“Lossless” recording in SIPREC

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“Lossless” statement in SIPREC

- 3.2.6. Lossless Recording Session recording may be a regulatory requirement in certain communication environments. Such environments may impose a requirement generally known as Lossless Recording. An overall lossless recording solution may involve multiple layers of solutions. Individual aspects of the solutions may range from administering networks for appropriate QoS, reliable transmission of recorded media and perhaps certain SIPREC protocol level capabilities in SRC and SRS.

What is “Lossless” to customer

- Proof of 100% recording for any RS
- No single point of failure may cause recording loss
- Any loss would need to be reported to regulators and could result in fines.
- Customers need to understand how lossless is achieved to feel comfortable.

“Lossless” Use Case

Use Case 10: High availability and continuous recording.

Specific deployment scenarios present different requirements for system availability, error handling, etc., including the following:

- An SRS must always be available at call setup time.
- No loss of media recording can occur, including during failure of an **SRS**.
- The Communication Session must be terminated (or suitable notification given to parties) in the event of a recording failure.

What about failure Media Server (recorder)?

SRS failure SIP (covered)

- RS stays till time-out (options PING)
- Ability SRS behind v_ip with session replication
- Ability to re-invite open RS from alternative SRS
- Single invite per RS sent by SRC
- Trading Recording RS will be resend by SRC as RS lasts from logon to logoff. So not call based

SRS Failure RTP (Lossless?)

- RTP may flow to specific Media Server at SRS
- RTCP Reporting indicating loss
- Re-invite by SRS, update SDP with new Media Server (**not lossless, failover time = loss**)
- 2 RS from SRC to 2 independent SRS
  (currently used at Trading Recording based on SIPREC)
- 1 RS with 2 independent RTP streams in SDP to capture RTP on 2 independent Media Servers
  (currently used at Trading Recording based on SIPREC but not based on draft-ietf-avtext-rtp-duplication-04)

SRS Failure RTP (Good and bad)

- Pro's
  - 2N RS or dual SDP streams is current option
  - SRS uses RTCP to indicate best recording to keep
  - Ability to reconstruct complete recording if needed
- Cons
  - No advice on 2N RS or dual SDP streams in SIPREC
  - 2N Media servers is cost
  - 2N Streams is network cost

SRS Failure RTP (Options)

- Include 2N implementation for RS/SRP in SIPREC
- Work towards buffering option at SRC
  - Acknowledged media handover
  - Will cover lossless with HA Media Server
  - Buffer RTP at SRC (B2BUA) while SRS is re-inviting RTP to alternative Media Server
- Media Server pair with v_ip and RTP replication to cover loss on Media Server failure
- No change, up to vendor to implement what they think is needed, no guidance in SIPREC