Explicit Congestion Notification for RTP
draft-ietf-avtcore-ecn-for-rtp-05

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Document Status

• Document (-04) has gone through WG last call
• Many thanks to our reviewers:
  • Thomas Belling
  • Roni Even
  • Bill Ver Steeg
  • Dan Wing
  • Qin Wu
• A new version (-05) was submitted addressing the more minor issues
• Two open issues remain
Open Issue #1: Interactions with ICE

- Process to check for ECT capable path using ICE:
  a) Do normal ICE
  b) Do additional STUN checks as an ECN validation
  c) If (b) showed ECN worked, start sending RTP with ECN
  d) If (b) showed ECN failed, start sending RTP without ECN

- Dan Wing noted that steps (b-d) can add additional call setup time, which is undesirable

- Proposal:
  - If the call has been answered, media should be sent without ECN once the normal ICE exchange has completed
  - STUN checks for ECN validation can then be done in parallel to media, at low rate, with ECN being enabled if they succeed (alternatively, switch to using RTP/RTCP for ECN validation at this point)
Open Issue #2: Support for Multicast

• The draft requires all receivers, and the paths to all receivers, of a multicast flow to support ECN, else it falls back to not using ECN

• Bill Ver Steeg raised the concern that this is highly conservative, and does not scale to large groups

• We agree, but don’t have a better proposal

  • Allowing some non-ECN capable receivers causes fairness issues when the bottleneck link is shared by ECN and non-ECN flows that we haven’t (yet) been able to satisfactorily address

  • Proposal: add a note to say that the multicast ECN rules are known to be conservative, and may be relaxed in a future version of the specification; and encourage experimentation to determine a less conservative, but still relatively fair, response
Next Steps

• Address these open issues and submit -06 for new WG last call