OSPF Prefix/Link Tags

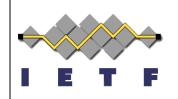
Acee Lindem, Cisco Peter Psenak, Cisco



Overview

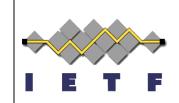


- Allows one or more administrative tags to be associated with an OSPF link or prefix.
- Avails Recent OSPF/OSPFv3 Encoding Drafts
 - OSPFv2 Prefix/Link Attributes
 - OSPFv3 Extended Attributes
- For prefixes, similar to IS-IS RFC 5150
 - 64 bit tags moved to appendix given no IS-IS implementations.or requirement



Use Cases

- Controlling Prefix Redistribution to/from other protocols (requires tags kept in RIB)
- Selecting Prefixes for IPFRR protection
- Selection Prefixes for prioritization
- Selection Links for IPFRR protection
- Other administrative tasks always a fine line on whether to use tag or to go ahead and standardize the usage (e.g., Shared Link Risk Group – SLRG)



OSPFv2 Encoding

- Extended Prefix TLV advertised in the OSPFv2 Extended Prefix LSA 2.
- Extended Link TLV advertised in the OSPFv2 Extended Prefix LSA
- Simply a list of one more 32-bit admin tags



OSPFv3 Encoding

- Router-Link TLV advertised in the E-Router-LSA 2.
- Inter-Area-Prefix TLV advertised in the E-Inter-Area-Prefix-LSA
- Intra-Area-Prefix TLV advertised in the E-Link-LSA and the E- Intra-Area-LSA
- External-Prefix TLV advertised in the E-AS-External-LSA and the E-NSSA-LSA
- Same list of one or more 32-bit admin tags



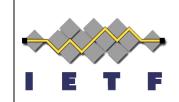
- ABRs and NSSA Translators MUST propagate tags across area boundaries.
- Tags SHOULD be configurable on area ranges.
- OSPF(v3) MUST support one prefix or link tag and MAY support more than one.
- For ECMP prefixes, tags from one of the paths MUST be propagated and multiple tags from multiple paths may be propagated.





Protocol Operation (Cont)

 First External or NSSA LSA tag MUST always be advertised using the existing OSPFv2/OSPFv3 LSA.



Next Steps

- Solicit review and discuss on OSPF WG list.
- Request WG adoption