Baseline DCBX Goals and Functions

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DCBX Goals

- Discover DCB capabilities of peer
- Identify configuration problems
  - Exchange relevant configuration of DCB features with peer
  - Defend as appropriate (e.g. disable the DCB feature)
  - Notification of issues
- Provide for “negotiation” of DCB features
  - One peer can take obtain its DCB configuration from the other

Baseline DCBX

- Many individuals contributed to the Baseline DCBX proposal
- http://www.ieee802.org/1/files/public/docs2008/az-wadekar-dcbx-capability-exchange-discovery-protocol-1108-v1.01.pdf
- Based on LLDP
  - Link based protocol
  - Higher level management systems used to ensure consistent end-to-end configuration
- Provides a framework for exchanging and negotiating DCB feature configuration

DCBX Management Features

Advertise

- Allows local independent configuration of feature
- Or, configuration in conjunction with peer

Willing

- A Willing peer can get its configuration from a Not Willing peer

Enable

- Indicates to peer whether feature has been administratively enabled/disabled (e.g. instead of silently not advertising)

These per-DCB feature objects provide:

- a consistent management interface for each feature
- information to management systems about peer – possibly across management domains (server vs. network)
- flexibility in management and configuration of features - again, possibly across management domains

Function of SeqNo / AckNo

Principles of the initial DCBX design included:

- Each peer exchanges Desired Configuration
- Each peer (when advertising) computes the same Operational Configuration

Function of SeqNo / AckNo:

- Don't act on old information
  - Only process peer PDUs that indicate most recent advertisement was received by peer
- Don't advertise a new Desired Configuration until previous one was ACKed

LLDP Fast Transmit on TLV change:

- Improves reliability and chances for a timely convergence of DCBX
- But, does not replace the function of SeqNo/AckNo

Thanks!