Extensions to RT-Constrain for Hierarchical RR Scenario

draft-ietf-idr-rtc-hierarchical-rr

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Recap of This Document

- Analyzes the issues with RT-Constrain (RTC) in hierarchical RR scenarios
  - With current CT-Constrain rules, routers may fail to build the route distribution graph correctly
- Provides candidate solutions for fixing the RTC issues in hierarchical RR scenario
  - Details are provided on next page
- This discussion was initiated back in 2014, and this document was adopted in 2015
- There are new proposals on solving the RTC issues for hierarchical RR scenarios
  - See the next topic on the agenda
- The WG may want to take both the existing and new proposals into consideration to build one converged solution
Problem Scenario

- RR1 selects the best RTC route (route #1 from RR2) and advertise to RR2 and RR3
- RR2 detects its own CLUSTER_ID in the RTC route, discard it
- Result: RR2 will NOT advertise VPN routes with RT-1 to RR1
Proposed Solutions

• Option 1: Uses add-path for RTC routes between hierarchical RRs
  • Ensure that sufficient RTC routes are advertised to pass the BGP loop detection on the receiving RR
  • No change to BGP path selection rules

• Option 2: Advertises the most disjoint alternative route to the peer from which the best route is received
  • Most disjoint alternate path: the CLUSTER_LIST and ORIGINATOR_ID attributes are diverse from those of the best route
  • BGP path selection rules for RTC is changed
Next Steps

• Continue the discussion with authors of another document and the WG

• Provide a converged solution for RTC in hierarchical RR scenario
Thank You