FCoE Device Type Indication

Anoop Ghanwani (Dell)
Jeff Lynch (IBM)
Manoj Wadekar (Qlogic)
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

- 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