Using ALTO for exposing Time-Variant Routing information

draft-contreras-tvr-alto-exposure-03

Luis M. Contreras (Telefonica)

IETF 119, TVR WG, Brisbane, March 2024
Background

- Presented at IETF 116, 117 & 118
- It enables an off-path mechanism for exposing scheduled topological changes
- It serves the purpose of exposing scheduled topological changes to Applications/Services so those can become aware of routing variations impacting them
- ALTO allows to expose anticipated and predictable topological changes by leveraging on the cost calendar feature, defined in [RFC8896]
Advantages of the proposed approach

• By leveraging on ALTO, it is possible to **offload the processing of changes from the network elements**, avoiding also undesirable cascading / propagation effect
  • I.e., one scheduled change notified by one network element triggers advertisement of subsequent predicted changes in other network elements, and so on

• It can easily **solve the case of considering predicted changes due to the appearance of new nodes / links** not currently present in a topology
  • Network elements know about present nodes and links, but not about nodes and links not yet existing in the topology

• It allows to **expose the scheduled topological changes to Applications / Services**
  • Application/Services usually do not have access to internal routing information

• It can co-exist with on-path solution
Changes from -02

• Editorial typos, fixing
• Assessment of ALTO as off-path solution against TVR requirements (v -01)
  • As long as the requirements draft progresses, this checking will continue

• Draft already presented at IETF 117 and 118
Next steps

• Collect further feedback from the WG
  • Previously received comments already addressed

• Ask for WG adoption as off-path solution for TVR