Objective 4

Setting Up a Home Internet Network

GETTING STARTED WITH TECHNOLOGY

WHAT YOU NEED TO KNOW

Home Network

A collection of devices in a home interacting on a connected system of cables or wirelessly is a home network. Nearby devices can also be part of the network, depending on the range.

Most home networks use the following items:

- **Router** (wired or wireless): This is the technology that serves as the central connection for all devices on a home network.
- **Access point(s)**: This networking device(s) provides the home with another network hub for wireless devices.
- **Ethernet switch and cables**: If you are planning on connecting devices physically (as opposed to wirelessly) you will need an ethernet switch, which is used to connect to the router. In order to make the connection, ethernet cables will be needed to connect a device to the switch.

HOW THIS HELPS YOU

When establishing a home network, it's possible to store certain information on one device and access that same data on another device. Users can have one device designated to store photos or video, but still access the files from a different machine.

WIRED CONNECTION

Advantages

A wired network provides a level of safety from cybercriminals. They would need to physically connect a cable to your network to cause harm.

Wired connections are less likely to have data slowed down by some form of interference from another device.

Disadvantages

More equipment is needed to set up a wired home network.

Some devices don't have the ability to connect to a wired connection, like a tablet or phone.

Because the device and router need to be physically connected, the length of the cable limits how far apart technologies can be.

WIRELESS CONNECTION

Advantages

Because the home user is not confined to connecting physically to a router, there is increased mobility and ease of connection.

Wireless is less expense (in theory) because there is less equipment needed.

Less complexity makes deployment and tech support more streamlined

Disadvantages

A wireless connection has a slower transmission.

A wireless network is less secure than its connected counterpart. Wired connections force hackers to physically be in the home, where a wireless attack can come from outside the home.

THINGS TO KEEP IN MIND

Quality matters: High-quality hardware and software can improve security and reliability, but that can come with a higher retail cost.

Location, location, location: Just like in real estate, location is key when setting up an effective home network. Setting up the router in the middle of the home provides the network's devices with a centrally located hub to send/receive data.

VPN + Router = Secure Remote Access: A virtual private network (VPN) is a great addition to the home network security. By adding a VPN to your router, all the data outgoing is encrypted to hide the physical location of the device.

BEST PRACTICIES

Network security: In order to help secure the home network, log in to the router's website to manage some key settings.

- Change the default settings for the SSID (network name) and password.
- Turn on the available router firewall settings.

Keep hardware up to date: Networks need to be secure, and one of the simplest measures that can be taken is to make sure that devices have their software or firmware updated. By installing updates, most devices fix security and functionality issues. When a manufacturer finds a hole in their security, they will send out a new update to remedy or reduce the issue.

NOTES

Make a list of the items in your home that can support an internet connection. Note whether they are wired or wireless.

Some devices are able to be configured with an ethernet connection or wirelessly. As the user, assess the pros and cons of a physical connection vs. a wireless one, then determine what is most important to you.

Device	**Positive: wired**	**Positive: wireless**
Example: laptop	Typically faster download speeds	Mobility around the home
	Negative: wired	**Negative: wireless**
	Limited to the length of the Ethernet cable	Less secure

221 North Stadium Blvd., Suite 201, Columbia, MO 65203
(573) 884-7200 | info@more.net | www.more.net

MOREnet
Be better connected.