802.1Qay D3.0: State Machine Instances

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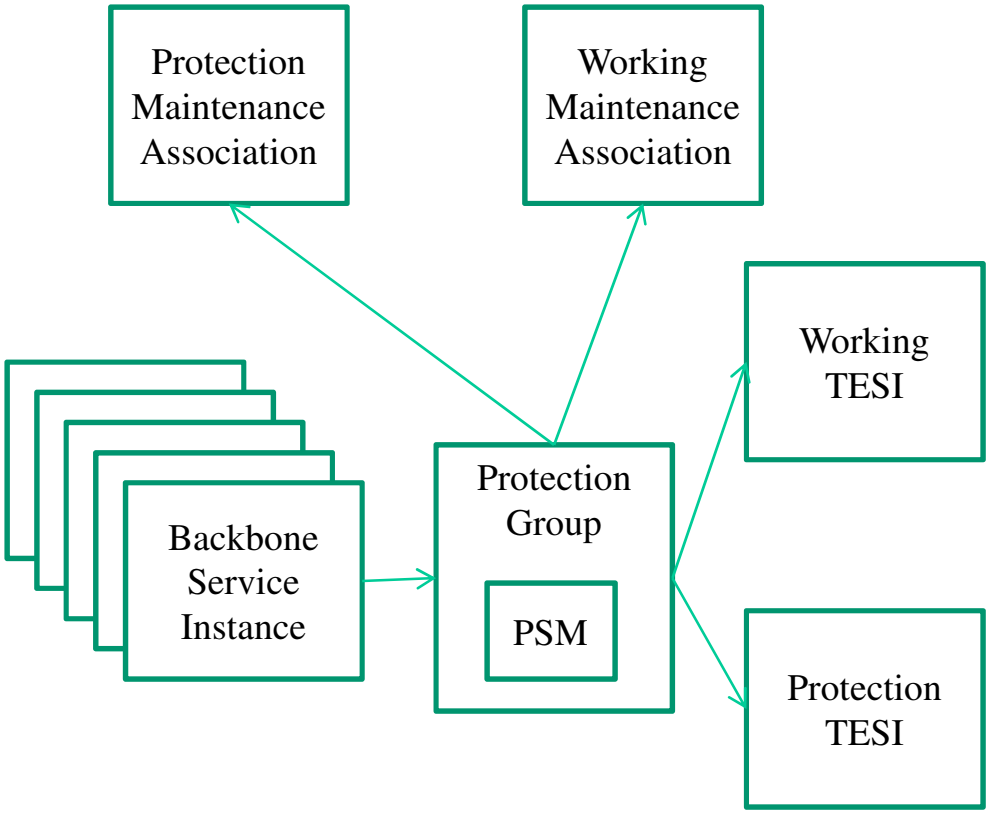
Version 1

State Machine Instances

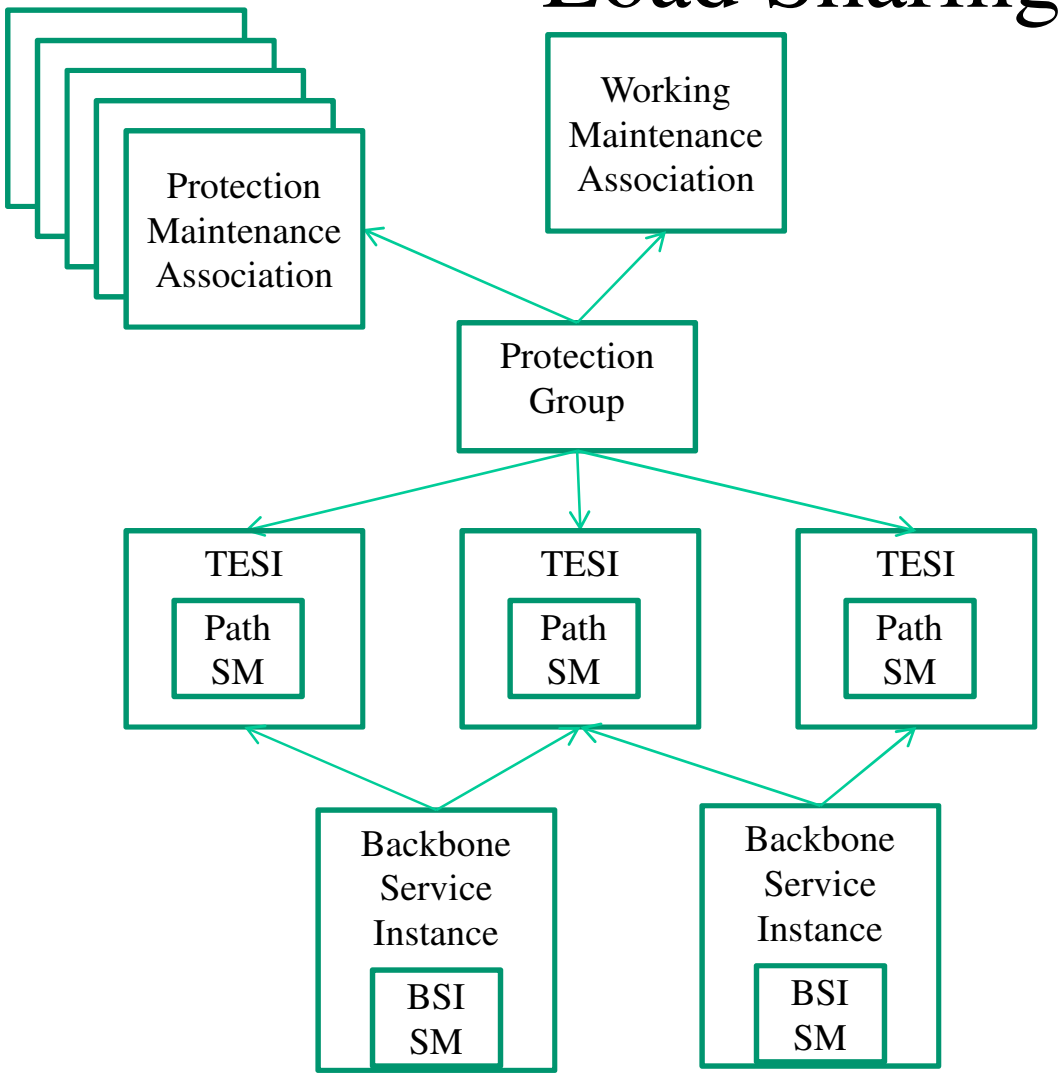
- The operational modes for a protection group:
  1. Non Load Sharing
  2. Load Sharing
- Depending on the mode, 2 scenarios of state machines are defined
- The slide deck provides
  1. an overview of the state machines defined in both modes
  2. A proposal to re-organise the state machines to support both operational mode in a simpler way

State Machines for Non Load Sharing Mode



- The protection group has several associations:
  - 1 Working TESI
  - 1 Protection TESI
  - 1 Working MA
  - 1 Protection MA
- To run protection, one new state machine is defined; the protection state machine (PSM)
- The MAs provide inputs into the PSM

State Machines for Load Sharing Mode

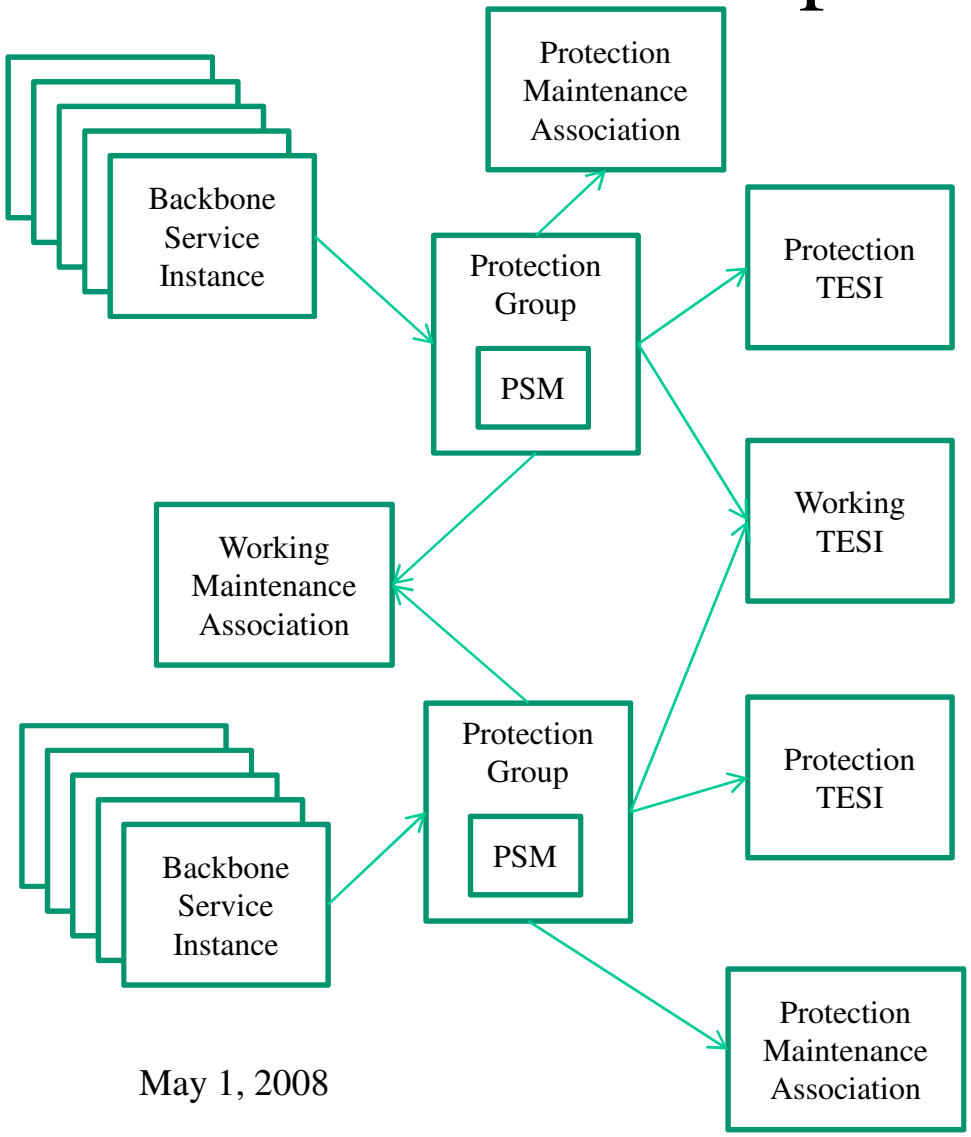


- The protection group has several associations:
  - 1 Working MA
  - A set of Protection MA
  - A set of TESI
- A TESI runs a state machine to control whether it can carry traffic
- Each BSI runs a state machine to determine which TESI is used to carry traffic

Concerns with the current model

- 2 completely separate behaviors depending on the mode.
- The current Path state machine is very similar to the Protection state machine. This does not make sense since they are serving different purposes.
  - Protection: switching between TESIs
  - Path: can the TESI carry traffic
- Load sharing multiplies the number of active state machines. This is a concern for scalability especially since there is a state machine per BSI.

Alternative: allow TESIs to be used by more that 1 protection group…



- Each protection group has several associations:
  - 1 Working TESI
  - 1 Protection TESI
  - 1 Working MA
  - 1 Protection MA
- These protection groups are sharing a working tunnel and have separate protection TESIs
- The protection TESIs can be used for other protections groups as working TESIs

Advantages

- The state machines used in each mode is identical
- The provisioning of each mode is identical
- Scalability is improved since there is only a state machine per protection group.