



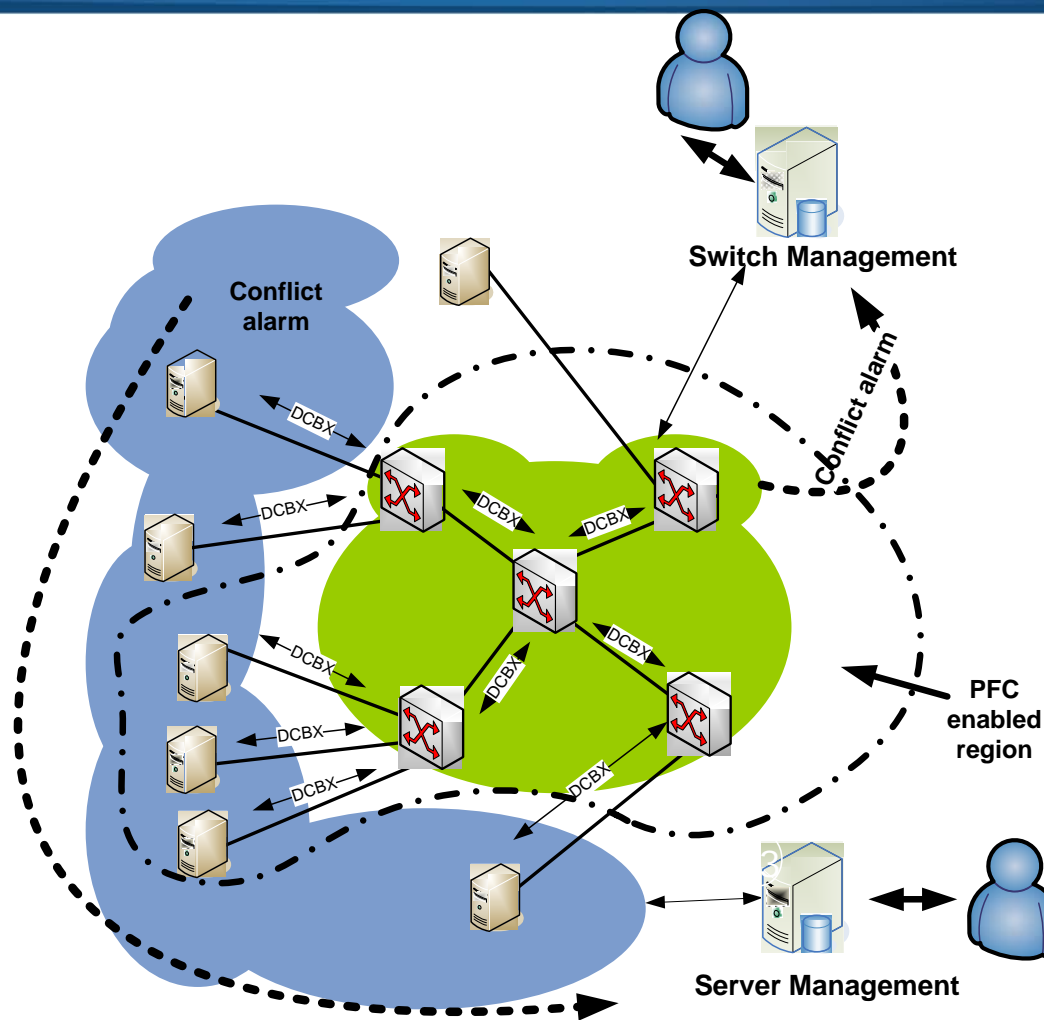
DCBX Protocol Proposal

Manoj Wadekar

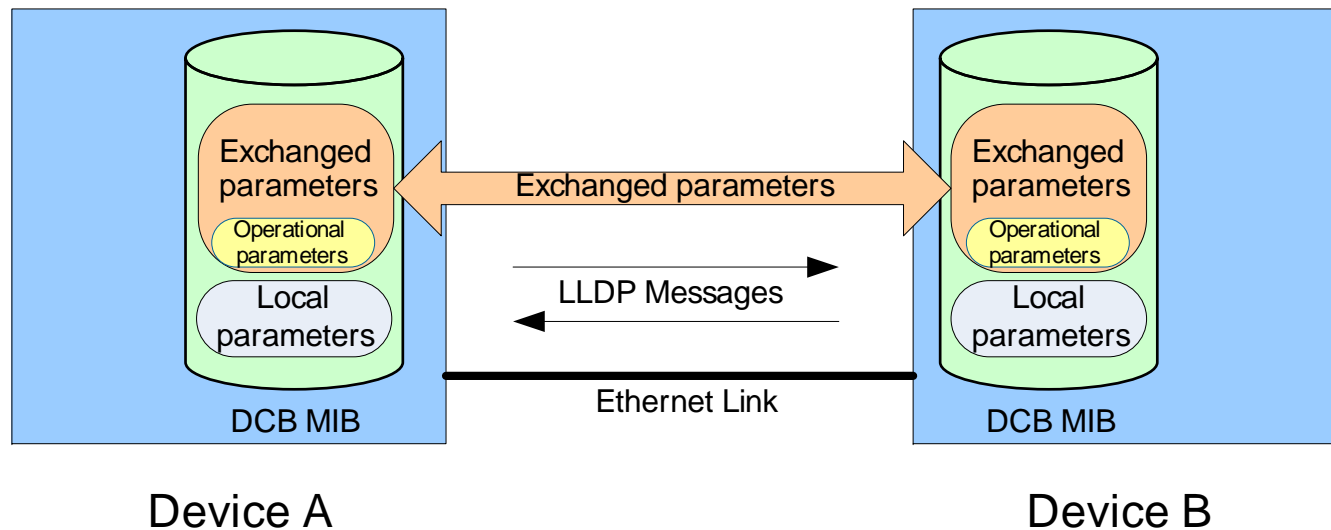
- Amit Shukla – Juniper
- Anoop Ghanwani - Brocade
- Anjan – Cisco
- Anthony Faustini - Cisco
- Asif Hazarika – Fujitsu
- Awais Nemat – Marvell
- Bruce Klemin – Qlogic
- Brice Kwan - Broadcom
- Claudio DeSanti- Cisco
- Craig W. Carlson - QLogic
- Dan Eisenhauer – IBM
- Danny J. Mitzel - Brocade
- David Peterson – Brocade
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- Douglas Dreyer - IBM
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- Eric Multanen - Intel
- Gaurav Chawla - Dell
- Glenn - Brocade
- Hemal Purohit - QLogic
- Hugh Barrass – Cisco
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- John Hufferd – Brocade
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- Manoj Wadekar – Qlogic
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- Mike Ko – IBM
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- Parag Bhide - Emulex
- Pat Thaler - Broadcom
- Ravi Shenoy - Emulex
- Renato Recio - IBM
- Robert Snively - Brocade
- Roger Hathorn - IBM
- Sanjaya Anand – Qlogic
- Sanjay Sane – Cisco
- Shreyas Shah - PLX
- Silvano Gai - Cisco
- Stuart Berman - Emulex
- Suresh Vobbilisetty - Brocade
- Taufik Ma - Emulex
- Uri Elzur - Broadcom

- **Discovery of DCB capability in a peer**
 - Mechanism to know if the peer device supports a particular feature such as Priority Groups (PG) or Priority-based Flow Control (PFC)
- **DCB feature misconfiguration detection**
 - Detect misconfiguration of a feature between the peers on a link
- **Peer configuration of DCB features**
 - Provide basic peer to peer configuration

DCBX Deployment Scenario

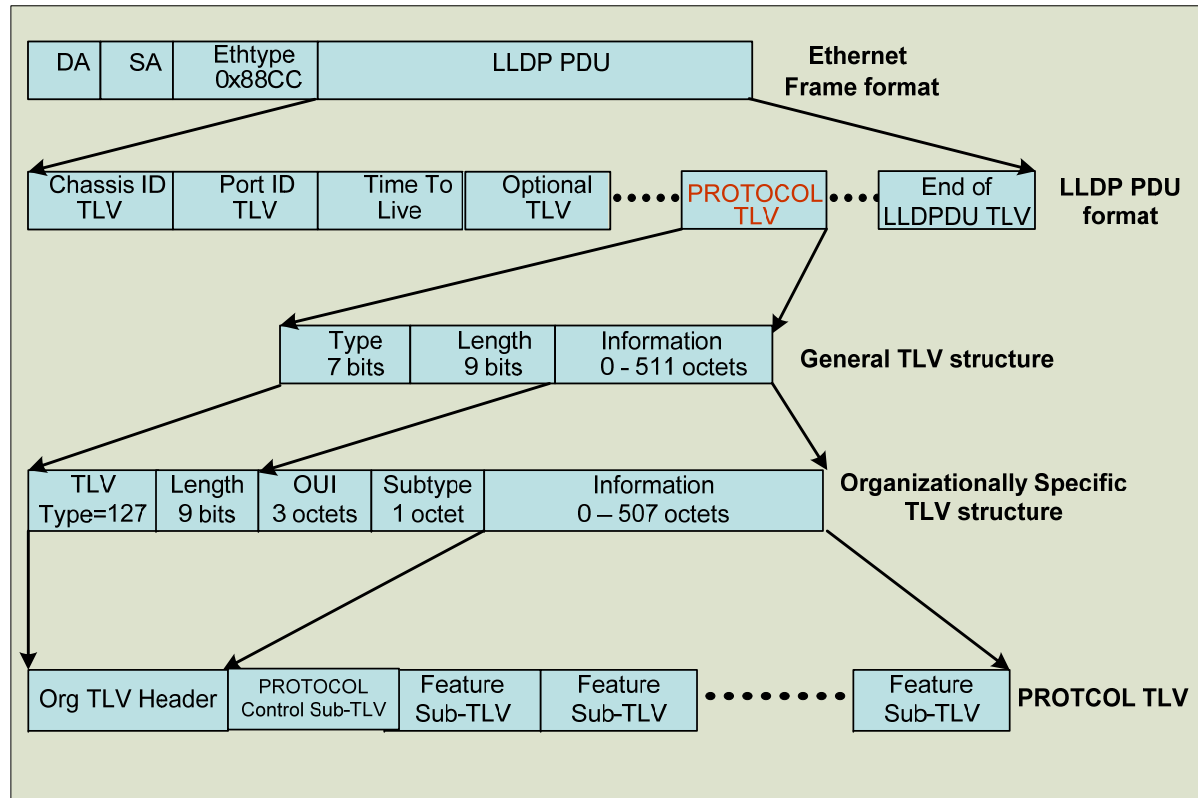


DCBX Exchange Overview



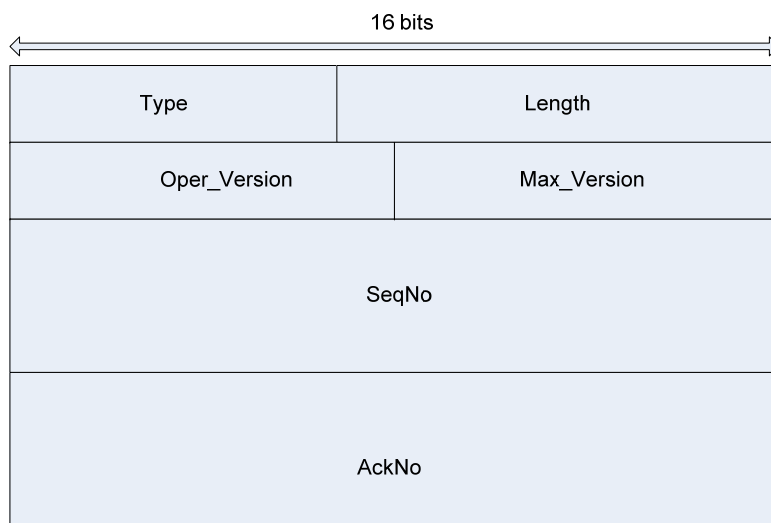
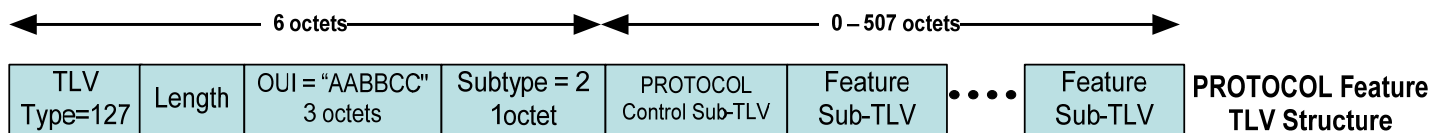
- **Exchanged parameters:** Exchanged parameters are sent to the peer
 - Administered parameters
 - Operational parameters
- **Local parameters:** Local parameters are not exchanged in LLDP messages

LLDP and DCBX



- **Uses LLDP for exchange information between link peers**
- **Adds control protocol above LLDP to ensure synchronization between peers for information**
 - Additional mechanism for reliability and synchronization
- **Defines protocol to (optionally) provide desired configuration to link peer**

DCBX Control and Protocol TLVs



DCBX Control TLV Definition



EN=Enabled

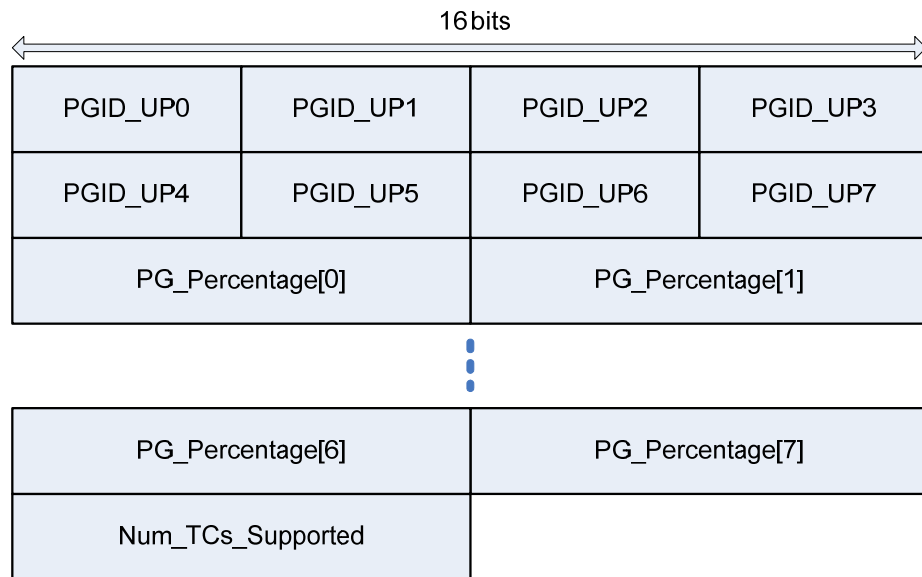
ER = Error

W=Willing

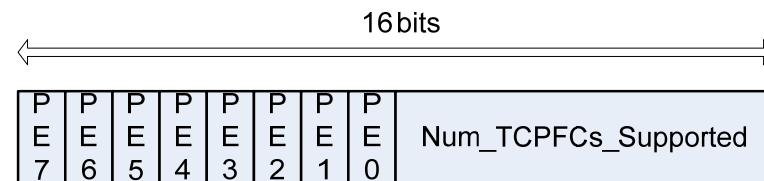
SIZE=6 Octets

- **Each feature carries its version number, subtype and configurability information**

DCBX : PG and PFC TLVs



Priority Group Parameters Structure



Priority-based Flow Control Parameters Structure

- <http://www.ieee802.org/1/files/public/docs2008/az-wadekar-dcbx-capability-exchange-discovery-protocol-0608-v1.0.pdf>
- Includes additional state machine and other details that are not covered in this presentation
- Comments/Questions/Suggestions are welcome



Thank You!

