

Package Analysis

We still believe ‘use-candidate’ is the reason the connection failed, instead of the DTSL role setup (as we added the role and it is still failing). So we walked through the package related, and suggest adding ‘use_candidate’ on every STUN package send to selected ICE.

Firefox Selects the ICE candidate:

Session Statistics

[32212254895] https://www.intern.facebook.com/vidocall/fncall/?peer_id=641265604&call_id=2039419132&is_ (closed) Mon Apr 02 2018 15:23:57 GMT-0700 (PDT)

[hide details](#)

PeerConnection ID: 1522707814253010 (id=32212254895 url=https://www.intern.facebook.com/vidocall/fncall/?peer_id=641265604&call_id=2039419132&is_)

ICE Stats

Trickled candidates (arriving after answer) are highlighted in blue

Local Candidate	Remote Candidate	Component ID	ICE State	Priority	Nominated	Selected	Bytes sent	Bytes received
172.27.88.166:52102/udp(host)	172.22.149.146:64654/udp(host)	1	failed	9079290933588656000	false	false	0	0
31.13.76.86:53763/udp(relayed-udp)	172.22.149.146:64654/udp(host)	1	failed	395506427071839740	false	false	0	0
172.27.88.166:52102/udp(host)	31.13.76.86:48654/udp(relayed)	1	failed	144149272885592580	false	false	0	0
31.13.76.86:53763/udp(relayed-udp)	31.13.76.86:48654/udp(relayed)	1	succeeded	14414926882521680	true	true	0	0
31.13.76.86:44680/udp(relayed-tcp)	172.22.149.146:64654/udp(host)	1	failed	35219556393827840	false	false	0	0
31.13.76.86:43779/udp(relayed-tcp)	172.22.149.146:64654/udp(host)	1	failed	35219556393827840	false	false	0	0
31.13.76.86:44680/udp(relayed-tcp)	31.13.76.86:48654/udp(relayed)	1	succeeded	35219552233078270	true	false	0	0
31.13.76.86:43779/udp(relayed-tcp)	31.13.76.86:48654/udp(relayed)	1	cancelled	35219552233078270	false	false	0	0

ICE restarts: 0
ICE rollbacks: 0

The issue we found is: ‘use-candidate’ attribute is not set in the last package. However, RFC specified that every message should include this attribute: (<https://tools.ietf.org/html/rfc5245#section-8.1.1.2>)

Wireshark packet capture showing a STUN packet (No. 839) with the following details:

- Attribute Type:** XOR-PEER-ADDRESS (0x0012)
- Attribute Length:** 8
- Reserved:** 00
- Protocol Family:** IPv4 (0x01)
- Port (XOR-d):** 9f1c [Port: 48654]
- IP (XOR-d):** 3e1fe814 [IP: 31.13.76.86]
- DATA**
 - Attribute Type:** DATA (0x0013)
 - Attribute Length:** 104
 - Value:** 000100542112a4424ba32866c45e66090f0aad7300060019...
 - Data (104 bytes)**
- FINGERPRINT**
 - Attribute Type:** FINGERPRINT (0x8028)
 - Attribute Length:** 4
 - CRC-32:** 0x77f86e25

Hex dump of the data field:

```

0000 00 00 0c 9f f1 2c 98 01 a7 a4 43 5d 08 00 45 00 .....C]..E.
0010 00 b0 d7 d0 00 00 40 11 46 48 ac 1b 44 a6 1f 0d .....@.FH..D...
0020 4c 56 cb 86 9c 42 00 9c 02 cf 00 16 00 80 21 12 LV...B..g.....!
0030 a4 42 0f da 5b 1e c2 f3 00 64 47 00 05 77 00 12 .B...dG...w...
0040 00 08 00 01 9f 1c 3e 1f e8 14 00 13 00 6c 00 01 .....V..3.....
0050 00 54 21 12 a4 42 10 cc 1b 63 4a 68 b5 d0 d8 df .X]..B..cJh....
0060 50 7a 00 06 00 19 66 6e 41 78 7a 50 6f 4b 32 62 .s...fn AxzPoK2b
0070 55 66 61 52 64 77 3a 39 62 63 33 35 66 38 36 00 UfaRdw:9 bc35f86.
0080 00 00 00 25 00 00 24 00 04 6e 7d 00 ff 80 2a .....$.n}...*...
0090 00 06 f2 fe e8 bf 5b 91 d3 4a 00 08 00 14 1d 01 .....L.J.....
00a0 ee 27 96 90 c5 b2 a3 ca 76 eb 20 33 8e a7 8f 91 .....V..3.....
00b0 b4 e5 80 28 00 04 ff 0c 46 56 80 28 00 04 a4 3b .....FV.(...;
00c0 0c 4a .....J
  
```

Some previous packages do have 'use_candidate' attribute though:

Wireshark packet capture showing a STUN packet (No. 677) with the following details:

- IP (XOR-d):** 3e1fe814 [IP: 31.13.76.86]
- DATA**
 - Attribute Type:** DATA (0x0013)
 - Attribute Length:** 108
 - Value:** 000100582112a44210cc1b634a68b5d0d8df507a00060019...
 - Data (108 bytes)**
- FINGERPRINT**
 - Attribute Type:** FINGERPRINT (0x8028)
 - Attribute Length:** 4
 - CRC-32:** 0xa43b0c4a

Hex dump of the data field:

```

0000 00 00 0c 9f f1 2c 98 01 a7 a4 43 5d 08 00 45 00 .....C]..E.
0010 00 b4 15 7e 00 00 40 11 08 97 ac 1b 44 a6 1f 0d .....@.FH..D...
0020 4c 56 cb 86 9c 42 00 a0 67 05 00 16 00 84 21 12 LV...B..g.....!
0030 a4 42 0f da 5b 1e c2 f3 00 64 47 00 05 77 00 12 .B...dG...w...
0040 00 08 00 01 9f 1c 3e 1f e8 14 00 13 00 6c 00 01 .....V..3.....
0050 00 58 21 12 a4 42 10 cc 1b 63 4a 68 b5 d0 d8 df .X]..B..cJh....
0060 50 7a 00 06 00 19 66 6e 41 78 7a 50 6f 4b 32 62 .s...fn AxzPoK2b
0070 55 66 61 52 64 77 3a 39 62 63 33 35 66 38 36 00 UfaRdw:9 bc35f86.
0080 00 00 00 25 00 00 24 00 04 6e 7d 00 ff 80 2a .....$.n}...*...
0090 00 06 f2 fe e8 bf 5b 91 d3 4a 00 08 00 14 1d 01 .....L.J.....
00a0 ee 27 96 90 c5 b2 a3 ca 76 eb 20 33 8e a7 8f 91 .....V..3.....
00b0 b4 e5 80 28 00 04 ff 0c 46 56 80 28 00 04 a4 3b .....FV.(...;
00c0 0c 4a .....J
  
```

Bytes 78-185: Data (data.data) Packets: 867 · Displayed: 29 (3.3%) · Dropped: 0 (0.0%) Profile

