

Figure 7-6 shows a network that has four separate access switches that are linked together via a distribution switch.

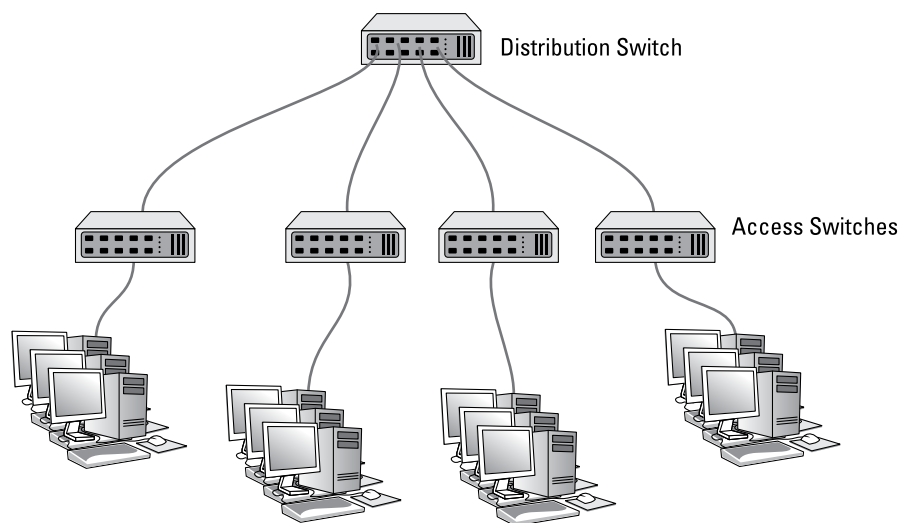


FIGURE 7-6:
Distribution and
access switches.

Powering Up with Power over Ethernet

In addition to delivering data, Ethernet can also be used to deliver power to devices that don't consume a lot of electrical power. Ethernet circuits that provide power are called *Power over Ethernet* (PoE). Using PoE requires that you use special switches that are designed to provide PoE.

Three types of devices are commonly used on PoE networks:

- » **IP phones:** Phone systems that use TCP/IP to transmit voice conversations often use PoE to provide power to the phones at users' desks. This eliminates the need for a separate power supply to power the phone.
- » **Wi-Fi access points:** Wi-Fi access points often use PoE rather than a separate power supply. Because Wi-Fi access points are often placed in the ceiling, getting power to them can be tricky. Using PoE eliminates the need to have an electrician provide an electrical outlet next to each Wi-Fi access point.
- » **Security cameras:** Surveillance cameras often use PoE for the same reason that Wi-Fi access points do: to eliminate the need for power outlets at each camera location.