

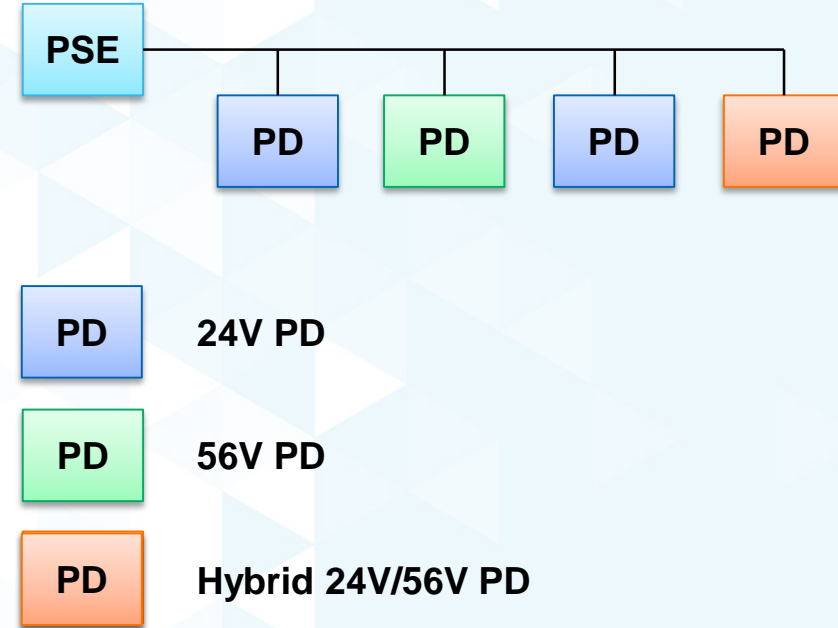
# Multidrop Classification

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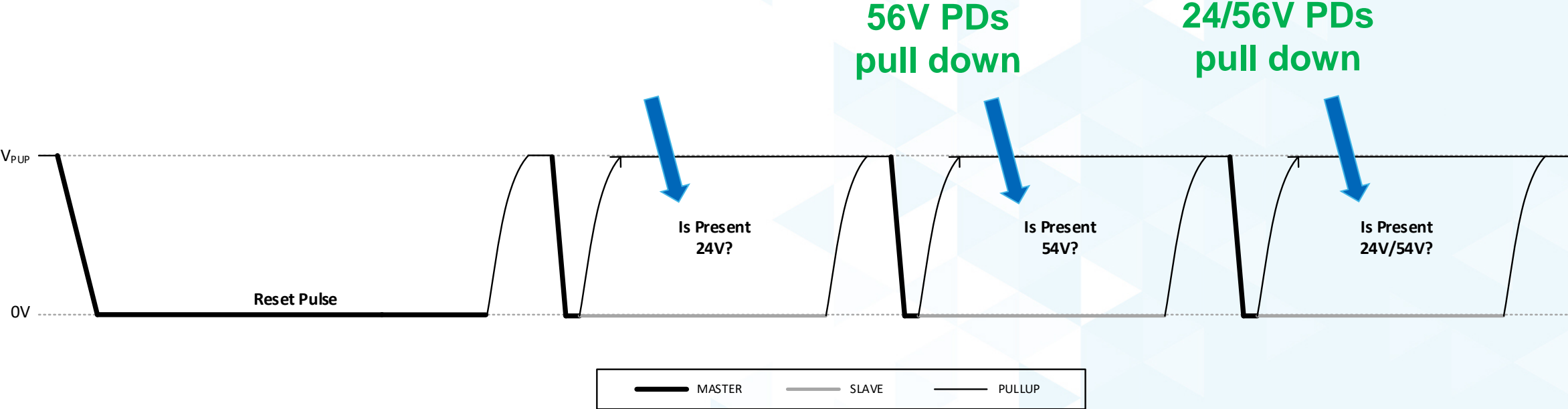
# Device Population and “Classification as Detection”

- ▶ PoE has a proud history of **deliberate** application and removal of power
  - **Do not apply** power unless a PD is present
  - **Remove** power if no PDs are present
- ▶ Application of power is a deliberate step
  - Prior to application of power, query link segment
    - Only apply power if at least one compatible PD is present
  - Propose to use a simple vote to determine if PDs of various “types” are present
    - **Slot 1:** 24V PD
    - **Slot 2:** 56V PD
    - **Slot 3:** Hybrid 24V/56V PD
  - Multiple PDs may answer in the same slot

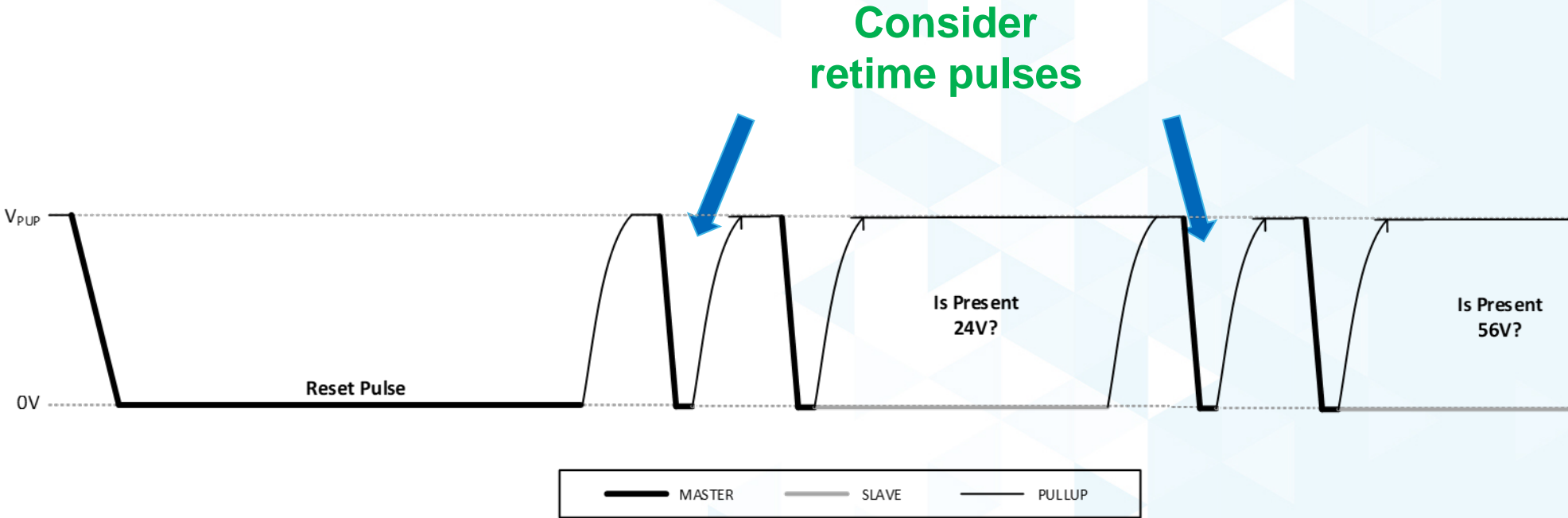


- ▶ **Solution:** Simple class one-hot “vote” allows PSE to determine if one (or more) of a voltage class is present

# Sample One-hot Device Population Classification



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Timing TBD based on lumped RC