draft-ravisingh-mpls-el-for-seamless-mpls-01

Entropy Label for Seamless MPLS

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What is this draft about?

- Providing benefits of entropy label (EL) for e2e MPLS data traffic when:
  - E2e labeled path is made from separate constituent labeled paths (that are individual portions of the e2e labeled path):
    - The constituent labeled paths maybe separate due to their:
      - using different signaling protocols, or
      - being setup independently
  - Not every constituent labeled path supports EL
  - Not every transit router is able to hash deep enough on label stack so as to include entropy label as a hashing input

- Key concept:
  - Entropy Label Capability (ELC) translation rules
Feedback on “-00” @ IETF-86 (Orlando)

- Is this draft beneficial for deployments?
- What are the use-cases for this draft?
New in “-01”

- Use-cases:
  - Following use-cases for this draft are listed
    - Inter-AS L3VPN/BGP-VPLS
    - CoC L3VPN
    - GMPLS LSP stitching

- Central theme of the use-cases:
  - Carry through the same EL from e2e ingress LER to egress LER where possible, rather than have to do multiple insert-EL/remove-EL steps along the e2e path
  - Carry through the EL even on those constituent labeled paths (of the e2e LSP) whose ingress/egress LERs are not EL-capable
Carrier network: simplified view

Customer 1

Customer 2

ASBR1

ASBR2

Backbone (AS-0)

Metro1 (AS-1)

Metro2 (AS-2)

Customer 1

Customer 2

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Hybrid L3VPN: CoC + Inter-AS Option C:

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Legend
- - - E2e LSP

iBGP: labeled Unicast IPv4
eBGP: labeled Unicast IPv4
RSVP LSP (implicit NULL)
LDP over single-hop RSVP LSP
Addressing: Feedback on “-00” @ IETF-86 (Orlando)

- **Is this draft beneficial for deployments?** : YES because:
  - Operators will not (be able to) turn-on/deploy EL in all of their routers/networks at the same time
  - Undesirable to insert-EL/remove-EL multiple times along e2e path
  - Desirable to get benefits of EL even on those constituent labeled paths that are not EL-capable
  - The above are enabled by the “EL-capability translation rules” listed in this draft

- **What are the use-cases for this draft?**
  - Covered in earlier slides
  - See section 6 in draft
Next steps?

- Soliciting any more feedback
- Progressing in the WG