

Network Security Concepts

- Network security is any activity designed to protect the usability and integrity of your network and data.
- **It includes both hardware and software technologies.**
- Effective network security manages access to the network. It targets a variety of threats and stops them from entering or spreading on your network.
- **Threats to Network Security:**
 - Virus
 - Worms
 - Trojan Horse
 - Spams

VIRUS

- ① Are the malicious code/programs that cause damage to data and files on a system.
- ② Virus attach itself to program or file so that it can spread from one computer to another leaving infection as it travels.
- ③ Some Virus cause only annoying effects like changing desktop icons, etc. while others can damage your hardware, software or files.
- ④ Almost all Virus are attached to an executable file, it means Virus cannot infect your computer unless you run or open the program/file.
- ⑤ It means Computer Virus cannot spread without a human action.

Damage Caused by Virus

- **DAMAGE OR DELETE FILES** : some virus may delete or damage random documents or specific file that are crucial to Operating System and system will not be able to boot.
- It may slow down your computer
- **INVADE YOUR EMAIL PROGRAM:** some forms of viruses may wreak even more havoc by spreading themselves to the contact in your address book

Prevention from Virus

- Use Anti-Virus Software: scan all your computer for virus, disconnect infected PC from network, notify anti-virus vendor to update its database.
- Regularly update your Anti-Virus
- Don't download or open email from unknown sender
- Don't click on link in email rather type the link in address bar
- Disconnect the internet if you are away
- Disable cookie if possible

WORM

- A worm is a self-replication programs which eats up the entire disk space or memory. A Worm keeps on creating its copies until all the disk space or memory is filled.
- Worms harm to a computer or a computer network by consuming bandwidth and slow down the network speed. After the worm has infected a system, it can propagate to other systems via internet or while copying files from one system to another without user interaction

Damage caused by WORM and prevention

• DAMAGE

- It eats up entire disk space or memory
- Consumes network bandwidth and slows down the network speed.

• PREVENTION

- Use Total Security software and scan the PC using the option BOOT TIME SCAN.
- Update regularly
- Avoid inserting infected pen drives

Trojan Horse

- Is a program that appears harmless (such as text editor or a utility program) but actually performs malicious functions such as deleting or damaging files.
- With help of Trojan, harm that could be done by hacker on target computer systems are:
 - Data theft
 - Installation of unwanted softwares
 - Keystroke logging
 - Downloading or uploading of files. And many more...

Prevention from Trojan Horse

- Use Total Security software
- Update regularly
- Never download any software or file from untrusted website
- While using public computer, check for any additional device connected to it or be alert of keylogger software, so for financial transaction prefer to use VIRTUAL KEYBOARD rather than keyboard typing
- Logout from your account and remove history if you are working on public computer

SPAMs

- Means sending of bulk-mail by an identified or unidentified source. In non-malicious form, bulk advertising mail is sent to many accounts. In malicious form (email bombarding) the attacker keeps on sending bulk mail until the mail-server runs out of disk space. Damages are:
 - **Spam reduces productivity:** billions of spam messages circulating across the Internet can disrupt email delivery, degrade system performance and reduce overall productivity
 - **Spam eats up your time:** deleting spam emails like the simple solutions, but it eats a significant amount of productivity
 - **Spam can lead to worse things:** spam messages may contain offensive, fraudulent material and can even be used to spread viruses.

THANKS