Application Mechanism for maintaining alive the NAT mappings associated to RTP flows.
ietf-avt-app-rtp-keepalive-07

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Goal of the presentation

- List the comments received from the IESG evaluation.

- Propose solutions to solve them.

- Decide one solution when more than one proposed solution.

Comment 1

- There are some concerns that the currently recommended fallback method of Section 4.6 *"RTP Packet with Unknown Payload Type"* has more drawbacks than currently stated:
  - RFC3550 does not preclude examination of received packets by the peer in an attempt to determine if it is under attack.
  - The statement that "RTP Packet with Unknown Payload Type … will always works"" is not always observed in real life.
  - The solution does not discuss which SSRC should be used.

- Proposal:
  - Add the cons raised by the IESG for Section 4.6.

Comment 2

- There is some support on the conclusion that multiplexing RTCP and RTP is the RECOMMENDED. However, there is some feedback that the document's current approach of RECOMMENDING falling back to Section 4.6 (sending RTP with an unknown payload type) is a mistake.

- Proposals:
  - Keep previous consensus of WG (what is described in 07 draft).
  - or RECOMMEND "multiplexing RTCP and RTP" and state that any other mecanism is NOT RECOMMENDED. Anyhow keep other mechanims in the draft to document discussion about them.

- WG Decision?

Comment 3

- There is also some concern that the a=rtp-keepalive declarative is not useful. As a reminder, there was a clear consensus from the group that it was needed. I don't think the IETF needs to change its position on that point. (http://www.ietf.org/mail-archive/web/mmusic/current/msg07135.html). A derived question is also the following: "what is the interpretation of a=rtp-keepalive attribute in multicast session"

- Proposal:
  - Keep previous consensus of WG (what is described in 07 draft).
  - or decide it is not needed if the fallback solution is not used.

- WG Decision?

Comment 4

- RTCP is an integral part of RTP. There are a number of mechanism that doesn't work unless also the RTCP flows are kept alive. This document can't rule RTCP out of scope. It needs to be covered.

- Proposal:
  - Keep previous consensus of WG (what is described in 07 draft).
  - or ask the WG if we want to rescope the document to discuss RTCP as well. If yes, additional editing help is needed.

- WG Decision?

Comment 5

- Section 4 "*List of Alternatives for Performing RTP Keepalive*" needs to discuss which solutions result in RTCP reporting on the keepalive packets.

- Proposal:
  - Depends on the choice made for point 4.

Comment 6

- Section 6.1, first paragraph: This section is in error. T.140 requires that for the SSRC(s) one is using that the sequence number space is continous. If one switches to another media format, and do not attempt to use them intermixed it can work. Thus, method 4.6 can be used if another SSRC than the ones used to transport actual media are used.

- Proposal: Remove first paragraph.

- WG Decision?

Comment 7

- Section 7: Agree with minimal value for Tr of 15 seconds. It makes sense when sent over UDP. However, a significant larger value, like 5 to 15 min makes more sense for TCP. This is an area where it is difficult to provide good recommendations without considering the underlying transport protocol.

- Proposal:
  - Keep previous consensus of WG (what is described in 07 draft).
  - or modify with the following: in section 7, after "The minimum RECOMMENDED Tr value is 15 seconds, and Tr SHOULD be configurable to larger values." add a sentence like "Tr is bound to the underlying transport protocol".

- WG Decision?

Comment 8

- Introduction: The "this does not apply to ICE agents" is a bit terse and cryptic. If the reader might not know what an ICE agent is, you should probably describe it. You might also reasonably explain *why* this document does not apply to ICE agents.

- Proposal:
  - Keep previous consensus of WG (what is described in 07 draft).
  - or add a sentence like "ICE is the protocol for solving the overall Network Address Translator (NAT) traversal. This document is limited to discussing how to realise the specific task of a keepalive mechanism for agent that would not use the ICE protocol.

Comment 9

- Streaming applications is one of the biggest usage of uni- directional RTP flows. The failure to mention RTSP and streaming seems strange.

- Proposal:
  - Do nothing about this comment unless a concrete example of keepalive problem in an RTSP problem can be provided. (To my knowledge, the problem mentionned above would be rather be related to opening a NAT pinhole rather that maintaining a NAT pinhole open, which is the current topic of the draft).

- WG Decision?

Comment 10

- Section 1, bullet 3: It appears inaccurate that comfort noise would be sent to seldom that a NAT binding would timeout. Can you mention any codec that would produce CN with longer interval than 1 second?

- Proposal:
  - If someone can mention such a codec, let's mention it. Otherwise remove bullet 3.

Comment 11

- REQ-9: This is not a requirement, it is a statement about the world.

- Proposal:

  - Remove REQ-9.

Comment 12

- Section 4.3: How can it be a con to require SDP signaling when you state in REQ-8 that is desirable. In fact only REQ-7 isn't supported by this solution which is a pretty good Pro list.

- Proposal:
  - Replace "advertise" by "described" in REQ-8, and remove the 4.3 con on SDP.