The Benefits and Pitfalls of using Explicit Congestion Notification (ECN)

draft-ietf-aqm-ecn-benefits-00

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Draft goals

Point of draft:

- document gains of ECN
- includes less obvious gains
- Could include deployment scenarios to illustrate benefit
- NEW: now also "pitfalls" (next slide)

Out of scope:

To recommend a specific behavior

Pitfalls

- Policies that bleach and middlebox requirements to deploy
 - Also points to RFC6040 for correct use of tunnelling

Cheating by hosts

Possible need for mechanisms to verify if a path really supports ECN

New conclusion (not "turn it on", but "don't break it")

- People configuring host stacks and network devices <u>should</u> ensure that their equipment correctly reacts to packets carrying ECN codepoints.
- This includes:
 - routers not resetting the ECN codepoint to zero
 - middleboxes not resetting the ECN codepoint to zero
 - correctly updating the codepoint when congested
 - routers correctly supporting alternate ECN semantics ([RFC4774])
 - hosts receiving ECN marks correctly reflecting them

Next Steps

- Aim to WGLC after next (Dallas) IETF!
- Deployment scenarios / use cases still pretty empty
 - This section could be small
 - Text donations welcome

• Other comments?