Accessing sites with questionable content often results in spam or release of viruses.*
- *Don't download unknown or unsolicited programs!*



Don't fall for tricks



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Spit on a Pedestrian!
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BEAT THE OLD COMPUTER
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Knock out Osama!
Get a **FREE* XBOX 360™!**
*details apply



8. & 9. Physically secure your area and data when unattended ~

- *Secure your files and portable equipment - including flash drives.*
- *Secure laptop computers with a lockdown cable.*





10. Lock your screen



- *For a PC ~*

<ctrl> <alt> <delete> <enter> OR

<⏏> <L>

- *Use a password to start up or wake-up your computer.*



What can an attacker do to your computer?

- Hide programs that launch attacks
- Generate large volumes of unwanted traffic, slowing down the entire system
- Distribute illegal software from your computer
- Access restricted information (e.g. identity theft)
- Record all of your keystrokes and get your passwords



Protecting Restricted Data



Center for Economic Development
Security Awareness, Training & Education
www.cedcal.com or (530) 898-3851



Restricted data includes, but is not limited to:

- *Name or first initial and last name*
- *Health or medical information*
- *Social security numbers*
- *Ethnicity or gender*
- *Date of birth*
- *Financial information (credit card number, bank account number)*
- *Proprietary data and copyrighted information*
- *Information subject to a non-disclosure agreement*



Managing Restricted Data

- *Know where this data is stored.*
- *Destroy restricted data that is no longer needed*
 - Shred or otherwise destroy restricted data before throwing it away
 - Erase information before disposing of or re-using drives.
- *Protect restricted data that you keep*
 - back-up your data regularly



Liability

- If restricted data is breached it may lead to a lawsuit
- CSUC housing department was breached in 2005
- A required letter was sent to each student that may have had their SSN breached.



ADDITIONAL RESOURCES/ RECOMMENDATIONS

Anti-virus Software

Anti-virus guard (AVG)

Avast

Anti-spyware Software

Malwarebytes' Anti-Malware

SuperAntiSpyware

Operating System Secure Wipe

Darik's Nuke and Boot



ADDITIONAL RESOURCES/ RECOMMENDATIONS

Encryption Software

Free SafeHouse Explorer Encryption