

Linking Up

Objective

Describe link aggregation.

Scenario

Many bottlenecks occur on your small- to medium-sized business network, even though you have configured VLANs, STP, and other network traffic options on the company's switches.

Instead of keeping the switches as they are currently configured, you would like to try EtherChannel as an option for, at least, part of the network to see if it will lesson traffic congestion between your access and distribution layer switches.

Your company uses Catalyst 3560 switches at the distribution layer and Catalyst 2960 and 2950 switches at the access layer of the network. To verify if these switches can perform EtherChannel, you visit the [System Requirements to Implement EtherChannel on Catalyst Switches](#). This site allows you to gather more information to determine if EtherChannel is a good option for the equipment and network currently in place.

After researching the models, you decide to use a simulation software program to practice configuring EtherChannel before implementing it live on your network. As a part of this procedure, you ensure that the equipment simulated in Packet Tracer will support these practice configurations.

Resources

- World Wide Web connectivity
- Packet Tracer software
- Word processing or spreadsheet software

Directions

Step 1: Visit [System Requirements to Implement EtherChannel on Catalyst Switches](#).

- a. Pay particular attention to the Catalyst 3560, 2960, and 2950 model information.
- b. Record any information you feel would be useful to deciding whether to use EtherChannel in your company.

Step 2: Create a matrix to record the information you recorded in Step 1b, including:

- a. Number of ports allowed to be bundled for an EtherChannel group
- b. Maximum group bandwidth supported by bundling the ports
- c. IOS version needed to support EtherChannel on the switch model
- d. Load balancing availability
- e. Load balancing configuration options
- f. Network layers supported for EtherChannel operation

Step 3: Open Packet Tracer.

- a. Notice how many ports are available to bundle for EtherChannel on all three switch models.
- b. Check all three models to see how many EtherChannel groups you could create on each model.
- c. Make sure the IOS version is recent enough to support all EtherChannel configurations.

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- d. Do not configure your simulated network, but do check the models available in the Packet Tracer to make sure they will support all the EtherChannel configuration options.

Step 4: Share your matrix with another group or the class.