

We're going to build and secure a network. In your group you will be responsible for many of the decisions behind the network and workstation configuration.

### Situation #1

Your business employs 20 people, 10 of which are already set up and using desktops in your office. They are connected to a wired network using a Linksys E4200 router running firmware version 2.0.25, the wireless is currently disabled. This router is then hooked up to an unmanaged switch to provide extra Ethernet ports for our wired network.

The 10 people not currently set-up were previously traveling sales people, but they are going to be used now for in house over the phone sales, all of these employees currently have laptops with no Ethernet ports, but they do have an 802.11n wireless card. You have a couple LAPN600 Access points sitting around, you decide to use these for your newfound wireless needs.

Explain IN DEPTH the configuration you decide on for your Wireless router, and your access points. I would recommend SCREENSHOTS of important settings and menus where you have made changes to better administer and support this network. The following questions should also be answered in your presentation.

1. What steps did/would you take to harden the network?
2. What are some possible changes that you would recommend to your company if outside people were often able to enter, and walk around your office?
3. What are some best practices that involve workstation hardening that would be well suited for this environment. If you feel you don't have enough information to make some of those decisions, what questions would you ask your co-workers to better understand the security needs of the business?

### Situation #2

In this situation, you have too much money on your hands, and need to setup a SOHO for your home. You have a single desktop that is about 5 feet away from where your cable modem would go, IF YOU HAD ONE. You've got a thousand bucks burning a hole in your pocket, go buy a modem, router, wired NIC (PCIe), and the cables required. Explain your decisions and why you made them.

1. What settings would you change or look for to be able to change to enhance the security of this home network?
2. The router you selected probably has a bunch of non-sense (or maybe useful) features advertised. Select two of these that sound interesting, research, and explain them.
3. What possible problems could you run into when installing, and configuring the wired NIC?

### Situation #3

You're tasked to setup a wireless router for a couple that just moved into a new apartment. They aren't so computer savvy but, ask you if you think there might be any interference from surrounding wireless radios depending on what channel and frequency you select for them. It's odd that they would know to ask that, but it's something to ponder...

They often entertain guests, but want their network to be as SECURE AS POSSIBLE.

They have the following equipment:

LinksysEA9500 Wireless router

Apple Iphone6s                      MAC:A6-D1-12-32-45-77

Samsung Galaxy S7 Active      MAC:E5-F6-87-88-88-64

Dell XP 15 9560 (Base model) MAC:B5-55-C4-D4-54-64

Macbook Air (Current model) MAC:A0-D3-C1-55-98-23

Using the information provided, show us how you would configure the 9500 for this couple.