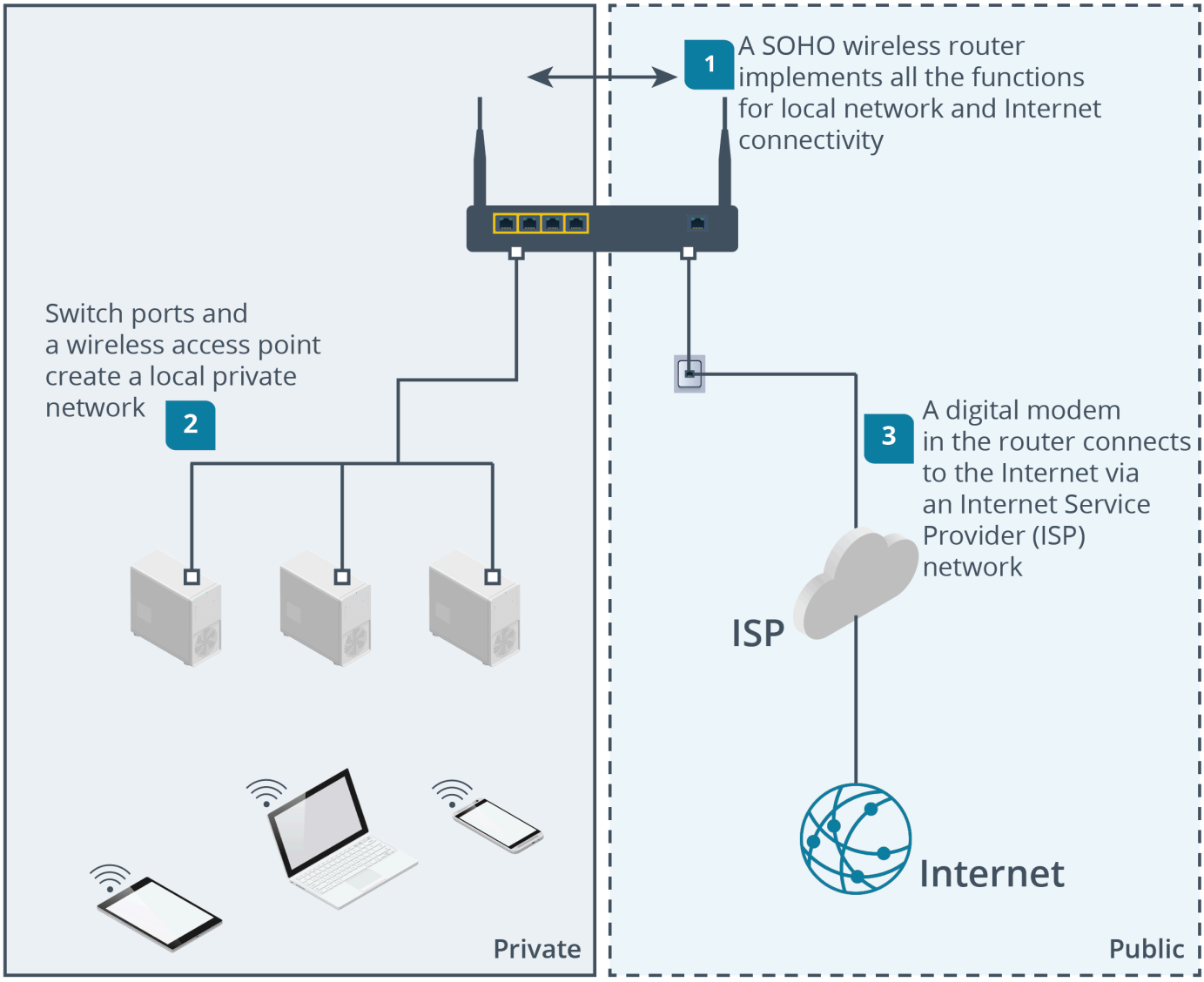
A+ Core 1 and Core 2 CertMaster Perform 15.0

5.1.2 SOHO and Enterprise Networks

A **small office/home office (SOHO)** LAN is a small network possibly using a centralized server, in addition to client devices and printers, but often using a single networking appliance to provide LAN and Internet connectivity. This is often referred to as a "SOHO router," "Internet router," or "broadband router." SOHO networks are typically designed to support a small number of users.

A typical SOHO network layout



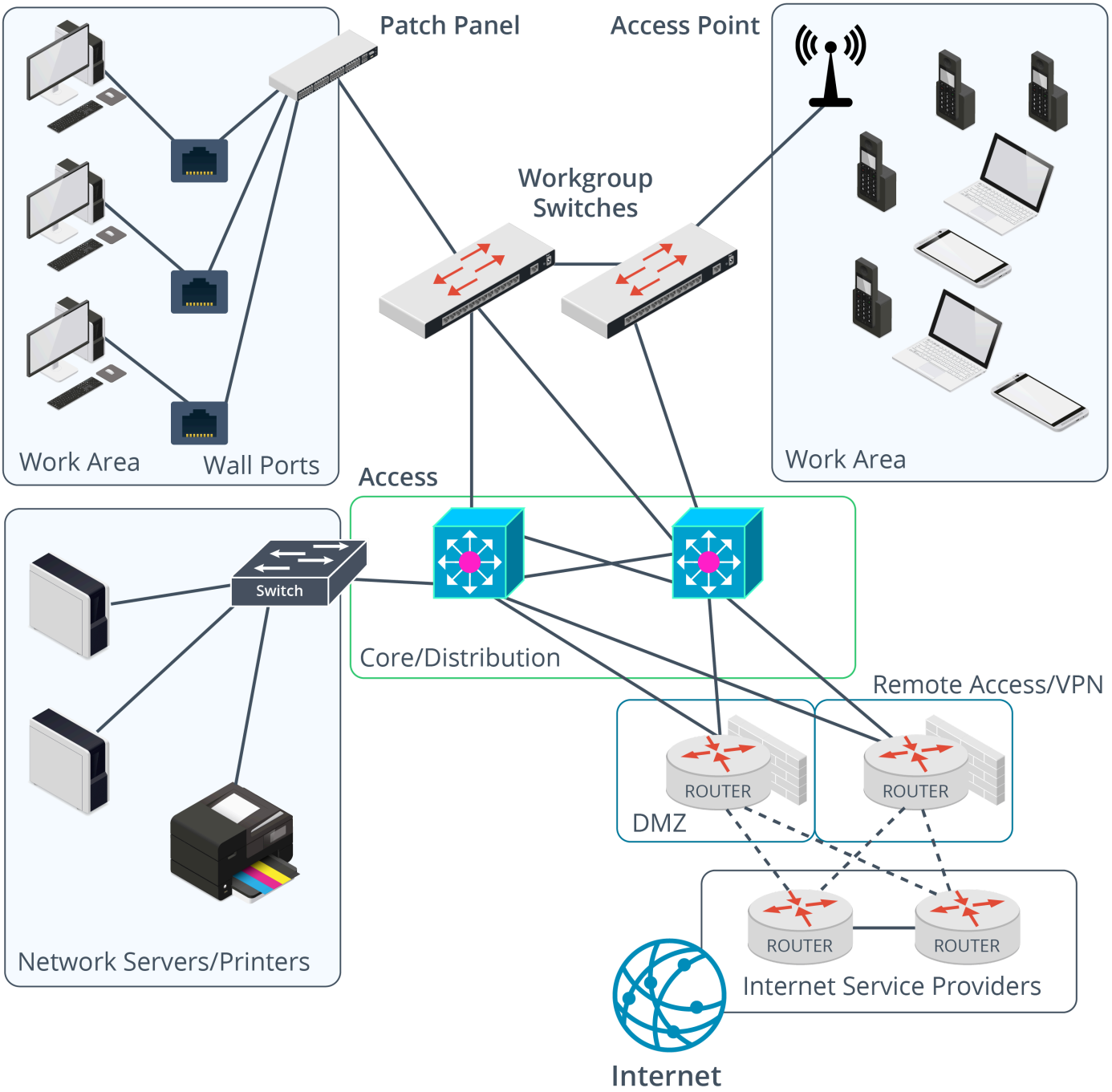
▼ Description

The steps are as follows: Step 1 (Public): A SOHO wireless router implements all the functions for local network and internet connectivity. Step 2 (Private): Switch Ports and a wireless access point create a local private network. Step 3 (Public): A digital modem in the router connects to the internet via an internet service provider (I S P) network.

Networks supporting larger businesses or academic institutions have networking appliances with the same basic functions as a SOHO router, but because they must support more clients with a greater degree of reliability, each function is performed by a separate network device.

The following graphic illustrates how an enterprise LAN might be implemented. Each segment of the network is designed as a modular function. Client computers and printers are located in work areas and connected to the network by cabling running through wall conduit. Laptops and mobile devices connect to the network via wireless access points (APs). Network servers are separated from client computers in a server room. Workgroup switches connect each of these blocks to core/distribution switches, routers, and firewalls. These network appliances allow authorized connections between the clients and servers.

Positioning network components



▼ Description

On the top left, the Work Area is connected to Wall Ports. These devices are linked to a Patch Panel through cables. The Patch Panel connects to Workgroup Switches. On the right, there is another Work Area that includes wireless devices such as laptops, smartphones, and tablets. These devices communicate with the network wirelessly through an Access Point, which also links to the Workgroup Switches. The workgroup switches are connected to the core or distribution. The core or distribution further connects to the network servers or printers, D M Z, remote access or V P N, and internet service providers.

Internet services are placed in protected screened subnets, which represent a border between the private LAN and the public Internet. Traffic to and from this zone is strictly filtered and monitored. Network border services provide Internet access for employees, email and communications, remote access and WAN branch office links via virtual private networks (VPNs), and web services for external clients and customers.