

RTSP & NATs

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Purpose

- To describe how to traverse NATs and Firewalls with RTSP
- Describes several NAT traversal approaches
 - Client only modifications = limited applicability.
 - Client and server modifying = Support all NAT types.
 - How to implement an RTSP ALG (Don't do them).
- Give recommendations regarding RTSP for Firewalls.

Status

- Client side only or already available approaches that are documented:
 - STUN (Cone NATs Only)
 - TURN (DoS restrictions)
 - RTP/RTCP tunneled in RTSP over TCP (TCP behavior)
- ALG for NATs and Firewalls
 - Needs more work to be clear.
- Needs review

Open Issue – What are the Goals

- What goals should be met for the symmetric NAT solution?:
 - Allow Servers to be located behind NATs?
 - Mitigate the RTP denial of service attack at the same time?
 - How important is the timeframe to get a standardized solution?
 - Select only one solution!

Open Issue – Symmetric NAT

- How to solve traversal for symmetric NATs?
 - Meet the determined goals of the solution.
 - Will Require Server extensions.
 - Solutions complexity.

Open Issue - Candidates

- Symmetric RTP
 - Increased hijacking and DoS risk
 - Will not allow for servers behind NATs without further extensions (STUN).
- STUN with server co-location
 - DoS restrictions or worse security. (multi address NAT)
 - Allow for servers behind NATs in some cases (full cone NAT).

Open Issue - Candidates

- ICE for RTSP
 - Mitigates DoS attack almost completely.
 - Allows for servers behind almost any NAT constellation.
 - Most complex.
- DCCP
 - Will not allow for servers behind NATs.
 - Mitigates DoS attack.
 - Will not be ready and deployed in significant amount anytime soon.
 - Needs further investigation.
 - Will have its own NAT problems!

Way Forward

- Continue discussion about which solution to choose on the mailing list.
- Update the draft on the client side schemes, ALG, Firewall, and NAT recommendations.
- When solution selected write necessary specification, plus motivation to choice.
- Please state your opinion!