

Connectivity Preconditions for SDP Media Stream

draft-andreasen-mmusic-connectivityprecondition-02.txt

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Overview

- Problem
 - NATs, Firewalls, routing anomalies, etc. can all interfere with media stream packets
 - Ensure there is media stream connectivity between offerer and answerer prior to proceeding with session establishment
- Solution
 - Define a connectivity precondition (RFC 3312 and 3312update)
 - Connectivity can be verified in different ways
 - Draft does not mandate any particular mechanism
 - Provides considerations for RTP No-Op, ICE, and TCP

Changes since -01

- Addressed requirements from RFC 3312update
- Renamed attribute name from “con” to “cntv” to address concerns about accidental mixup with “conn” (connection precondition)
- Updated definitions of “send” and “recv” connectivity preconditions (again)
 - New definitions are simpler and clearly unidirectional (not obvious with the old ones)
- Added considerations for use of “Supported” versus “Require”
 - Supported only allows for “optional” strength-tag in offer, so upgrade to “mandatory” in answer.

Changes since -01, cont.

- Added considerations for handling multiple addresses per media stream
 - Connectivity to all of them MUST be verified in order for the precondition to be met.
 - In the case of RTP-based media streams, RTCP connectivity however is not a requirement.
- Added considerations for three different approaches to verifying connectivity
 - RTP No-Op, ICE, and TCP
 - Addresses forking issue as well by explaining correlation between media packets and SIP dialogs

Open Issue #1

- Current draft does not mandate any particular way of verifying connectivity, however RTP No-Op is recommended
 - Only works for RTP though
 - Doesn't work by itself in case we have NATs (need to create a binding for the RTCP report)
- Should we even have a recommendation in there, and if so, what should it be ?
 - For connection-less transports, sending STUN to VoIP peer seems like a better candidate
 - For connection-oriented transports, it's less clear

Open Issue #2

- Connectivity preconditions for TCP streams (or connection-oriented media in general) are similar to connection preconditions
- Should we have two mechanisms for the same problem ?
 - Consider merging connection preconditions and connectivity preconditions