SR-MPLS with RIFT

draft-ietf-rift-sr-01

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Refresh of ISIS/OSPF SR

• Each router is provisioned with:
  • its own SRGB
  • an SRGB SID/Index for each of its prefix segments

• Each router floods that information
  • Every router knows everything, and,
  • Calculates how to reach each other

• Consider the following:
  • R1/2/3 advertises SRGBr1, SRGBr2, SRGBr3 respectively
  • R1 advertises SID Index I1 for its loopback
  • R3 calculates that the NH for R1’s loopback is R2, so it installs a label route:
    • SRGBr3[I1] → <If-to-R2, swap to SRGBr2[I1]>
  • Similarly, R2 installs a label route:
    • SRGBr2[I1] → <If-to-R1, swap to SRGBr1[I1]>
Refresh of SR with RIFT

• Instead of each node flooding its provisioned info to everyone, everyone’s is “provisioned” with everyone’s information
  • Through southbound KVs from ToFs
  • Each ToF receives the same information from an orchestrator to construct the KVs

• Each node calculates the routes to its south nodes with corresponding SID information

• Each node learns routes to other nodes whose SID may appear in the SID list
  • Those routes need to be propagated south all the way down
Change in the -01 Revision

- Fixed an error about the Key Type
  - A new type is requested – can’t use the Well-Known type
- Clarified the Key Identifier
  - A value the orchestrator assigns to identify a node
  - In simple cases, it could be the SID Index for a node’s Node SID.
Next Steps

• Comments and discussions
• Explore more optimized ways of distributing provisioned info
  • You only need to know your neighbors’ SRGB
  • May not worth the trouble though
• Understand the relevance/difference to/from SRv6