

BGP signaling of Entropy Label capability using BGP Next-Hop Capabilities

draft-decraene-idr-next-hop-capability-01

Bruno Decraene
Kireeti Kompella
Wim Henderickx

Orange
Juniper Networks
Alcatel Lucent

Recaps: Entropy Label

- RFC 6790 defines:
 - MPLS Entropy Label (EL)
 - egress EL capability signaling for LDP, BGP, RSVP-TE
 - for BGP defines the Entropy Label Capability attribute (ELCA)
- RFC 7447 deprecates the BGP ELCA
 - because a transitive BGP Attribute can't fulfill the EL signaling requirements
 - and calls a future replacement.

draft-decraene-idr-next-hop-capability-01

- Have BGP signal the capability to receive EL as egress LSR
 - i.e. a replacement of the deprecated EL BGP capability attribute
 - a priori relevant to the MPLS WG: being presented @ IETF93

- An opportunity to make it a generic BGP tool, to signal Next-Hop dependent capabilities.
 - hence the draft's name "BGP Next-Hop Capabilities"
 - a priori relevant to the IDR WG: presented @ IETF92
 - useful as a generic tool
 - because we need a non-transitive attribute to enforce the signaling behavior
 - but non-transitive attribute are painful to deployed (limited incremental deployment)
 - → Let's define a single attribute, pay once the deployment cost, then enjoy future reuse

Overview

1. New optional non-transitive BGP Attribute

- “BGP Next-Hop Capabilities”
- Operation rules:
 - Propagated while BGP Next-Hop is unchanged
 - Removed (possibly modified) when BGP Next-Hop is changed
- **Generic tool** to advertise any kind of BGP Next-Hop capability
 - typically forwarding plane capabilities

2. Entropy Label Next-Hop Capability

- Use the above BGP attribute
- When advertised, means that EL can be used for labelled NLRI advertised in the BGP Update
 - Specific rule copy/paste from RFC 6790 (EL, MPLS WG)

3. Added optional ability to advertise the Readable Label Depth

- based upon recent MPLS work [I-D.ietf-mpls-spring-entropy-label](#)

Next

- Feedback & comments welcomed.
- Any preferred target WG?
 - IDR or MPLS?
 - should probably be discussed in both?

Thank you