

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