

Modalità chiamata per chiamata agente mobile rilevata in JTAPI GW e CUCM

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Introduzione

Cisco Unified Mobile Agent consente a un agente che utilizza un telefono PSTN (Public Switched Telephone Network) e una connessione VPN a banda larga (per le comunicazioni desktop dell'agente) di funzionare come un agente che si trova in un call center formale e utilizza un telefono IP Cisco monitorato e controllato da Cisco Unified Communications Manager (CUCM) Java Telephony Application Programming Interface (JTAPI). Cisco Unified Mobile Agent consente agli amministratori di sistema di configurare gli agenti in modo che utilizzino la chiamata per chiamata o una connessione senza fili. In modalità chiamata per chiamata, viene composto il telefono dell'agente mobile per ogni chiamata in arrivo. Al termine della chiamata, il telefono dell'agente mobile viene disconnesso prima di essere pronto per la chiamata successiva. In questo documento viene tenuta traccia di una chiamata in entrata a un agente mobile call-by-call

nei log JGW (JTAPI Gateway) e CUCM. Ciò comporta due componenti di chiamata, una dal cliente alla porta CTI locale (LCP) e una dalla porta CTI remota (RCP) all'agente. L'obiettivo è quello di catturare il modo in cui la JGW ottiene CUCM per collegare le due gambe di chiamata.

Prerequisiti

Requisiti

Nessun requisito specifico previsto per questo documento.

Componenti usati

Le informazioni fornite in questo documento si basano sulle seguenti versioni software e hardware:

- Unified Contact Center Enterprise versione 10.0
- CUCM versione 10.0

Panoramica

Dettagli chiamata

Sia i telefoni degli agenti che quelli dei clienti sono estensioni di un Communications Manager Express (CME) collegato tramite PRI ISDN al gateway connesso a CUCM.

```
CME---- ISDN PRI--- SIP Gateway (10.106.61.162)--- CUCM (10.106.81.67)
```

```
LCP : LCP5000F0001, DN 6001  
RCP : RCP5000F0001, DN 6101  
Agent mobile number : 2003  
Caller number: 2001  
PG IP Address: 10.106.81.68  
CVP IP Address:10.106.81.69
```

Flusso di chiamata ad alto livello

1. Caller 2001 su CME chiama 9001, che punta a Gateway (GW) (10.106.61.162). Il peer di composizione GW punta al Customer Voice Portal (CVP).
 2. CVP invia una richiesta di route a Intelligent Contact Manager (ICM) e ICM restituisce l'etichetta dell'agente mobile, ovvero LCP port Dialed Number (DN) 6001.
 3. Il CVP invia l'invito a CUCM. Mentre la porta LCP suona, il gateway JTAPI (JGW) indica a CUCM di chiamare l'agente phone 2001 da RCP 6101.
 4. Una volta che l'agente risponde, la gamba dell'agente è collegata a Music-on-Hold (MoH).
 5. JGW indica a CUCM di rispondere alla chiamata in entrata che squilla sulla porta LCP.
 6. Una volta collegata la gamba LCP, JGW indica a CUCM di recuperare la gamba dell'agente.
 7. JGW trasmette i dettagli dell'indirizzo IP/porta del protocollo RTP (Real-Time Transport Protocol) dal segmento cliente al segmento agente e viceversa.
 8. CUCM crea un ponte tra le due gambe e stabilisce il percorso RTP tra l'agente e il cliente.
- L'analisi inizia dal passo 3, quando la chiamata arriva alla porta LCP CUCM. Ciascun frammento

JGW è immediatamente seguito dal frammento di log CUCM che corrisponde identificato rispettivamente dalle intestazioni JGW e CUCM.

Risoluzione dei problemi

Utilizzare questi livelli di debug per risolvere i problemi relativi alla messaggistica JGW e alla segnalazione SIP (Session Initiation Protocol) che corrispondono a CUCM:

JTAPI

Su Agent Peripheral Gateway (PG), utilizzare l'utility Procmon per attivare la traccia per il processo JGW:

```
C:\>procmon <cust_inst> <node> jgw<jtapi instance>
>>>trace JT_TPREQUESTS /on
>>>trace JT_JTAPI_EVENT_USED* /on
>>>trace JT_PIM_EVENT /on
>>>trace JT_ROUTE_MESSAGE /on
>>>trace *CONF* /on
```

Nota: I comandi trace fanno distinzione tra maiuscole e minuscole.

```
Communications Manager:
Enable SIP tracing from serviceability
```

Analisi dettagliata del flusso di chiamata

JGW riceve NewCallEvent per la chiamata in entrata alla porta LCP

JGW

```
17:27:19:762 PG1A-jgw1 Trace: 978: Sep 12 17:27:19.762 IST %JTAPI-PROTOCOL-7-UNK:
(P8-10.106.81.67) received Event: com.cisco.cti.protocol.NewCallEvent {
```

```
eventSequence                = 207
lineCallManagerID            = 1
lineID                        = 14
lineHandleSpecified          = true
deviceName                    = LCP5000F0001
callCallManagerID            = 1
callLegID                     = 20622152
globalCallManagerID          = 1
callID                        = 7017
callingParty                  = 2001
```

calledParty = 6001
CUCM

00584403.005 |17:27:19.520 |AppInfo |SIPTcp - wait_SdlReadRsp: Incoming SIP TCP message from 10.106.81.69 on port 19540 index 9 with 1080 bytes:

[308,NET]

INVITE sip:6001@10.106.81.67;transport=tcp SIP/2.0

Via: SIP/2.0/TCP 10.106.81.69:5060;branch=z9hG4bK0pklbe3yYKOMmlUkMFks+A~~90

Max-Forwards: 69

To: <sip:6001@10.106.81.67;transport=tcp>

From: 2001 <sip:2001@10.106.81.69:5060>;tag=ds68ab6ea6

Call-ID: **78B041A239AB11E480032C542D7590C8-141054823683618**@10.106.81.69

CSeq: 1 INVITE

Content-Length: 0

Contact: <sip:2001@10.106.81.69:5060;transport=tcp>

Expires: 60

User-Agent: CVP 10.0 (1) Build-490

Call-Info: <sip:10.106.61.162:5060>;purpose=x-cisco-origIP

Remote-Party-ID: <sip:2001@10.106.61.162>;party=calling;screen=no;privacy=off

Date: Fri, 12 Sep 2014 12:02:16 GMT

Min-SE: 1800

Cisco-Guid: 2024817058-0967512548-2147691604-0762679496

Allow: INVITE, OPTIONS, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE, NOTIFY, INFO, REGISTER

Allow-Events: telephone-event

X-Cisco-CCBProbe: id:10.106.61.162;loc:https;trunks:1

MIME-Version: 1.0

Cisco-Gucid: 78B041A239AB11E480032C542D7590C8

Supported: timer

Supported: resource-priority

Supported: replaces

Supported: sdp-anat

App-Info: <10.106.81.69:8000:8443>

LCP Rings e JGW iniziano la chiamata a Remote Agent 2003 da RCP

JGW

17:27:19:795 PG1A-jgw1 Trace: 1078: Sep 12 17:27:19.795 IST %JTAPI-PROTOCOL-7-UNK:
(P8-10.106.81.67) [GW-ThreadMakeRemoteAgentCall] sending: com.cisco.cti.protocol.

LineCallInitiateRequest {

sequenceNumber = 124
lineCallManagerID = 1
lineID = 10
globalCallManagerID = 1
globalCallID = 7018
callingAddress = 6101
destAddress = 2003
userData = null
mediaDeviceName =
mediaResourceID = 0
featurePriority = 1
}

17:27:19:799 PG1A-jgw1 Trace: 1079: Sep 12 17:27:19.799 IST %JTAPI-PROTOCOL-7-UNK:
(P8-10.106.81.67) received Response: com.cisco.cti.protocol.LineCallInitiateResponse {

sequenceNumber = 124
result = 0
lineCallManagerID = 1
lineID = 10
callManagerID = 1
callLegID = **20622153**

CUCM

00584484.001 |17:27:19.532 |AppInfo |SIPTcp - wait_SdlSPISignal: Outgoing SIP TCP
message to 10.106.81.69 on port 19540 index 9

[310,NET]

SIP/2.0 180 Ringing

Via: SIP/2.0/TCP 10.106.81.69:5060;branch=z9hG4bK0pklbe3yYKOMmlUkMFKs+A~~90

From: 2001 <sip:2001@10.106.81.69:5060>;tag=ds68ab6ea6

To: <sip:6001@10.106.81.67;transport=tcp>;tag=32~9fb3c68a-3291-4bd4-98cd-c82b97aed22a-
20622151

Date: Fri, 12 Sep 2014 11:57:19 GMT

Call-ID: **78B041A239AB11E480032C542D7590C8-141054823683618**@10.106.81.69

CSeq: 1 INVITE

Allow: INVITE, OPTIONS, INFO, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE, NOTIFY

Allow-Events: presence

Server: Cisco-CUCM10.0

Supported: X-cisco-srtp-fallback

Supported: Geolocation

P-Asserted-Identity: <sip:6001@10.106.81.67>

Remote-Party-ID: <sip:6001@10.106.81.67>;party=called;screen=yes;privacy=off

Contact: <sip:6001@10.106.81.67:5060;transport=tcp>

Content-Length: 0

00584490.000 |17:27:19.566 |SdlSig-I |**CtiLineCallInitiateReq** |restart0
|StationD(1,100,63,4) |CTIDeviceLineMgr(1,200,25,1) |1,200,13,
2.9296^10.106.81.68^RCP5000F0001 |[R:N-H:0,N:0,L:0,V:0,Z:0,D:0]
AsyncResponse=148 LH=1|11 GCH=1|7018 CalledPartyInfo=2003 MediaDeviceName = Media
DevicePid = (0,0,0,0) resource ID=0 FetaurePriority=1

00584582.001 |17:27:19.587 |AppInfo |SIPtcp - wait_SdlSPISignal: Outgoing SIP TCP
message to 10.106.61.162 on port 5060 index 12

[311,NET]

INVITE sip:**2003**@10.106.61.162:5060 SIP/2.0

Via: SIP/2.0/TCP 10.106.81.67:5060;branch=z9hG4bK654d9a6da3

From: <sip:6101@10.106.81.67>;tag=33~9fb3c68a-3291-4bd4-98cd-c82b97aed22a-20622154

To: <sip:2003@10.106.61.162>

Date: Fri, 12 Sep 2014 11:57:19 GMT

Call-ID: **f1283f00-4121df9f-b-43516a0a**@10.106.81.67

Supported: timer,resource-priority,replaces

Min-SE: 1800

User-Agent: Cisco-CUCM10.0

Allow: INVITE, OPTIONS, INFO, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE,
NOTIFY

CSeq: 101 INVITE

Expires: 180

Allow-Events: presence, kpml

Supported: X-cisco-srtp-fallback,X-cisco-original-called

Call-Info: <sip:10.106.81.67:5060>;method="NOTIFY;Event=telephone-event;Duration=500"

Call-Info: <urn:x-cisco-remotecc:callinfo>;x-cisco-video-traffic-class=VIDEO_UNSPECIFIED

Cisco-Guid: 4045946624-0000065536-0000000011-1129409034

Session-Expires: 1800

P-Asserted-Identity: <sip:6101@10.106.81.67>

Remote-Party-ID: <sip:6101@10.106.81.67>;party=calling;screen=yes;privacy=off

Contact: <sip:6101@10.106.81.67:5060;transport=tcp>

Max-Forwards: 70

Content-Length: 0

Risposte dell'agente e CUCM invia supporti Open Logical Channel (MOLC) alla porta RCP

JGW

17:27:25:285 PG1A-jgw1 Trace: 1203: Sep 12 17:27:25.285 IST %JTAPI-PROTOCOL-7-UNK:(P8-10.106.81.67) received Event: com.cisco.cti.protocol.**DeviceCallOpen LogicalChannelEvent** {

eventSequence = 216
deviceCallManagerID = 1
deviceID = 2
callCallManagerID = 1
callLegID = 20622153

CUCM

00584627.002 |17:27:25.048 |AppInfo |SIPtcp - wait_SdlReadRsp: Incoming SIP TCP message from 10.106.61.162 on port 5060 index 12 with 1021 bytes:

[314,NET]

SIP/2.0 200 OK

Via: SIP/2.0/TCP 10.106.81.67:5060;branch=z9hG4bK654d9a6da3

From: <sip:6101@10.106.81.67>;tag=33~9fb3c68a-3291-4bd4-98cd-c82b97aed22a-20622154

To: <sip:2003@10.106.61.162>;tag=66DAB40-15DF

Date: Fri, 12 Sep 2014 12:02:19 GMT

Call-ID: f1283f00-4121df9f-b-43516a0a@10.106.81.67

CSeq: 101 INVITE

Allow: INVITE, OPTIONS, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE, NOTIFY, INFO, REGISTER

Allow-Events: telephone-event

Remote-Party-ID: <sip:2003@10.106.61.162>;party=called;screen=no;privacy=off

Contact: <sip:2003@10.106.61.162:5060;transport=tcp>

Supported: replaces

Supported: sdp-anat

Server: Cisco-SIPGateway/IOS-12.x

Require: timer

Session-Expires: 1800;refresher=uac

Supported: timer

Content-Type: application/sdp

Content-Disposition: session;handling=required

Content-Length: 193

v=0

o=CiscoSystemsSIP-GW-UserAgent 8244 219 IN IP4 10.106.61.162

s=SIP Call

c=IN IP4 10.106.61.162

t=0 0

m=audio 29722 RTP/AVP 0

c=IN IP4 10.106.61.162

a=rtpmap:0 PCMU/8000

a=ptime:20

```
00584677.000 |17:27:25.052 |SdlSig |MXAgenaOpenLogicalChannel
              |call_delivered4 |StationCdpc(1,100,64,18)
              |StationD(1,100,63,4) |1,100,14,27559.6^10.106.61.162^*
              |[R:N-H:0,N:4,L:0,V:0,Z:0,D:0] codec=4 CI=20622153 mediaType=1
audioRate=20 iLBCMode=1 rfc2833PayloadNum=0 confId=0 streamFlag=F partyId=
16777257 PT=F PTId=16777216 dyn payloadTypeNum=0 MediaEncrAlgo=0 ConnType=3
ReqIpAddrType=0 ipAddrType=0 ipv4=10.106.61.162:29722 dscpForMyParty=0xb8
(DSCP=0x2e) dscpForOtherEndParty=0xb8 (DSCP=0x2e) v150MER=F T38MER=F
```

StartTransmissionEvent per segmento RCP Fornisce i dettagli della porta/indirizzo RTP remoto

JGW

17:27:25:286 PG1A-jgw1 Trace: 1205: Sep 12 17:27:25.286 IST %JTAPI-PROTOCOL-7-
UNK:(P8-10.106.81.67) received Event: com.cisco.cti.protocol.**StartTransmission**

Event {

```

eventSequence          = 217
deviceCallManagerID   = 1
deviceID               = 2
callCallManagerID     = 1
callLegID              = 20622153
ipAddr                 = -1573033462
rtpPortNumber         = 29722

```

CUCM

```

00584686.000 |17:27:25.052 |SdlSig      |StationOutputStartMediaTransmission
  |restart0                |StationD(1,100,63,4)
|StationCdpc(1,100,64,18) |1,100,14,27559.6^10.106.61.162^*
|[R:N-H:0,N:7,L:0,V:0,Z:0,D:0] ConfId=20622153 remoteIpAddr=.type=0 .addr=
0x{a,6a,3d,a2,0,0,0,0,0,0,0,0,0,0,0,0}(10.106.61.162) Port=29722 PacketSize=
20 PayloadType=4 CI=20622153 DiffServ=0xb8 (DSCP=0x2e) Silent=0 MaxFrms=0
G723BitRate=0 PartyId=0x1000029 RFC2833PayloadType=0 mixingMode=0 partyDir=0

```

JGW risponde con i parametri Open Logical Channel (OLC) ACK

Nota: Questo è l'indirizzo IP del PG perché il segmento LCP non è ancora collegato.

JGW

```

17:27:25:299 PG1A-jgw1 Trace: 1241: %JTAPI-JTAPI-7-UNK:(P8-pguser)[ObserverThread
(com.cisco.icm.jgw.jtapi.JTapiObj@14323d5)][RCP5000F0001]Request: setRTPParams(Cisco
RTPParams10.106.81.68/31025)

```

```

17:27:25:299 PG1A-jgw1 Trace: 1242: Sep 12 17:27:25.299 IST %JTAPI-PROTOCOL-7-UNK:
(P8-10.106.81.67) [ObserverThread(com.cisco.icm.jgw.jtapi.JTapiObj@14323d5)] sending:
com.cisco.cti.protocol.DeviceSetRTPForCallRequest {

```

```

17:27:25:300 PG1A-jgw1 Trace:

```

```

sequenceNumber        = 125
callManagerID         = 1
deviceID               = 2
callCallManagerID     = 1
callLegID              = 20622153
ipAddress              = 1146186250
rtpPortNumber         = 31025

```

CUCM

00584713.000 |17:27:25.070 |SdlSig | **CtiDeviceSetRTPForCallReq**
|active10 |StationCdpc(1,100,64,18)
|StationD(1,100,63,4) |1,200,13,2.9297^10.106.81.68
^RCP5000F0001 |[R:N-H:0,N:0,L:0,V:0,Z:0,D:0] AsyncResponse=149mCtiInterface
(1,200,25,1) DH=1|3 CH=1|**20622153** RtpDestination**1146186250**|**31025**

00584718.000 |17:27:25.070 |SdlSig | **MXAgenaOpenLogicalChannelAck**
|waitForMXCapabilitiesorOfferorAnswer |AgenaInterface(1,100,244,25)
|StationCdpc(1,100,64,18) |1,200,13,2.9297^10.106.81.68^RCP5000F0001
|[R:N-H:0,N:1,L:0,V:0,Z:0,D:0] rc=0 isMultiMedia=F LCN=0 partyId=16777257 port=
31025 ipAddrType=0 ipv4=**10.106.81.68**

00584745.001 |17:27:25.080 |AppInfo |SIPTcp - wait_SdlSPISignal: Outgoing SIP
TCP message to 10.106.61.162 on port 5060 index 12

[315,NET]

ACK sip:2003@10.106.61.162:5060;transport=tcp SIP/2.0

Via: SIP/2.0/TCP 10.106.81.67:5060;branch=z9hG4bK667d8dda73

From: <sip:6101@10.106.81.67>;tag=33~9fb3c68a-3291-4bd4-98cd-c82b97aed22a-20622154

To: <sip:2003@10.106.61.162>;tag=66DAB40-15DF

Date: Fri, 12 Sep 2014 11:57:19 GMT

Call-ID: f1283f00-4121df9f-b-43516a0a@10.106.81.67

User-Agent: Cisco-CUCM10.0

Max-Forwards: 70

CSeq: 101 ACK

Allow-Events: presence, kpml

Content-Type: application/sdp

Content-Length: 186

v=0

o=CiscoSystemsCCM-SIP 33 1 IN IP4 10.106.81.67

s=SIP Call

c=IN IP4 **10.106.81.68**

b=TIAS:64000

b=CT:64

b=AS:64

t=0 0

m=audio **31025** RTP/AVP 0

a=ptime:20

a=rtpmap:0 PCMU/8000

Richieste JGW per mettere in attesa la parte RCP

JGW

17:27:25:309 PG1A-jgw1 Trace: 1262: Sep 12 17:27:25.309 IST %JTAPI-PROTOCOL-7-
UNK:(P8-10.106.81.67) [pool-1-thread-22-JTAPIGW-22] sending: com.cisco.cti.
protocol.**CallHoldRequest** {

sequenceNumber = 126

lineCallManagerID = 1

lineID = 10

callLegCallManagerID = 1

callLegID = 20622153

CUCM

00585451.000 |17:27:38.419 |SdlSig-I |**CtiLineCallHoldReq**
|restart0 |StationD(1,100,63,4)
|CTIDeviceLineMgr(1,200,25,1) |1,200,13,2.9303^10.106.81.68
^RCP5000F0001 |[R:N-H:0,N:0,L:0,V:0,Z:0,D:0] AsyncResponse=155 CH=1|**20622153**
LH=1|11 ContentId=

001 |17:27:38.420 |AppInfo |SIPTcp - wait_SdlSPISignal: Outgoing SIP TCP message
to 10.106.61.162 on port 5060 index 12

[340,NET]

INVITE sip:2003@10.106.61.162:5060;transport=tcp SIP/2.0

Via: SIP/2.0/TCP 10.106.81.67:5060;branch=z9hG4bK712fda313c

From: <sip:6101@10.106.81.67>;tag=33~9fb3c68a-3291-4bd4-98cd-c82b97aed22a-20622154

To: <sip:2003@10.106.61.162>;tag=66DAB40-15DF

Date: Fri, 12 Sep 2014 11:57:38 GMT

Call-ID: f1283f00-4121df9f-b-43516a0a@10.106.81.67

Supported: timer,resource-priority,replaces

User-Agent: Cisco-CUCM10.0

Allow: INVITE, OPTIONS, INFO, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE,
NOTIFY

CSeq: 106 INVITE

Max-Forwards: 70

Expires: 180

Allow-Events: presence

Call-Info: <urn:x-cisco-remotec:callinfo>;x-cisco-video-traffic-class=VIDEO_UNSPECIFIED

Supported: X-cisco-srtp-fallback

Supported: Geolocation

Session-Expires: 1800;refresher=uac

Min-SE: 1800

P-Asserted-Identity: <sip:6101@10.106.81.67>

Remote-Party-ID: <sip:6101@10.106.81.67>;party=calling;screen=yes;privacy=off

Contact: <sip:6101@10.106.81.67:5060;transport=tcp>

Content-Type: application/sdp

Content-Length: 193

v=0

o=CiscoSystemsCCM-SIP 33 6 IN IP4 10.106.81.67

s=SIP Call

c=IN IP4 0.0.0.0

b=TIAS:64000

b=CT:64

b=AS:64

t=0 0

m=audio 16390 RTP/AVP 0

a=ptime:20

a=rtpmap:0 PCMU/8000

a=inactive

JGW indica a CUCM di rispondere alla coda LCP

JGW

17:27:25:312 PG1A-jgw1 Trace: 1270: Sep 12 17:27:25.312 IST %JTAPI-PROTOCOL-7-UNK:(P8-10.106.81.67) [GW-ThreadAnswerCall] sending: com.cisco.cti.protocol.

CallAnswerRequest {

sequenceNumber = 127

lineCallManagerID = 1

lineID = 14

callLegCallManagerID = 1

callLegID = 20622152
CUCM

00584785.000 |17:27:25.082 |SdlSig-I |**CtiLineCallAnswerReq**
|restart0 |StationD(1,100,63,3)
|CTIDeviceLineMgr(1,200,25,1) |1,200,13,2.9299^10.106.81.68
^LCP5000F0001 |[R:N-H:0,N:0,L:0,V:0,Z:0,D:0] mAsyncResponse=151 CH=1|20622152
LH=1|15 MediaDeviceName = MediaDevicePid = (0,0,0,0) resource ID=0

00584875.001 |17:27:25.088 |AppInfo |SIPTcp - wait_SdlSPISignal: Outgoing SIP TCP
message to 10.106.81.69 on port 19540 index 9

[317,NET]

SIP/2.0 200 OK

Via: SIP/2.0/TCP 10.106.81.69:5060;branch=z9hG4bK0pklbe3yYKOMmlUkMFKs+A~~90

From: 2001 <sip:2001@10.106.81.69:5060>;tag=ds68ab6ea6

To: <sip:6001@10.106.81.67;transport=tcp>;tag=32~9fb3c68a-3291-4bd4-98cd-c82b97
aed22a-20622151

Date: Fri, 12 Sep 2014 11:57:19 GMT

Call-ID: **78B041A239AB11E480032C542D7590C8-141054823683618**@10.106.81.69

CSeq: 1 INVITE

Allow: INVITE, OPTIONS, INFO, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE,
NOTIFY

Allow-Events: presence, kpml

Supported: replaces

Server: Cisco-CUCM10.0

Supported: X-cisco-srtp-fallback

Supported: Geolocation

Session-Expires: 1800;refresher=uas

Require: timer

P-Asserted-Identity: <sip:6001@10.106.81.67>

Remote-Party-ID: <sip:6001@10.106.81.67>;party=called;screen=yes;privacy=off

Contact: <sip:6001@10.106.81.67:5060;transport=tcp>

Content-Type: application/sdp

Content-Length: 183

v=0

o=CiscoSystemsCCM-SIP 32 1 IN IP4 10.106.81.67

s=SIP Call
c=IN IP4 0.0.0.0
b=TIAS:64000
b=AS:64
t=0 0
m=audio 4000 RTP/AVP 0
a=ptime:20
a=rtpmap:0 PCMU/8000
a=sendonly

LCP risponde e CUCM invia MOLC a LCP

JGW

17:27:25:345 PG1A-jgw1 Trace: 1327: Sep 12 17:27:25.344 IST %JTAPI-PROTOCOL-7-
UNK:(P8-10.106.81.67) received Event: com.cisco.cti.protocol.**DeviceCallOpen**
LogicalChannelEvent {

eventSequence = 226
deviceCallManagerID = 1
deviceID = 4
callCallManagerID = 1
callLegID = **20622152**

CUCM

00585043.000 |17:27:25.113 |SdlSig |**MXAgenaOpenLogicalChannel**
|restart0 |StationD(1,100,63,3)
|AgenaInterface(1,100,244,26) |1,100,14,27389.6^10.106.81.69^*
|[R:N-H:0,N:1,L:1,V:0,Z:0,D:0] codec=4 CI=**20622152** mediaType=1
audioRate=20 iLBCMode=1 rfc2833PayloadNum=0 confId=0 streamFlag=F partyId=
16777260 PT=F PTid=16777216 dyn payloadTypeNum=0 MediaEncrAlgo=0 ConnType=3
ReqIpAddrType=0 ipAddrType=0 ipv4=**10.106.61.162:16390** dscpForMyParty=0xb8
(DSCP=0x2e) dscpForOtherEndParty=0xb8 (DSCP=0x2e) v150MER=F T38MER=F

JGW indica a CUCM di sbloccare la parte RCP per l'agente una volta ricevuta la richiesta MOLC

JGW

17:27:25:358 PG1A-jgw1 Trace: 1367: Sep 12 17:27:25.358 IST %JTAPI-PROTOCOL-7-
UNK:(P8-10.106.81.67) [pool-1-thread-23-JTAPIGW-23] sending: com.cisco.cti.protocol.
CallRetrieveRequest {

sequenceNumber = 128
lineCallManagerID = 1

lineID = 10

callLegCallManagerID = 1

callLegID = 20622153

CUCM

00585056.000 |17:27:25.128 |SdlSig-I |**CtiLineCallHoldRetrieveReq**
|restart0 |StationD(1,100,63,4)
|CTIDeviceLineMgr(1,200,25,1) |1,200,13,2.9300^10.106.81.68^
RCP5000F0001 |[R:N-H:0,N:0,L:0,V:0,Z:0,D:0] AsyncResponse=152 CH=1|**20622153** LH=1|11

00585090.001 |17:27:25.130 |AppInfo |SIPTcp - wait_SdlSPISignal: Outgoing SIP TCP message to 10.106.61.162 on port 5060 index 12

[326,NET]

INVITE sip:2003@10.106.61.162:5060;transport=tcp SIP/2.0

Via: SIP/2.0/TCP 10.106.81.67:5060;branch=z9hG4bK6b6d73b3b4

From: <sip:6101@10.106.81.67>;tag=33~9fb3c68a-3291-4bd4-98cd-c82b97aed22a-20622154

To: <sip:2003@10.106.61.162>;tag=66DAB40-15DF

Date: Fri, 12 Sep 2014 11:57:25 GMT

Call-ID: f1283f00-4121df9f-b-43516a0a@10.106.81.67

Supported: timer,resource-priority,replaces

User-Agent: Cisco-CUCM10.0

Allow: INVITE, OPTIONS, INFO, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE, NOTIFY

CSeq: 104 INVITE

Max-Forwards: 70

Expires: 180

Allow-Events: presence

Call-Info: <urn:x-cisco-remotecc:callinfo>;x-cisco-video-traffic-class=VIDEO_UNSPECIFIED

Supported: X-cisco-srtp-fallback

Supported: Geolocation

Session-Expires: 1800;refresher=uac

Min-SE: 1800

P-Asserted-Identity: <sip:6101@10.106.81.67>

Remote-Party-ID: <sip:6101@10.106.81.67>;party=calling;screen=yes;privacy=off

Contact: <sip:6101@10.106.81.67:5060;transport=tcp>

Content-Type: application/sdp

Content-Length: 182

v=0

o=CiscoSystemsCCM-SIP 33 4 IN IP4 10.106.81.67

s=SIP Call

c=IN IP4 0.0.0.0

t=0 0

m=audio 4000 RTP/AVP 0

a=X-cisco-media:umoh

a=ptime:20

a=rtpmap:0 PCMU/8000

a=inactive

CUCM invia MOLC a RCP in risposta a Unhold

JGW

17:27:25:376 PG1A-jgw1 Trace: 1387: Sep 12 17:27:25.376 IST %JTAPI-PROTOCOL-7-
UNK:(P8-10.106.81.67) received Event: com.cisco.cti.protocol.DeviceCallOpen
LogicalChannelEvent {

eventSequence = 228
deviceCallManagerID = 1
deviceID = 2
callCallManagerID = 1
callLegID = 20622153

CUCM

00585195.002 |17:27:25.143 |AppInfo |SIPTcp - wait_SdlReadRsp: Incoming SIP TCP
message from 10.106.61.162 on port 5060 index 12 with 973 bytes:

[332,NET]

SIP/2.0 200 OK

Via: SIP/2.0/TCP 10.106.81.67:5060;branch=z9hG4bK6d5a13fb6a

From: <sip:6101@10.106.81.67>;tag=33~9fb3c68a-3291-4bd4-98cd-c82b97aed22a-20622154

To: <sip:2003@10.106.61.162>;tag=66DAB40-15DF

Date: Fri, 12 Sep 2014 12:02:25 GMT

Call-ID: f1283f00-4121df9f-b-43516a0a@10.106.81.67

CSeq: 105 INVITE

Allow: INVITE, OPTIONS, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE, NOTIFY, INFO, REGISTER

Allow-Events: telephone-event

Remote-Party-ID: <sip:2003@10.106.61.162>;party=called;screen=no;privacy=off

Contact: <sip:2003@10.106.61.162:5060;transport=tcp>

Supported: replaces

Supported: sdp-anat

Server: Cisco-SIPGateway/IOS-12.x

Require: timer

Session-Expires: 1800;refresher=uac

Supported: timer

Content-Type: application/sdp

Content-Length: 193

v=0

o=CiscoSystemsSIP-GW-UserAgent 8244 223 IN IP4 10.106.61.162

s=SIP Call

c=IN IP4 10.106.61.162

t=0 0

m=audio **29722** RTP/AVP 0

c=IN IP4 **10.106.61.162**

a=rtpmap:0 PCMU/8000

a=ptime:20

000 |17:27:25.144 |SdlSig |**MXAgenaOpenLogicalChannel** |restart0
 |StationD(1,100,63,4) |AgenaInterface
(1,100,244,25) |1,100,14,27559.17^10.106.61.162^* |[R:N-H:0,
N:2,L:0,V:0,Z:0,D:0] codec=4 CI=20622153 mediaType=1 audioRate=20
iLBCMode=1 rfc2833PayloadNum=0 confId=0 streamFlag=F partyId=16777261
PT=F PTId=16777216 dyn payloadTypeNum=0 MediaEncrAlgo=0 ConnType=3 ReqIpAddr
Type=0 ipAddrType=0 ipv4=**10.106.61.162:29722** dscpForMyParty=0xb8 (DSCP=0x2e)
dscpForOtherEndParty=0xb8 (DSCP=0x2e) v150MER=F T38MER=F

CUCM invia StartTransmissionEvent con indirizzo RTP/dettagli porta per segmento RCP all'agente

JGW

17:27:25:378 PG1A-jgw1 Trace: 1390: Sep 12 17:27:25.377 IST %JTAPI-PROTOCOL-7-
UNK:(P8-10.106.81.67) received Event: com.cisco.cti.protocol.**StartTransmissionEvent** {

eventSequence = 229
deviceCallManagerID = 1
deviceID = 2
callCallManagerID = 1
callLegID = 20622153
ipAddr = -1573033462
rtpPortNumber = 29722

CUCM

00585220.000 |17:27:25.144 |SdlSig |**StationOutputStartMediaTransmission**
|restart0 |StationD(1,100,63,4) |StationCdpc
(1,100,64,18) |1,100,14,27559.17^10.106.61.162^* |[R:N-H:0,N:5,L:0,
V:0,Z:0,D:0] ConfId=20622153 remoteIpAddr=.type=0 .addr=0x{a,6a,3d,a2,0,0,0,0,0,
0,0,0,0,0,0}(10.106.61.162) Port=29722 PacketSize=20 PayloadType=4 CI=20622153
DiffServ=0xb8 (DSCP=0x2e) Silent=0 MaxFrms=0 G723BitRate=0 PartyId=0x100002d RFC
2833PayloadType=0 mixingMode=0 partyDir=0

JGW indica a CUCM di collegare i supporti del cliente impostando i parametri RTP dell'agente sull'handle LCP

JGW

17:27:25:386 PG1A-jgw1 Trace: 1410: Sep 12 17:27:25.386 IST %JTAPI-PROTOCOL-7-
UNK:(P8-10.106.81.67) [ObserverThread(com.cisco.icm.jgw.jtapi.JTapiObj@14323d5)]
sending: com.cisco.cti.protocol.**DeviceSetRTPForCallRequest** {

17:27:25:387 PG1A-jgw1 Trace:

sequenceNumber = 129
callManagerID = 1
deviceID = 4
callCallManagerID = 1
callLegID = 20622152
ipAddress = -1573033462
rtpPortNumber = 29722

17:27:25:390 PG1A-jgw1 Trace: **MediaMgr::connectLocalMedia**: <LCP5000F0001>#4
setRTPParams on handle: **20622152/1** Address: /**10.106.61.162** Port: **29722** on CID:
16784233 with RespTime: 4 milsecs

CUCM

00585227.000 |17:27:25.157 |SdlSig-I |**CtiDeviceSetRTPForCallReq**

|restart0 |StationD(1,100,63,3)
|CTIDeviceLineMgr(1,200,25,1) |1,200,13,2.9301^10.
106.81.68^LCP5000F0001 |[R:N-H:0,N:0,L:0,V:0,Z:0,D:0] AsyncResponse=
153mCtiInterface(1,200,25,1) DH=1|5 CH=1|20622152 RtpDestination
2721933834|29722

00585240.001 |17:27:25.169 |AppInfo |SIPTcp - wait_SdlSPISignal:
Outgoing SIP TCP message to 10.106.81.69 on port 5060 index 11

[333,NET]

INVITE sip:2001@10.106.81.69:5060;transport=tcp SIP/2.0

Via: SIP/2.0/TCP 10.106.81.67:5060;branch=z9hG4bK6e48afa3a0

From: <sip:6001@10.106.81.67;transport=tcp>;tag=32~9fb3c68a-3291-
4bd4-98cd-c82b97aed22a-20622151

To: 2001 <sip:2001@10.106.81.69:5060>;tag=ds68ab6ea6

Date: Fri, 12 Sep 2014 11:57:25 GMT

Call-ID: 78B041A239AB11E480032C542D7590C8-141054823683618@10.106.81.69

Supported: timer,resource-priority,replaces

Cisco-Guid: 2024817058-0967512548-2147691604-0762679496

User-Agent: Cisco-CUCM10.0

Allow: INVITE, OPTIONS, INFO, BYE, CANCEL, ACK, PRACK, UPDATE, REFER,

SUBSCRIBE, NOTIFY

CSeq: 101 INVITE

Max-Forwards: 70

Expires: 180

Allow-Events: presence, kpml

Supported: X-cisco-srtp-fallback

Supported: Geolocation

Session-Expires: 1800;refresher=uac

Min-SE: 1800

P-Asserted-Identity: <sip:6001@10.106.81.67>

Remote-Party-ID: <sip:6001@10.106.81.67>;party=calling;screen=yes;

privacy=off

Contact: <sip:6001@10.106.81.67:5060;transport=tcp>

Content-Type: application/sdp

Content-Length: 178

v=0

o=CiscoSystemsCCM-SIP 32 2 IN IP4 10.106.81.67

s=SIP Call

c=IN IP4 10.106.61.162

b=TIAS:64000

b=AS:64

t=0 0

m=audio 29722 RTP/AVP 0

a=ptime:20

a=rtpmap:0 PCMU/8000

CUCM invia al cliente StartTransmissionEvent con indirizzo RTP/dettagli porta per segmento LCP

JGW

17:27:25:440 PG1A-jgw1 Trace: 1424: Sep 12 17:27:25.440 IST %JTAPI-PROTOCOL-7-
UNK:(P8-10.106.81.67) received Event: com.cisco.cti.protocol.**StartTransmission**
Event {

eventSequence = 231<

deviceCallManagerID = 1

17:27:25:440 PG1A-jgw1 Trace:

deviceID = 4

callCallManagerID = 1

callLegID = 20622152

ipAddr = -1573033462

rtpPortNumber = 16390

CUCM

00585246.002 |17:27:25.204 |AppInfo |SIPtcp - wait_SdlReadRsp: Incoming SIP TCP
message from 10.106.81.69 on port 5060 index 11 with 1094 bytes:

[335,NET]

SIP/2.0 200 Ok

Via: SIP/2.0/TCP 10.106.81.67:5060;branch=z9hG4bK6e48afa3a0

To: 2001 <sip:2001@10.106.81.69:5060>;tag=ds68ab6ea6

From: <sip:6001@10.106.81.67;transport=tcp>;tag=32~9fb3c68a-3291-4bd4-98cd-c82b97
aed22a-20622151

Call-ID: 78B041A239AB11E480032C542D7590C8-141054823683618@10.106.81.69

CSeq: 101 INVITE

Content-Length: 193

Cisco-Guid: 2024817058-0967512548-2147691604-0762679496

Contact: <sip:2001@10.106.81.69:5060;transport=tcp>

Date: Fri, 12 Sep 2014 12:02:25 GMT

Allow: INVITE, OPTIONS, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE, NOTIFY, INFO, REGISTER

Allow-Events: telephone-event

Remote-Party-ID: "--CVP_10_0_1_0_0_0_490" <sip:2001@10.106.61.162>;party=called;screen=no;privacy=off

Server: Cisco-SIPGateway/IOS-12.x

Require: timer

Session-Expires: 1800;refresher=uac

Supported: replaces

Supported: sdp-anat

Supported: timer

Content-Type: application/sdp

v=0

o=CiscoSystemsSIP-GW-UserAgent 9377 510 IN IP4 10.106.61.162

s=SIP Call

c=IN IP4 10.106.61.162

t=0 0

m=audio 16390 RTP/AVP 0

c=IN IP4 10.106.61.162

a=rtpmap:0 PCMU/8000

a=ptime:20

```
00585273.000 |17:27:25.206 |SdlSig |StationOutputStartMediaTransmission
|restart0 |StationD(1,100,63,3)
|StationCdpc(1,100,64,17) |1,100,14,27391.5^10.106.81.69^*
|[R:N:H:0,N:6,L:0,V:0,Z:0,D:0] ConfId=20622152 remoteIpAddr=.type=0
.addr=0x{a,6a,3d,a2,0,0,0,0,0,0,0,0,0,0,0,0}(10.106.61.162) Port=16390 Packet
Size=20 PayloadType=4 CI=20622152 DiffServ=0xb8 (DSCP=0x2e) Silent=0 MaxFrms=0
G723BitRate=0 PartyId=0x100002c RFC2833PayloadType=0 mixingMode=0 partyDir=0
```

JGW indica a CUCM di collegare i supporti dell'agente impostando i parametri RTP del cliente sull'handle RCP

JGW

17:27:25:447 PG1A-jgw1 Trace: 1441: Sep 12 17:27:25.447 IST %JTAPI-PROTOCOL-7-
UNK:(P8-10.106.81.67) [ObserverThread(com.cisco.icm.jgw.jtapi.JTapiObj@14323d5)]
sending: com.cisco.cti.protocol.**DeviceSetRTPForCallRequest** {

17:27:25:447 PG1A-jgw1 Trace:

sequenceNumber = 130
callManagerID = 1
deviceID = 2
callCallManagerID = 1
callLegID = 20622153
ipAddress = -1573033462
rtpPortNumber = 16390

17:27:25:449 PG1A-jgw1 Trace: MediaMgr::connectRemoteMedia: <RCP5000F0001>
setRTPParams on **handle: 20622153**/1 Address: /**10.106.61.162** Port: **16390** on CID:
16784233 with RespTime: 2 milsecs

CUCM

00585300.000 |17:27:25.217 |SdlSig |CtiDeviceSetRTPForCallReq
|active10 |StationCdpc(1,100,64,18)
|StationD(1,100,63,4) |1,200,13,2.9302^10.106.81.68^
RCP5000F0001 |[R:N-H:0,N:0,L:0,V:0,Z:0,D:0] AsyncResponse=154mCtiInterface
(1,200,25,1) DH=1|3 CH=1|**20622153** RtpDestination**2721933834**|**16390**

00585328.001 |17:27:25.218 |AppInfo |SIPTcp - wait_SdlSPISignal: Outgoing SIP TCP
message to 10.106.61.162 on port 5060 index 12

[337,NET]

ACK sip:2003@10.106.61.162:5060;transport=tcp SIP/2.0

Via: SIP/2.0/TCP 10.106.81.67:5060;branch=z9hG4bK705adddfae

From: <sip:6101@10.106.81.67>;tag=33~9fb3c68a-3291-4bd4-98cd-c82b97aed22a-20622154

To: <sip:2003@10.106.61.162>;tag=66DAB40-15DF

Date: Fri, 12 Sep 2014 11:57:25 GMT

Call-ID: f1283f00-4121df9f-b-43516a0a@10.106.81.67

User-Agent: Cisco-CUCM10.0

Max-Forwards: 70

CSeq: 105 ACK

Allow-Events: presence, kpml

Content-Type: application/sdp

Content-Length: 187G

v=0

o=CiscoSystemsCCM-SIP 33 5 IN IP4 10.106.81.67

s=SIP Call

c=IN IP4 10.106.61.162

b=TIAS:64000

b=CT:64

b=AS:64

t=0 0

m=audio 16390 RTP/AVP 0

a=ptime:20

a=rtpmap:0 PCMU/8000

A questo punto le due gambe sono collegate da un audio a due vie.