

TCP/IP: Can we go further ?

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Views are my own.**

TCP/IP

TCP has long been thought as being “done”.

A lot of work on QUIC these days. (Remember [AIS@2019](#) talk on quic deployment)

However, customers still want more interactive services.

ECN

**ECN has seen slow but gradual deployment.
Firewalls blocking/modem equipment crashing.**

Apple has enabled ECN on its products and CDN.

ECN major advantage: explicit notification of congestion, unlike packet loss which can be due to medium corruption.

RFC 8087: The Benefits of Using Explicit Congestion Notification (ECN).

ECN benefits

- Wireless customers (lte/wifi) don't need to retransmit.**
- interactive services over tcp are "faster".**
- Slight throughput increase.**
- Interactive Applications will benefit from this. Voip, interactive video, real-time data.**
- Easier for network engineers to see congestion on their network.**
- Development of new ways to react to congestion control signal (SCE, l4s, dctcp, etc...).**

ECN & SCE

ECN is “a little” aggressive.

SCE was proposed by Rodney Grimes, Jonathan Morton, Peter Heist, Dave Taht and David Reed.

A signal to tell that there is “some congestion”.

IETF 105 hackathon. More africans involved: Mauritius (cyberstorm.mu), and you next ?

SCE and L4S

L4S is an adaptation of DCTCP.

It collides with SCE for ECT(1) codepoint.

Again, “latency driven” to improve experience.

Have your word

Join tsvwg IETF mailing list.

Spare 1 hour testing ECN/SCE/L4S on your network. It can benefit your customers !

Can you benefit from enabling ECN on your network as ISP/home users/enterprises ?

Talk about your results.

IETF community in Mauritius

