Virtual Aggregation (VA)

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Summary

• No new technical material
• Consolidation and simplification of drafts
• We consider drafts now to be “stable”
• Future:
  – Expect only minor changes based on lessons learned from implementation and deployment
Current drafts

- Current drafts:
  - draft-ietf-grow-va-02
  - draft-ietf-grow-simple-va-00
  - draft-ietf-grow-va-auto-01

- Deprecated drafts:
  - draft-ietf-grow-va-mpls-innerlabel-00
  - draft-ietf-grow-va-gre-00
  - draft-ietf-grow-va-mpls-00
  - All simplified and folded into draft-ietf-grow-va-02
draft-ietf-grow-va-02

• Removed some tunnel types
  – GRE, use of per-external peer IP tunnels
• Remaining tunnel types:
  – IP or MPLS
  – Both with or without inner label
  – Note:
    • with inner label, BGP next hop is local ASBR,
    • without inner label, BGP next hop is remote ASBR
• Regarding uRPF (Jarad raised in Hiroshima)
  – For strict uRPF, local ASBR can do it, but must FIB-install routes where peer remote ASBR is next hop
    • Good idea to do this anyway, for efficient paths
  – Loose uRPF can only be done at Aggregation Point Router (APR)
    • Same for martian filters, etc.

• Silver lining: VA allows lower-tier ISPs that today default route everything to providers, to now do RPF, martian filtering, etc.
Simple VA = “Raszuk mode” VA
- Core routers keep full FIB, edge routers do FIB suppression, otherwise default 0/0 to core
- Virtually no configuration

Simply moved text for this from main draft to separate draft
- 11 pages total (5 substantive pages)
- Very easy to understand and digest for vendors and customers only interested in this mode
draft-ietf-grow-va-auto-01

• 00 version discussed several variants of auto-configuration

• 01 version has only one:
  – “Can suppress” tag
  – In a nutshell, effectively limits configuration to local ASBRs that peer with provider ISPs

• Why this version? Because Huawei is implementing it
  – Can revisit other variants if the market suggests a need
draft-ietf-grow-va-auto-01

- Requires a new extended communities attribute
  - Does this suggest that it should be standard rather than informational?
Next steps?

• Continue work on interoperable implementations
  – Use experience to tweak drafts

• Otherwise, anything else needed to move to RFC?