MUX EXCLUSIVE

IETF#95

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(2)

- Support of non-RTP/RTCP-mux (non-mux) optional for WebRTC endpoints
- Need to indicate if only non-RTP/RTCP mux (exclusive mux) is supported
  - Current SDP 'rtcp-mux' attribute indicates capability to fallback to non-mux

(3) WHY?

- Some networks define usage of non-mux
- If connected with endpoints that may use mux, network entry points need to know whether endpoints are able to fallback to non-mux
  - Otherwise network entry point need to insert "mux transcoder" before forwarding offer
  - Needs to be done
  - Usage of RTP/RTCP mux mandated within BUNDLE groups
  - According to browser people browsers won't implement non-mux

(4) CURRENT SOLUTION:
SDP 'rtcp-mux-exclusive' attribute

- Not supported by currently deployed endpoints

- Will not be implemented by future non-mux endpoints

  - Will try to use non-mux

(5) ALTERNATIVE SOLUTION: SDP 'rtcp-mux' + RTP candidate

- NUTSHELL
  - Include SDP 'rtcp-mux' attribute
  - Provide RTP candidiate <u>only</u> (no RTCP candidiate)
- ISSUES
  - Works only with ICE
  - Assume RTCP candidiate won't be trickled later
    - Mandate mux for trickle?
    - Mandate RTP- and RTCP candidiates to be provided at the same time (even if trickle is used)?

(6) ALTERNATIVE SOLUTION: ICE option

- NUTSHELL
  - Include ICE option tag indicating mux exclusive
  - Provide RTP candidiate <u>only</u> (no RTCP candidiate)
- ISSUES
  - Works only with ICE
  - What happens if remote endpoint does not support ICE option?
    - Reject media?
    - Discard ICE option tag?
      - Similar issues as with SDP 'rtcp-mux-exclusive'

(7) ALTERNATIVE SOLUTION: SDP 'rtcp' attribute

- NUTSHELL
  - Include SDP 'rtcp' attribute with RTP address:port; OR
  - Include SDP 'rtcp' attribute with 0 port value
- ISSUES
  - Unclear how endpoints would handle case where attribute contains RTP address:port
  - Claims that 'rtcp' attribute is broken, and we should not define new usage for it.

(8) ALTERNATIVE:
DO MUX ONLY

- NUTSHELL
  - Mandate usage of mux for WebRTC entities
    - Decision by RTCWEB WG
- ISSUES
  - Works only with WebRTC endpoints
  - If there is no explicit indicator, endpoints need to know that peer is an WebRTC endpoint
    - Not an issue as long as you anyway are going to need a gateway between WebRTC and legacy

(9) NEXT STEPS

- Agree on way forward

- Submit new version of draft-ietf-mmusic-mux-exclusive

- New WGLC

(10) THE END