

New LLDP capabilities v100

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Goal

Introduce new features for LLDP that are applicable to a wide range of applications and in scope for the protocol. All proposed TLVs are optional for PSEs to implement.

New TLVs

1. Autoclass

These TLVs make Autoclass available to PDs that have dynamic maximum power needs, or to PDs that cannot meet the physical layer Autoclass timing requirements.

- Request a new Autoclass measurement
- Cancel Autoclass (the PSE reverts to the L1 class power detected during classification)

2. Power cycle

A TLV to request a power cycle, with a timeout as a parameter. Can be used for forcing a complete reboot and as watchdog functionality.

New TLVs

3. Port measurements

Enable the PSE to request the measured V_{PD} and I_{port} from the PD. This can be used to enable retracted power.

Enable the PD to request measured V_{PSE} and I_{port} from the PSE. This can be used to facilitate extended power.

4. I_{cut}

Request the value of I_{cut} from the PSE. This enables extended power beyond P_{Class} potentially up to $V_{PSE} \cdot I_{Cable}$.

5. MPS I_{Hold}

Negotiate lower MPS current I_{Hold} if the PSE supports it.

