

FCoE Device Type Indication

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Overview

- Motivation
- FCoE device types
- Possible solutions
- Additional thoughts

Motivation

- FC-BB-5 recommends that bridges perform FIP snooping to improve security in FCoE deployments using ACLs
- This function must only be performed by bridges immediately adjacent to an ENode or FCF
 - Otherwise, a change in path would result in traffic being discarded
- Without a way to auto-detect connectivity to an ENode or FCF, this must be manually configured
- LLDP can easily provide the information needed for auto-detection

FCoE Device Types

- ENode – End system
 - FCF – Fibre Channel Forwarder
 - FDF – FCoE Data Forwarder
 - FSB – FIP-snooping Bridge
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- ENode, FCF, FSB are defined in FC-BB-5
 - FDF is defined in FC-BB-6 (work in progress)

Possible Solutions

- System Capabilities in LLDP
 - Add an additional “capability” for each device
 - 5 unused “capability” bits
 - See Table 8-4 in 802.1AB-2009
 - “Station Only” already defined and can be used for ENode
 - Would need to define
 - FCF, FDF, FSB?
- New TLV in DCBX
 - Provide a new TLV in DCBX for FCoE device type

Additional Thoughts

- System Capabilities TLV
 - An optional TLV
 - Most implementations don't send it by default
 - Updates 802.1AB
 - Liaison with T11 to recommend ENodes, FCFs, FDFs, FSBs advertise this TLV
- New TLV in DCBX
 - DCBX is widely used by ENodes, FCFs, and FSBs
 - Would require an update to 802.1Q

THANK YOU