ISIS Extensions for FlexE Link Advertisement

draft-zhu-ccamp-flexe-link-advertisement-01

Yongqing Zhu (zhuyq@gsta.com)
Huanan Chen (chenhuanan@gsta.com)
Mach Chen (mach.chen@huawei.com)
Zongpeng Du (duzongpeng@huawei.com)
History of This Document

• draft-zcdc-isis-flexe-extention-00 was published in March 13, 2017
  • Submitted to ISIS WG, presented in IETF 98th meeting
  • Two major comments received so far:
    • This work should be done in CCAMP WG
      • Moved to CCAMP
      • Submitted as draft-zhu-ccamp-flexe-link-advertisement
    • The Interface Switching Capability Descriptor (ISCD) TLV may not be the right TLV for carrying FlexE link attributes;
      • The ISCD is designed to describe the “Interface Switching Capability”, and this is not about FlexE Switching;
      • Define a new TLV to carry the FlexE link attributes (see follow-up slides)
Terminologies

• A FlexE interface
  • Is a logical interface and consists of 1 to 254 100GBASE-R Ethernet interfaces
  • Can be channelized into multiple sub-interfaces

• A FlexE sub-interface
  • Is a channelized sub-interface of an FlexE interface

• A FlexE link connects two FlexE interfaces

• A FlexE sub-link connects two FlexE sub-interfaces
FlexE Link Advertisement

- FlexE Interface sub-TLV
  - A new sub-TLV to the extended IS reachability TLV [RFC5303]
  - Describing the attributes of a FlexE interface
  - Carrying the FlexE Group Number, Granularity, and Available Slots of a FlexE interface
FlexE Sub-link Advertisement

• A FlexE sub-link
  • Advertised as an normal link
  • Add a new flag to “Link attribute sub-TLV” [RFC5029] to indicate whether a link is a “Channelized FlexE sub-link”
    • The flag can be used by a controller or a node to compute a path that is required to over FlexE sub-links.
Next steps

• Extensions to OSPF
• Solicit more reviews and comments
Thanks