**#18518** - <https://redmine.vnc.biz/issues/18518>

1. **Description**:

Alice clicks on file transfer icon and select file to transfer. Accepts

Bob receives a request, but the text of the popup is an invitation to videoconference!

* if bob accepts this pop up, the file transfer "starts" but no file is transmitted

There is some problem with the dialog box for file transfer, it is using the another dialog, for example, the last dialog text used for the last videoconference.

Phuong Vu (IP public: 171.253.38.227) transfer file to Hai Bui (IP public: 113.161.89.159)

After Hai Bui accept Phuong Vu's request transfer file, I can see on log full candidates:

After that, Hai Bui see message Session-terminate, reason: failed-transport.

I reproduce the bug on development server:

1. **Analytic**
   1. **Guessed root cause**:

When receive candidates, I'll remove UDP and TCP type, just keep “**srflx**”.

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| PeerConnection.prototype.\_onIce = function (event) {  ...  //Phuong Vu test  console.log("ICE:::: ", ice);  if ( event.candidate.candidate.indexOf('srflx') == -1 ) {  console.log("PhuongVu: == Type Host");  return;  }  …  } |

There are xmpp messages on **alice** console browser:

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| **SEND**  <iq xmlns="jabber:client"   from ..............  to="carl@prosody-dev4.vnctalk.zimbra-vnc.de/file\_transfer"   type="set"   id="54fd06de-8d29-4922-bce9-93878cb5947c">  <jingle xmlns="urn:xmpp:jingle:1"   sid="1432178050881"   action="session-accept">  <content creator="initiator" name="data">  <transport xmlns="urn:xmpp:jingle:transports:ice-udp:1"   ufrag="nSrhkQTB2q1J5Cvu"   pwd="oMYQZ+MJn5URd+iyjHhRinHm">  <fingerprint xmlns="urn:xmpp:jingle:apps:dtls:0" hash="sha-256" setup="active">  9F:A5:32:63:51:DC:3A:05:7B:22:40:BC:BD:B2:79:D2:48:64:87:4E:80:70:D4:0F:98:CC:DC:B8:34:F1:62:BB  </fingerprint>  <sctpmap xmlns="urn:xmpp:jingle:transports:dtls-sctp:1" number="5000" protocol="webrtc-datachannel" streams="1024"/>  </transport>  </content>  </jingle>  </iq>  **SEND**  <iq xmlns="jabber:client"   to="carl@prosody-dev4.vnctalk.zimbra-vnc.de/file\_transfer"   type="set"   id="45bae424-b69c-4e54-b90f-ca3048dbf949">  <jingle xmlns="urn:xmpp:jingle:1"   sid="1432178050881"   action="transport-info">  <content name="data" creator="responder">  <transport xmlns="urn:xmpp:jingle:transports:ice-udp:1"   ufrag="nSrhkQTB2q1J5Cvu"   pwd="oMYQZ+MJn5URd+iyjHhRinHm">  <candidate foundation="3498006680"   component="1"   protocol="udp"   priority="1685987071"   ip="113.161.89.159"   port="22960"   type="srflx"   generation="0"   rel-addr="192.168.3.117"   rel-port="64582"   network="1"   id="0.e2xi8pjqbl"/>  </transport>  </content>  </jingle>  </iq>  **REV**  <iq type="result"   to="alice@prosody-dev4.vnctalk.zimbra-vnc.de/file\_transfer"   from="carl@prosody-dev4.vnctalk.zimbra-vnc.de/file\_transfer"   id="54fd06de-8d29-4922-bce9-93878cb5947c"   xmlns="jabber:client"   xml:lang="en"/>  **REV**  <iq type="result"   to="alice@prosody-dev4.vnctalk.zimbra-vnc.de/file\_transfer"   from="carl@prosody-dev4.vnctalk.zimbra-vnc.de/file\_transfer"   id="45bae424-b69c-4e54-b90f-ca3048dbf949"   xmlns="jabber:client"   xml:lang="en"/>  **REV**  <iq type="set"   to="alice@prosody-dev4.vnctalk.zimbra-vnc.de/file\_transfer"   from="carl@prosody-dev4.vnctalk.zimbra-vnc.de/file\_transfer"   id="df769e6a-036a-4818-896e-c5a0be8742f9"   xmlns="jabber:client"   xml:lang="en">  <jingle sid="1432178050881"   action="session-terminate"   xmlns="urn:xmpp:jingle:1">  <reason>  <failed-transport/>  </reason>  </jingle>  </iq> |

* Ice connection state change on sender: checking -> failed -> closed.

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| Ref: <http://www.w3.org/TR/webrtc/#rtciceconnectionstate-enum>  "failed": the ICE agent has checked all the remote candidates and didn't find a match for at least one component. Connections may have been found for some components. |

* Valid candidate:

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| candidate: "a=candidate:3498006680 1 UDP 1685921535 [113.161.89.159](http://113.161.89.159) 17870 typ srflx raddr [192.168.3.117](http://192.168.3.117) rport 53216 generation 0 |

* Use stanzabundleio.js demo: <https://github.com/legastero/jingle-interop-demos>
* Research on link: [https://groups.google.com/forum/#!topic/discuss-webrtc/2swo-3nXhPE](https://groups.google.com/forum/#%21topic/discuss-webrtc/2swo-3nXhPE)

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| You can restart the ice connection by creating a new offer with [peerConnection.createOffer](http://peerconnection.createoffer)(successCallback, failureCallback, {mandatory: {IceRestart: true}}), and configuring your successCallback to do a complete negotiation (setLocalDescription, send offer over the signaling channel, etc.).  I'm not sure about all possible orderings of addCandidate and set\*Description, but it should be OK to call addCandidate before or after setRemoteDescription, and if you're calling it at the wrong time, you should get an error or failure callback in javascript. |

Turn server: <http://numb.viagenie.ca/>

* test turn server: [{ 'url': 'turn:numb.viagenie.ca', 'username': 'hai.bui@htklabs.com', 'credential': '01011991qwe' }] **success**.
* Research mod\_turncredential prosody.
* Stanzaio support XEP-0215.

Apply code and test on server zimbra:<https://z8test.vnc.biz> and prosody: “*ufnos.vnctalk.zimbra-vnc.de*”

I can get credential turn server:

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| SENT: <iq xmlns="jabber:client" type="get" to="vnctalk.zimbra-vnc.de" id="9a4c07fe-9516-4437-933e-7b68c84c0196"><services xmlns="urn:xmpp:extdisco:1"/></iq> RECV: <iq type="result" to="demo2@vnctalk.zimbra-vnc.de/file\_transfer" from="vnctalk.zimbra-vnc.de" id="9a4c07fe-9516-4437-933e-7b68c84c0196" xmlns="jabber:client" xml:lang="en"><services xmlns="urn:xmpp:extdisco:1"><service password="9YoYSMLPTQl3WUErZyIRI22TAis=" type="turn" port="3478" host="vnctalk.zimbra-vnc.de" username="1433402235" ttl="86400" transport="tcp"/></services></iq>  discoverICEServers: success. |

I can get candidates type host and **srflx** but not type relay

Sender Candidates:

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| SENT: <iq xmlns="jabber:client" to="phuong.vu@vnctalk.zimbra-vnc.de/file\_transfer" type="set" id="e66be8a8-7c1c-4235-baab-74515b1f8cc6"><jingle xmlns="urn:xmpp:jingle:1" sid="1433316109142" action="session-initiate"><content creator="initiator" name="data"><description xmlns="urn:xmpp:jingle:apps:file-transfer:3"><offer><file><date>2015-04-20T08:58:48.682Z</date><name>Filetransfer\_Receiver\_Cancel.ogv</name><size>13166991</size><hash xmlns="urn:xmpp:hashes:1" algo="sha-1"></hash></file></offer></description><transport xmlns="urn:xmpp:jingle:transports:ice-udp:1" ufrag="keruPDPfNcZR4x4k" pwd="oYNq4I8DubB/EGv1Hzm+1PdA"><fingerprint xmlns="urn:xmpp:jingle:apps:dtls:0" hash="sha-256" setup="actpass">52:25:C6:AA:B3:6E:92:32:F0:F7:4E:F0:3C:8A:CA:96:9C:C0:CF:71:50:58:27:77:60:F3:2E:2A:02:15:B4:AC</fingerprint><sctpmap xmlns="urn:xmpp:jingle:transports:dtls-sctp:1" number="5000" protocol="webrtc-datachannel" streams="1024"/></transport></content></jingle></iq> VM675:378 SENT: <iq xmlns="jabber:client" to="phuong.vu@vnctalk.zimbra-vnc.de/file\_transfer" type="set" id="326d90ae-32fb-4f98-9a65-98705da5441b"><jingle xmlns="urn:xmpp:jingle:1" sid="1433316109142" action="transport-info"><content name="data" creator="initiator"><transport xmlns="urn:xmpp:jingle:transports:ice-udp:1" ufrag="keruPDPfNcZR4x4k" pwd="oYNq4I8DubB/EGv1Hzm+1PdA"><candidate foundation="2382557538" component="1" protocol="udp" priority="2122260223" ip="192.168.1.19" port="54391" type="host" generation="0" network="1" id="0.7e5s2ncpvp"/></transport></content></jingle></iq> VM675:378 SENT: <iq xmlns="jabber:client" to="phuong.vu@vnctalk.zimbra-vnc.de/file\_transfer" type="set" id="2d5c326e-bd7b-4c0c-8444-999af19f5047"><jingle xmlns="urn:xmpp:jingle:1" sid="1433316109142" action="transport-info"><content name="data" creator="initiator"><transport xmlns="urn:xmpp:jingle:transports:ice-udp:1" ufrag="keruPDPfNcZR4x4k" pwd="oYNq4I8DubB/EGv1Hzm+1PdA"><candidate foundation="3229683090" component="1" protocol="tcp" priority="1518280447" ip="192.168.1.19" port="0" type="host" generation="0" tcptype="active" network="1" id="2.7e5s2ncpvp"/></transport></content></jingle></iq> VM675:378 SENT: <iq xmlns="jabber:client" to="phuong.vu@vnctalk.zimbra-vnc.de/file\_transfer" type="set" id="7f50e8ae-50ce-4eab-b8cc-a21f59b7bd12"><jingle xmlns="urn:xmpp:jingle:1" sid="1433316109142" action="transport-info"><content name="data" creator="initiator"><transport xmlns="urn:xmpp:jingle:transports:ice-udp:1" ufrag="keruPDPfNcZR4x4k" pwd="oYNq4I8DubB/EGv1Hzm+1PdA"><candidate foundation="2014480566" component="1" protocol="udp" priority="1686052607" ip="113.161.89.159" port="9924" type="srflx" generation="0" rel-addr="192.168.1.19" rel-port="54391" network="1" id="4.7e5s2ncpvp"/></transport></content></jingle></iq> |

Receiver candidates:

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| RECV: <iq type="set" to="demo2@vnctalk.zimbra-vnc.de/file\_transfer" from="phuong.vu@vnctalk.zimbra-vnc.de/file\_transfer" id="65a94ac0-b578-44ee-8bb1-5e605a60e85d" xmlns="jabber:client" xml:lang="en"><jingle sid="1433316109142" action="transport-info" xmlns="urn:xmpp:jingle:1"><content name="data" creator="responder"><transport ufrag="+brXKfQgmwdyoFcQ" pwd="Uk+UatXkn2FMwpZZ0m9P4bXK" xmlns="urn:xmpp:jingle:transports:ice-udp:1"><candidate type="host" protocol="udp" id="3.jbiowdf5j1" ip="192.168.9.19" component="1" port="58738" foundation="3186474757" generation="0" priority="2122194687" network="1"/></transport></content></jingle></iq> VM675:114 RECV [object Object] VM675:378 SENT: <iq xmlns="jabber:client" to="phuong.vu@vnctalk.zimbra-vnc.de/file\_transfer" id="65a94ac0-b578-44ee-8bb1-5e605a60e85d" type="result"/> VM675:77 RECV: <iq type="set" to="demo2@vnctalk.zimbra-vnc.de/file\_transfer" from="phuong.vu@vnctalk.zimbra-vnc.de/file\_transfer" id="358933e4-174d-4f19-95db-da88d925c170" xmlns="jabber:client" xml:lang="en"><jingle sid="1433316109142" action="transport-info" xmlns="urn:xmpp:jingle:1"><content name="data" creator="responder"><transport ufrag="+brXKfQgmwdyoFcQ" pwd="Uk+UatXkn2FMwpZZ0m9P4bXK" xmlns="urn:xmpp:jingle:transports:ice-udp:1"><candidate type="host" protocol="tcp" id="6.jbiowdf5j1" ip="192.168.9.19" component="1" port="0" foundation="4084089845" generation="0" network="1" priority="1518214911" tcptype="active"/></transport></content></jingle></iq> VM675:114 RECV [object Object] VM675:378 SENT: <iq xmlns="jabber:client" to="phuong.vu@vnctalk.zimbra-vnc.de/file\_transfer" id="358933e4-174d-4f19-95db-da88d925c170" type="result"/> VM675:77 RECV: <iq type="set" to="demo2@vnctalk.zimbra-vnc.de/file\_transfer" from="phuong.vu@vnctalk.zimbra-vnc.de/file\_transfer" id="0312945e-9528-4d3a-867f-7b379aaafa88" xmlns="jabber:client" xml:lang="en"><jingle sid="1433316109142" action="transport-info" xmlns="urn:xmpp:jingle:1"><content name="data" creator="responder"><transport ufrag="+brXKfQgmwdyoFcQ"  pwd="Uk+UatXkn2FMwpZZ0m9P4bXK"  xmlns="urn:xmpp:jingle:transports:ice-udp:1"><candidate rel-port="58738" type="srflx"  protocol="udp" id="8.jbiowdf5j1" ip="171.233.60.239" component="1" port="58738" foundation="1274922705" generation="0" rel-addr="192.168.9.19" priority="1685987071" network="1"/></transport></content></jingle></iq> |

Check logs on server:

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| root@ufnos:~# tail -f /var/log/syslog | grep restund Jun 3 07:51:46 ufnos restund[14203]: binding: request from 113.161.89.159:57135 Jun 3 07:51:47 ufnos restund[14203]: message repeated 2 times: [ binding: request from 113.161.89.159:57135] Jun 3 07:51:47 ufnos restund[14203]: tcp: connect from: 113.161.89.159:27506 Jun 3 07:51:47 ufnos restund[14203]: tcp: connect from: 113.161.89.159:36878 Jun 3 07:51:47 ufnos restund[14203]: auth: unknown user '1433396814' (113.161.89.159) Jun 3 07:51:48 ufnos restund[14203]: message repeated 3 times: [ auth: unknown user '1433396814' (113.161.89.159)] Jun 3 07:51:57 ufnos restund[14203]: binding: request from 113.161.89.159:57135 Jun 3 07:51:57 ufnos restund[14203]: binding: request from 113.161.89.159:57135 Jun 3 07:51:57 ufnos restund[14203]: tcp: connection closed: Success Jun 3 07:51:57 ufnos restund[14203]: binding: request from 113.161.89.159:57135 Jun 3 07:52:49 ufnos restund[14203]: message repeated 15 times: [ binding: request from 113.161.89.159:57135] Jun 3 07:52:49 ufnos restund[14203]: tcp: connection closed: Success Jun 3 09:21:44 ufnos restund[14203]: binding: request from 113.161.89.159:9924 Jun 3 09:21:44 ufnos restund[14203]: message repeated 2 times: [ binding: request from 113.161.89.159:9924] Jun 3 09:21:44 ufnos restund[14203]: tcp: connect from: 113.161.89.159:23380 Jun 3 09:21:45 ufnos restund[14203]: tcp: connect from: 113.161.89.159:18118 Jun 3 09:21:45 ufnos restund[14203]: auth: unknown user '1433402235' (113.161.89.159) Jun 3 09:21:46 ufnos restund[14203]: message repeated 3 times: [ auth: unknown user '1433402235' (113.161.89.159)] Jun 3 09:21:54 ufnos restund[14203]: binding: request from 113.161.89.159:9924 Jun 3 09:21:55 ufnos restund[14203]: binding: request from 113.161.89.159:9924 Jun 3 09:21:55 ufnos restund[14203]: tcp: connection closed: Success Jun 3 09:21:55 ufnos restund[14203]: binding: request from 113.161.89.159:9924 Jun 3 09:22:26 ufnos restund[14203]: message repeated 9 times: [ binding: request from 113.161.89.159:9924] Jun 3 09:22:31 ufnos restund[14203]: binding: request from 171.233.60.239:58738 Jun 3 09:22:31 ufnos restund[14203]: binding: request from 171.233.60.239:58738 Jun 3 09:22:31 ufnos restund[14203]: tcp: connect from: 171.233.60.239:51731 Jun 3 09:22:31 ufnos restund[14203]: tcp: connect from: 171.233.60.239:51732 Jun 3 09:22:31 ufnos restund[14203]: auth: unknown user '1433402480' (171.233.60.239) Jun 3 09:22:32 ufnos restund[14203]: message repeated 2 times: [ auth: unknown user '1433402480' (171.233.60.239)] Jun 3 09:22:36 ufnos restund[14203]: binding: request from 113.161.89.159:9924 Jun 3 09:22:36 ufnos restund[14203]: message repeated 2 times: [ binding: request from 113.161.89.159:9924] Jun 3 09:22:41 ufnos restund[14203]: binding: request from 171.233.60.239:58738 Jun 3 09:22:41 ufnos restund[14203]: binding: request from 171.233.60.239:58738 Jun 3 09:22:41 ufnos restund[14203]: tcp: connection closed: Success Jun 3 09:22:46 ufnos restund[14203]: binding: request from 113.161.89.159:9924 Jun 3 09:22:47 ufnos restund[14203]: message repeated 2 times: [ binding: request from 113.161.89.159:9924] Jun 3 09:22:47 ufnos restund[14203]: tcp: connection closed: Success |

Current configuration on prosody server:

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| turncredentials = {  { type = "turn", host = "vnctalk.zimbra-vnc.de", port = 3478, transport = "tcp" }  } |

* Reference link:

Get terminate reason:<http://xmpp.org/extensions/xep-0166.html#def-reason>

Signaling WebRTC datachannels in Jingle:<http://xmpp.org/extensions/xep-0343.html>

Author blog about XEP 343:<http://legastero.github.io/jingle-specs/extensions/xep-0343.html#protocol-syntax>

ICE-UDP candidate:<http://xmpp.org/extensions/xep-0176.html>

Our code demo:<https://github.com/legastero/jingle-interop-demos/tree/gh-pages/stanzaio>

* 1. **Suggested solutions (implemented)**:

**Use turn server:**

* Configure stanzabundleio.js use other turn server.
* Get credential turn server from prosody server.

Can’t use “restund” server on prosody because the TURN servers for vnc are TCP only.

But the file transfer use RTC datachannel only support SCTP (UDP base )

* **Rainer confirmed**: Create a new turn server for file transfer

1. **Implementation**
   1. **Code:**

Use turn server:

* Configure stanzabundleio.js use other turn server.

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| diff --git a/mini/javascripts/stanzaio.bundle.js b/mini/javascripts/stanzaio.bundle.js  index c12949b..b19d452 100644  --- a/mini/javascripts/stanzaio.bundle.js  +++ b/mini/javascripts/stanzaio.bundle.js  @@ -33151,7 +33151,7 @@ function SessionManager(conf) {  this.config = {  debug: false,  peerConnectionConfig: {  - iceServers: conf.iceServers || [{'url': 'stun:stun.l.google.com:19302'}]  + iceServers: conf.iceServers || []  },  peerConnectionConstraints: {  optional: [  @@ -33257,6 +33257,7 @@ SessionManager.prototype.createMediaSession = function (peer, sid, stream) {    SessionManager.prototype.createFileTransferSession = function (peer, sid) {  var session = new FileSession({  + iceServers: this.iceServers,  sid: sid,  peer: peer,  initiator: true,  @@ -33563,7 +33564,8 @@ function FileTransferSession(opts) {  var self = this;    this.pc = new RTCPeerConnection({  - iceServers: opts.iceServers || [],  + //Use turn server and back up by stun google  + iceServers: (!opts.iceServers||opts.iceServers.length===0)?[{'url': 'stun:stun.l.google.com:19302'}]:opts.iceServers,  useJingle: true  }, opts.constraints || {}); |

* Get credential turn server from prosody server:

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| --- |
| diff --git a/mini/javascripts/mini.js b/mini/javascripts/mini.js  index 5701743..37911c1 100644  --- a/mini/javascripts/mini.js  +++ b/mini/javascripts/mini.js  @@ -13059,6 +13059,10 @@ self.displayMessageFileTransferStatus = function(sid,buddy,body) {    self.client.on('session:started', function () {  log('Connected as:', self.client.jid.full);  + //Get turn credential from XMPP server XEP-0215  + self.client.discoverICEServers(function(data,ices){  + console.log("discoverICEServers: success.");  + });  }); |