配置CUE MWI機制並對其進行故障排除

目錄

簡介

本文說明在網際網路通訊協定(IP)電話上啟用和停用訊息等待指示器(MWI)的不同方法，以及對Cisco Unity Express(CUE)與Cisco Unified Communications Manager Express(CUCME)整合時產生的問題進行疑難排解。

必要條件

需求

思科建議您瞭解以下主題：

- Call Manager Express(CME)或CUCME
- Cisco Unity Express

- 精簡型通話控制通訊協定(SCCP)
- 作業階段啟始通訊協定(SIP)

採用元件

本文中的資訊係根據以下軟體和硬體版本：

- CUE 7.x和8.x。示例配置和螢幕截圖取自NME-CUE模組上安裝的CUE 7.0.6和8.6.2
- CUCME 7.1和8.5
- 在CUCME中註冊的Cisco IP電話7965，帶SCCP

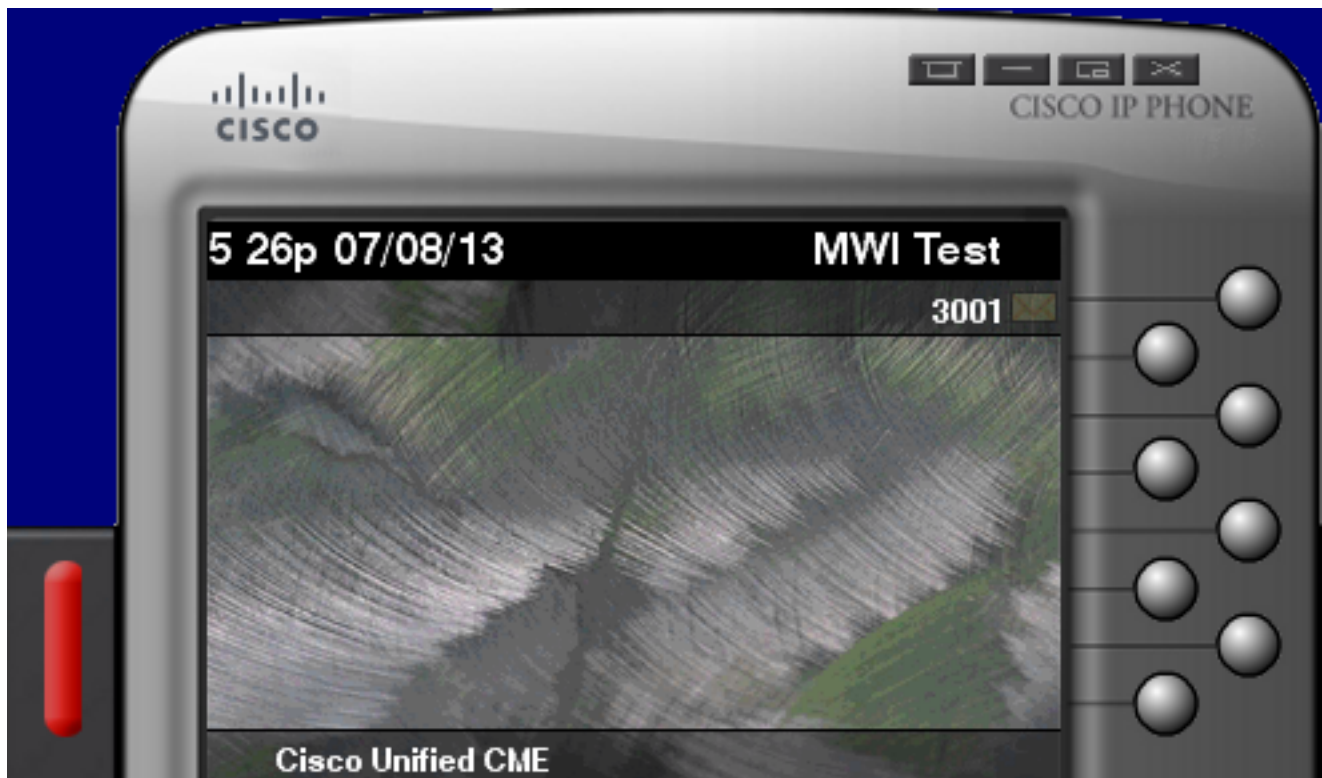本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設）的組態來啟動。如果您的網路運作中，請確保您瞭解任何指令可能造成的影響。

相關產品

本文件也適用於以下硬體和軟體版本：

- 可以使用任何CUE和CME版本
- 可以使用任何CUE模組或CME路由器

背景資訊

MWI用於指示語音信箱中留下新留言。為了指示新消息，IP電話上的紅燈與線路顯示旁邊的信封圖示一起開啟。

　　附註：本文檔基於與CUE模組整合的CUCME伺服器。

當CUE與CUCME整合時，有三個MWI機制可用：

- Outcall
- SIP Subscribe-Notify
- 未經請求的SIP

當CUE與CUCM整合時，有一個MWI機制可用：

- Java電話API(JTAPI)/電腦電話整合(CTI)

  附註：CUE JTAPI問題和案例研究文檔提供了有關如何在CUE中啟用JTAPI跟蹤以及如何通過JTAPI排除MWI故障的資訊。

設定

SIP去話方法

Outcall是CUE中使用的預設方法，用於為可用系統提供向後相容性。雖然建議對MWI通知使用Subscribe-Notify或Unsolicited方法，但在多個網路環境中使用Outcall方法為註冊到CME的SCCP IP電話配置和啟用MWI。

  附註：Outcall機制在Cisco Survivable Remote Site Telephony(SRST)部署中不起作用。 不支援SIP終端。

在此機制中，當使用者擁有新的語音郵件時，CUE會向CUCME傳送邀請。
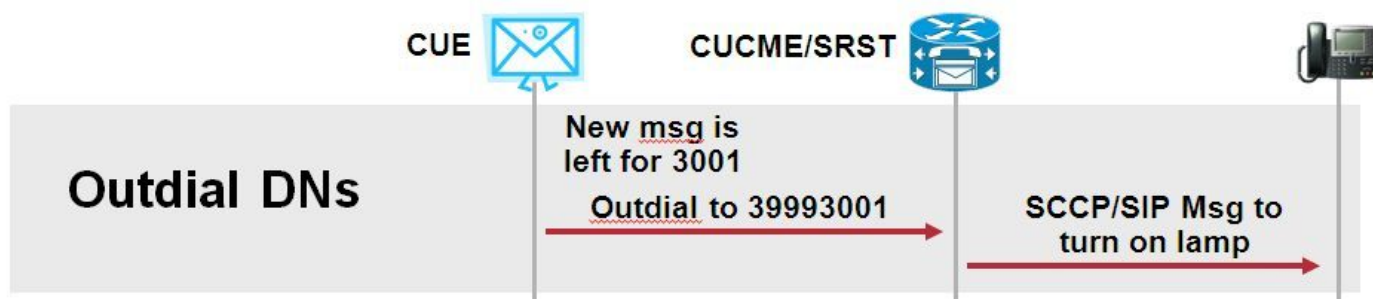
在CUCME上配置兩個ephone-dns。兩個DN表示CUE必須撥號為給定分機啟用或禁用MWI的分機。

```
ephone-dn 3
 mwi on
 number 3999....
!
ephone-dn 4
 mwi off
 number 3998....
```

  附註：DN結尾的點數必須與註冊到CUCME的電話使用的分機長度相匹配。

確保CUCME配置已完成，然後繼續進行CUE配置。在CUE的初始配置中，MWI DN將自動填充在初始化嚮導的**呼叫處理**部分。

附註：要訪問初始化嚮導，必須將CME與CUE整合，以便進行圖形使用者介面(GUI)訪問。在生產系統上，DN資訊與CUE同步。導航到**語音郵件(Voice Mail)>消息等待指示器(Message Waiting Indicators)>設定(Settings)**以檢視DN。

DN配置並與CUE同步後MWI設定頁面示例：

附註：此處還啟用了Subscribe-Notify。這不是必需的，但支援同時配置Subscribe-Notify和Outcaling。CUE傳送兩個通知，每個方法一個通知，以便開啟或關閉MWI。

附註：不支援同時配置Outcall和Unsolicited Notify。

CUE配置示例：

```
ccn application ciscomwiapplication aa
  description "ciscomwiapplication"
  enabled
  maxsessions 6
```

```
  script "setmwi.aef"
  parameter "strMWI_OFF_DN" "3999"
  parameter "strMWI_ON_DN" "3998"
  end application

ccn subsystem sip
 mwi sip outcall
```

使用show ccn subsystem sip命令確定當前MWI配置。

```
CUE# sh ccn subsystem sip
SIP Gateway:                          10.10.202.1
SIP Port Number:                   5060
DTMF Relay:                           sip-notify,sub-notify
MWI Notification:                          outcall
MWI Envelope Info:                 disabled
Transfer Mode:                        bye-also
SIP RFC Compliance:            Pre-RFC3261
```

> **附註**：在示例配置中，定義MWI擴展時不帶點。點僅在CME中定義，用於指示電話DN分機長度。show ccn subsystem sip命令輸出可能因CUE版本而異。

必須對CUE使用的撥號對等體進行更改，才能確保匹配出站SIP INVITE的正確入站撥號對等體。還可以建立新的撥號對等體來充當入站撥號對等體：

```
dial-peer voice 3600 voip
destination-pattern 3600
session protocol sipv2
session target ipv4:10.10.202.50
incoming called-number 399[89]....
dtmf-relay sip-notify
codec g711ulaw
no vad
!
```

或

```
dial-peer voice 3999 voip
session protocol sipv2
incoming called-number 399[89]....
dtmf-relay sip-notify
codec g711ulaw
no vad
!
```

SIP訂閱通知

在Subscribe-Notify機制中，DN最初使用CUE進行訂閱。訂閱後，將接受來自CUE的NOTIFY消息以進行MWI通知。

> **注意**：建議對SRST和CUCME部署使用此方法。

啟用訂戶通知以使用此通知方法：

或者，也可以在命令列介面(CLI)上啟用使用者通知方法：

```
ccn subsystem sip
 gateway address "10.10.202.1"
 mwi envelope-info
 mwi sip sub-notify
 end subsystem
```

在sip-ua部分使用MWI伺服器(CUE)IP地址配置CME。您可以使用**show run interface**命令，從託管CUE的服務模組的介面配置中確認CUE的IP地址。

```
interface Integrated-Service-Engine1/0
 ip unnumbered Vlan400
 service-module ip address 10.10.202.50 255.255.255.0

sip-ua
 mwi-server ipv4:10.10.202.50 expires 3600 port 5060 transport udp
```

sip-ua下的mwi-server ipv4:10.10.202.50命令足以支援MWI的Subscribe-Notify事件。**Expires、Port和Transport**會自動包括在具有預設設定的組態中。

配置DN以使用CUE進行訂閱以接收MWI通知事件。此方法可用於註冊到CME路由器的SCCP和SIP IP電話。

```
voice register dn 1
 number 3005
 mwi
!
ephone-dn  1
 number 3001
 mwi sip
```

輸入該命令後，電話會向CUE傳送**SUBSCRIBE**消息以請求MWI更新，CUE會以202 Accepted SIP消息進行響應：

```
Sent:
SUBSCRIBE sip:3001@10.10.202.50:5060 SIP/2.0
Via: SIP/2.0/UDP 10.10.202.1:5060;branch=z9hG4bK4812E5
From: <sip:3001@10.10.202.1>;tag=CC5F60-3EC
To: <sip:3001@10.10.202.50>
Call-ID: AE09C597-E3FE11E2-80F3BB44-39D4A3CF@10.10.202.1
CSeq: 101 SUBSCRIBE
Max-Forwards: 70
Date: Thu, 04 Jul 2013 16:36:15 GMT
User-Agent: Cisco-SIPGateway/IOS-12.x
Event: message-summary
Expires: 3600
Contact:




Accept: application/simple-message-summary
Content-Length: 0
```

```
Received:
SIP/2.0 202 Accepted
Via: SIP/2.0/UDP 10.10.202.1:5060;branch=z9hG4bK4812E5
To: <sip:3001@10.10.202.50>;tag=217fce13-1101
From: <sip:3001@10.10.202.1>;tag=CC5F60-3EC
Call-ID: AE09C597-E3FE11E2-80F3BB44-39D4A3CF@10.10.202.1
CSeq: 101 SUBSCRIBE
Content-Length: 0
Expires: 3600
Contact: sip:3001@10.10.202.50
Allow-Events: refer
Allow-Events: telephone-event
Allow-Events: message-summary
```

接受訂閱後，CUE會傳送一條**NOTIFY**消息，其中包含該特定DN的MWI的當前狀態。在此示例中，MWI通知設定為Yes:

```
Received:
NOTIFY sip:3001@10.10.202.1:5060 SIP/2.0
```

```
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~30
Max-Forwards: 70
To: <sip:3001@10.10.202.1>;tag=CC5F60-3EC
From: <sip:3001@10.10.202.50>;tag=217fce13-1101
Call-ID: AE09C597-E3FE11E2-80F3BB44-39D4A3CF@10.10.202.1
CSeq: 1 NOTIFY
Content-Length: 113
Contact: sip:3001@10.10.202.50
Event: message-summary
Allow-Events: refer
Allow-Events: telephone-event
Allow-Events: message-summary
Subscription-State: active
Content-Type: application/simple-message-summary

Messages-Waiting: yes
Message-Account: sip:3001@10.10.202.50
Voice-Message: 1/0 (0/0)
Fax-Message: 0/0 (0/0)

Sent:
SIP/2.0 200 OK
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~30
From: <sip:3001@10.10.202.50>;tag=217fce13-1101
To: <sip:3001@10.10.202.1>;tag=CC5F60-3EC
Date: Thu, 04 Jul 2013 16:36:15 GMT
Call-ID: AE09C597-E3FE11E2-80F3BB44-39D4A3CF@10.10.202.1
CSeq: 1 NOTIFY
Content-Length: 0
```

在CUE GUI上，請注意Currently active subscriptions對於接收的每條Subscribe消息增加1：

使用show ccn sip subscription mwi命令檢視訂閱狀態。

```
DN                      Subscription Time                          Expires
--------------------------------------------------------------------------------

3001                    Mon Sep 22 13:40:02 EDT 2008               3600
```

SRST中的MWI訂閱通知：

在**call-manager-fallback**下為傳統SRST配置**mwi中繼**，或為CME-SRST部署配置**telephony-service**。

```
call-manager-fallback
  mwi relay

telephony-service
 mwi relay
```

SIP Unsolicited-Notify

SIP Unsolicited-Notify方法支援CUCME和SRST。此方法使用SIP NOTIFY消息來開啟/關閉MWI。與Subscribe-Notify不同，CUE不維護任何訂閱。

在**call-manager-fallback** 或**CME-SRST**下配置**mwi relay** 命令以支援SRST部署，同時配置**sip-ua**MWI配置命令。

啟用Unsolicited Notify選項：

Voice Mail > Message Waiting Indicators > Settings

Apply　Help

SIP MWI Notification Mechanism

☐ **Subscribe - Notify**
Currently active subscriptions: 2
　☐　Include envelope information in the notifications.

☑ **Unsolicited Notify**
Failures in last 5 tries: 0

☐ **Outcalling**
MWI On Number: 3999....
MWI Off Number: 3998....

或者，可以在CUE CLI上啟用未經請求的通知：

```
ccn subsystem sip
  mwi sip unsolicited
```

在CME CLI上啟用未經請求的通知：

```
sip-ua
 mwi-server ipv4:10.10.202.50 expires 3600 port 5060 transport udp unsolicited
```

> **警告**：除非在**mwi-server**命令上配置了**unsolicited**，否則CME繼續使用**Subscribe-Notify**，並且MWI不工作，因為CME上的配置與CUE上的配置不匹配。

> **附註**：不能同時將**Unsolited-Notify**機制與任何其他機制一起使用。

使用Cisco Unified Communications Manager(CUCM)的MWI

當CUE與CUCM整合時，JTAPI協定使用**setMessageWaiting**消息切換MWI開/關。由JTAPI控制的CTI埠分配有呼叫搜尋空間(CSS)，該空間具有電話的目錄號碼部分。在更高版本的CUE中，您可以配置專用CTI埠以提供MWI通知。如果埠不可用，則CUE使用由JTAPI控制的任何配置的可用埠。

由於JTAPI對MWI事件使用**setMessageWaiting**消息，因此CUCM中未配置MWI擴展。如果配置了擴展，則它們將被忽略，不會導致JTAPI出現互操作性問題。

在CUE版本7.x及更高版本中，您可以將CUCME路由器和CUE配置為使用Unsolicited-Notify方法，以便在SRST中保持完整的MWI功能。

疑難排解

本節提供的資訊可用於對組態進行疑難排解。

調試和跟蹤

CUCME

若要疑難排解MWI問題，請使用以下調試：

```
debug ccsip messages
debug voice ccapi inout
```

要排除使用MWI轉接方法註冊到CUCME路由器的SCCP電話的MWI問題，請使用以下調試：

```
debug ccsip messages
debug voice ccapi inout
debug ephone mwi mac <mac address>
debug ephone detail mac <mac address>
```

無論使用何種機制，**show ephone reg**命令均可用於確認MWI的狀態。當電話位於遠端站點時，這是一個有用的命令。

```
#show ephone reg
ephone-1[0] Mac:0023.5E18.23EC TCP socket:[1] activeLine:0 whisperLine:0 REGISTERED in SCCP ver
17/12 max_streams=5
mediaActive:0 whisper_mediaActive:0 startMedia:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging
0 debug:1 caps:9 privacy:1
IP:10.10.202.2 22856 7965  keepalive 186 max_line 6 available_line 6
button 1: dn 1  number 3001 CH1    IDLE          CH2    IDLE          CH3    IDLE          CH4    IDLE
CH5    IDLE          CH6    IDLE          CH7    IDLE          CH8    IDLE              mwi
Preferred Codec: g711ulaw
Username: MWI1 Password: cisco
```

提示

在CUE中，您可以使用以下show命令來驗證您的配置：

```
show ccn application
show ccn subsystem sip
```

CUE還提供跟蹤功能，以便排除與MWI相關的任何問題。您可以使用CUE中已啟用的預設跟蹤，也可以使用更易於收集和讀取的特定跟蹤。

可以在CUE中啟用的特定跟蹤為：

```
trace ccn stacksip dbug
```

此追蹤軌跡提供SIP訊號資訊，有助於判斷是否為MWI正確傳送**SIP Outcall**或**Notify**訊息。

您也可以結合使用stacksip trace來啟用**trace voicemail all**，以獲得有關呼叫和MWI事件的詳細資訊

，或者至少啟用trace voicemail vxml all和trace voicemail mwi all。

附註：有關MWI問題的詳細資訊，請參閱排除Unity Express消息等待指示(MWI)問題。

CUE許可

在CUE中，確保安裝許可證以支援正確的呼叫代理（CUCME或CUCM）和語音郵件埠。

在CUE版本7.0.x中，命令是show software licenses。

```
CUE# show software licenses
Installed license files:
 - voicemail_lic.sig : 25 MAILBOX LICENSE
 - ivr_lic.sig : 4 PORT IVR BASE LICENSE
 - port_lic.sig : 24 PORT BASE LICENSE

Core:
 - Application mode: CCME
 - Total usable system ports: 24

Voicemail/Auto Attendant:
 - Max system mailbox capacity time: 18000
 - Default # of general delivery mailboxes: 10
 - Default # of personal mailboxes: 25

 - Max # of configurable mailboxes: 35

Interactive Voice Response:
 - Max # of IVR sessions: 4

Languages:
 - Max installed languages: 5
 - Max enabled languages: 5
```

在CUE 7.1.x及更高版本中，命令是show license status application和show call-agent

```
CUE# show license status application
voicemail enabled: 10 ports, 10 sessions, 30 mailboxes
ivr disabled, ivr session activation count has been set to zero

CUE# show call-agent
Call-agent:          CUCME
```

您還可以使用show license all,它提供有關許可證的詳細資訊。若要確定CUE是否具有評估許可證，以及到期之前還有多少時間，或者安裝的許可證是永久性的，此顯示命令非常有用：

```
CUE# show license all
License Store: Primary License Storage
StoreIndex:  0  Feature: VMIVR-VM-MBX                     Version: 1.0
        License Type: Permanent
        License State: Active, In Use
        License Count: 65 /30
        License Priority: Medium
License Store: Primary License Storage
```

```
StoreIndex:  1  Feature: VMIVR-IVR-SESS                    Version: 1.0
        License Type: Permanent
        License State: Active, Not in Use
        License Count: 10 / 0
        License Priority: Medium
License Store: Primary License Storage
StoreIndex:  2  Feature: TCV-USER                          Version: 1.0
        License Type: Permanent
        License State: Active, Not in Use
        License Count: 60 / 0
        License Priority: Medium
License Store: Primary License Storage
StoreIndex:  3  Feature: VMIVR-PORT                        Version: 1.0
         License Type: Permanent
         License State: Active, In Use
         License Count: 20 /10
        License Priority: Medium
License Store: Evaluation License Storage
```

排除SIP Outcall故障

SIP Outcall方法生成到CUCME的SIP呼叫事件，以便為一個特定分機開啟或關閉MWI。CUE等待 **180 Ringing**消息。一旦收到，它就可以斷開呼叫。

在CUE中：

```
CUE# no trace all
#trace ccn StackSip dbug
# clear trace
#mwi refresh telephonenumber 3001
#show trace buff tail
Press <CTRL-C> to exit...
4524 07/04 09:35:16.484 ACCN STGN 0 Task: 263000000018GetListMember: output string:outcall
4524 07/04 09:35:16.489 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTINGEnter connect
4524 07/04 09:35:16.489 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTINGEnter createInvitation
4524 07/04 09:35:16.489 ACCN SIPL 0 SDPBody : v=0
o=CiscoSystemsSIP-Workflow-App-UserAgent 3337 3337 IN IP4 10.10.202.50
s=SIP Call
c=IN IP4 10.10.202.50
t=0 0
m=audio 16910 RTP/AVP 0
a=rtpmap:0 pcmu/8000
a=ptime:20

4524 07/04 09:35:16.489 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTINGbefore
invitationmanager.createInvitation. body : v=0
o=CiscoSystemsSIP-Workflow-App-UserAgent 3337 3337 IN IP4 10.10.202.50
s=SIP Call
c=IN IP4 10.10.202.50
t=0 0
m=audio 16910 RTP/AVP 0
a=rtpmap:0 pcmu/8000
a=ptime:20
body type : application/sdp toNA : <sip:39993001@10.10.202.1:5060;user=phone> fromNA :
<sip:3602@10.10.202.50:5060> from tag : cue5aa7689b
4524 07/04 09:35:16.489 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTINGafter
invitationmanager.createInvitation
4524 07/04 09:35:16.489 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTING added ciscogcid
4524 07/04 09:35:16.489 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTING getDTMFHeader: Enter
4524 07/04 09:35:16.489 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTING getDTMFHeader: getting the
```

```
headers
4524 07/04 09:35:16.490 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTING getDTMFHeader: before
adding headers to message
4524 07/04 09:35:16.490 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTING getDTMFHeader: after
adding headers to message :
INVITE sip:39993001@10.10.202.1:5060;user=phone SIP/2.0
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~10
Max-Forwards: 70
To: <sip:39993001@10.10.202.1:5060;user=phone>
From: <sip:3602@10.10.202.50:5060>;tag=cue5aa7689b
Call-ID: 137295211648821@10.10.202.50
CSeq: 1 INVITE
Content-Length: 178
Contact: <sip:3602@10.10.202.50:5060>
Content-Type: application/sdp
Cisco-Gcid: AA52BD08-013F-1000-4000-001125CUCE68
Call-Info: <sip:10.10.202.50:5060>;method="NOTIFY;Event=telephone-event;Duration=2000"
Allow-Events: telephone-event

v=0
o=CiscoSystemsSIP-Workflow-App-UserAgent 3337 3337 IN IP4 10.10.202.50
s=SIP Call
c=IN IP4 10.10.202.50
t=0 0
m=audio 16910 RTP/AVP 0
a=rtpmap:0 pcmu/8000
a=ptime:20

4524 07/04 09:35:16.490 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTINGinvite message : INVITE
sip:39993001@10.10.202.1:5060;user=phone SIP/2.0
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~10
Max-Forwards: 70
To: <sip:39993001@10.10.202.1:5060;user=phone>
From: <sip:3602@10.10.202.50:5060>;tag=cue5aa7689b
Call-ID: 137295211648821@10.10.202.50
CSeq: 1 INVITE
Content-Length: 178
Contact: <sip:3602@10.10.202.50:5060>
Content-Type: application/sdp
Cisco-Gcid: AA52BD08-013F-1000-4000-001125CUCE68
Call-Info: <sip:10.10.202.50:5060>;method="NOTIFY;Event=telephone-event;Duration=2000"
Allow-Events: telephone-event

v=0
o=CiscoSystemsSIP-Workflow-App-UserAgent 3337 3337 IN IP4 10.10.202.50
s=SIP Call
c=IN IP4 10.10.202.50
t=0 0
m=audio 16910 RTP/AVP 0
a=rtpmap:0 pcmu/8000
a=ptime:20

4524 07/04 09:35:16.490 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTINGreturning invitation
4524 07/04 09:35:16.490 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTINGgot Invitation
4524 07/04 09:35:16.490 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTINGbefore Invitation start
4524 07/04 09:35:16.491 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTINGafter Invitation start
4846 07/04 09:35:16.509 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTING
InvitationCallback.proceeding
4846 07/04 09:35:16.509 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTING SIP/2.0 100 Trying
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~10
To: <sip:39993001@10.10.202.1:5060;user=phone>
From: <sip:3602@10.10.202.50:5060>;tag=cue5aa7689b
Call-ID: 137295211648821@10.10.202.50
CSeq: 1 INVITE
```

```
Content-Length: 0
Date: Thu, 04 Jul 2013 15:50:11 GMT
Allow-Events: telephone-event
Server: Cisco-SIPGateway/IOS-12.x


4846 07/04 09:35:16.515 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTING---
InvitationCallback.proceeding (dialog)
4846 07/04 09:35:16.515 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTINGSIP/2.0 180 Ringing
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~10
To: <sip:39993001@10.10.202.1:5060;user=phone>;tag=A233D8-2382
From: <sip:3602@10.10.202.50:5060>;tag=cue5aa7689b
Call-ID: 137295211648821@10.10.202.50
CSeq: 1 INVITE
Content-Length: 0
Date: Thu, 04 Jul 2013 15:50:11 GMT
Allow: INVITE, OPTIONS, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE, NOTIFY, INFO,
REGISTER
Allow-Events: telephone-event
Remote-Party-ID: <sip:39990000@10.10.202.1>;party=called;screen=no;privacy=off
Contact: <sip:39993001@10.10.202.1:5060>
Server: Cisco-SIPGateway/IOS-12.x


4524 07/04 09:35:21.489 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTING terminating dialog in
contacting state 20
4524 07/04 09:35:21.491 ACCN SIPL 0 sip-ltp17: 3602, State=TERMINATEDcontacting state hangup
4524 07/04 09:35:21.492 ACCN SIPL 0 sip-ltp17: 3602, State=TERMINATEDAfter contacting state
hangup
4846 07/04 09:35:21.507 ACCN SIPL 0 sip-ltp17: 3602, State=TERMINATED
InvitationDialogCallback.rejected
4846 07/04 09:35:21.508 ACCN SIPL 0 sip-ltp17: 3602, State=TERMINATED SIP/2.0 487 Request
Cancelled
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~10
To: <sip:39993001@10.10.202.1:5060;user=phone>;tag=A233D8-2382
From: <sip:3602@10.10.202.50:5060>;tag=cue5aa7689b
Call-ID: 137295211648821@10.10.202.50
CSeq: 1 INVITE
Content-Length: 0
Date: Thu, 04 Jul 2013 15:50:16 GMT
Allow-Events: telephone-event
Server: Cisco-SIPGateway/IOS-12.x
Reason: Q.850;cause=16
```

在CUCME中：

```
Received:
INVITE sip:39983001@10.10.202.1:5060;user=phone SIP/2.0
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~3
Max-Forwards: 70
To: <sip:39983001@10.10.202.1:5060;user=phone>
From: <sip:3602@10.10.202.50:5060>;tag=cue9c19e76c
Call-ID: 13729499207617@10.10.202.50
CSeq: 1 INVITE
Content-Length: 178
Contact: <sip:3602@10.10.202.50:5060>
Content-Type: application/sdp
Cisco-Gcid: AA313BF9-013F-1000-4000-001125CUCE68
Call-Info: <sip:10.10.202.50:5060>;method="NOTIFY;Event=telephone-event;Duration=2000"
Allow-Events: telephone-event


v=0
```

```
o=CiscoSystemsSIP-Workflow-App-UserAgent 3068 3068 IN IP4 10.10.202.50
s=SIP Call
c=IN IP4 10.10.202.50
t=0 0
m=audio 16928 RTP/AVP 0
a=rtpmap:0 pcmu/8000
a=ptime:20


   //-1/21F6E0878040/CCAPI/cc_api_display_ie_subfields: cc_api_call_setup_ind_common:
   cisco-username=3602
   ----- ccCallInfo IE subfields -----
   cisco-ani=3602
   cisco-anitype=0
   cisco-aniplan=0
   cisco-anipi=0
   cisco-anisi=0
   dest=39983001

//-1/21F6E0878040/CCAPI/cc_api_call_setup_ind_common:
   Interface=0x49432FE0, Call Info(
   Calling Number=3602,(Calling Name=)(TON=Unknown, NPI=Unknown, Screening=Not Screened,
Presentation=Allowed),
   Called Number=39983001(TON=Unknown, NPI=Unknown),
   Calling Translated=FALSE, Subscriber Type Str=Unknown, FinalDestinationFlag=TRUE,
   Incoming Dial-peer=3600, Progress Indication=NULL(0), Calling IE Present=TRUE,
   Source Trkgrp Route Label=, Target Trkgrp Route Label=, CLID Transparent=FALSE), Call Id=22
…

//22/21F6E0878040/CCAPI/cc_api_display_ie_subfields:
   ccCallSetupRequest:
   cisco-username=3602
   ----- ccCallInfo IE subfields -----
   cisco-ani=3602
   cisco-anitype=0
   cisco-aniplan=0
   cisco-anipi=0
   cisco-anisi=0
   dest=39983001

//22/21F6E0878040/CCAPI/ccIFCallSetupRequestPrivate:
   Interface=0x4A492188, Interface Type=6, Destination=, Mode=0x0,
   Call Params(Calling Number=3602,(Calling Name=)(TON=Unknown, NPI=Unknown, Screening=Not
Screened, Presentation=Allowed),
   Called Number=39983001(TON=Unknown, NPI=Unknown), Calling Translated=FALSE,
   Subscriber Type Str=Unknown, FinalDestinationFlag=TRUE, Outgoing Dial-peer=20004, Call Count
On=FALSE,
   Source Trkgrp Route Label=, Target Trkgrp Route Label=, tg_label_flag=0, Application Call
Id=)


Sent:
SIP/2.0 100 Trying
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~3
From: <sip:3602@10.10.202.50:5060>;tag=cue9c19e76c
To: <sip:39983001@10.10.202.1:5060;user=phone>
Date: Thu, 04 Jul 2013 15:13:36 GMT
Call-ID: 13729499207617@10.10.202.50
CSeq: 1 INVITE
Allow-Events: telephone-event
Server: Cisco-SIPGateway/IOS-12.x
Content-Length: 0


Sent:
SIP/2.0 180 Ringing
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~3
```

```
From: <sip:3602@10.10.202.50:5060>;tag=cue9c19e76c
To: <sip:39983001@10.10.202.1:5060;user=phone>;tag=80B2C0-1CF
Date: Thu, 04 Jul 2013 15:13:36 GMT
Call-ID: 13729499207617@10.10.202.50
CSeq: 1 INVITE
Allow: INVITE, OPTIONS, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE, NOTIFY, INFO,
REGISTER
Allow-Events: telephone-event
Remote-Party-ID: <sip:39980000@10.10.202.1>;party=called;screen=no;privacy=off
Contact: <sip:39983001@10.10.202.1:5060>
Server: Cisco-SIPGateway/IOS-12.x
Content-Length: 0
```

Received:
CANCEL sip:39983001@10.10.202.1:5060;user=phone SIP/2.0
```
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~3
Max-Forwards: 70
To: <sip:39983001@10.10.202.1:5060;user=phone>
From: <sip:3602@10.10.202.50:5060>;tag=cue9c19e76c
Call-ID: 13729499207617@10.10.202.50
CSeq: 1 CANCEL
Content-Length: 0
```

//22/21F6E0878040/CCAPI/cc_api_call_disconnected:
**   Cause Value=16, Interface=0x49432FE0, Call Id=22**

Sent:
SIP/2.0 200 OK
```
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~3
From: <sip:3602@10.10.202.50:5060>;tag=cue9c19e76c
To: <sip:39983001@10.10.202.1:5060;user=phone>
Date: Thu, 04 Jul 2013 15:13:41 GMT
Call-ID: 13729499207617@10.10.202.50
CSeq: 1 CANCEL
Content-Length: 0
```

Sent:
SIP/2.0 487 Request Cancelled
```
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~3
From: <sip:3602@10.10.202.50:5060>;tag=cue9c19e76c
To: <sip:39983001@10.10.202.1:5060;user=phone>;tag=80B2C0-1CF
Date: Thu, 04 Jul 2013 15:13:41 GMT
Call-ID: 13729499207617@10.10.202.50
CSeq: 1 INVITE
Allow-Events: telephone-event
Server: Cisco-SIPGateway/IOS-12.x
Reason: Q.850;cause=16
Content-Length: 0
```

Received:
ACK sip:39983001@10.10.202.1:5060;user=phone SIP/2.0
```
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~3
Max-Forwards: 70
To: <sip:39983001@10.10.202.1:5060;user=phone>;tag=80B2C0-1CF
From: <sip:3602@10.10.202.50:5060>;tag=cue9c19e76c
Call-ID: 13729499207617@10.10.202.50
CSeq: 1 ACK
Content-Length: 0
```

Debug ephone mwi:

```
000922: Jul  4 10:23:22.654: SetCallInfo MODE 1 calling dn -1 chan 1 dn 3 chan 1
```
000923: Jul 4 10:23:22.654: alling [3602] called [39993001]

```
000924: Jul  4 10:23:22.654: SkinnyTryCall to 3001 instance 1 start at 0SkinnyTryCall to 3001
instance 1 match DN 1
000925: Jul  4 10:23:22.654: ephone-1[1]:Set MWI line 1 to ON count 0
000926: Jul  4 10:23:22.654: ephone-1[1]:Set MWI line 0 to ON count 0
```

Debug ephone detailed:

```
001231: Jul  4 10:25:37.899: Phone 0 DN 1 MWI on 0 messages
001232: Jul  4 10:25:37.899: ephone-1[1]:Set MWI line 1 to ON count 0
001233: Jul  4 10:25:37.899: ephone-1[1]:Set MWI line 0 to ON count 0
```

SIP Subscribe-Notify故障排除

初始訂購DN後，CUE向CUCME傳送通知消息，以通知哪個分機需要開啟或關閉MWI。

在CUE中：

```
CUE#no trace all
CUE#trace ccn stacksip dbug
CUE#trace voicemail all
CUE# clear trace
CUE#mwi refresh telephonenumber 3001
CUE#show trace buff tail
Press <CTRL-C> to exit...

4430 07/04 10:43:39.263 VMSS dbug 1 com.cisco.aesop.voicemail.LdapAgent : getAttributeValue:
/sw/local/users/MWI1/TelephoneNumbers/primaryExtension
4430 07/04 10:43:39.264 VMSS vmwi 0x00000000000f1206 2 3001,true
4430 07/04 10:43:39.264 VMSS dbug 1 com.cisco.aesop.voicemail.Mailbox : setMessageWaiting:
3001,true
4430 07/04 10:43:39.264 VMSS vmdb 0 Request connection: inUse: 1, active: 2
4430 07/04 10:43:39.264 VMSS dbug 1 com.cisco.aesop.voicemail.VMDatabase : Request connection:
inUse: 1, active: 2
4430 07/04 10:43:39.264 VMSS vmdb 0 Got connection: 1, inUse: 2, active: 2
4430 07/04 10:43:39.264 VMSS dbug 1 com.cisco.aesop.voicemail.VMDatabase : Got connection: 1,
inUse: 2, active: 2
4430 07/04 10:43:39.264 VMSS vmdb 7 select uid from vm_message   where
vm_message.messageid='FTX1242A3S6-NME-FOC12394L3Y-1372949852538' ;
4430 07/04 10:43:39.264 VMSS dbug 1 com.cisco.aesop.voicemail.VMDatabase : select uid from
vm_message   where vm_message.messageid='FTX1242A3S6-NME-FOC12394L3Y-1372949852538' ;
4430 07/04 10:43:39.273 VMSS vmdb 3 PERSONAL_00000000000000000000000
4430 07/04 10:43:39.273 VMSS dbug 1 com.cisco.aesop.voicemail.VMDatabase :
PERSONAL_00000000000000000000000
4430 07/04 10:43:39.273 VMSS dbug 1 com.cisco.aesop.voicemail.VMUser : getMailboxInfo:
personalMailboxId=PERSONAL_00000000000000000000000
4430 07/04 10:43:39.273 VMSS vmdb 0 Freed connection: 1, inUse: 1, active: 2
4430 07/04 10:43:39.273 VMSS dbug 1 com.cisco.aesop.voicemail.VMDatabase : Freed connection: 1,
inUse: 1, active: 2
4430 07/04 10:43:39.273 VMSS vmsg 8 populateSenderDetails: sender entity:
id=MW2,type=1,ext=3002,cn=MW2,desc=
4430 07/04 10:43:39.273 VMSS vmsg 8 populateSenderDetails: localPart=MW2
4430 07/04 10:43:39.273 VMSS vmsg 8 populateSenderDetails: imapSender="MW2 \(MW2\)"
<MW2@localdomain>, mwiFrom="MW2" <sip:3002@sip.invalid>, subjectLine=3002
4430 07/04 10:43:39.273 VMSS dbug 1 com.cisco.aesop.voicemail.Message : getLengthMillisec():
msgid: FTX1242A3S6-NME-FOC12394L3Y-1372949852538 totalMsgLength: 14287
4430 07/04 10:43:39.273 VMSS dbug 1 com.cisco.aesop.voicemail.Message : getLengthMillisec():
msgid: FTX1242A3S6-NME-FOC12394L3Y-1372949852538 totalMsgLength: 14287
4430 07/04 10:43:39.274 VMSS vmwi 4 MessageWaitingThread.addJob:
```

Messages-Waiting: yes
Message-Account: sip:3001@10.10.202.50
Voice-Message: 1/0 (0/0)
Fax-Message: 0/0 (0/0)

X-Cisco-Message-State: new
X-Cisco-Message-Type: normal
From: "MW2" <sip:3002@sip.invalid>
To: <sip:3001@sip.invalid>
Date: Thu, 4 Jul 2013 16:43:39 GMT
Message-ID: FTX1242A3S6-NME-FOC12394L3Y-1372949852538
Message-Context: voice-message
Content-Duration: 14

4430 07/04 10:43:39.274 VMSS vmwi 4 MessageWaitingThread.addJob: numJobs=1
4430 07/04 10:43:39.274 VMSS dbug 1 MessageWaitingThread : adding job
4430 07/04 10:43:39.274 **VMSS vmdb 0x00000000000f1206 7 update vm_message set mwion=true where**
messageid='FTX1242A3S6-NME-FOC12394L3Y-1372949852538';
4430 07/04 10:43:39.274 VMSS dbug 1 com.cisco.aesop.voicemail.VMDatabase : taskId:
987654(0xf1206): update vm_message set mwion=true where messageid='FTX1242A3S6-NME-FOC12394L3Y-
1372949852538';
4430 07/04 10:43:39.274 VMSS dbug 1 com.cisco.aesop.voicemail.VMDatabase : connection 0:
execute: update vm_message set mwion=true where messageid='FTX1242A3S6-NME-FOC12394L3Y-
1372949852538';
3450 07/04 10:43:39.274 VMSS vmwi 4 MessageWaitingThread.run: extn=3001, numJobs=0
3450 07/04 10:43:39.274 VMSS vmwi 4 http://localhost:8080/mwiapp?extn=3001&state=1
3450 07/04 10:43:39.274 VMSS dbug 1 com.cisco.aesop.voicemail.MessageWaitingThread :
http://localhost:8080/mwiapp?extn=3001&state=1

4522 07/04 10:43:39.289 ACCN STGN 0 Task: 263000000053GetListMember: output string:sub-notify

在CUCME中：

Received:
NOTIFY sip:3001@10.10.202.1:5060 SIP/2.0
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~26
Max-Forwards: 70
To: <sip:3001@10.10.202.1>;tag=C253E4-7B4
From: <sip:3001@10.10.202.50>;tag=a4c2d6ba-1099
Call-ID: 25A81829-E3FD11E2-80C3BB44-39D4A3CF@10.10.202.1
CSeq: 5 NOTIFY
Content-Length: 113
Contact: sip:3001@10.10.202.50
Event: message-summary
Allow-Events: refer
Allow-Events: telephone-event
Allow-Events: message-summary
Subscription-State: active
Content-Type: application/simple-message-summary

Messages-Waiting: yes
Message-Account: sip:3001@10.10.202.50
Voice-Message: 1/0 (0/0)
Fax-Message: 0/0 (0/0)

Sent:
SIP/2.0 200 OK
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~26
From: <sip:3001@10.10.202.50>;tag=a4c2d6ba-1099
To: <sip:3001@10.10.202.1>;tag=C253E4-7B4
Date: Thu, 04 Jul 2013 16:33:26 GMT
Call-ID: 25A81829-E3FD11E2-80C3BB44-39D4A3CF@10.10.202.1

```
CSeq: 5 NOTIFY
Content-Length: 0
```

對未經請求的SIP進行故障排除

CUE向CUCME傳送NOTIFY消息。無需預先訂閱。

在CUE中：

```
2922 07/04 11:07:59.028 VMSS vmwi 0x00000000000f1206 2 3001,true
2922 07/04 11:07:59.028 VMSS dbug 1 com.cisco.aesop.voicemail.Mailbox : setMessageWaiting:
3001,true
2922 07/04 11:07:59.029 VMSS vmwi 4 MessageWaitingThread.addJob:
Messages-Waiting: yes
Message-Account: sip:3001@10.10.202.50
Voice-Message: 2/0 (0/0)
Fax-Message: 0/0 (0/0)

2922 07/04 11:07:59.029 VMSS vmwi 4 MessageWaitingThread.addJob: numJobs=1
2922 07/04 11:07:59.029 VMSS dbug 1 MessageWaitingThread : adding job
3450 07/04 11:07:59.029 VMSS vmwi 4 MessageWaitingThread.run: extn=3001, numJobs=0
3450 07/04 11:07:59.029 VMSS vmwi 4 http://localhost:8080/mwiapp?extn=3001&state=1
3450 07/04 11:07:59.029 VMSS dbug 1 com.cisco.aesop.voicemail.MessageWaitingThread :
http://localhost:8080/mwiapp?extn=3001&state=1
2924 07/04 11:07:59.037 VMSS sydb 1 MailboxNode: PERSONAL_00000000000000000000000,ownerDn
2924 07/04 11:07:59.037 VMSS dbug 1 com.cisco.aesop.voicemail.VMSysdbMailboxNode : Get
attribute: ownerDn Mailbox: PERSONAL_00000000000000000000000
2921 07/04 11:07:59.039 VMSS sydb 1 MailboxNode: PERSONAL_00000000000000000000000,mailboxDesc
2921 07/04 11:07:59.039 VMSS dbug 1 com.cisco.aesop.voicemail.VMSysdbMailboxNode : Get
attribute: mailboxDesc Mailbox: PERSONAL_00000000000000000000000
4524 07/04 11:07:59.041 ACCN STGN 0 Task: 263000000060GetListMember: output string:unsolicited
4524 07/04 11:07:59.041 ACCN STGN 0 Task: 263000000060GetListMember: Position variable is beyond
the string list: number of tokens in the list:1
4524 07/04 11:07:59.041 ACCN SIPL 0 SubscriptionLineImpl: Unsolicited Notify Message being
sent:NOTIFY sip:3001@10.10.202.1:5060;transport=udp SIP/2.0
Max-Forwards: 70
To: <sip:3001@10.10.202.1:5060>
From: <sip:3001@10.10.202.50:5060>;tag=ds9b9149a8
Call-ID: a5244b0b-1105@sip:3001@10.10.202.50:5060
CSeq: 1 NOTIFY
Content-Length: 113
Contact: <sip:3001@10.10.202.50:5060>
Content-Type: application/simple-message-summary
Event: message-summary

Messages-Waiting: yes
Message-Account: sip:3001@10.10.202.50
Voice-Message: 2/0 (0/0)
Fax-Message: 0/0 (0/0)

4524 07/04 11:07:59.052 ACCN SIPL 0 SubscriptionLineImpl: Unsolicited Notify Message sent,
result:true
4524 07/04 11:08:09.053 ACCN SIPL 0 SubscriptionLineImpl: Unsolicited Notify Message sent,
result:true
```

在CUCME中：

```
Received:
```

```
NOTIFY sip:3001@10.10.202.1:5060;transport=udp SIP/2.0
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~44
Max-Forwards: 70
To: <sip:3001@10.10.202.1:5060>
From: <sip:3001@10.10.202.50:5060>;tag=ds3f77b499
Call-ID: 7364fb7c-1104@sip:3001@10.10.202.50:5060
CSeq: 1 NOTIFY
Content-Length: 113
Contact: <sip:3001@10.10.202.50:5060>
Content-Type: application/simple-message-summary
Event: message-summary

Messages-Waiting: yes
Message-Account: sip:3001@10.10.202.50
Voice-Message: 1/0 (0/0)
Fax-Message: 0/0 (0/0)

Sent:
SIP/2.0 200 OK
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUKbreuy0GkQBlQw~~44
From: <sip:3001@10.10.202.50:5060>;tag=ds3f77b499
To: <sip:3001@10.10.202.1:5060>;tag=F07F98-117C
Date: Thu, 04 Jul 2013 17:15:43 GMT
Call-ID: 7364fb7c-1104@sip:3003@10.10.202.50:5060
CSeq: 1 NOTIFY
Content-Length: 0
```

常見問題

問題1. MWI在SIP bind命令後無法正常工作

在**語音服務voip**下，將SIP繫結命令配置到非CUE使用的介面。這是一個非常常見的問題，使用CME中的故障排除工具很難檢測。從CME的角度來看，未顯示SIP消息。

在CME中，如果執行**debug ip udp**，您可以注意到來自CUE的資料包，但不會在**debug ccsip messages**或**debug ccsip all**中顯示任何消息：

```
000186: *Jul  8 17:30:48.843: UDP: rcvd src=10.10.202.50(32777), dst=10.10.202.1(5060),
length=748
000187: *Jul  8 17:30:49.343: UDP: rcvd src=10.10.202.50(32777), dst=10.10.202.1(5060),
length=748
000188: *Jul  8 17:30:50.347: UDP: rcvd src=10.10.202.50(32777), dst=10.10.202.1(5060),
length=748
000189: *Jul  8 17:30:52.351: UDP: rcvd src=10.10.202.50(32777), dst=10.10.202.1(5060),
length=748
000190: *Jul  8 17:30:56.351: UDP: rcvd src=10.10.202.50(32777), dst=10.10.202.1(5060),
length=748
000191: *Jul  8 17:31:04.355: UDP: rcvd src=10.10.202.50(32777), dst=10.10.202.1(5060),
length=748
```

如果使用**ip traffic export**直接從CUE介面收集資料包捕獲，您可以注意到CUCME確實接收了INVITE：

| Filter: | sip | | ▼ Expression... Clear Apply |
No. ▪	Time	Source	Destination	Protocol	Info
6	0.101558	10.10.202.50	10.10.202.1	SIP/SDP	Request: INVITE sip:39993001@10.10.202.1:5060;user=phone, with session desc
76	0.603723	10.10.202.50	10.10.202.1	SIP/SDP	Request: INVITE sip:39993001@10.10.202.1:5060;user=phone, with session desc
78	1.605571	10.10.202.50	10.10.202.1	SIP/SDP	Request: INVITE sip:39993001@10.10.202.1:5060;user=phone, with session desc
80	3.608380	10.10.202.50	10.10.202.1	SIP/SDP	Request: INVITE sip:39993001@10.10.202.1:5060;user=phone, with session desc
82	7.609776	10.10.202.50	10.10.202.1	SIP/SDP	Request: INVITE sip:39993001@10.10.202.1:5060;user=phone, with session desc

在CUE中，INVITE顯示為已傳送，雖然由於CUCME沒有響應，它會繼續傳送INVITE直到達到重試計數，然後連線因無響應而終止：

```
4480 07/08 10:30:59.377 ACCN HTTS 0 -> AInvoker.doGet() (/mwiapp) EXIT
4901 07/08 10:31:01.858 DSSP LWRE 0 Sending UDP packet on 10.10.202.50:32775, destination
10.10.202.1:5060
INVITE sip:39993001@10.10.202.1:5060;user=phone SIP/2.0
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bK51VhKqo+pUDrDt5LgLS2yA~~5
Max-Forwards: 70
To: <sip:39993001@10.10.202.1:5060;user=phone>
From: <sip:3@10.10.202.50:5060>;tag=cuefb95dbea
Call-ID: 137330105434811@10.10.202.50
CSeq: 1 INVITE
Content-Length: 178
Contact: <sip:3@10.10.202.50:5060>
Content-Type: application/sdp
Cisco-Gcid: BF1F1B8C-013F-1000-4000-001125CUCE68
Call-Info: <sip:10.10.202.50:5060>;method="NOTIFY;Event=telephone-event;Duration=2000"
Allow-Events: telephone-event

v=0
o=CiscoSystemsSIP-Workflow-App-UserAgent 2956 2956 IN IP4 10.10.202.50
s=SIP Call
c=IN IP4 10.10.202.50
t=0 0
m=audio 16926 RTP/AVP 0
a=rtpmap:0 pcmu/8000
a=ptime:20

4488 07/08 10:31:04.355 ACCN ENGN 0 Record 544481396 enqueued. Queue size=0 total number of
writes=10
4863 07/08 10:31:04.359 ACCN ENGN 0 Insert Record 544481396 took 3ms finish at 1373301064359
4903 07/08 10:31:09.860 DSSP LWRE 0 Sending UDP packet on 10.10.202.50:32775, destination
10.10.202.1:5060
INVITE sip:39993001@10.10.202.1:5060;user=phone SIP/2.0
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bK51VhKqo+pUDrDt5LgLS2yA~~5
Max-Forwards: 70
To: <sip:39993001@10.10.202.1:5060;user=phone>
From: <sip:3@10.10.202.50:5060>;tag=cuefb95dbea
Call-ID: 137330105434811@10.10.202.50
CSeq: 1 INVITE
Content-Length: 178
Contact: <sip:3@10.10.202.50:5060>
Content-Type: application/sdp
Cisco-Gcid: BF1F1B8C-013F-1000-4000-001125CUCE68
Call-Info: <sip:10.10.202.50:5060>;method="NOTIFY;Event=telephone-event;Duration=2000"
Allow-Events: telephone-event

v=0
o=CiscoSystemsSIP-Workflow-App-UserAgent 2956 2956 IN IP4 10.10.202.50
s=SIP Call
c=IN IP4 10.10.202.50
t=0 0
m=audio 16926 RTP/AVP 0
a=rtpmap:0 pcmu/8000
a=ptime:20
```

```
2882 07/08 10:36:30.909 VMSS dbug 1 com.cisco.aesop.voicemail.Mailbox : refreshMWI: 3001
2882 07/08 10:36:30.909 VMSS dbug 1 com.cisco.aesop.voicemail.LdapAgent : getUserByPhoneNo: 3001
2882 07/08 10:36:30.918 VMSS dbug 1 com.cisco.aesop.voicemail.LdapAgent : getUserByPhoneNo: id
MWIOne
2882 07/08 10:36:30.918 VMSS dbug 1 com.cisco.aesop.voicemail.VMDatabase : connection 0: query:
select mailboxid from vm_mbxusers where owner=true and userdn='/sw/local/users/MWIOne';
2882 07/08 10:36:30.919 VMSS dbug 1 com.cisco.aesop.voicemail.VMUser : getMailboxInfo:
personalMailboxId=PERSONAL_0000000000000000000000
2882 07/08 10:36:30.920 VMSS dbug 1 com.cisco.aesop.voicemail.VMDatabase : connection 1: query:
select messageid from vm_message where messagetype=50 and starttime<=1373301390920 and
endtime>=1373301390920 and private='false' except select vm_bcst_heard.messageid from
vm_message, vm_bcst_heard where vm_message.messageid=vm_bcst_heard.messageid  and
vm_bcst_heard.mailboxid='PERSONAL_0000000000000000000000';
2882 07/08 10:36:30.922 VMSS dbug 1 com.cisco.aesop.voicemail.LdapAgent : getAttributeValue:
/sw/local/users/MWIOne/TelephoneNumbers/primaryExtension
2882 07/08 10:36:30.923 VMSS dbug 1 com.cisco.aesop.voicemail.Mailbox : **setMessageWaiting:
3001,true**
2882 07/08 10:36:30.923 VMSS dbug 1 MessageWaitingThread : adding job
3400 07/08 10:36:30.923 VMSS dbug 1 com.cisco.aesop.voicemail.MessageWaitingThread :
http://localhost:8080/mwiapp?extn=3001&state=1
4481 07/08 10:36:30.935 ACCN STGN 0 Task: 265000000011**GetListMember: output string:outcall**
4481 07/08 10:36:30.937 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTINGenter connect
4481 07/08 10:36:30.937 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTINGenter createInvitation
4481 07/08 10:36:30.937 ACCN SIPL 0 SDPBody : v=0
o=CiscoSystemsSIP-Workflow-App-UserAgent 3673 3673 IN IP4 10.10.202.50
s=SIP Call
c=IN IP4 10.10.202.50
t=0 0
m=audio 16924 RTP/AVP 0
a=rtpmap:0 pcmu/8000
a=ptime:20


4481 07/08 10:36:30.937 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTINGbefore
invitationmanager.createInvitation. body : v=0
o=CiscoSystemsSIP-Workflow-App-UserAgent 3673 3673 IN IP4 10.10.202.50
s=SIP Call
c=IN IP4 10.10.202.50
t=0 0
m=audio 16924 RTP/AVP 0
a=rtpmap:0 pcmu/8000
a=ptime:20
body type : application/sdp toNA : <sip:39993001@10.10.202.1:5060;user=phone> fromNA :
<sip:3@10.10.202.50:5060> from tag : cue9d5cfebc
4481 07/08 10:36:30.937 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTINGafter
invitationmanager.createInvitation
4481 07/08 10:36:30.937 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTING added ciscogcid
4481 07/08 10:36:30.937 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTING getDTMFHeader: Enter
4481 07/08 10:36:30.937 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTING getDTMFHeader: getting the
headers
4481 07/08 10:36:30.937 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTING getDTMFHeader: before adding
headers to message
4481 07/08 10:36:30.938 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTING getDTMFHeader: after adding
headers to message :
**INVITE sip:39993001@10.10.202.1:5060;user=phone SIP/2.0**
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bK51VhKqo+pUDrDt5LgLS2yA~~6
Max-Forwards: 70
To: <sip:39993001@10.10.202.1:5060;user=phone>
From: <sip:3@10.10.202.50:5060>;tag=cue9d5cfebc
Call-ID: 137330139093613@10.10.202.50
CSeq: 1 INVITE
Content-Length: 178
Contact: <sip:3@10.10.202.50:5060>
Content-Type: application/sdp
```

```
Cisco-Gcid: BF243E58-013F-1000-4000-001125CUCE68
Call-Info: <sip:10.10.202.50:5060>;method="NOTIFY;Event=telephone-event;Duration=2000"
Allow-Events: telephone-event

v=0
o=CiscoSystemsSIP-Workflow-App-UserAgent 3673 3673 IN IP4 10.10.202.50
s=SIP Call
c=IN IP4 10.10.202.50
t=0 0
m=audio 16924 RTP/AVP 0
a=rtpmap:0 pcmu/8000
a=ptime:20

4481 07/08 10:36:30.938 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTINGinvite message : INVITE
sip:39993001@10.10.202.1:5060;user=phone SIP/2.0
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bK51VhKqo+pUDrDt5LgLS2yA~~6
Max-Forwards: 70
To: <sip:39993001@10.10.202.1:5060;user=phone>
From: <sip:3@10.10.202.50:5060>;tag=cue9d5cfebc
Call-ID: 137330139093613@10.10.202.50
CSeq: 1 INVITE
Content-Length: 178
Contact: <sip:3@10.10.202.50:5060>
Content-Type: application/sdp
Cisco-Gcid: BF243E58-013F-1000-4000-001125CUCE68
Call-Info: <sip:10.10.202.50:5060>;method="NOTIFY;Event=telephone-event;Duration=2000"
Allow-Events: telephone-event

v=0
o=CiscoSystemsSIP-Workflow-App-UserAgent 3673 3673 IN IP4 10.10.202.50
s=SIP Call
c=IN IP4 10.10.202.50
t=0 0
m=audio 16924 RTP/AVP 0
a=rtpmap:0 pcmu/8000
a=ptime:20

4481 07/08 10:36:30.938 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTINGreturning invitation
4481 07/08 10:36:30.938 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTINGgot Invitation
4481 07/08 10:36:30.938 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTINGbefore Invitation start
4481 07/08 10:36:30.939 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTINGafter Invitation start
4481 07/08 10:36:35.938 ACCN SIPL 0 sip-ltp10: 3, State=CONTACTING terminating dialog in
contacting state 20
4481 07/08 10:36:35.939 ACCN SIPL 0 sip-ltp10: 3, State=TERMINATEDcontacting state hangup
4481 07/08 10:36:35.939 ACCN SIPL 0 sip-ltp10: 3, State=TERMINATEDAfter contacting state hangup
```

解決方案：

bind介面命令允許您將信令和媒體資料包的源IP地址配置為特定介面的IP地址。因此，封包上傳出的位址將繫結到使用bind指令指定的介面的IP位址。目的地不是繫結地址的資料包將被丟棄。

1. 檢查用於配置CUE的介面。
2. 建議在ip source-address內部的CUCME中使用的介面與用於CUE的介面相同。
3. 進行適當的調整，以接受來源為CUE介面的SIP流量：
   3.1您可以從**語音服務voip**中刪除bind命令。這允許網關接受來自任何介面的SIP流量。

```
voice service voip
 sip
  no bind control source-interface [interface]
  no bind media source-interface [interface]
```

3.2您可以基於撥號對等體配置SIP bind命令。當您擁有到運營商或防火牆的SIP中繼，需要特定的IP地址以允許：

```
dial-peer voice tag voip
 session protocol sipv2
 voice-class sip bind {control | media} source interface interface-id[ipv6-address ipv6-address]
 exit
```
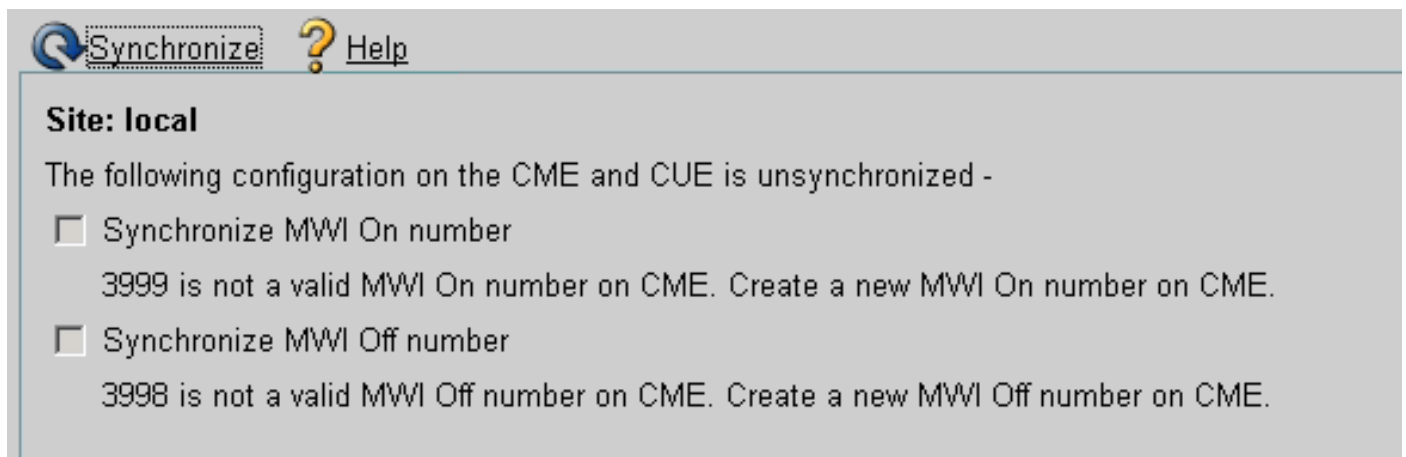
問題2. ephone-dn中未定義正確的分機長度

在CUCME中為Outcall Method配置的MWI DN未正確預配在CUCME的MWI撥號計畫中使用的正確分機長度。

可能的原因#1

如果只使用MWI擴展配置了ephoned-dn，並且沒有點('.')，則CUE同步失敗:

導航到管理>同步資訊

可能的原因#2

分機長度與使用者分機的正確數字量不匹配。

在CUCME中，可以使用debug ccsip messages且消息存在，但MWI不起作用：

```
Received:
INVITE sip:39993001@10.10.202.1:5060;user=phone SIP/2.0
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bK51VhKqo+pUDrDt5LgLS2yA~~20
Max-Forwards: 70
To: <sip:39993001@10.10.202.1:5060;user=phone>
From: <sip:3@10.10.202.50:5060>;tag=cue5d4ca12d
Call-ID: 137330470927141@10.10.202.50
CSeq: 1 INVITE
Content-Length: 176
Contact: <sip:3@10.10.202.50:5060>
Content-Type: application/sdp
```

```
Cisco-Gcid: BF56E097-013F-1000-4000-001125CUCE68
Call-Info: <sip:10.10.202.50:5060>;method="NOTIFY;Event=telephone-event;Duration=2000"
Allow-Events: telephone-event

v=0
o=CiscoSystemsSIP-Workflow-App-UserAgent 151 151 IN IP4 10.10.202.50
s=SIP Call
c=IN IP4 10.10.202.50
t=0 0
m=audio 16932 RTP/AVP 0
a=rtpmap:0 pcmu/8000
a=ptime:20


000815: *Jul  8 18:26:07.215: SetCallInfo MODE 1 calling dn -1 chan 1 dn 3 chan 1
000816: *Jul  8 18:26:07.215: alling [3] called [39993001]
000817: *Jul  8 18:26:07.215: SkinnyTryCall to 1 instance 1 start at 0
000818: *Jul  8 18:26:07.215: MWI-on non-local target 1
000819: *Jul  8 18:26:07.215: MWI-on has no non-local target 1


CME#show ephone reg

ephone-1[0] Mac:0023.5E18.23EC TCP socket:[2] activeLine:0 whisperLine:0 REGISTERED in SCCP ver
17/12 max_streams=5
mediaActive:0 whisper_mediaActive:0 startMedia:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging
0 debug:1 caps:9
IP:10.10.202.2 31984 7965  keepalive 4 max_line 6 available_line 6
button 1: dn 1  number 3001 CH1   IDLE          CH2    IDLE
Preferred Codec: g711ulaw
Username: MWIOne Password: cisco
```

解決方案：

確保在MWI分機號之後配置了適當數量的點('.')，以便與使用者在CUCME中使用的分機號長度匹配：

```
ephone-dn 3
 mwi on
 number 3999….
!
ephone-dn 4
 mwi off
 number 3998….
```

問題3. Subscribe-Notify with no Subscription

當使用SIP Subscribe-Notify方法並且以前未訂閱目錄號碼時，MWI不起作用，並且沒有為MWI事件傳送SIP Notify。

在CUCME中，在離開或檢索語音郵件後，不會從CUE傳送任何SIP通知以開啟/關閉MWI:

```
Sent:
BYE sip:3600@10.10.202.50:5060 SIP/2.0
Via: SIP/2.0/UDP 10.10.202.1:5060;branch=z9hG4bK601067
From: <sip:3001@10.10.202.1>;tag=716F18-152D
To: <sip:3600@10.10.202.50>;tag=cue861dc350
Date: Mon, 08 Jul 2013 18:35:00 GMT
Call-ID: EE5026C6-E73311E2-80DE96BA-2150599@10.10.202.1
```

```
User-Agent: Cisco-SIPGateway/IOS-12.x
Max-Forwards: 70
Timestamp: 1373308519
CSeq: 102 BYE
Reason: Q.850;cause=16
Content-Length: 0


Received:
SIP/2.0 200 Ok
Via: SIP/2.0/UDP 10.10.202.1:5060;branch=z9hG4bK601067
To: <sip:3600@10.10.202.50>;tag=cue861dc350
From: <sip:3001@10.10.202.1>;tag=716F18-152D
Call-ID: EE5026C6-E73311E2-80DE96BA-2150599@10.10.202.1
CSeq: 102 BYE
Content-Length: 0
```

解決方案：

配置正確的MWI Subscription命令，以獲取DN Subscribe with CUE for MWI事件：

```
voice register dn 1
 number 3005
 mwi
!
ephone-dn  1
 number 3001
 mwi sip

Sent:
SUBSCRIBE sip:3001@10.10.202.50:5060 SIP/2.0
Via: SIP/2.0/UDP 10.10.202.1:5060;branch=z9hG4bK61210
From: <sip:3001@10.10.202.1>;tag=728524-1B54
To: <sip:3001@10.10.202.50>
Call-ID: 18BDF708-E73411E2-80DF96BA-2150599@10.10.202.1
CSeq: 101 SUBSCRIBE
Max-Forwards: 70
Date: Mon, 08 Jul 2013 18:36:11 GMT
User-Agent: Cisco-SIPGateway/IOS-12.x
Event: message-summary
Expires: 3600
Contact: <sip:3001@10.10.202.1:5060>
Accept: application/simple-message-summary
Content-Length: 0

Received:
SIP/2.0 202 Accepted
Via: SIP/2.0/UDP 10.10.202.1:5060;branch=z9hG4bK61210
To: <sip:3001@10.10.202.50>;tag=591a1296-1099
From: <sip:3001@10.10.202.1>;tag=728524-1B54
Call-ID: 18BDF708-E73411E2-80DF96BA-2150599@10.10.202.1
CSeq: 101 SUBSCRIBE
Content-Length: 0
Expires: 3600
Contact: sip:3001@10.10.202.50
Allow-Events: refer
Allow-Events: telephone-event
Allow-Events: message-summary

Received:
NOTIFY sip:3001@10.10.202.1:5060 SIP/2.0
```

```
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bK51VhKqo+pUDrDt5LgLS2yA~~27
Max-Forwards: 70
To: <sip:3001@10.10.202.1>;tag=728524-1B54
From: <sip:3001@10.10.202.50>;tag=591a1296-1099
Call-ID: 18BDF708-E73411E2-80DF96BA-2150599@10.10.202.1
CSeq: 1 NOTIFY
Content-Length: 113
Contact: sip:3001@10.10.202.50
Event: message-summary
Allow-Events: refer
Allow-Events: telephone-event
Allow-Events: message-summary
Subscription-State: active
Content-Type: application/simple-message-summary

Messages-Waiting: yes
Message-Account: sip:3001@10.10.202.50
Voice-Message: 1/0 (0/0)
Fax-Message: 0/0 (0/0)

Sent:
SIP/2.0 200 OK
Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bK51VhKqo+pUDrDt5LgLS2yA~~27
From: <sip:3001@10.10.202.50>;tag=591a1296-1099
To: <sip:3001@10.10.202.1>;tag=728524-1B54
Date: Mon, 08 Jul 2013 18:36:11 GMT
Call-ID: 18BDF708-E73411E2-80DF96BA-2150599@10.10.202.1
CSeq: 1 NOTIFY
Content-Length: 0

000963: *Jul  8 18:36:12.255: %SYS-5-CONFIG_I: Configured from console by jovalver on vty0
(10.10.100.6)
000964: *Jul  8 18:36:12.599: ephone-1[2]:Set MWI line 1 to ON count 1
000965: *Jul  8 18:36:12.599: ephone-1[2]:Set MWI line 0 to ON count 1
```

問題4:488不可接受的媒體

當CUE傳送MWI的Outcall INVITE時,CUCME傳送488不可接受的媒體。

```
Sent:
SIP/2.0 488 Not Acceptable Media
Via: SIP/2.0/UDP 172.18.106.88:5060
From: "Cisco SIP Channel1" <sip:outbound-0@172.18.106.66>;tag=75b5194d-133
To: <sip:1109811043@172.18.106.66;user=phone>;tag=23F1578C-252
Date: Fri, 11 Mar 2005 15:09:13 GMT
Call-ID: e34bafcc-131@172.18.106.88:5060
Server: Cisco-SIPGateway/IOS-12.x
CSeq: 51 INVITE
Allow-Events: telephone-event
Content-Length: 0
```

解決方案:

CUE僅支援G711ulaw

確保正確的傳入撥號對等體匹配以支援編解碼器G711ulaw。您可以建立新的撥號對等體,也可以使用現有的撥號對等體進行語音郵件訪問:

```
dial-peer voice 3600 voip
destination-pattern 3600
session protocol sipv2
session target ipv4:10.10.202.2
incoming called-number 399[89]....
dtmf-relay sip-notify
codec g711ulaw
no vad
!
```

相關資訊

- [適用於3.0及更高版本的Cisco Unity Express VoiceMail和Auto Attendant CLI管理員指南](#)
- [Unity Express消息等待指示(MWI)問題故障排除](#)
- [將語音郵件與Cisco Unified SRST整合](#)
- [適用於Bind指令的SIP閘道支援](#)
- [Cisco CallManager Express/Cisco Unity Express配置示例](#)