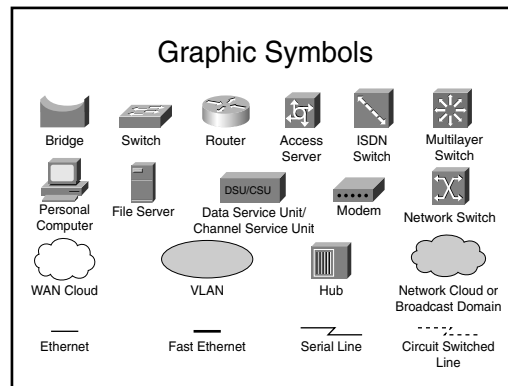


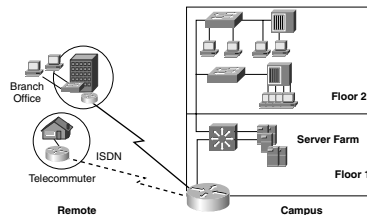
General Concepts



Defining Networks

Several different types of users access the network from many locations:

- **Main office**—Most corporate information is located here. Everyone is connected to the LAN.
- **Branch office**—Remote sites with a separate LAN access the main office through the WAN.
- **Private residences**—Many employees work out of their homes, which become part of the network.
- **Other sites**—Mobile users can connect from virtually anywhere.



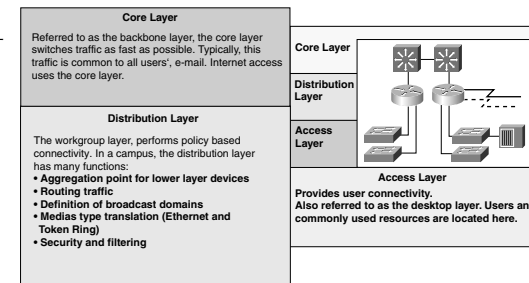
Hierarchical Model

Cisco uses a hierarchical network model. High traffic loads create a need for efficient routing and switching techniques.

Defining a Network's Key Points

Cisco uses a hierarchical network model. The three layers are the access layer, the distribution layer, and the core layer:

- **Access layer**—Provides user connectivity to the network.
- **Distribution layer**—Responsible for routing, filtering, and WAN access.
- **Core layer**—Responsible for fast-switching services.



OSI Model

The *OSI model* is a standardized framework for network functions and schemes. It breaks down otherwise complex network interactions into simple elements, allowing developers to modularize design efforts. This method allows many independent developers to work on separate network functions that can be applied in a "plug-and-play" manner.

OSI Model

Application	User interface	Telnet HTTP
Presentation	Encryption and other processing	ASCII JPEG
Session	Manages multiple applications	Operating systems Scheduling