

Layered Network Design Simulation

Objective

Explain the need to design a hierarchical network that is scalable.

Scenario

As the network administrator for a very small network, you want to prepare a simulated-network presentation for your branch manager to explain how the network currently operates.

The small network includes the following equipment:

- One Cisco 2911 series router
- One Cisco 3560 switch
- One Cisco 2960 switch
- Four user workstations (PCs or laptops)
- One printer

Resources

- Packet Tracer software

Directions

Step 1: Create a simple network topology using Packet Tracer software. Place the devices at the appropriate levels of the Cisco three-layer hierarchical model design, including:

- a. One Cisco 2911 series router
- b. One Cisco 3560 switch
- c. One Cisco 2960 switch
- d. Four user workstations (PCs or laptops)
- e. One printer

Step 2: Using Packet Tracer's drawing tool and indicate the hierarchical layers with different color coding and labels:

- a. Access layer
- b. Distribution layer
- c. Core layer

Step 3: Configure the network and user devices. Check for end-to-end connectivity.

Step 4: Share your configuration and hierarchical network design Packet Tracer file with another student, group, the class, or the instructor.