
Comment Resolution

Section 33.6

Anoop Vetteth

Wael Diab

Comment # 202

Commenter: Wael Diab

Section: 33.6.5

The current sequencing for the PD's DLL engine has a bug which would allow a Type 2 midspan to trigger the PD to send L2 packets to a switch from bootup despite the fact that there is nothing on the other side. This can be remedied as described below without losing the mutual-identification aspect and preserving the intended timing as well as the keep alive nature of the protocol.

Comment # 203

Commenter: Wael Diab

Section: 33.6.5

We have allowed Type 1 PDs to do DLL, hence the startup procedure should be defined independent of the PD Type. The current definition leaves it ambiguous for Type 1 PDs capable of L2.

Proposed Resolution

- Remove the requirement to transmit an LLDPDU containing DTE power via MDI classification TLV every 30 seconds after enabling the DLL engine
 - Mandate <AB Revision> that requires minimum retransmission to ensure that at least one packet makes it to the remote system.
 - LLDP already mandates transmission of LLDPDU when there is change in the associated local MIB variables
 - Add a trigger bit to the TLV that can be used by the local system to induce the remote system to send an LLDPDU containing DTE power via MDI classification TLV <Remove>
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Timing Requirements

- Define state variable `pse_dll_ready` that is mapped to a local MIB variable. `pse_dll_ready` is asserted when the PSE system software has initialized the DLL engine and is ready to start receiving/transmitting LLDPDU containing DTE power via MDI classification TLV.
 - Define state variable `pd_dll_ready` that is mapped to a local MIB variable. `pd_dll_ready` is asserted when the PD system software has initialized the DLL engine and is ready to start receiving/transmitting LLDPDU containing DTE power via MDI classification TLV.
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Timing Requirements continued

- A type 2 PSE shall send an LLDPDU containing a DTE power via MDI classification TLV within 10 seconds of Data Link Layer being enabled in the PSE as indicated by the variable `pse_dll_enabled`
 - A type 1 PSE shall send an LLDPDU containing a DTE power via MDI classification TLV when the PSE DLL engine is ready as indicated by the variable `pse_dll_ready`.
 - Type 2 PDs with power draw greater than 12.95W during boot-up shall assert `pd_dll_ready` within 10 seconds of Data Link Layer being enabled in the PD as indicated by the variable `pd_dll_enabled`.
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PSE MIB Variables

PSEs shall send an LLDPDU containing a DTE Power via MDI classification TLV within 10 seconds of a change in the following local MIB variables if the variable `pse_dll_ready` is asserted:

- `aDLLPowerType`
 - `aDLLPowerSource`
 - `aDLLPDPowerPriority`
 - `aMirroredDLLPDRRequestedPowerValue`
 - `aDLLPSEAllocatedPowerValue`
 - `aLostCommunication`
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PD MIB Variables

PDs shall send an LLDPDU containing a DTE Power via MDI classification TLV within 10 seconds of a change in the following local MIB variables if the variable `pd_dll_ready` is asserted:

- `aDLLPowerType`
 - `aDLLPowerSource`
 - `aDLLPDPowerPriority`
 - `aDLLPDRequestedPowerValue`
 - `aMirroredDLLPSEAllocatedPowerValue`
 - `aLostCommunication`
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Comment # 145

Commenter: Anoop Vetteth

Section: 33.7

Rewrite the section to match the state diagram and to show what happens to the MIB variables. Update the definition of the MIB variables. There are a lot of inconsistencies with loss of communication.

Proposed Resolution

- Remove boot-up timing from the section. We cannot lose communication unless it has been established
 - Only expiration of TTL associated with DTE Power via MDI classification TLV can lead to loss of communication
 - Rename Section 33.7 to “Loss of DTE power via MDI classification TLV communication”
 - Split the section into 2 sub-sections; one for PSE and other for PD
 - Fix definition of aLostCommunication. It is currently defined as a counter in Section 30
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Proposed Resolution continued

- Remove MIB variable assignments from Section 33.7 (aLostCommunication)
 - Replace state variable “loss_of_comms” with 3 new state variables in 33.6.6.2 and 33.6.6.5
 - pse_loss_comms_detection
 - pd_loss_comms_indication
 - pd_loss_comms_detection
 - Explain when and how these state variables are updated in 33.7
 - Update Table 33-29 to include the mapping of these state variables to/from MIB variables
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Proposed Resolution continued

- PSE may remove the power if it loses communication from the PD or if the PD indicates that it has lost communication with the PSE
 - Clearly show that power cycling is intended to reset a PD that is brain dead.
 - The ability of the PSE to power-cycle a PD upon loss of communication using LLDPDU containing DTE power via MDI classification TLV is intended to reset a brain-dead PD that is non-responsive to management protocols including LLDP.
 - Note: A management action on the PD resulting in turning off LLDP can result in the PSE removing power and resetting the device.
 - Move loss of communication field to a bit in “type/source/power” field. Rename the field “Power Status”
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Other comments resolved by this proposal

- Landry: #81
 - Finn: Late #10, Late #17, Late #5, Late #16, Late #12, Late #2, Late #9, Late #13, Late #8, Late #11
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