Planning the Infrastructure

You also need to plan the details of how you will connect the computers in the network. This task includes determining whether you'll use a wired or wireless network (or both), what networking devices you need to service your network, and how you'll connect your network to the Internet.

If you chose to use a wired network, you can choose between Cat5e and Cat6 cabling. Cat6 is a bit more expensive than Cat5e but supports faster network speeds. Beyond that basic choice, you have many additional decisions to make:

- Will you use inexpensive consumer-grade network switches such as those you can buy at a consumer electronics store or an office supply store, or will you want professional-grade switches, which are more expensive but provide advanced management features?
- Where will you place the switch — on a desktop somewhere within the group or in a central wiring closet?
- How many client computers and other devices will you place on each switch, and how many switches will you need to support all of these computers and other devices?
- If you need more than one switch, what type of cabling will you use to connect the switches to one another?

For more information about network cabling, see Chapter 7.

TIP

If you're installing new network cable, don't scrimp on the cable itself. Because installing network cable is a labor-intensive task, the cost of the cable itself is a small part of the total cable installation cost. Consider using Cat6 cable instead of Cat5e. And in many cases, you should consider installing more cable than you actually need. For example, if one area of your office has four desks, don't pull just four cables to that location — pull six or even eight cables. The cost of labor for pulling the cables is more than the cost of the cables themselves, and it doesn't take much more labor to pull a few additional cables to the same location.

Drawing Diagrams

One of the most helpful techniques for creating a network plan is to draw a picture of it. The diagram can be a detailed floor plan, showing the actual location of each network component. This type of diagram is sometimes called a "physical map." If you prefer, the diagram can be a *logical map*, which is more abstract and