BMP
BGP Monitoring Protocol
GROW WG

IETF 106
Nov. 16-17, 2019
Singapore
Hackathon Plan

- Test Interoperability between router and data-collection for route monitoring and peer up/down message type extensions defined in
  - draft-ietf-grow-bmp-local-rib (BGP Local RIB)
  - RFC 8671 (BGP Adj-RIB Out)
- By using Wireshark BMP dissector and pmacct pmbmpd Apache AVRO messages
Topology - Test Setup

http://www.swisscom-ietf.net/ietf106/
Gaps identified (1)

- BGP withdraw in Adj-RIB In does show in packet capturing but not in pmbmpd Kafka AVRO message.
- RFC 4271 doesn't specify BGP next-hop attribute for local originated routes in BGP local RIB. Propose to add recommendation in draft-ietf-grow-bmp-local-rib BMP (127.0.0.1 vs. 0.0.0.0?)
Gaps identified (2)

• When BMP Adj-RIB Out and/or post policy is configured on router, one or multiple BMP peer up messages with different peer header (O and L bit set) are seen in packet capture.
• Due to this ambiguity, Wireshark BMP dissector shows peer up notifications under update message and pmbmpd duplicated peer up message types.
• We like to collect at GROW WG how other vendors implemented peer up.
What we learned

• Good
  • Dedicated BMP Hackathon lab environment's (Internet & VPN) are working fine.

• Bad
  • Tests take longer than expected. Need automated test environment (CI, continuous integration).
Next Step for 107 Hackathon

- Understand different BMP implementations and support found gaps before next hackathon.
- Define BGP RIB state changes and their intendent results.
- Develop test script which performs BGP configuration changes and validate results at data collection.
- Import BMP metrics with schema into TSDB and make it accessible with Web UI.
- Implement the following drafts for router and data collection
  - draft-ietf-grow-bmp-tlv
  - draft-cppy-grow-bmp-path-marking-tlv
  - draft-xu-grow-bmp-route-policy-attr-trace
Thanks to...

- Yunan Gu
- Alexis La Goutte
- Binyang Huang (remote)
- Camilo Cardona
- Christian Kuster
- Matthias Arnold
- Paolo Lucente
- Thomas Graf