RTC Chair summary slides
Fixing RFC4684 Open Issues

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Draft-ietf-rtc-no-rtc

draft-ietf-rtc-no-rtc (WG LC 5/22 to 6/5 in progress)

Type of Draft: Administrative

Original Route Targets: VRFs configured with RTs,

- UPDATES of certain AFI/SAFIs ("VPN address families") Always carry RTs distributes
- Distributed to "all" PEs, Receiving PE uses RT to map updates to VRFs

RTC – Announce what you are interested in

Problem: MDT-SAFI did not carry RTs (RT's added later), MCAST MVPNs do not need RTs

Summary:

- • Compromise solution: establish default behaviors
- • For MDT-SAFI and MCAST-VPN: No RTs, No RTC filters
- • Everything else: original behavior (Send RT with VRF, RTC filters)
- • New AFI/SAFIs: get original behavior unless specified otherwise

Next steps: Adopt unless someone has a better idea

RTC Drafts: Litowski-idr-rtc-interas

WG adoption (5/31 to 6/14)

Type of Draft: Proposed Standard (Augment RFC4684)

Problem: When disjoint AS-es within AS, route distribution tree is incorrect, preventing communication due to:

- **Pruning based on peering type** – only for e-BGP (iBGP not pruned)
  - Pro: faster convergence and optimal routes
  - Con: sub-optimal routing in case single node attached to multiple routers in external AS
- **Pruning based on NLRI type** – prune External RT membership NLRI (Source as differnent form Local AS) – for eBGP and iBGP
  - Pro: prevents hot-potato routing and transit for disjoint AS
  - Con: more routes are propagated.

Solution: Disable path pruning for

- a) given origin AS (different from the local AS).
- B) private AS numbers by default, but must make provision for it to be selectively enabled if such a feature is present.

Next Step: Adopt as WG draft

3)draft-ietf-idr-legacy-rtc-05 (WG draft)

Type of Draft: Proposed Standard, alternative to RFC4684

Problem: Legacy routers that do not support RFC4684

Solution:

1) Collect import route targets of all config customer VRFs into set **IRTS**

2) Create special route-filter VRF with RD same value for all legacy PEs

3) A) Originate 1 or more routes in VRF and attach **IRTS** as "translated route-target communities" , or

    B) attach as "export route-target extended communities"

4) Mark routes NO_ADVERTISE and NO_EXPORT

Why translate IRTS: Refrain from importing "route-filter" VRF routes into VPN VRFs that would import the same route-targets.

Next step: Awaiting 2 implementations

Draft-ietf-idr-rtc-hierarchical-rr-00

Type: Proposed Standard

Problem: Hierarchical RR does not allow route distribution graph to be created (RFC4684)

- PE-1, PE-2, PE-3 advertise RT members of RT-1 to RR, RR-2 and RR-3, then append CLUSTER_ID (CLU-2/RR-2, CLU-3/RR-3)
- CLU-2/RR-2 selected by RR-1
- RR-1 Announces to RR-2, RR-3
- RR-2 find RR-2 in CLUSTER_LIST, ignores RR-1
- Result: no advertising of RT-1 to RR-1

Solutions:

1) Add-paths: allows to skip loop detection - **Chosen**
2) Changes Rules I and ii in section 3.2 of RFC4684