

RTSP to Draft Standard

draft-ietf-mmusic-rfc2236bis-02.txt

Authors:

Henning Schulzrinne, Anup Rao,
Robert Lanphier, Magnus Westerlund

Outline

- Introduction
- Changes to Specification
- The Way Forward
- Open Issues

Introduction

- Goal is to progress RTSP (RFC 2326) to Draft Standard
- Resolve all known bugs and shortcomings, see <http://rtspspec.sourceforge.net>
- Needs interoperability tests.
- Work has been going on for a year.

Changes from 01 version (1 of 4)

- Removal of Queued Play is performed
- Multiple ranges clarified on how to use
- RTSP URL is updated to handle IPv6 with backward compatibility note.
- Updated to use RFC 2616
 - Public, and Content-Base header copied to RTSP spec.
 - Security considerations reviewed
- Use of connections, non-persistent clarified
- Corrected Server and User-Agent header syntax

Changes from 01 version (2 of 4)

- All BNF is updated to RFC 2234 rules, with the exception of 1# which still is used.
- Added Timestamp, Via, Unsupported to Minimal Server Implementation.
- Time formats (NPT, SMPTE, UTC) has been updated to have same possibilities to specify ranges.
- Use of REDIRECT and 3xx response has been clarified and expanded with 2 new codes to more useable.
- Updated Cache-Control header to achieve consistency between text and BNF.

Changes from 01 version, (3 of 4)

- IANA Section has been expanded and updated
 - Removal of X-headers and harder requirements for registration
 - Added registries for Response Codes, Cache-Control directives, and transport header parameters.
- Clarified requirement levels on use of the Date, Server and User-Agent headers.
- Scale and Speed activation based on range header has been removed as it doesn't work.
- Supported header added as defined in SIP.
- Use of Allow and Public header with OPTIONS clarified

Changes from 01 version (4 of 4)

- Session keep-alive has been clarified.
- Use of SETUP and TEARDOWN in play state is optional and has option tag.
- CSeq must now be increased by one for each message.
- Header table is updated:
 - Split into two parts to fit the specification
 - Allow has been updated to be possible to use in request
- State machine has been corrected on a couple of places
- Accept-Ranges added
- NAT and Firewall chapter initiated

The Way Forward

- Review updated spec
- Resume teleconferences
- Resolve Open Issues
- Progress Interoperability Testing plans
- Publish as Proposed Standard?

Open Issue - Redirect

- Shall the server be allowed to close a session as soon as the client acknowledge the REDIRECT method?
 - For 3xx response this can not be done because no acknowledge are received as it is carried in a response.
 - The server will in most case anyway have to throw out the client if they do not comply in a timely fashion
- What to do with the 3xx codes:
 - 303: Deprecated , intended to use with HTTP POST.
 - 304: Is intended for a response to conditional HTTP GET request.
 - 350 “Going Away”: Added to signal maintenance redirects.
 - 351 “Load Balancing”: Added.

Open Issue - RECORD

- The authors are lacking experience with RECORD.
- Seem to need significant clarification on how to use it.
- Issues related to RECORD are:
 - How to use ANNOUNCE
 - How to signal “Disk Full” or “Quota Reached”.
 - SETUP requirements to be able to RECORD.
 - Appending, replacing
 - Creation of new files (201) and there status.

Open Issue – Appendix C

- a=control: needs further clarification on URL resolution and examples.
- How to express live content in SDP should be explicit.
- The text on aggregated and non-aggregated control needs to be updated.
- Need for aggregated control URL construction rule?

Open Issue – Accept-Ranges header

- Response Header to be included in SETUP responses.
- The header tells which time formats that may be used for the resource. Can also be given more attributes:
 - “Live”: The resource is live content and range operations are restricted.
 - “No-seek”: The content does not allow seeking, only restart and non-moving pause-play.
- Resolves range handling insecurities.

Open Issue – Via Header

- The current RTSP definition of Via requires proxies and others to add themselves to the header before forwarding the request.
- SIP requires that all entities including UA to add its name, transport and branch parameter to the Via header.
- Will simplify for a proxy to keep track of all request and their return path.
- Backwards compatibility will require proxies to still support the more costly way.

Open Issue – Negative Scale

- If using the Scale header one can specify a negative value. This requires a media to be played backwards.
- Not possible to support for some media types.
 - Audio is practically useless backwards.
 - Some coding schemes result in dependencies on future packets when played in reverse.
- Problems with how to handle Range.

Open Issues

- Should RTSP define text/Parameters for general text based parameters?
- Add TLS to RTSP?
- RTSP over UDP needs specification.
- Multiple SSRCs is a media stream and the transport header.

RTSP discussion this Week

- We will have a “bar” discussion where any interested is welcome.
- Time:
- Location:
- Questions: <mailto:magnus.westerlund@era.ericsson.se>
or phone +46 70 211 38 67