

Location of transport information for BUNDLE groups

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Richard Ejzak
MMUSIC IETF 86

Transport info in SDP for BUNDLE

- Goal: consider modifications to BUNDLE to:
 - maximize compatibility with legacy equipment
 - optimize BUNDLE consistent with Option A
- Consider separately: first offer, first answer, subsequent offer, subsequent answer
- Alternatives for location of transport info:
 - Repeated in all valid m lines of BUNDLE group (current BUNDLE)
 - In 1st valid m line of BUNDLE group (draft, modified)
 - In a new/separate m line (not considered further due to similarity with mmt)

Constraints

- Legacy equipment must see unique ports
- When BUNDLE is negotiated, intermediates must not see multiple valid 5-tuples
- These seemingly contradictory requirements might be addressable by some combination of:
 - Extra SDP offer/answer exchanges
 - Invalid/unspecified address
- Allocating host only candidates for some m lines might also reduce overhead

Concerns with current BUNDLE

- Subsequent offers repeat valid transport info in all valid m lines in the group
 - In 3pcc scenarios, there is potential to send such an offer to legacy equipment, which may fail the session
 - Duplicate data needs to be validated
- All successful initial exchanges negotiating BUNDLE require 2 offer/answers

Proposal in draft (modified)

- 5-tuple for BUNDLE determined by transport info from first valid (non-zero port) m line in SDP offer and first valid m line in SDP answer
- First and subsequent offer:
 - valid and unique ports and addresses for all m lines
 - Option of only host candidates for lines 2-N (new)
- First and subsequent answer when using BUNDLE:
 - Invalid/unspecified address for valid m lines 2-N
- Send extra offer if:
 - any rejected m lines appear in answer to avoid 5-tuple endpoints represented by different m lines or
 - BUNDLE not selected and candidates are missing for lines 2-N

Concerns raised with alternate proposal

- This use of unspecified address is a “design error” or that one way media flow might be possible
 - RFC 3264 requires support and says that no packets are to flow for the m line in either direction
 - Can be modified to mean that no transport information is specified for the m line
- The 3pcc scenario indicated is not likely
 - Disagree. Numerous call flows demonstrate how it might work.
- Intermediates might choke
 - Only systems forwarding BUNDLE attributes or supporting BUNDLE will see an SDP answer with unspecified address

Comparison

BUNDLE	BUNDLE enhancement proposal
First and subsequent offers use different formats	All offers use same format
Repeated transport info in m lines needs to be validated	Only one instance of transport info in SDP for a BUNDLE group
Potentially fail session in 3pcc scenarios with legacy systems	All offers are legacy safe
All successful BUNDLE negotiations need two offer/answers	Most negotiations finish with one offer/answer
Idea of limiting to host only candidates in subsequent lines is applicable	Idea of limiting to host only candidates in subsequent lines is applicable
All answers are legacy safe	Invalid/unspecified address in answer exposed to systems supporting BUNDLE

Resolution?

- Are there other factors to consider?
- If group can “live with” either approach, determine if there is a preference