IS-IS and OSPF extensions for TVR (Time-Variant Routing)
draft-zw-tvr-igp-extensions-02/draft-zw-lsr-tvr-extensions-00

TVR WG
IETF118

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Where and when to use this extension

- There is no controller disseminating the schedule information to all the nodes in the network.
- The variable node cannot send the schedule information to all the other nodes in the network directly.
- The variable node cannot advertise the changes (such as cost, etc.) ahead of the scheduled time.

- The extension can be advertised by:
  - The variable node itself
  - The adjacent node when the variable node doesn’t support IGP protocols.
- The advertisement is received by all the other non-variable nodes. All the nodes calculate routing table ahead of the scheduled time.
For example, there is a ground network with some nodes are connected with satellites. The nodes in the ground network need to know the schedule information and calculate routing table ahead of the scheduled time.
Extension introduction-1

• The schedule information is treated as constrains that affecting routing calculation.
• The method defined in RFC9350 is borrowed for the constrains advertisement.

• A new time variant sub-TLV is defined in IS-IS/OSPF FAD sub-TLV to carry the schedule information.
• A new metric-type is defined for the schedule variant info advertisement.
Extension introduction-2

• All the nodes receive the schedule information in advance.
• The advertisement needs not be periodically.

• All the nodes calculate the routing table according to the FAD ahead of the scheduled time.
• The calculation process is like FAD.

• Some updates will be made in future version, for example, the recurrence type.
• Any comments welcomed

Thanks!