Rate Measurement Test Protocol Problem Statement

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draft-ietf-ippm-rate-problem-04

Scope

- Access Rate Measurement on Production Networks
  - Rates at edge << core, likely bottleneck
  - Asymmetrical ingress and egress rates
  - Largest scale at edge: low complexity needed in device at user end
  - Tester has control of sender/receiver

Scope (contd.)

- Access Rate Measurement on Production Networks
  - Active measurements (IPPM charter)
  - Both In-Service and Out-of-Service
    - Includes service commissioning activity
- Non-Goals
  - No protocol solution in this draft
  - No Exact methods of meas (but categories discussed)

Revisions (04)

- Comments: Thanks Kostas
- History: had proposals, needed Prob Statement, so there was some assumed context
- Clarified Intro and Scope statements, focusing on protocol
- Scope in terms of LMAP reference path and measurement points
- Clarified a few requirements

TCP testing (new req S4)

- Capability to Control an Open-Loop TCP test (MBM)
  - Sender: Generate packet streams at controlled rates & packet spacings
  - Continue sending (open-loop)
  - Receiver performs normally, with large enough window to enable Sender behavior
- Capability to Control a "normal" BTC measurement
  - Examined in **draft-morton-ippm-twamp-tcp-00**
  - Two Modes: Initiator and Listener
  - Mixed Security Mode is compatible (na in OWAMP)
  - New Request-TW-Session Command
  - Select Congestion Control from a list? (e.g., AIMD)

Conclusion + Next Steps

- This measurement problem is a hot-topic in the Industry
  - Working LMAP before it was named…
- Additional Comments?
  - Need to close on problem statement to get to the real work (TCP control)
- draft-morton-ippm-twamp-rate-04
  - similar scope section updates
- draft-morton-ippm-twamp-tcp-00

backup

draft-ietf-ippm-lmap-path-00

Internet-Draft LMAP Reference Path July 2013

Subsc. device mp000 -- Private Net #1 -- Private Net #2 -- Access Demarc. mp100 -- Intra IP Access mp150 -- GRA GW mp190 -- Transit GRA GW mp200

... Transit GRA GW mpX90 -- GRA GW mp890 -- Service Demarc. mp800 -- Private Net #n -- Private Net #n+1 -- Destination Host mp900

GRA = Globally Routable Address, GW = Gateway

Summary of Specs

- Minimize test traffic when necessary
- Possible assessment of background
- Architecture MAY be either 1 or 2 way
- SHALL support packet ensemble tests
  - 1 of 4 categories, others are OPTIONAL
- Variable (asymmetrical) payload and ensemble lengths among streams MUST be communicated

Motivation

- Many possible Rate Measurement Scenarios – Narrow the scope
- Access-Rate Measurement
  - Has Continued Industry Attention
  - Many different approaches
  - Need to avoid mistakes: No comparison of Apples & Oranges
  - Topic of this draft and discussion