Week 4 Case Study -

Personal Computer Security Threats

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Computer security threats are something that any user faces on any type of computer system. When we think of securing a computer system or network of systems, often times an average, personal computer-user may think that attacks are only targeted at big business. The notions of “I don’t have anything important to steal” or “why would anyone care to ‘hack’ my system?” are far too common a school of thought. The reality of it is the threat of security risks are something that is always prevalent when any type of user connects to the Internet. We are all susceptible; we are all targets; and we all need to understand why and how to better secure our systems in order to keep our data and systems safe and protected.

Computer viruses, spyware, hackers, and phishing are just a few examples of the expansive amount of threats looming out in Cyberspace. Any time a user fires up their system and connects to the Internet, they exist in Cyberspace – which is the notional environment in which communication over computer networks occurs. Users must be aware of these threats, and they must understand and implement methods of protection against them, ‘or else.’ A user may be able to skate by unaware and unhindered by some of these threats, but more often than not most are going to be sorry they didn’t have something in place before an attack occurred.

Viruses, as a common example of security threats, are programs that can be transmitted any time you are dealing with a file; whether it be through the Internet, disk drives, flash drives or email. A virus copies and modifies itself so that it is undetectable by the host computer without proper scanning in place. A virus can then attach itself to one or any of the methods listed above, and then when it is downloaded it executes itself. A virus’s impact on the system can be minimal and unnoticed, or it can be catastrophic and system-crashing. Either way, the best prevention is a reliable virus scanning program in which you update the definitions and run scans regularly.

Another common example of a security threat on a home computer (or any computer for that matter) is spyware/ad-ware. These are usually attached with a free program the user downloads, and most times the user does not realize they are installing more than what they bargained for. Since these programs are freeware, the program can generate money through selling information about your computer and network. Information is gathered and then sent back via the spyware, which can then be sold to interested parties. The best way to avoid spyware is 1) simply not download/install programs you do not trust 2) create a firewall rule to block any Internet traffic of the program if you do decide to install one. This will not allow any information to be sent back, therefore keeping you and your data safe.

Even those who are not an avid and seasoned computer user will probably admit they notice their systems slowing down over time. A large part of this is simply due to all the garbage and clutter a user can accumulate over time by doing seemingly harmless tasks, like downloading files. As we discussed, there can be many risks (viruses, spyware, etc.) involved with even “daily use” such as surfing the Internet and downloading files. Simply using a firewall would eliminate a large majority of personal-computer threats. In addition, regularly using antivirus software would help take preservation of the system to another level. On top of these two solutions, general education about a computer system and the risks of connecting to the Internet coupled with careful use (such as not clicking on suspicious links or downloads, etc.) practices will go a long way in helping you, your data, and your system itself stay protected and functioning the way it should. Always make sure to have a regular back-up plan in place as well in preparation for a worst case scenario.

References

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