Link Aggregation YANG Considerations

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Review of issue for AXdz

• See Stephen Haddock’s presentation here:

• Executive Summary
  • ieee802-dot1q-bridge.yang augments IETF interface
    • If the iftype is a bridge or ethernetCsmacd or iee8023adLag or iLan then
      • The bridge-port container is available
      • That is ok except when an ethernetCsmacd is an aggregation port.
  • So... Need to update ieee802-dot1q-bridge.yang in some way to allow the bridge-port container to be excluded from the tree when an ethernetCsmacd is an aggregation port
Considerations

• (At least) Two ways of doing this...
  • Have the ieee802-dotq1-bridge module understand if an interface is an aggregation port.
    • Negative --- this requires the dot1ax module to be imported ... always
  • Create a presence container in ieee802-dotq1-bridge that can be used to indicate that the bridge-port container should not be used
    • Positive --- backwardly compatible

• Is there a way to support this without modifying the bridge module?
  • I can’t think of one... anyone else?
IEEE802-DOTQ1-Bridge Modifications Suggested

 augmentation "/if:interfaces/if:interface" {
   container no-bridge-port {
      presence "Indicates if the bridge-port container should be available or not";
      description "no-bridge-port indicator";
   }
}

Here is the switch

Presence container that provides a way to indicate that no bridge-port container should be included
Modification of bridge module

• Backward compatible change
• Completes the ability for link aggregation to be supported and leverage the existing bridge-port capability when appropriate
• If we don’t do this...
  • The bridge-port container contains some dangerous things that should not be used when the interface is an aggregation port.
  • Bottom line, this makes for YANG that reduces the ability to do a wrong thing in relation to aggregation ports.