ICE
draft-ietf-ice-rfc5245bis

IETF#95
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(2) AGENDA

- Keep-alives
- Connectivity check pacing
- Aggressive nomination
- Frozen candidates

- Next steps
(3) Keep-alives

**ISSUE:**
- RTP no-op and RTP comfort noise currently defined as a keep-alive mechanism when peer does not support ICE
- RTP no-op will not progress in AVT
  * draft-ietf-avt-rtp-no-op

**SUGGESTION:**
- Remove reference to RTP no-op

**QUESTION:**
- Do we want to keep recommendation of using RTP comfort noise for keep-alives when peer does not support ICE?
(4) Connectivity check pacing

• ISSUE:
  – Current min Ta value causes bad performance
    • Check phase can take a long time
  – Too small value might cause bandwidth/NAT issues

• SUGGESTION:
  – Min Ta value: 5 ms
    • Smaller value does not provide any gain
  – Default Ta value: 50 ms
    • Currently used by many implementations
    • Specific value might be negotiated, if supported by signaling protocol
  – No distinction between RTP and non-RTP

• NOTE:
  – If we get measurement results before WGLC, we can revisit the decision
  – If we get measurement results after publication, we can always update the RFC
(5) Aggressive nomination (1/2)

- **ISSUE:**
  - Redundant
    - Spec already allows you to send media before nomination is done
  - You don’t know when nomination is done
  - Previous agreement to remove aggressive nomination
  - Question is HOW to deprecate it, in order to backward compatible
(6) Aggressive nomination (2/2)

**SUGGESTION:**

- **Alternative 1: receive-do-not-send**
  - Controlling endpoint: MUST only nominate one candidate pair
  - Controlled endpoint: If remote peer uses aggressive nomination, endpoint selects the highest-priority nominated candidate pair
    - Endpoint must still be able to receive aggressive nomination

- **Alternative 2: ice-option**
  - Controlling endpoint: MUST only nominate one candidate pair
  - Both endpoint include ‘ice-option=disable-aggressive’
    - Endpoints supporting the ice-option will not use aggressive nomination
    - Endpoints not supporting the ice-option will not use aggressive nomination
      » Because of ICE rules when receiving non-supported ice-option

**NOTE**

- Both alternatives still allows sending media before nomination

**QUESTION**

- Do we need to address endpoints that are not able to receive media before nomination?
(7) Frozen candidates

• ISSUE:
  – Does not seem to be implemented by everyone
    • Low number of streams
    • Usage of RTP/RTCP mux, BUNDLE,…
  – Issues with trickle

• SUGGESTION:
  – Alternative 1: Do not standardize usage of freezing
    • Endpoints can still do it as an implementation specific optimization
    • No need to standardize how trickle deals with freezing
    • QUESTION: Interoperability between endpoints that freeze and endpoints that don’t?
  – Alternative 2: Deal with trickle issue in draft-trickle
    • No impact on 5245bis
    • QUESTION: Can we solve trickle issues without touching 5245bis?
(8) NEXT STEPS

• Submit new version of draft-5245bis
• WGLC?
THE END