OSPF-GT
(GENERALIZED TRANSPORT)
draft-ietf-lsr-ospf-transport-instance

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OSPF-GT (Generalized Transport)

- OSPF-GT is **NOT** classic OSPF, and it doesn’t compute routes.
- OSPF-GT is not dependent on any other OSPF instance. However, information should satisfy the “condition of reachability”, which is verified via the OSPF-GT Topology although this could be relaxed for certain applications.
- OSPF-GT neighbors are not required to be directly attached, and its topology is independently defined.
OSPF-GT Sparse Topologies

Remote Neighbor

• Configuration of tunnels to form a fully connected graph.
• A remote OSPF-GT neighbor’s address is configured, and IP routing is used to deliver OSPF-GT protocol packets. A default poll-interval of 40 seconds is RECOMMENDED.

Multiple Topologies

• OSPF-GT may support multiple topologies as defined in RFC4915.
OSPF-GT Spare Topology Example
For OSPFv2, RFC 6549 Multi-Instance Extensions provides the necessary packet encoding for multiple OSPF instances. OSPFv3 supports separate instances within the packet encodings.

By setting the IP/IPv6 precedence differently for OSPF-GT packets, traditional OSPF routing instances can be given priority during both packet transmission and reception.
OSPF-GT Information (GTI) Encoding

OSPFv2 Opaque LSA option type: Generalized Transport Information (GTI)

OSPFv3 function code: Generalized Transport Information (GTI)
OSPF-GT Information (GTI) TLV Encoding

OSPF-GT Information (GTI) TLV:
- Application ID: an identifier assigned to the application via the IANA registry as defined in RFC 6823.
- Additional Application-Specific Sub-TLVs: defined by applications.

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Potential OSPF-GT Applications

- Drafts for applications must define encodings, usage semantics, “Condition of Reachability” rules, Security Considerations, and Management Considerations.

- Potential BGP-LS alternative (simple LSDB wrapper).

- OSPF FlowSpec Wrapper

- Management information

- 5G Application in draft
Next Steps

◦ Please review and provide comments

Thanks!