Ethernet Link OAM Yang Models

802.3ah (Ethernet in the First Mile)

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Agenda

- Market requirement
- Approach taken to creating the models
- Model structure:
  - Configuration
  - Operational
  - RPCs
  - Notifications

Ethernet Link OAM YANG Market Requirement

- For Cisco, Ethernet Link OAM is reasonably widely deployed and used in carrier Ethernet networks.
- In our experience, customer are most likely to use it at the NNI or UNI, i.e. it seems to be particularly useful where separate administrative domains meet at an Ethernet interface.
- So this is a currently used technology, and hence providing a standard YANG model would likely be beneficial to the wider industry.

Ethernet Link OAM YANG Approach to model design

Split models into two parts:

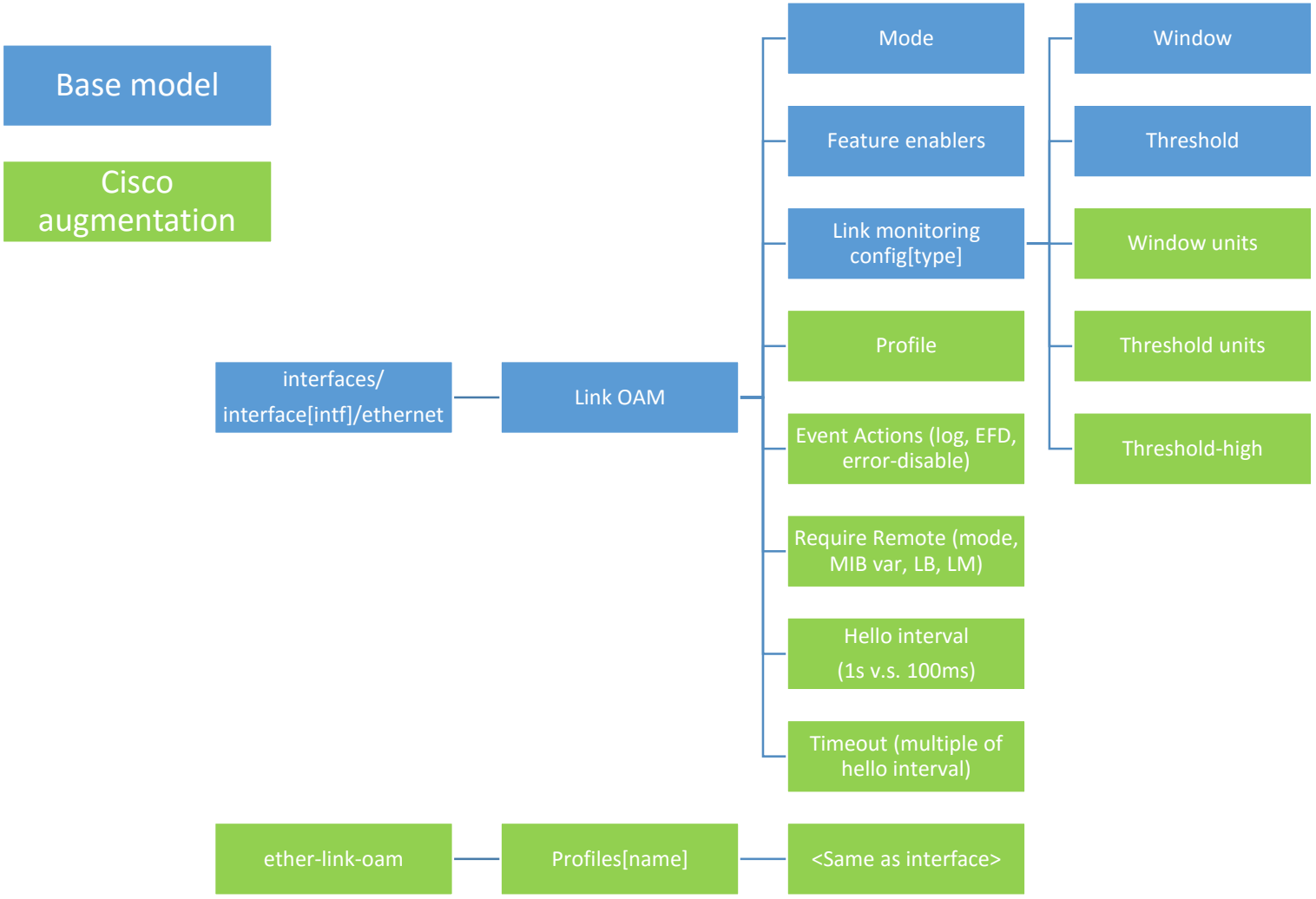
- A standard model (intended to be standardized in IEEE 802.3cf)
  - Based off the Ethernet interfaces YANG model
  - Desire for consistency with RFC 4878 where possible (IETF's ELO MIB)
- Cisco specific augmentations to cover Cisco's extensions to Link OAM:
  - Profiles
  - Different units for thresholds/window sizes
  - High thresholds, and more actions for handling failures (internal mechanism such as EFD, error disable)
  - "Require-remote" config
  - Currently per node (e.g. per linecard) operational data, but if standardized it would make more sense to present this as a global, per device, summary.
  - Mis-wiring detection
  - Configurable hello interval and connection timeout

Ethernet Link OAM YANG Approach to model design (2)

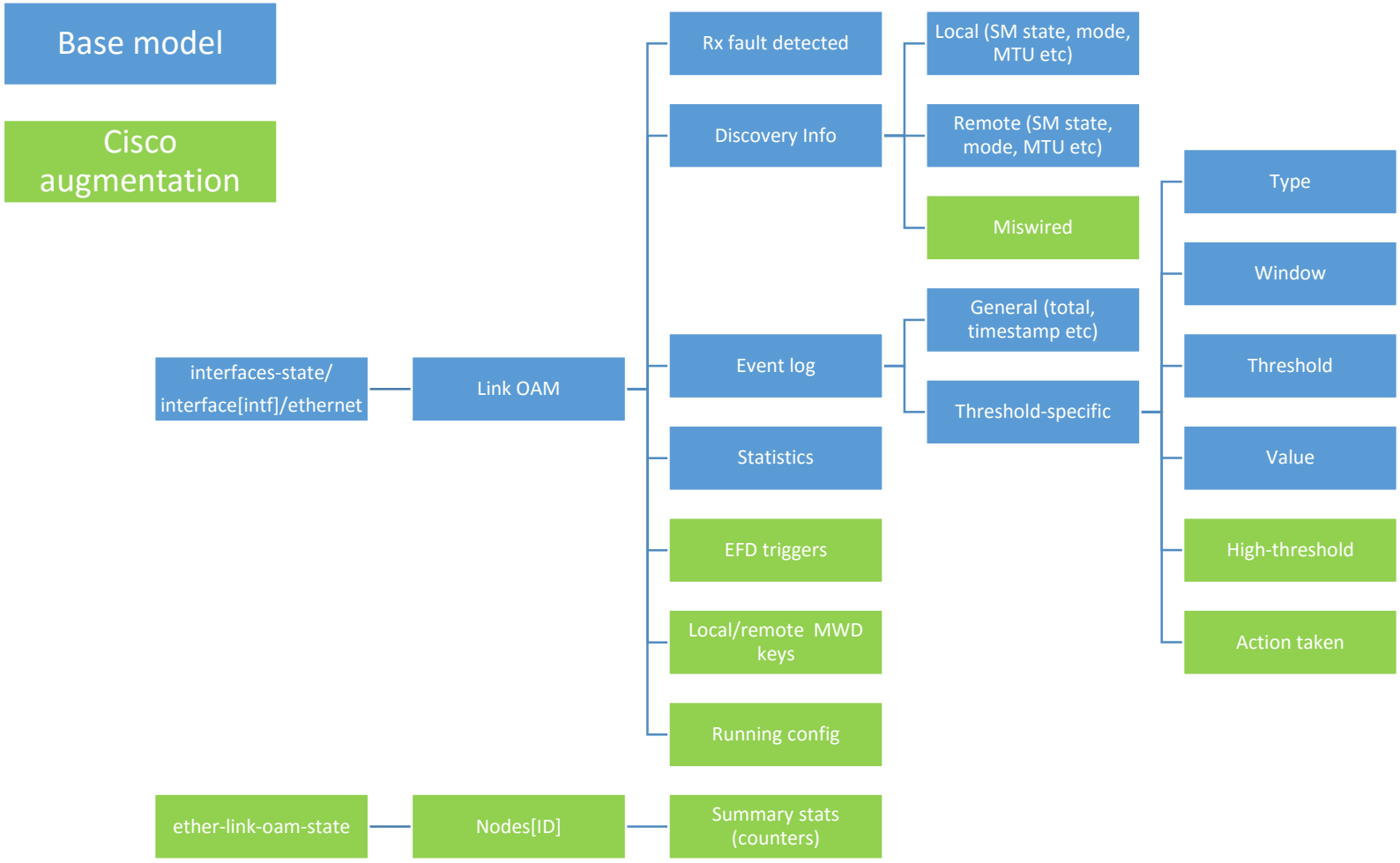
Aims:

- At a minimum it would be useful to standardize the common part of the model (that has been designed for standardization).
- If others would like to pull in some of the Cisco specific extensions into the standard model then that would be OK as well:
  - If multiple vendors implement similar enhancements then there is a general benefit to operators if they use a consist configuration and management interface.
  - Some of the enhancements, e.g. profiles, are designed to make configuration easier rather than add any new functionality.

Configuration



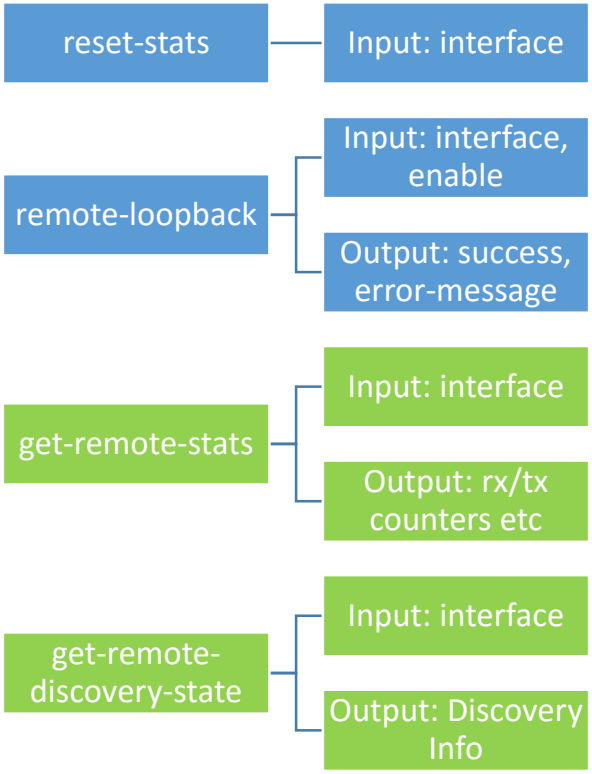
Operational



RPCs

Base model

Cisco augmentation



Notifications

Base model

Cisco augmentation