

# **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

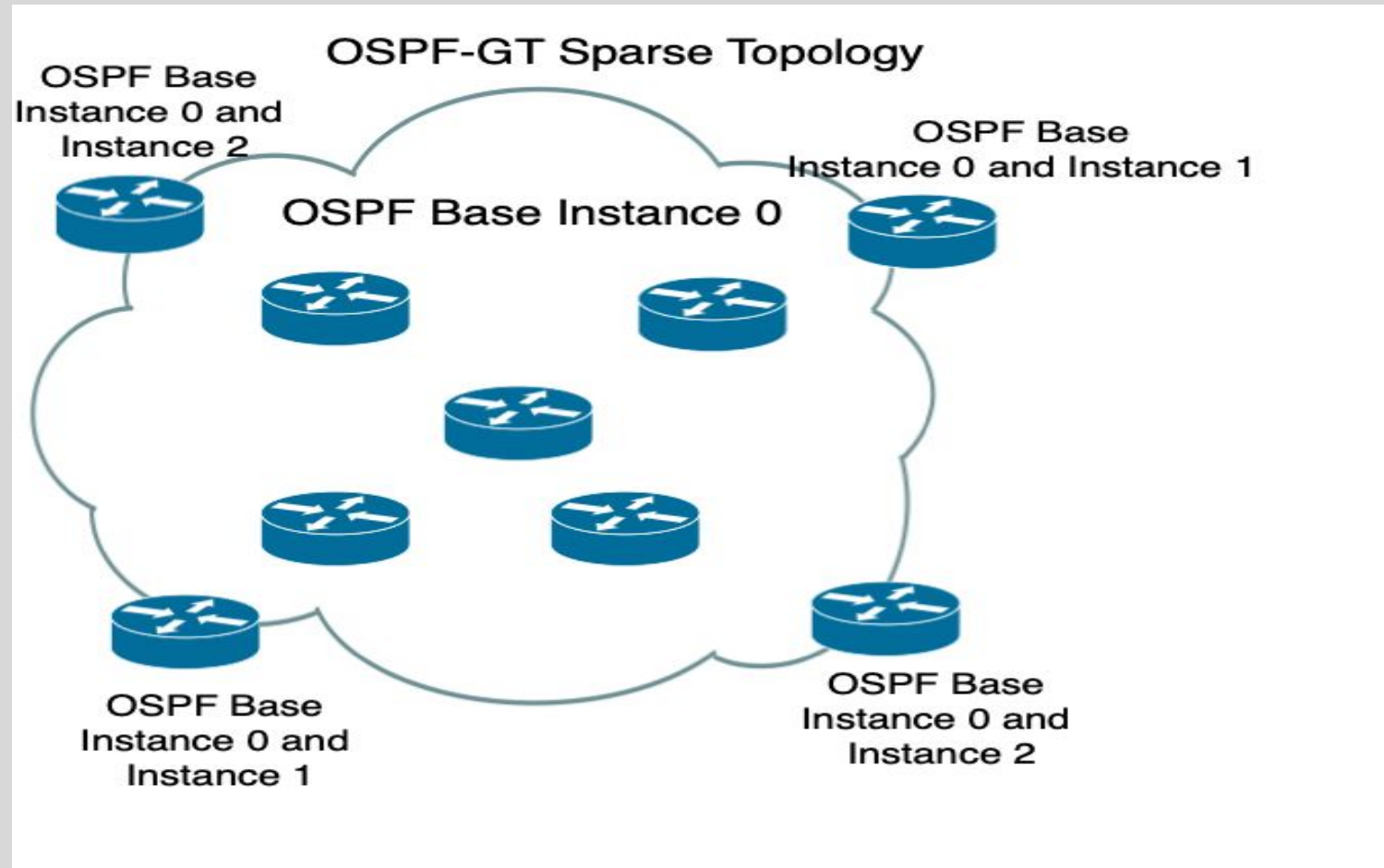
## Remote Neighbor

- 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



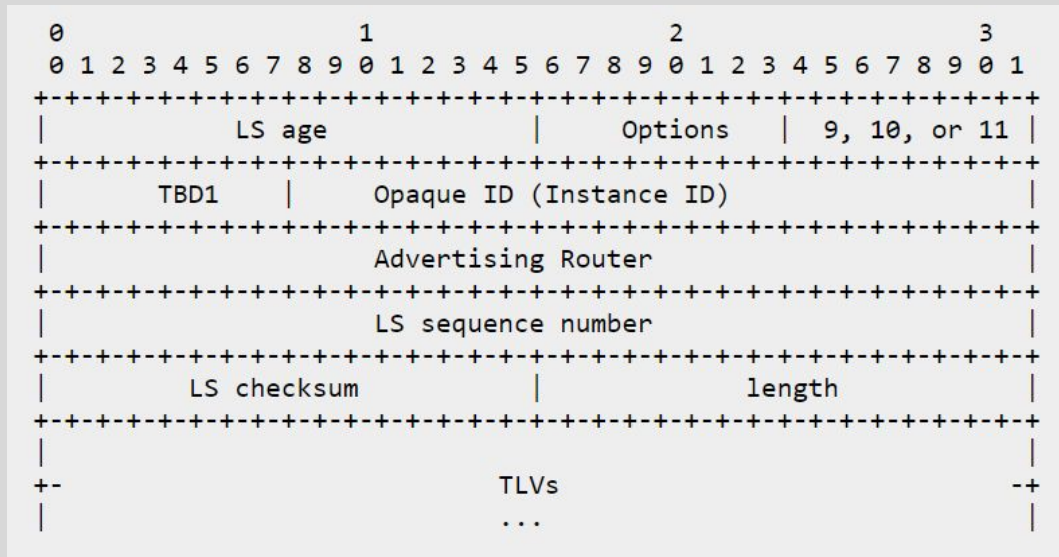
## OSPF-GT Packet Differentiation

- For OSPFv2, RFC 6549 Multi-Instance Extensions provides the necessary packet encoding for multiple OSPF instances.
- OSPFv3 supports separate instances within the packet encodings.

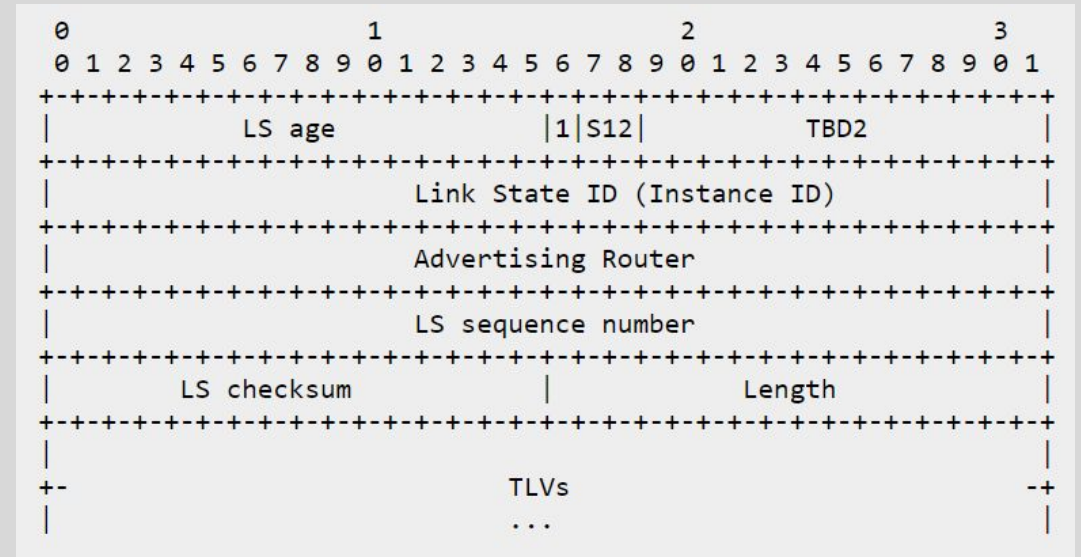
## OSPF-GT Network Prioritization

- 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

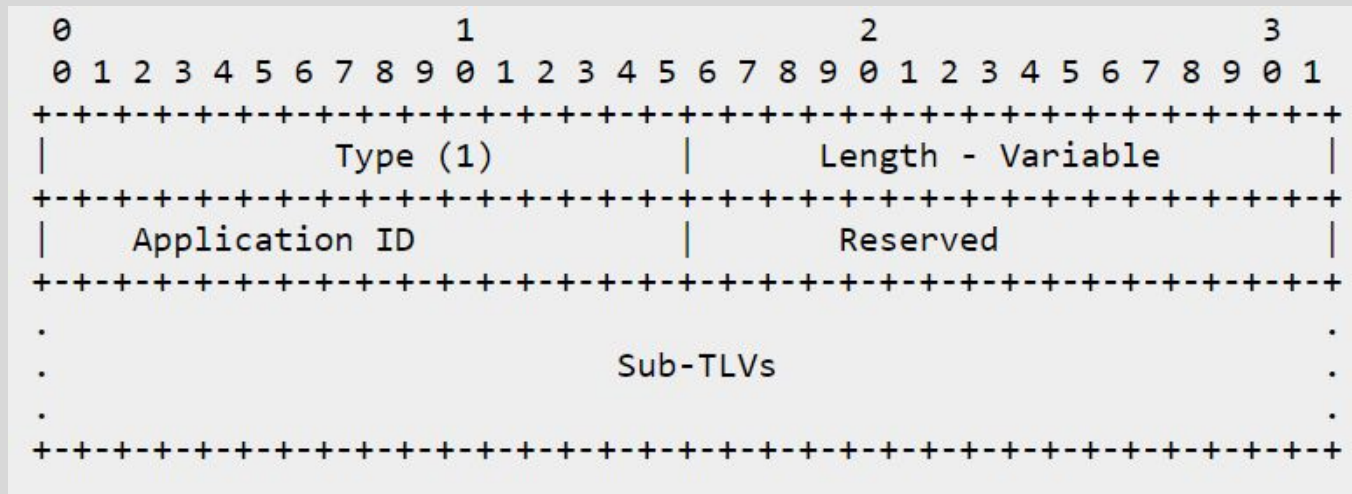


OSPFv2 Opaque LSA option type:  
Generalized Transport Information (GTI)



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.

# 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!***