

The RTSP Core specification

`draft-ietf-mmusic-rfc2326bis-06.txt`

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Outline

- Current Status
- Open Issues
- Way Forward

Current Status

- The latest draft resolves most issues logged in the bug tracker (40 Bugs Total):
 - 10 Bugs with stable resolution, review then to be closed
 - 17 Bugs with resolution proposal, needs further review
 - 7 Bugs needs write-up of resolution
 - 4 Bugs needs discussion
 - 2 Bugs has dependencies, preventing resolution.

Major Updates done

- RTP usage clarified with new text and examples.
- Finished compiling all syntax in one chapter, removing it from everywhere else.
- Proposal for how do “Timing out RTSP messages”.

Minor Updates

- Clarified how the server and client may handle the TCP connection in relation to REDIRECT
- Clarified that there is no specification for how to derive an aggregated URL.
- Defined what “live” means within the specification.
- Made the usage of SETUP to add media in play state undefined.
- Made the usage of RTP-Info a SHOULD instead of MUST.
- Clarified that deprecated, or removed features are unspecified.

Minor Updates

- The Cseq number space is direction dependent for each server and client pair.
- The “dest_addr” transport parameter can be used with empty host part, i.e. only specify ports.

Open Issues

- Changing of transport parameters.
 - Investigate if there is difference in what will be work in INIT and READY state compared to PLAYING.
 - Point out that in the general case the changes can result in that a new RTP session is created. This has implication for synchronization.
 - Another consideration is for connection oriented media, can a switch over be performed relatively seamless.
 - It seems that not requiring a PAUSE, SETUP, PLAY sequence makes sense, thus motivating the continuation of this work.
 - However the proposals and text needs more thought.

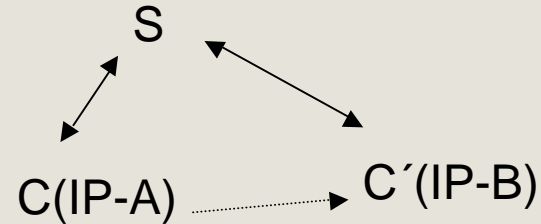
Open Issues

- Should we use “c=” to determine what address class(es) that the server supports through the SDP?
 - If one supports both IPv4 and IPv6 delivery, should one include both in the “c=” to indicate support for delivery?
 - To be able to declare both, will we be using “Grouping of media lines” (RFC 3388) for this? However cases like client decided multicast addresses is not possible to indicate.
 - Should dest_addr include address type information, for open destination specifications?
 - In the general case session description can be used to indicate for client which transport possibilities that are available. However a client can also try using a certain configuration.
 - Conclusion: Servers should set c= address class equal to TCP connections address class.

Open Issues

- How does a client determine the servers multicast capabilities?
 - Servers seems to be lacking a mechanism to tell clients that it supports multicast deliver.
 - Is there a need?
 - How does one determine that multicast capabilities reach the client and possible further invites?

Open Issues



- Session Hijacking

- Allowing Non-persistent connections makes hijacking easier.
- Non-persistent connections advantage for robustness and also allow for application layer mobility.
- Server may have multiple TCP connections that transport messages for the same session.
- Today the only protection is the random session ID.
- If attacker can sniff packets between client and server it can easily steal a session.
- Solution: Use a authentication scheme. For the common case this scheme must only prove that C' is in fact C that established the session.

Open Issues

- Destination redirection
 - This has resurfaced in relation to changing transport parameters.
 - For example it seems reasonable to allow a client to change the destination of media to its new attachment. However this should only be allowed if the message exchange originates from this new destination address.
 - The general problem needs a solution. However the RTCP core spec is not the right document to solve this.
 - Conclusion: Try to better scope the cases when destination is allowed. Strengthen the language on usage in other cases and require the usage of future solution that solves the problem.

Resolved issues but not edited in

- RTSP Proxies, should be further expanded on.
- Write up the primary use cases according to embryo in the draft.
- Needs to specify how to use implicit redirect.

Way Forward

- Please review this version. There is few open issues and many changes.
- Resolve the remaining issues and edit them in.
- Restart teleconferences.
- Do revisions to resolve comments on the changes.
- Try to finish RTSP core, this year.

RTSP and NAT

draft-ietf-mmusic-rtsp-nat-02.txt
draft-zeng-mmusic-map-ice-rtrsp-00.txt

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Thomas Zeng / PacketVideo Network Solutions

Changes

- Added requirements section, per discussions during IETF 58.
- Delegated the discussion on using ICE for RTSP to a separate draft.
- Removed all the solutions proposal in regards protocol changing mechanism.

Open Issues

- The ALG recommendations need to be improved and clarified.
- The firewall RTSP ALG recommendations need to be written as they are different from the NAT ALG in some perspectives.
- Select a protocol modifying NAT traversal solution that full fills the requirements

The protocol modifying solution

- The requirements for this the traversal solution are available so it is time to start developing a solution.
- There has been a number of high level proposals:
 - Using ICE
 - Embedding STUN in RTSP server
 - Symmetric RTP
- Interested parties should write drafts.

The ICE mapping for RTSP

- Proposal for how to map ICE onto RTSP.
- Assumes that either server or client has public address.
- Uses SETUP as initiator of ICE exchange.
- Possible optimization using DESCRIBE and the session declaration to inform client of servers possible addresses.
- Needs to be reviewed.

Way Forward

- Give the interested parties time to write drafts, while finishing RTSP core specification.
- Evaluate and discussion the different solutions.
- Select a solution.
- Meantime try to resolve the other parts of the RTSP NAT draft.