IETF Hackathon: Measurement

Tools, Systems, and Projects

IETF 105

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Montreal

Team members:

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First timers @ Hackathon:

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Hackathon Plan

- Maximum IP-Layer Capacity Metric & Measurement
  - https://tools.ietf.org/html/draft-morton-ippm-capcity-metric-method-00
  - Gain UDP-based measurement experience with:
    - Busy 1Gbps Access @IETF
    - Additional Access types (volunteers)
- Plan: Run tests, iterate measurement parameters, rev tool
- Compare with Commercial Tool on same Server in Network.

Udpst and Ookla Web Sockets Clients

Internet Society
31.130.239.25

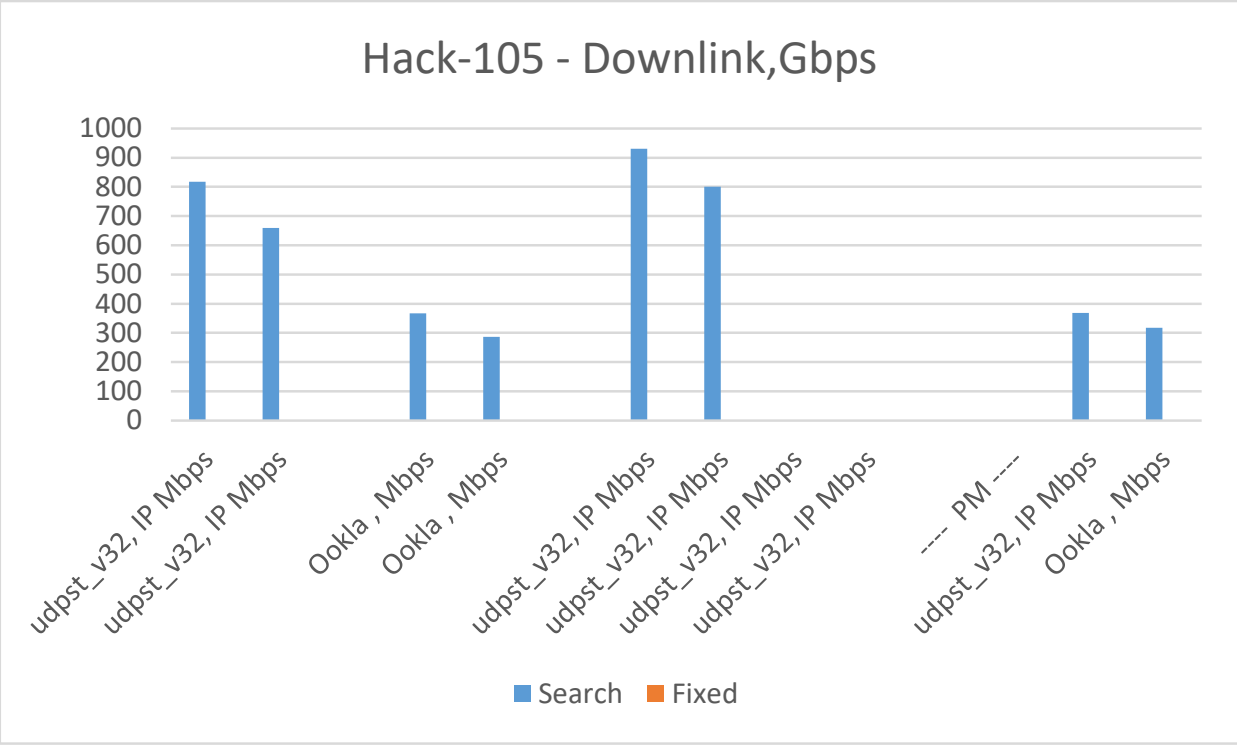
Udpst and Ookla Web Sockets Servers

UDP-Speedtest
Middletown, NJ

12 hops, IXP in NYC

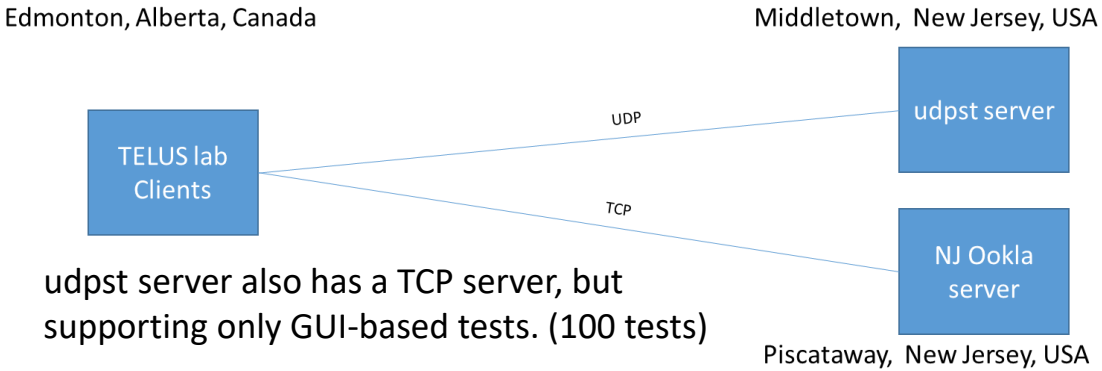
What got done

- Representative set of results in close time sequence, plus PM measurements (Saturday, Sunday morning similar to PM)

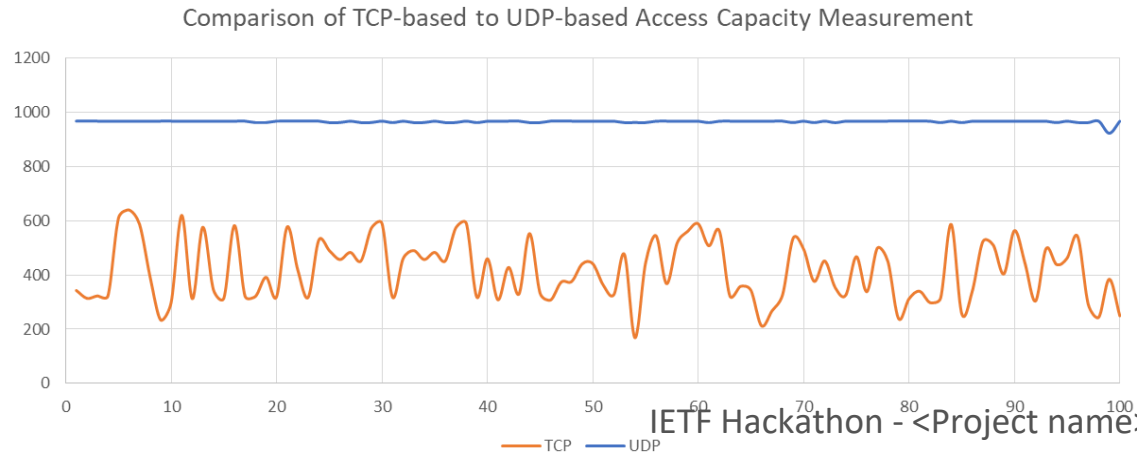


What got done, part deux

- Telus VM Client to UDP Server: 1Gbps UDP, Ookla lower



udpst server also has a TCP server, but supporting only GUI-based tests. (100 tests)



- Tests from UNH Labs:
- UNH found a router screen for UDP traffic – caused 100% loss every other second at current setting, same for iPerf3.6
- normal test after re-config! Nominally 1 Gbps.

Possible Items for further Dev.

- udpst has a fixed loss threshold in its Search Algorithm
  - Allow variable threshold on command-line
- Study of test duration range on accuracy (10 sec default)
- Test duration is a command-line variable, but
  - The range is fixed, [10-360] sec, allow shorter tests (5 sec)
  - It would be useful in Debug mode to have variable/shorter reporting intervals in verbose mode (currently 1 sec)
- Status messages: Sender tell Receiver the Sending Rate index
  - Receiver reports this Rate with Debug messages
- Allow simultaneous parallel flows (single flow now)

What we learned

- We can learn a lot from testing on many different types of access links and networking conditions.
- Main conclusions to-date still hold: UDP is a more reliable benchmark for Max IP-Layer Capacity Metric.

Wrap Up

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<Other links, contacts or notes>