

Copper Ports Test on SFE/SGE Managed Switches

Objective

Gigabit Ethernet (GE) ports offer speeds of 1000Mbps (1Gbps) and Fast Ethernet ports offer speeds of 100Mbps. GE ports are often used for the transmission of large files and videos. The cable used in GE ports is made up of twisted pair copper wire.

This document explains the performance of the copper ports test done by the Virtual Cable Tester (VCT) on Gigabit Ethernet (GE) ports.

Applicable Devices

- SFE/SGE Managed Switches

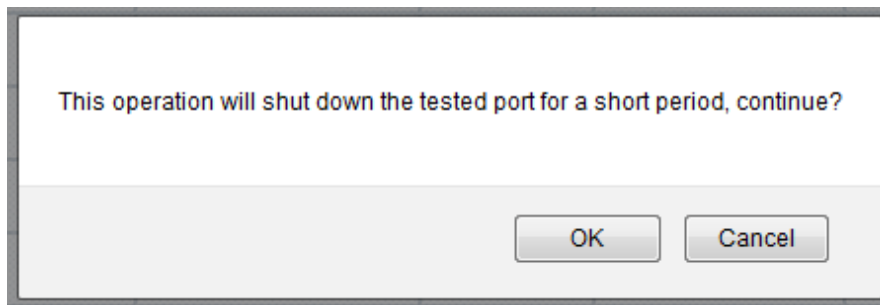
Copper Ports Test

Step 1. Log in to the web configuration utility to choose **Administration > Diagnostics > Copper Test**. The *Copper Test* page opens:

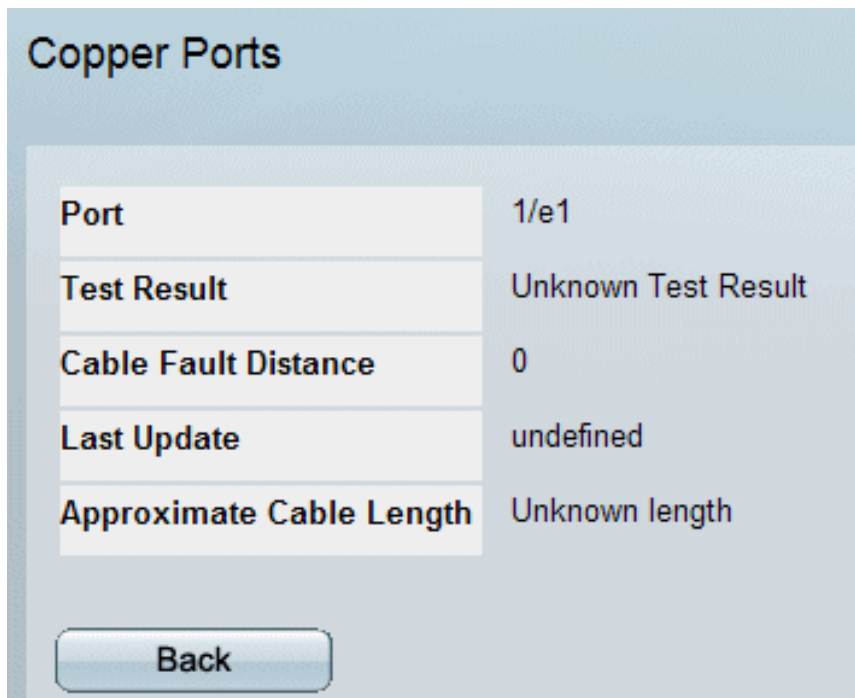
Step 2. Choose the GE or FE port as desired (in this case it is GE) on which the copper test is to be performed from the page.

Caution: The test can be done on cables of up to 140 meters long. After you choose the port on which the copper test is to be performed, the port is set to the Down state. Communications are disrupted and after the copper test, the port is set to the Up state.

Step 3: Click **Test**.



Step 4. A pop-up message is displayed. Click **OK** to continue the test or **Cancel** to stop the test.



When the user clicks **OK**, the *Test Results* area displays the following fields:

- Port — Indicates the tested port name and number.
- Test Results — Indicates the cable test results:
 - OK — Indicates that the cable has passed the test.
 - No Cable — Indicates that the cable is not connected to the port.
 - Open Cable — Indicates that the cable is connected on only one side.
 - Short Cable — Indicates that a short circuit has occurred on the cable.
 - Unknown Test Result — Indicates that an error has occurred.
- Cable Fault Distance — Indicates the distance of the fault from the port.
- Last Update — Indicates the date and time of the last test conducted on the port.
- Approximate Cable Length — Indicates the length of the cable.

Copper Cable Extended Feature						
Cable Status		Short Cable				
Speed		100MB/s				
Link Status		Up				
Pair	Distance to Fault	Status	Cable Length	Channel	Polarity	Pair Skew
1-2	0		Unknown length			
3-6	0		Unknown length			
4-5	0		Unknown length			
7-8	0		Unknown length			

When the VCT is run on a Gigabit port (GE1 or GE2) or Fast Ethernet (FE1 or FE2) the *Advanced Information* area displays the following fields:

- Pair — Displays the cable wire pair under test.
- Distance to Fault — Displays the distance of the fault from the port.
- Status — Displays the cable wire pair status:
 - Red — Displays fault.
 - Green — Displays status is OK.
- Cable Length — Displays the length of the cable.
- Channel — Displays the tested port cable channel.
- Polarity — Displays whether automatic polarity detection and correction is activated for the wire pair or not.
- Pair Skew — Displays the time difference in nano seconds for the cable wire pair.