

Case study

Sam started an ice cream business from home, relying on her personal devices to track her recipes and take orders from friends and family. Despite the modest beginnings, Sam's Ice Cream soon gained a following in the local community, and she opened a storefront to meet the growing demand. Once the store is open, Sam hires one additional employee to help her. To facilitate the running of the business, she needs to set up the office to allow two employees to oversee the company's activities. These activities include: stock keeping, printing out menus and promotional materials, and keeping financial records. Sam has purchased a network switch, but she needs your advice about the additional infrastructure required and the network that needs to be set up to make it possible to conduct her business.

Instructions

Step 1: Identify the necessary equipment

Begin by making a list of the equipment Sam will need. Remember, they have already purchased a network switch, and the business has two employees who need access to the network.

Step 2: Construct a diagram

Once you've identified what equipment is needed, demonstrate how the equipment is connected by creating a physical network topology. You can use a mind-mapping tool or pen and paper if you prefer

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Here is the necessary equipment and physical network topology for Sam's ice cream business:

Equipment:

1 network switch

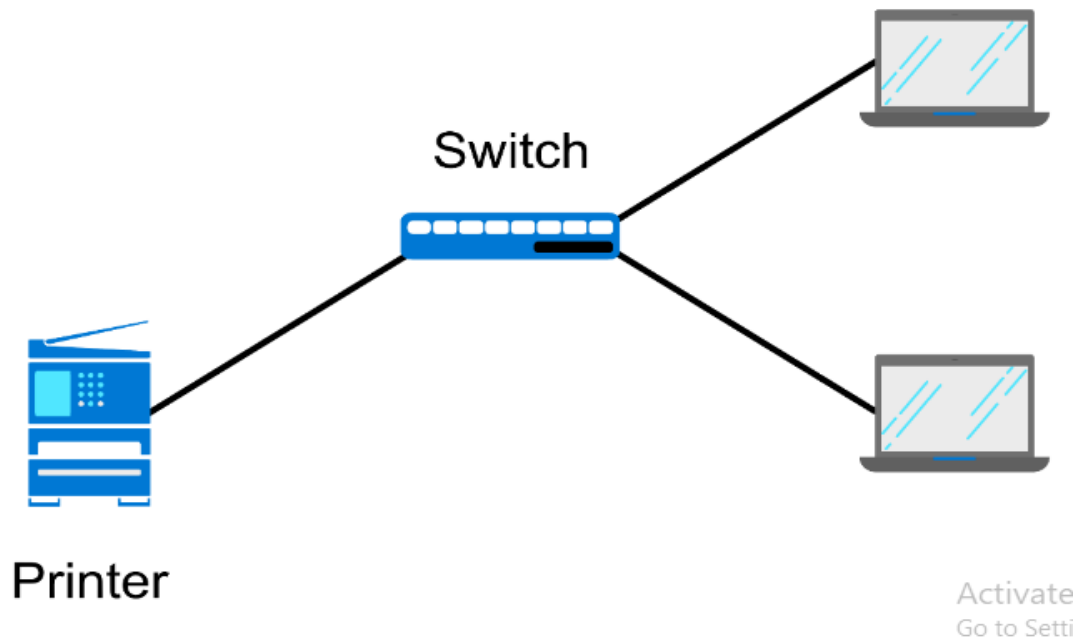
2 computers for employees

1 printer

Physical network topology:

The most suitable network topology for Sam's business is a star topology. In a star topology, all devices are connected to a central hub or switch. This makes it easy to troubleshoot problems and add new devices to the network.

The following diagram shows the physical network topology for Sam's business:



The internet connection is connected to the switch. The two computers and the printer are connected to the switch.

This network topology will allow Sam and her employees to share files, access the internet, and print documents. It is also a secure network topology as all devices are connected to a central device.

Here are the steps on how to set up the network:

- Connect the internet cable to the switch.
- Connect the computers and printer to the switch using Ethernet cables.
- Configure the network settings on the computers and printer.
- Test the network by connecting to the internet and printing a document.

Once the network is set up, Sam and her employees can start using it to run their business.