

PHY Commands

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test cable-diagnostics tdr

To use Time Domain Reflectometry (TDR) technology to diagnose the quality and characteristics of a copper cable attached to a port, use the **test cable-diagnostics tdr** Privileged EXEC mode command.

Syntax

test cable-diagnostics tdr interface *interface-id*

Parameters

interface-id—(Optional) Specifies an Ethernet port ID.

Command Mode

Privileged EXEC mode

User Guidelines

This command does not work on fiber ports (if they exist on the device). The port to be tested should be shut down during the test, unless it is a combination port with fiber port active. In this case, it does not need to be shut down, because the test does not work on fiber ports.

The maximum length of cable for the TDR test is 120 meters.

Example 1 - Test the copper cables attached to port gi1/0/1 (a copper port).

```
switchxxxxxx#  test cable-diagnostics tdr interface gi1/0/1
Cable is open at 64 meters
```

Example 2 - Test the copper cables attached to port 2 (a combo port with fiber active).

```
switchxxxxxx#  test cable-diagnostics tdr interface gi1/0/2
Fiber ports are not supported
```

show cable-diagnostics tdr

To display information on the last Time Domain Reflectometry (TDR) test performed on all copper ports or on a specific copper port, use the **show cable-diagnostics tdr** Privileged EXEC mode command.

Syntax

show cable-diagnostics tdr *[***interface** *interface-id*]

Parameters

- **interface-id**—(Optional) Specify an Ethernet port ID.

Command Mode

Privileged EXEC mode

User Guidelines

The maximum length of cable for the TDR test is 120 meters.

Example

The following example displays information on the last TDR test performed on all copper ports.

```
switchxxxxxx#  show cable-diagnostics tdr
```

Port	Result	Length [meters]	Date
gi1/0/1	OK		
gi1/0/2	Short	50	13:32:00 23 July 2010
gi1/0/3	Test has not been performed		
gi1/0/4	Open	64	13:32:00 23 July 2010

show cable-diagnostics cable-length

To display the estimated copper cable length attached to all ports or to a specific port, use the **show cable-diagnostics cable-length** Privileged EXEC mode command.

Syntax

show cable-diagnostics cable-length *[***interface** *interface-id*]

Parameters

- **interface-id**—(Optional) Specify an Ethernet port ID.

Command Mode

Privileged EXEC mode

User Guidelines

The port must be active. The cable length results are not available if link is running at 100Mbps.. The cable length results provided with this command may be effected if Green Ethernet Short Reach feature is enabled on the interface

Example

The following example displays the estimated copper cable length attached to all ports.

```
switchxxxxxx#  show cable-diagnostics cable-length
```

Port	Length [meters]
----	----------
gi1/0/1	< 50
gi1/0/2	Copper not active
gi1/0/3	110-140

show fiber-ports optical-transceiver

To display the optical transceiver diagnostics, use the **show fiber-ports optical-transceiver** Privileged EXEC mode command.

Syntax

show fiber-ports optical-transceiver *[***interface** *interface-id*]

Parameters

- **interface-id**—(Optional) Specify an Ethernet port ID.

Default Configuration

All ports are displayed. If detailed is not used, only present ports are displayed.

Command Mode

Privileged EXEC mode

Example

```
switchxxxxxx#  show fiber-ports optical-transceiver
   Port      Temp  Voltage Current Output  Input   LOS
             [C]   [Volt]  [mA]    Power   Power
                                   [mWatt] [mWatt]
----------- ------ ------- ------- ------- ------- ---
  gi1/0/1     Copper
  gi1/0/2     Copper
  gi1/0/3      28    3.32    7.26    3.53    3.68   No
  gi1/0/4      29    3.33    6.50    3.53    3.71   No
 Temp         - Internally measured transceiver temperature
 Voltage      - Internally measured supply voltage
 Current      - Measured TX bias current
 Output Power - Measured TX output power in milliWatts
 Input Power  - Measured RX received power in milliWatts
 LOS          - Loss of signal
 N/A - Not Available, N/S - Not Supported, W - Warning, E - Error
```