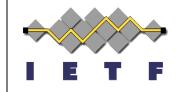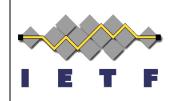# OSPFv3 LSA Extendability
IETF 88, Vancouver

Acee Lindem, Ericsson
Sina Mirtorabi, Cisco
Abhay Roy, Cisco
Fred Baker, Cisco
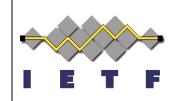
I E T F

OSPFv3 LSA Extension History

- LSA Extension proposed in "Multi-topology Routing for OSPFv3" years ago.

- Base RFC 5340 LSAs are fixed format. This poses the following problems:

  - Information associated with the OSPFv3 topology and prefixes must be advertised in a separate LSAs.

  - Introduces complications in terms of advertisement and additional lookups.

  - ISIS LSPs are extendable.

OSPFv3 LSA Requirements
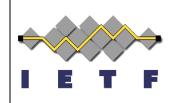
- Source address based routing – Fred Baker Draft

- Flow label based routing – Fred Baker Draft

- Tags on Intra/Inter prefixes

- Segment Routing (SR)

- Multi-Address Family in single instance

- Multi-Topology in single instance

- Useful for any information to be advertised that MUST be correlated with base topology or prefixes
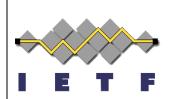
OSPFv3 LSA Extension – Changes Since Berlin

- OSPF WG Document

- Segment Routing and Source Routing drafts have a prerequisite

- Specification of U-Bit set in LSA ID. LSA will be flooded even if not understood.

- Addition of MixedModeDegraded backward compatibility mode where non-extended LSAs are used for SPF computation.

OSPFv3 LSA Extension – Changes Since Berlin

- Separation of Tag and Forwarding Address into sub-TLVs for E-AS-External-LSA and E-NSSA-LSA.

- Editorial Comments

- Update of Security Considerations to include potential for LSA signing.

Next Steps for Draft

- Review and discussion

- Consensus on backward compatibility

- Implementation(s)?