New Features & Open Discussion: “Test Protocol for One-way IP Capacity Measurement”

draft-ietf-ippm-capacity-metric-protocol-01

L. Ciavattone, A. Morton
Protocol: Setup and Test Phases

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**Communication to Well-Known Port (optional AUTH)**

**Communication to Ephemeral Port:**

**Offered Testing Parameters**

**Load PDUs**

**Time stamps, SeqNums, up to Gbps rates**

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**Client**

- Setup Exchange

**Server**

- Request PDU

- **Setup Test**

- Check AUTH

- Allocate Test Socket and Reply

- Includes Ephemeral Port

- **Server Admission Control:** BW check

- **Affirm or Replace Testing Parameters**

  (Down/Up, duration, etc.)

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**Test Stream & Feedback PDUs**

- **Response PDU**

- Feedback at 50ms intervals (default):

  - Measurements (loss, delay, Rcv Rate)

  - OR Sending Rate Structure

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- New Features for Test Setup & control!

- Not shown:
  - Timeouts
  - Rejects
  - Test STOP
Working Group Adoption (thanks!)
New features & comments resolved:

• Implementation of Randomized payload option. Performance of code suggests very limited compressibility.

• Server can set a BW limit for admission-control; Client would supply a max BW for its specific testing to help the server manage tests within its limit.

• Optional Start rate for load-adjustment algorithm (fixed-rate option remains).

• Backward compatibility: Servers can test with both protocol version 8 and (new) version 9.

• Consistent Terms for Test Activation Request/Response

• Other Clarifications for Test STOP

• There are many more error codes now, communicating a single code at a time keeps the field “byte-sized”, bit map would be bigger.

• Parameters refer to RFC 9097

• Trim-down to FOUR security modes of operation:
  • Un-AUTH, password AUTH(coded)
  • Secure Setup Exchange
  • “Secure All The Things”
Next Steps:

- Authors welcome proposals, revisions to Security modes of operation, etc.
- WG Adoption, we now ask for an early SEC-DIR Review and solve that aspect.

Reminders/Review Areas:
- This protocol could do more than measure Capacity – take a look!
- FOUR security modes of operation proposed now:
  - If want more/others, say so!
- Protocol ver 9 allows for New Load Adjustment Algorithm(s)
  - Watch for updates!