

# Mode mobile d'appel par appel d'agent dépisté dans JTAPI gw et CUCM

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## Introduction

La Fonction Cisco Unified Mobile Agent active un agent qui emploie n'importe quel téléphone du réseau téléphonique public commuté (PSTN) et une connexion VPN large bande (pour des transmissions d'Agent Desktop) pour fonctionner comme un agent situé dans un centre d'appels formel qui utilise un téléphone IP de Cisco qui est surveillé et contrôlé par l'interface de

programmation de téléphonie de Javas de Cisco Unified Communications Manager (CUCM) (JTAPI). La Fonction Cisco Unified Mobile Agent permet à des administrateurs système pour configurer des agents pour utiliser l'appel par appel composant ou une connexion clouée. En mode d'appel par appel, le téléphone de l'agent mobile est composé pour chaque appel entrant. Quand l'appel finit, le téléphone de l'agent mobile est déconnecté avant qu'il soit préparé pour le prochain appel. Ce document dépiste un appel d'arrivée à un agent mobile d'appel par appel dans la passerelle JTAPI (JGW) et les logs CUCM. Ceci implique deux tronçons d'appel, un du client au port CTI local (LCP) et un du port CTI distant (RCP) à l'agent. L'objectif est de capturer comment le JGW obtient CUCM pour jeter un pont sur les deux tronçons d'appel.

## Conditions préalables

### Exigences

Aucune spécification déterminée n'est requise pour ce document.

### Composants utilisés

Les informations contenues dans ce document sont basées sur les versions de matériel et de logiciel suivantes :

- Version 10.0 d'Unified Contact Center Enterprise
- Version 10.0 CUCM

## Aperçu

### Détails d'appel

Les téléphones d'agent et de client sont des extensions sur une Communication Manager Express (CME) connectée par le PRI RNIS à la passerelle CUCM-connectée.

```
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
```

## Écoulement de haut niveau d'appel

1. L'appelant 2001 sur CME compose 9001, qui indique la passerelle (gw) (10.106.61.162). Points de pair de cadran gw au Customer Voice Portal (CVP).
2. CVP envoie une demande de route au gestionnaire de contacts intelligent (missile aux

performances améliorées), et le missile aux performances améliorées renvoie l'étiquette mobile d'agent, qui est LCP numéro composé par port (DN) 6001.

3. CVP envoie invite à CUCM. Tandis que le port LCP sonne, la passerelle JTAPI (JGW) demande à CUCM d'appeler le téléphone d'agent 2001 de RCP 6101.
4. Une fois que les réponses d'agent, le tronçon d'agent est connectées à la musique d'attente (MoH).
5. JGW demande à CUCM pour répondre à l'appel d'arrivée que les sonneries sur le LCP mettent en communication.
6. Une fois que le tronçon LCP est connecté, JGW demande à CUCM de récupérer le tronçon d'agent.
7. JGW transmet les détails d'adresse IP/port de Protocole RTP (Real-Time Transport Protocol) du tronçon de client au tronçon d'agent et vice versa.
8. CUCM jette un pont sur les deux tronçons et établit le chemin de RTP entre l'agent et le client.

Cette analyse commence à partir de l'étape 3, quand les terres d'appel sur le CUCM LCP mettent en communication. Chaque extrait JGW est immédiatement suivi par l'extrait de log CUCM qui correspond identifié par les en-têtes JGW et CUCM respectivement.

## Dépanner

Utilisez ces derniers mettent au point des niveaux afin de dépanner la Messagerie JGW et la signalisation de Protocole SIP (Session Initiation Protocol) qui correspond sur CUCM :

### JTAPI

Sur la passerelle de périphérique d'agent (PAGE), employez l'utilitaire de Procmon afin d'indiquer le suivi pour le processus 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
```

**Note:** Les commandes trace distinguent les majuscules et minuscules.

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

## Analyse de flux d'appel détaillé

**JGW reçoit NewCallEvent pour l'appel d'arrivée au port 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 sonne et JGW initie l'appel à l'agent distant 2003 du 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-remotecallinfo>;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

**Les réponses d'agent et le CUCM envoient à des médias le canal logique ouvert (MOLC) au port 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 pour le tronçon RCP fournit les détails distants d'adresse/port de RTP

### 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}(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 répond avec des paramètres ouverts du canal logique (OLC) ACK

**Note:** C'est l'adresse IP de PAGE parce que le tronçon LCP n'est pas connecté encore.

### 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 RtpDestination1146186250|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

## **Demandes JGW de mettre le tronçon RCP sur l'attente**

### **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 demande à CUCM pour répondre au tronçon 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-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, 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
```

## Le tronçon LCP est répondu et CUCM envoie MOLC à 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 instruit CUCM au tronçon RCP d'Unhold à l'agent une fois qu'il reçoit la demande 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 envoie MOLC au RCP en réponse à Unhold

JGW

```
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

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 envoie StartTransmissionEvent avec des détails d'adresse/port de RTP pour le tronçon RCP à l'agent

### 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 demande à CUCM pour jeter un pont sur les medias de client en plaçant les paramètres de RTP d'agent sur le traitement 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 envoie StartTransmissionEvent avec des détails d'adresse/port de RTP pour le tronçon LCP au client

### 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-c82b97aed22a-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 demande à CUCM pour jeter un pont sur les medias d'agent en plaçant les paramètres de RTP de client sur le traitement 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 RtpDestination2721933834|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

En ce moment les deux tronçons pont avec l'audio bi-directionnel.