

Chapter 7



NETWORKS AND SECURITY

NETWORKS



- Why use Networks ?
- Shared Resources – It is easier to (and cheaper) to share one printer between two employees.
- Security – You can force people to “log on” to your network..

Network Architecture



- Architecture = Design
- Peer to Peer – connecting devices directly
- Most likely used at home
- Client /Server – computers are connected to a server.

LAN / WAN



- LAN = **L**ocal **A**rea **N**etwork = several computers connected together. Ex: Flanagan High School has several buildings and 1300 computers connected.
- WAN = **W**ide **A**rea **N**etwork = several LANS connected together. Ex: Broward School Board.
- BC is a WAN made up of small LANs

Cable



- Ethernet (slightly larger than phone cable)
- Cat 5, Cat 6



- Coaxial (coax)

Wireless



- Convenient
- Slightly more expensive than wired
- WEP vs. WPA Security
- If you have a wireless router at home, **BE SURE IT IS ENCRYPTED!**

- Using free wireless at Starbucks, **BE CAREFUL...**
- **Airsnort** is a utility that cracks WEP codes..

Switches / Routers



- A switch is a “traffic cop” for data within a network.



- A ROUTER transmits data between two different Networks..



Security



- Viruses –

A VIRUS IS A SMALL PROGRAM THAT IS WRITTEN BY SOMEONE. THE PROGRAM IS “ATTACHED” TO ANOTHER LARGE PROGRAM SUCH AS A GAME OR EMAIL. WHEN THE USER LOADS THE GAME OR EMAIL INTO HIS COMPUTER, THE VIRUS IS ALSO LOADED.

Hackers



- WHY DO PEOPLE WRITE VIRUSES ?
 - FUN , CHALLENGE
 - PURPOSE = TO WIN THE “HUNT”
 - ALWAYS MALES – USUALLY YOUNG.
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- An ANTI-VIRUS program contains a list of known viruses. It matches the files on your computer against this list. This list must be UPDATED often.

Firewall



- **Software = LIMITS THE “PORTS” (WINDOWS) ON YOUR COMPUTER THAT USERS CAN ACCESS.**
- **Hardware = SAME THING – ONLY USES A HARDWARE DEVICE.**

Phishing



- Phishing is the “art” of sending a request to people in the hopes that they will supply you with personal information about themselves.
- Phishing has been around for many years. It was previously done by calling people or sending paper letters - but has been “perfected” with the creation of Internet and e-mail.

The END

