ICE-microLite

draft-hutton-mmusic-icemicrolite-01

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Problem Statement

• We need a mechanism for conveying multiple media connection addresses for a given medium in an SDP offer (i.e. IPv4 / IPv6 Transition).
• ICE/ICE-Lite is the IETF defined mechanism (Obsoletes ANAT). (See IETF68/75 minutes for previous discussion on ICE, ANAT and SDP Caps)
• ICE/ICE-Lite requires the UA to support connectivity checking which is not needed if NAT traversal is not required.
• A simple solution is needed that does not impose unnecessary requirements on UA’s.
• Don’t want multiple mechanisms so an ICE based mechanism is proposed.
Use Cases

• Same as draft-boucadair-mmusic-altc-00
  – A dual-stack UAC initiating a SIP session without knowing the address family of the ultimate target UAS.
  – A UA receiving a SIP session request with SDP offer and wishes to avoid using IPv4, or to avoid IPv6.
  – Etc.
The Proposal

• An extension to the ICE a=candidate attribute provides the required functionality. For example: “a=candidate:1 1 UDP 2130706431 192.0.2.1 0 typ host microliteport 3478

• Uses the candidate extension mechanism defined in the ICE specification.

• Does not use connectivity checking.

• Makes use of ICE mismatch mechanism for fallback if UA receiving the offer does not support ICE-microLite.

• an ICE-microLite implementation only provides candidates for a single foundation in an SDP answer.

• Uses dummy values for ice-pwd and ice-ufrag because they are mandated by ICE/ICE-Lite but not used by ICE-microLite.
The Proposal

An example of an SDP offer using this mechanism is as follows when IPv6 is preferred but IPv4 is the fall back option.

v=0
o=test 2890844342 2890842164 IN IP4 192.0.2.2
c=IN IP4 192.0.2.2
t=0 0
a=ice-lite
a=ice-options microlite
a=ice-pwd:microlitemicrolitemicrolite
a=ice-ufrag:microlite
m=audio 3480 RTP/AVP 0
b=RS:0
b=RR:0
a=candidate:1 1 UDP 2130706431 2001::1 0 typ host microliteport 3478
a=candidate:2 1 UDP 2130706430 192.0.2.2 0 typ host microliteport 3480
Discussion