Network Monitoring of IGP

draft-gu-opsawg-network-monitoring-igp-00

Yunan Gu, **Shuanglong Chen**, Zhenbin (Robin) Li

2020-11-20

Previous work

- draft-chen-npm-use-cases-00: Network-wide Protocol Monitoring (NPM): Use Cases
  - Motivations
    - Quick Reporting: Contents of control protocols need to be reported quickly, especially IGP protocols.
    - High Performance: Binary encoding vs XML/JSON encoding.
    - Easy To Standardize: A protocol that is easier to standardize than YANG.
    - Wide Monitoring Scope: Control plane maintenance information includes IGP, LDP, RSVP-TE, RIB.
  - History
    - Presented in IETF 105

Changes from the previous draft

- With input from customer discussion, new standard progress, and the demo verification result
  - IGP use cases identified
  - Performance: Similar between Telemetry-based and BMP-like.
  - Scope changes: Focus on IGP only
    - RIB: YANG model for The Routing Information Base defined in RFC 8431(https://datatracker.ietf.org/doc/rfc8431/)
    - RSVP-TE & LDP: SR develops rapidly and replaces RSVP-TE & LDP

IGP Use Cases

- ISIS Route Flapping
  - The localizing of the flapping source and the identifying of root causes haven't been easy work due to various reasons. The causes maybe system ID conflict, IS-IS neighborship flapping, route source flapping (caused by import route policy misconfiguration) and so on.
- LSDB synchronization failure
  - During the IS-IS flooding, sometimes the LSP synchronization failure happens. The causes maybe “lsp is not correctly advertised” or “LSP transmission error” or “LSP is received but not correctly processed”.

Next Steps

- Solution options
  - Option 1: BMP-like
  - Option 2: Telemetry-based (YANG model to be defined)
- Suggestions are welcome

Thank you!