

# 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