

## Class Activity - Network by Design

### Objective

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

### Scenario

Your employer is opening a new, branch office.

You have been reassigned to the site as the network administrator where your job will be to design and maintain the new branch network.

The network administrators at the other branches used the Cisco, three-layer, hierarchical approach when designing their networks. You decide to use the same approach.

To get an idea of what using the hierarchical model can do to enhance the design process, you research the topic.

### Resources

- Internet access
- Word processing software

### Directions

**Step 1: Use the Internet to find information and take notes about the Cisco, three-layered hierarchical model. The site should include information about the:**

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

**Step 2: In your research, make sure to include:**

- a. A simple definition of each hierarchical layer
- b. Three concise facts about each layer
- c. Network device capabilities needed at each layer
- d. A detailed graphic that shows a full, three-layer hierarchical model design

### EXTENSION ACTIVITY:

In groups of three or four

Have a look on the web for Distribution Layer Switches

What are the results?

Are there particular features that are common to all Distribution layer switches?

How much do they cost?