Rationale for transport-independent common OAM

draft-mwnpkazcap-rtgwg-common-oam-00

Greg Mirsky gregory.mirsky@ericsson.com

Erik Nordmark nordmark@acm.org

Carlos Pignataro cpignata@cisco.com

Nagendra Kumar naikumar@cisco.com

Sam Aldrin aldrin.ietf@gmail.com

Russ White

Lianshu (Vero) Zheng vero.zheng@huawei.com

Mach Chen mach.chen@huawei.com

Nobo Akiya nobo.akiya.dev@gmail.com

Santosh Pallagatti santoshpk@juniper.net

IETF-94 November, 2015, Yokohama

Motivation

- A number of new overlay service layers have been introduced recently:

  - EVPN, SFC, NVO3, BIER

- Each new service layer introduces its own encapsulation

- Each new service layer introduces its own OAM, as well

What is in scope

- Definitions
- OAM: Operations, Administration, and Maintenance (RFC6291)
- FCAPS: Fault, Configuration, Accounting, Performance, Security management
- Focus on Fault and Performance
  - Fault: detection, localization, recovery, reporting
  - Performance: throughput, loss, delay, jitter, availability, etc.

What are the requirements: FM

- "In-band"
  - OAM traffic (active) MUST fate-share with the data traffic at the given layer
  - OAM should be identified as one of protocols by the layer encapsulation

- Pro-active continuity check
  - p2p BFD Asynchronous mode in IP and ACH encapsulation. p2m – some open questions

- On-demand connectivity verification, a.k.a. ping/traceroute
  - IP ping, MPLS LSP ping, BIER ping

- Alarm Indication Signal (Suppression) - gap

What are the requirements: PM

- Active Performance Measurement:
  - Pro-active and on-demand:
    - TWAMP (RFC 5357);
    - PL and DM in MPLS (RFC 6374)
- Passive Performance Measurement:
  - marking method (draft-tempia-ippm-p3m-02, draft-chen-ippm-coloring-based-ipfpm-framework-04, draft-mirsky-bier-pmmm-oam-00)

Rationale for Common OAM

- There should be a single OAM for all overlay service layers
  - Well documented requirement
  - Would improve network operations
  - Would increase deployment of these new service layers

Next steps

- Welcome comments from the WG