SAMPLE CASE STUDY: NETWORK DESIGN

CASE STUDY SITUATION

You are interested in starting your own Music Store, *QualitySounds*, in a suburban area of your town. You need to design and build a network and computing solution for your stores. You have done some initial planning and you will start with two stores (but you plan to add two more stores across town within one year). Your store will sell new and used music and allow customers to get "online" in your stores and download music. You also will offer classes on how to setup music downloads and configure MP3 devices. You took computer networking courses in college and you feel you can tackle this solution yourself. Upon initial planning, you have identified the following requirements for your network:

- Connects three office computers and one computer used for Point-of-Sale (POS) services at each of your stores. You also want six (6) computers in the lobby/store where patrons can download music and you can run "training classes" for people to learn about using MP3 players and get other basic information. The two offices have to be connected into one cohesive network, sharing POS services and other critical company information. You also need to provide a "hand out" casual area for people to stop in and discuss music and connect wirelessly to the Internet (you might even offer free coffee to entice people to come in to your store).

- Provides adequate security for all of the company communications and documents (especially sensitive sales documents). All POS services must be protected. All general network access should be segmented from the company POS services.

- Fast and have additional capacity as the company grows

- Provides for centralized printing

- Supports the eventual addition of other stores to the network

- Provides customers with a general information Website and a secure Website where clients can buy services, and products

- Provides for limited downtime (24 hour downtime maximum)

- Provides for centralized management and control of the computers in the two stores, so that you can maintain the network from off-site

- Provides for long-term cost effectiveness

- Provides a suite of software tools for the employees to effectively communicate and a POS solution for the stores

The company does not have any equipment. Your plan should include a complete network and computer system that meets these requirements and future expansion plans.

The two store locations will (eventually) be within a five-mile radius of each other. The locations are within a suburban area that has current technological infrastructures and related technology offerings. The stores will need a sales system and print services for invoices.

Complete your proposal including costs for computing equipment, network infrastructure, network servers, printers, and related hardware, software, and accessories. Include as much detail as possible as well as justification as to your selections. Diagram and explain your physical network and computer design as well as the logical network design (server installation, domain layout, etc.). As you are a small business, cost is a major factor and should be minimized.

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