

# Tunnelled Q Signaling (QSIG) Data causes Outbound Agent not Ready for 18 minutes

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## Introduction

This document describes the behavior of the Session Initiation Protocol (SIP) dialer in the Cisco Unified Contact Center Enterprise (UCCE) environment when the gateway sends a Bye Message after it did not detect Answer machine Termination Tone.

## Problem:Tunnelled Q Signaling (QSIG) Data causes Outbound Agent not Ready for 18 minutes

UCCE version 10.x

Call Flow : PSTN ← QSIG — Gateway ← SIP — Dialer

Dialer Configuration: Transfer to IVR Route Point and Terminate Tone Detect have been ticked

Agent Based Campaign
  Enable IP AMD
  Call Progress Analysis (CPA)
  Record CPA

Abandon Call  
 Transfer to Agent  
 Transfer to IVR Route Point  
 Terminate Tone Detect

Transfer to IVR Campaign
  Enable IP AMD

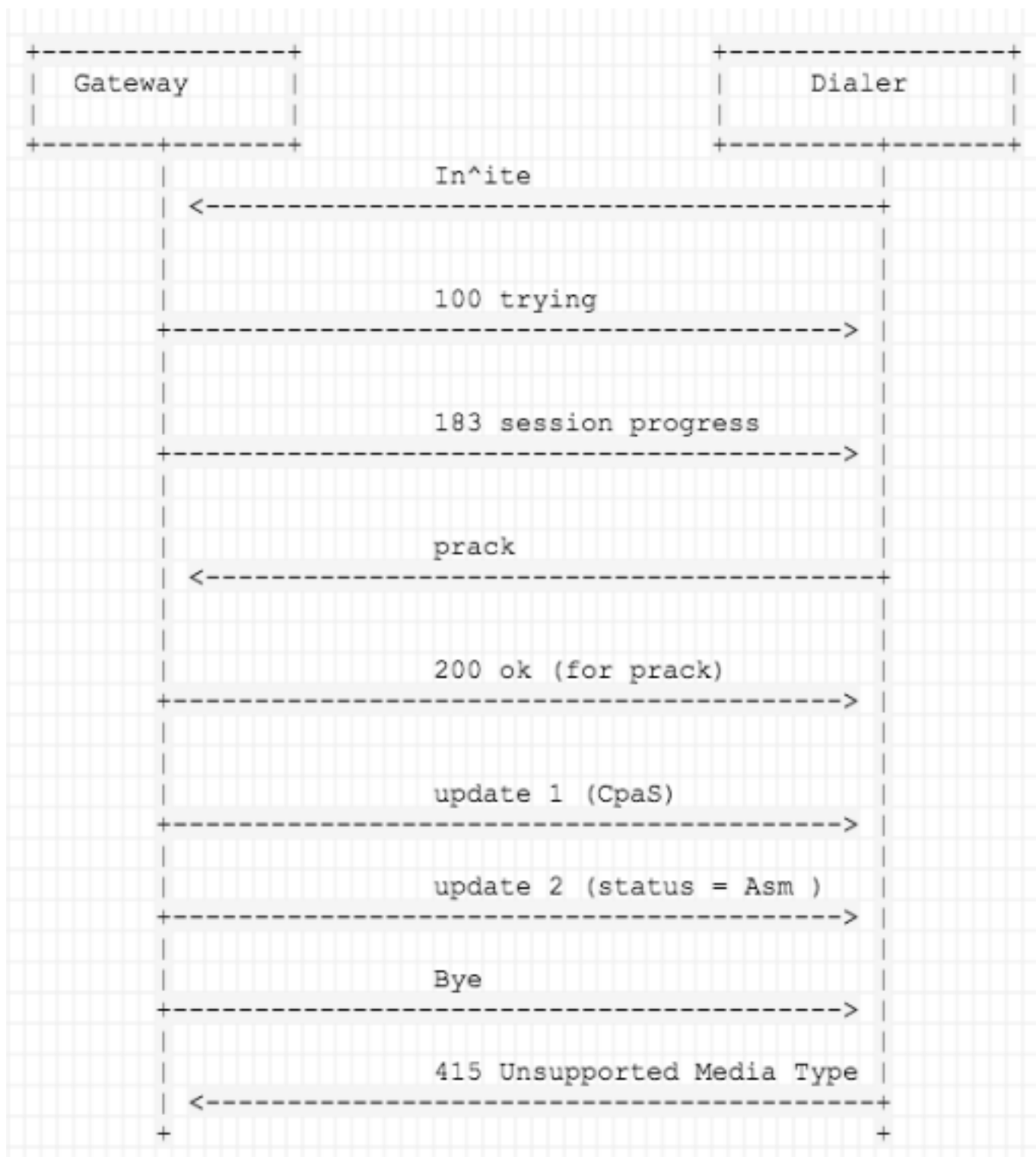
Abandon Call  
 Transfer to IVR Route Point  
 Terminate Tone Detect

Call Progress Analysis (CPA) Parameters

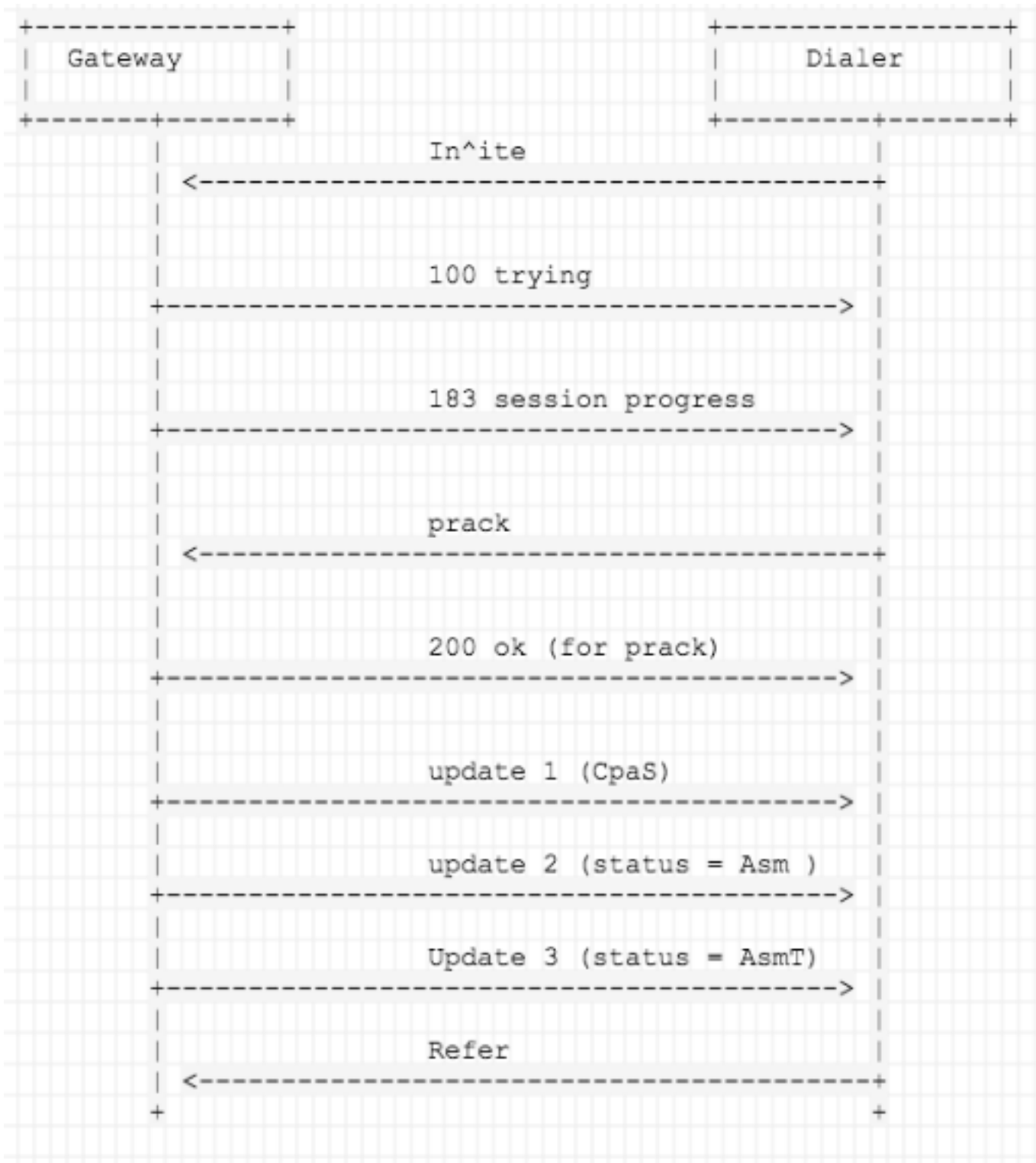
Minimum Silence Period (100 - 1000)	<input type="text" value="375"/>	Millisecond(s)
Analysis Period (1000 - 10000)	<input type="text" value="2500"/>	Millisecond(s)
Minimum Valid Speech (50 - 500)	<input type="text" value="112"/>	Millisecond(s)
Maximum Analysis Time (1000 - 10000)	<input type="text" value="3000"/>	Millisecond(s)
Maximum Termination Tone Analysis (1000 - 60000)	<input type="text" value="15001"/>	Millisecond(s)

When the gateway detect Answer machine, but did not determine Answer machine Termination Tone, it sends Bye message to SIP dialer. The SIP dialer sends back " SIP/2.0 415 Unsupported Media Type. In this case the call cannot be terminated and the agent cannot return back to ready status for approximately 18 minutes.

When the Gateway sends CPA with AsmT ( answer machine termination Tone ) , then the call can be referred to the VRU leg.



<without AsmT>



<with AsmT>

## Solution

Analysis:

the QSIG message encapsulated in the SIP messaging contains **A multipart-MiME body**.

A Multipart-MIME body—message part containing the tunneled QSIG data.

In the SIP TDM gateway scenario, there are two options—raw message (rawmsg) and

unconditional. The rawmsg option specifies tunneling of only raw message (application/qsig or application/x-q931). The unconditional option specifies tunneling of all additional message bodies, such as GTD and raw message (application/qsig or application/x-q931).

You should expect a SIP 415 final response message (Unsupported Media Type) if the User Agent Server (UAS) is unable to process tunneled QSIG or Q.931 messages

[http://www.cisco.com/c/en/us/td/docs/ios/voice/cube/configuration/guide/vb\\_book/vb\\_book/vb\\_8377.html](http://www.cisco.com/c/en/us/td/docs/ios/voice/cube/configuration/guide/vb_book/vb_book/vb_8377.html)

Multipart-MIME body has been seen from the Bye message ( GW → Dialer ) :

```
13:46:21:865 dialer-baDialer Trace: (RESIP) Received an unsupported mime type:
multipart/mixed;boundary=uniqueBoundary for SipReq: BYE 10000@10.240.112.25:58800 cid=875d601c-
803f1b7c-0f42dd21-1739f77c tid=5A5EF5141D cseq=BYE / 103 from(wire).
13:46:21:865 dialer-baDialer Trace: (RESIP) Helper::makeResponse(SipReq: BYE
10000@10.240.112.25:58800 cid=875d601c-803f1b7c-0f42dd21-1739f77c tid=5A5EF5141D cseq=BYE / 103
from(wire) code=415 reason=.
13:46:21:865 dialer-baDialer Trace: (RESIP) SEND: SipResp: 415 cid=875d601c-803f1b7c-0f42dd21-
1739f77c tid=5A5EF5141D cseq=BYE / 103 from(tu).
13:46:21:865 dialer-baDialer Trace: (RESIP) Failed content validation BYE
sip:10000@10.240.112.25:58800 SIP/2.0
Via: SIP/2.0/UDP 10.240.112.248:5060;branch=z9hG4bK5A5EF5141D
Max-Forwards: 70
To: <sip:10000@10.240.112.25>;tag=643e4c04
From: <sip:8880411590226@10.240.112.248>;tag=3A39A434-71F
Call-ID: 875d601c-803f1b7c-0f42dd21-1739f77c
CSeq: 103 BYE
Content-Type: multipart/mixed;boundary=uniqueBoundary
Date: Sat, 16 Apr 2016 03:46:10 GMT
MIME-Version: 1.0
Timestamp: 1460778381
User-Agent: Cisco-SIPGateway/IOS-15.4.3.M3
Reason: Q.850;cause=16
Content-Length: 281
P-RTP-Stat: PS=0,OS=0,PR=0,OR=0,PL=0,JI=1,LA=0,DU=11
```

```
--uniqueBoundary
Content-Type: application/x-q931
Content-Disposition: signal;handling=optional
Content-Length: 11
```

```
--uniqueBoundary
Content-Type: application/gtd
Content-Disposition: signal;handling=optional
```

```
REL,
PRN,isdn*, ,NET5*,
```

< Bye message from Gateway >

From badialer Message

```
13:46:21:865 dialer-baDialer Trace: (RESIP) Received an unsupported mime type:
```

```
multipart/mixed;boundary=uniqueBoundary for SipReq: BYE 10000@10.240.112.25:58800 cid=875d601c-803f1b7c-0f42dd21-1739f77c tid=5A5EF5141D cseq=BYE / 103 from(wire).
13:46:21:865 dialer-baDialer Trace: (RESIP) Helper::makeResponse(SipReq: BYE 10000@10.240.112.25:58800 cid=875d601c-803f1b7c-0f42dd21-1739f77c tid=5A5EF5141D cseq=BYE / 103 from(wire) code=415 reason=.
13:46:21:865 dialer-baDialer Trace: (RESIP) SEND: SipResp: 415 cid=875d601c-803f1b7c-0f42dd21-1739f77c tid=5A5EF5141D cseq=BYE / 103 from(tu).
13:46:21:865 dialer-baDialer Trace: (RESIP) Failed content validation BYE
sip:10000@10.240.112.25:58800 SIP/2.0
```

```
13:46:21:865 dialer-baDialer Trace: (RESIP) Found matching transaction for SipResp: 415 cid=875d601c-803f1b7c-0f42dd21-1739f77c tid=5A5EF5141D cseq=BYE / 103 from(tu) -> tid=5A5EF5141D [ ServerNonInviteTrying unreliable target=[ V4 10.240.112.248:5060 UDP target domain=unspecified mFlowKey=832 ]].
13:46:21:865 dialer-baDialer Trace: (RESIP) TransactionState::processServerNonInvite: SipResp: 415 cid=875d601c-803f1b7c-0f42dd21-1739f77c tid=5A5EF5141D cseq=BYE / 103 from(tu).
13:46:21:865 dialer-baDialer Trace: (RESIP) Adding timer: Timer J tid=5A5EF5141D ms=32000.
13:46:21:865 dialer-baDialer Trace: (RESIP) tid=5A5EF5141D sending to : [ V4 10.240.112.248:5060 UDP target domain=unspecified mFlowKey=832 ].
13:46:21:867 dialer-baDialer Trace: (RESIP) Looked up source for destination: [ V4 10.240.112.248:5060 UDP target domain=unspecified mFlowKey=832 ] -> [ V4 10.240.112.25:0 UDP target domain=unspecified mFlowKey=832 ] sent-by=10.240.112.248 sent-port=5060.
13:46:21:867 dialer-baDialer Trace: (RESIP) Transmitting to [ V4 10.240.112.248:5060 UDP target domain=unspecified mFlowKey=832 ] tlsDomain= via [ V4 10.240.112.25:58800 UDP target domain=unspecified mFlowKey=832 ]
```

```
SIP/2.0 415 Unsupported Media Type
Via: SIP/2.0/UDP 10.240.112.248:5060;branch=z9hG4bK5A5EF5141D
To: <sip:10000@10.240.112.25>;tag=643e4c04
From: <sip:8880411590226@10.240.112.248>;tag=3A39A434-71F
Call-ID: 875d601c-803f1b7c-0f42dd21-1739f77c
CSeq: 103 BYE
Content-Length: 0
```

## Solution:

Configure **signaling forward none** under the dial peer which accepts the call from Dialer.

[http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/cust\\_contact/contact\\_center/icm\\_enterprise/icm\\_enterprise\\_10\\_0\\_1/User/Guide/UCCE\\_BK\\_O9CF9347\\_00\\_outbound-option-guide-for-ucce.pdf](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/icm_enterprise/icm_enterprise_10_0_1/User/Guide/UCCE_BK_O9CF9347_00_outbound-option-guide-for-ucce.pdf)

```
dial-peer voice 888 voip
 session protocol sipv2
 incoming called-number 888T
 voice-class codec 1
 voice-class sip rel1xx supported "100rel"
 dtmf-relay rtp-nte
 signaling forward none
 no vad
```

signaling forward none will Prevent the gateway from forwarding the GTD payload to endpoints in the network.

[http://www.cisco.com/en/US/docs/ios/12\\_3/vvf\\_r/vrg\\_s2\\_ps1839\\_TSD\\_Products\\_Command\\_Reference\\_Chapter.html](http://www.cisco.com/en/US/docs/ios/12_3/vvf_r/vrg_s2_ps1839_TSD_Products_Command_Reference_Chapter.html)

After apply this, there is not Multiple-MIME has been forward to Dialer, and the problem Solved.