Application of 802.1Qaw In PBB-TE Environment

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Connectivity Test along in PBB-TE ESP without MIP

• For application scenario where MIPs are not implemented on immediate nodes/bridges:
  – Use the Reflection Responder defined in 802.1Qaw to respond to the proposed PBB-TE LBM
  – Only activate RR during maintenance window.
  – Benefit:
    • During normal condition, avoid the processing burden for all immediate nodes to intercept LBM and compare TLV.
    • Allow external adjunct box to process the LBR
How?

• Create a Reflection Responder at intermediate bridge interface(s) along PBB-TE ESPs (Let’s call it LBM-TE RR).
  – The MD level of the ESP => MD Level of the Reflection Responder
  – LBR’s VID => VID for the Reflection Responder
  – RR target address set to “SOURCE”, i.e. the Source_Address field of the filtered frame.
  – “Continue” Option is set OFF.

• Set RR Filter to filter out the proposed LBM-TE message
  • E.g. (Source_Address == ESP’s SA) & (Destination_Address == ESP’s DA) & (VID == ESP’s VID) & (TLV1= CFM LBM OpCode) & (TLV2= MIP MAC address)

• Create a RFM Receiver shim on the ESP’s SA which sends the LBM-TE to receive the PBB-TE LBR.

• The Loopback RR can be activated during maintenance window.

![Diagram showing the process of creating a Reflection Responder and filtering LBM-TE messages]
Another Application of 802.1Qaw in PBB-TE environment

• By allowing immediate nodes to send a PBB-TE loopback message, connectivity between any intermediate nodes along ESP can be diagnosed.
802.1Qaw can also be used to achieve the Link Trace In PBB-TE Environment

- Create a Reflection Responder at intermediate bridge interface(s) along PBB-TE ESPs (Let’s call it LTM-TE RR).
  - The MD level of the ESP => MD Level of the Reflection Responder
  - LTR’s VID => VID for the Reflection Responder
  - RR target address set to “SOURCE”, i.e. the Source_Address field of the filtered frame.
  - “Continue” Option is set ON.

- Set RR Filter to filter out the proposed LTM-TE message
  - E.g. (Source_Address == ESP’s SA) & (Destination_Address == ESP’s DA) & (VID == ESP’s VID) & (TLV1= CFM LTM OpCode)

- Create a RFM Receiver shim on the MEP which send the LTM-TE to receive the PBB-TE LTR.