802.1ah Backbone Edge & Core Bridges per D3.01 without 802.1ag CFM support

Backbone-MAC
Service Boundary
Backbone-MAC Provider → Backbone-MAC Client

Provider Bridge & Backbone Core Bridge

B(S)-VLAN

Relay

B-VLAN Comp.

I-SI Comp.

Relay (p2p only)

I-tagged srvc i/f

Bundled S-tagged srvc i/f

port based srvc i/f

VIP

6.8/.1ah

6.9/.1ah

25.3/.1ah

I-SI Comp.

1|n

bundling/multiplexing n client entities into 1 server entity
802.1ah Backbone Edge & Core Bridges per D3.01 with 802.1ag CFM MEPs & MIPs

Provider Bridge & Backbone Core Bridge

B(S)-VLAN

Relay

B-VLAN Comp.

B-VLAN MIPs

Provider Bridge & Backbone Core Bridge

B-S-VLAN

Relay

B-VLAN Comp.

B-VLAN MIPs

Customer Systems

Bundled S-tagged svc i/f

S-tagged svc i/f

Port based svc i/f

I-tagged svc i/f

MEP

MIP

1n bundling/multiplexing n client entities into 1 server entity

PBB and CFM / 2006-11-01
Modifications to 802.1ah to support 802.1ag

- split clause 6.8/802.1ah into two parts to support MEPs (802.1ag DOWN MP shim)
  - bottom part: clause 6.7/9.5(c) shim
    - ISS ⇔ EISS\text{\_VIP-ISID}
  - top part: one or more new clause 6.x shims (see PB & PBB models, slide 11)
    - ISS ⇔ EISS\text{\_RVID}
  - 802.1ag Down MPs shim between bottom and top parts
  - bottom part is optional, see slide 5
Modifications to 802.1ah to support 802.1ag

- split clause 6.9/802.1ah into three parts to support MIPs (802.1ag MIPs)
  - bottom part: clause 6.7/9.5(c) shim with I-SID translation
    - ISS ⇔ EISS
  - middle part: relay to create I-SI EISS instances; each EISS instance maps into one B-VLAN instance
  - top part: clause 6.7/9.5(b) shim {with B-MAC translation ?}
    - EISS ⇔ EISS instances
  - 802.1ag Up MPs, MIP and Down MPs shim between middle and top part

6.9/802.1ah D3.01 CFM impact on 6.9

CFM impact on 6.9
802.1ah Backbone Edge & Core Bridges per D3.01 with 802.1ag CFM and with internal CBP/PIP

Provider Bridge & Backbone Core Bridge

B(S)-VLAN

Relay

PBP

PNP

PBP

PNP

PBP

PNP

Backbone Edge Bridge

B-VLAN Comp.

I-SI Comp.

Relay (p2p only)

I-tagged srvc i/f

S-tagged srvc i/f

6.9'/1.1ah

6.8'/1.1ah

25.3'/1.1ah

VIP

VIP

PBP

PBP

PBP

PNP

PBP

PNP

PNP

Relay

VIP

VIP

VIP

VIP

VIP

PNP

Customer Systems

Bundled S-tagged srvc i/f

S-tagged srvc i/f

port based srvc i/f

I-tagged srvc i/f

MEP

MIP

 bundling/multiplexing n client entities into 1 server entity

PBB and CFM / 2006-11-01
802.1ah Backbone Edge & Core Bridges

B-MAC Service Boundary supporting CFM

Provider Bridge & Backbone Core Bridge

B(S)-VLAN

Relay

B-VLAN Comp.

I-SI Comp.

Relay (p2p only)

Backbone Edge Bridge

Customer Systems

Bundled S-tagged svc i/f

S-tagged svc i/f

port based svc i/f

1n bundling/multiplexing n client entities into 1 server entity