

Configuring LFS

Abstract

Link fault signaling operates between the remote RS and the local RS. Faults detected between the remote RS and the local RS are received by the local RS as Local Fault. Only an RS originates Remote Fault signals.

Sub-layers within the PHY are capable of detecting faults that render a link unreliable for communication. Upon recognition of a fault condition, a PHY sub-layer indicates Local Fault status on the data path. When this Local Fault status reaches an RS, the RS stops sending MAC data, and continuously generates a Remote Fault status on the transmit data path (possibly truncating a MAC frame being transmitted). When Remote Fault status is received by an RS, the RS stops sending MAC data, and continuously generates Idle control characters. When the RS no longer receives fault status messages, it returns to normal operation, sending MAC data.

The RS reports the fault status of the link. Local Fault indicates a fault detected on the receive data path between the remote RS and the local RS. Remote Fault indicates a fault on the transmit path between the local RS and the remote RS.

The fault status is as follows:

a) link_fault = OK

The RS shall send MAC frames as requested through the PLS service interface. In the absence of MAC frames, the RS shall generate Idle control characters.

b) link_fault = Local Fault

The RS shall continuously generate Remote Fault Sequence ordered_sets.

c) link_fault = Remote Fault

The RS shall continuously generate Idle control characters.

Link Fault Signaling

If ignore local fault is set as false. When link local fault is triggered, the RS shall continuously generate Remote Fault Sequence ordered_sets. Otherwise, the RS will not generate Remote Fault Sequence ordered_sets.

If ignore remote fault is set as false. When link remote fault is received, The RS shall continuously generate Idle control characters. Other, The RS shall send MAC frames as requested through the PLS service interface and generate Idle control characters in the absence of MAC frames.

LFS Commands

The following is the configuration command as sample:

```
ovs-vsctl set Interface te-1/1/1 options:link-fault-signaling=ignore-none
ovs-vsctl set Interface te-1/1/1 options:link-fault-signaling=ignore-local
ovs-vsctl set Interface te-1/1/1 options:link-fault-signaling=ignore-remote
ovs-vsctl set Interface te-1/1/1 options:link-fault-signaling=ignore-both
```

1. "ignore-local" means ignoring local signaling fault.
2. "ignore-remote" means ignoring local remote fault.
3. "ignore-both" means ignoring both local and remote signaling fault.
4. "ignore-none" means not ignoring neither local signaling fault nor remote signaling fault.

Up Mode

The force up command forcibly brings up a fiber Ethernet port and enables the port to forward packets uni-directionally over a single link. In this way, transmission links are well utilized.

Up mode commands.

The following is the configuration command as a sample:

```
ovs-vsctl set Interface te-1/1/1 options:up-mode=true
ovs-vsctl set Interface te-1/1/1 options:up-mode=false
```



1. Disable port command has a higher priority than set port up command. If one port is disabled manually, it is not effective to set it up forcibly.
2. Up-mode true command should be configured together with ignore-local-fault true command. If user only configures up-mode true and not ignore-local-fault command, traffic can't transmit from TX link
3. LFS command must configure on more than 10G port.