

配置CUE MWI机制并排除故障

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简介

本文档介绍在互联网协议(IP)电话上启用和禁用留言等待指示器(MWI)的可用方法，以及如何对Cisco Unity Express(CUE)与Cisco Unified Communications Manager Express(CUCME)集成时出现的问题进行故障排除。

先决条件

要求

Cisco 建议您了解以下主题：

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

- 瘦呼叫控制协议(SCCP)
- 会话初始协议 (SIP)

使用的组件

本文档中的信息基于以下软件和硬件版本：

- CUE 7.x和8.x。示例配置和屏幕截图取自CUE 7.0.6和8.6.2 (安装在NME-CUE模块上)
- CUCME 7.1和8.5
- 思科IP电话7965注册于CUCME，带SCCP

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始 (默认) 配置。如果您的网络处于活动状态，请确保您了解所有命令的潜在影响。

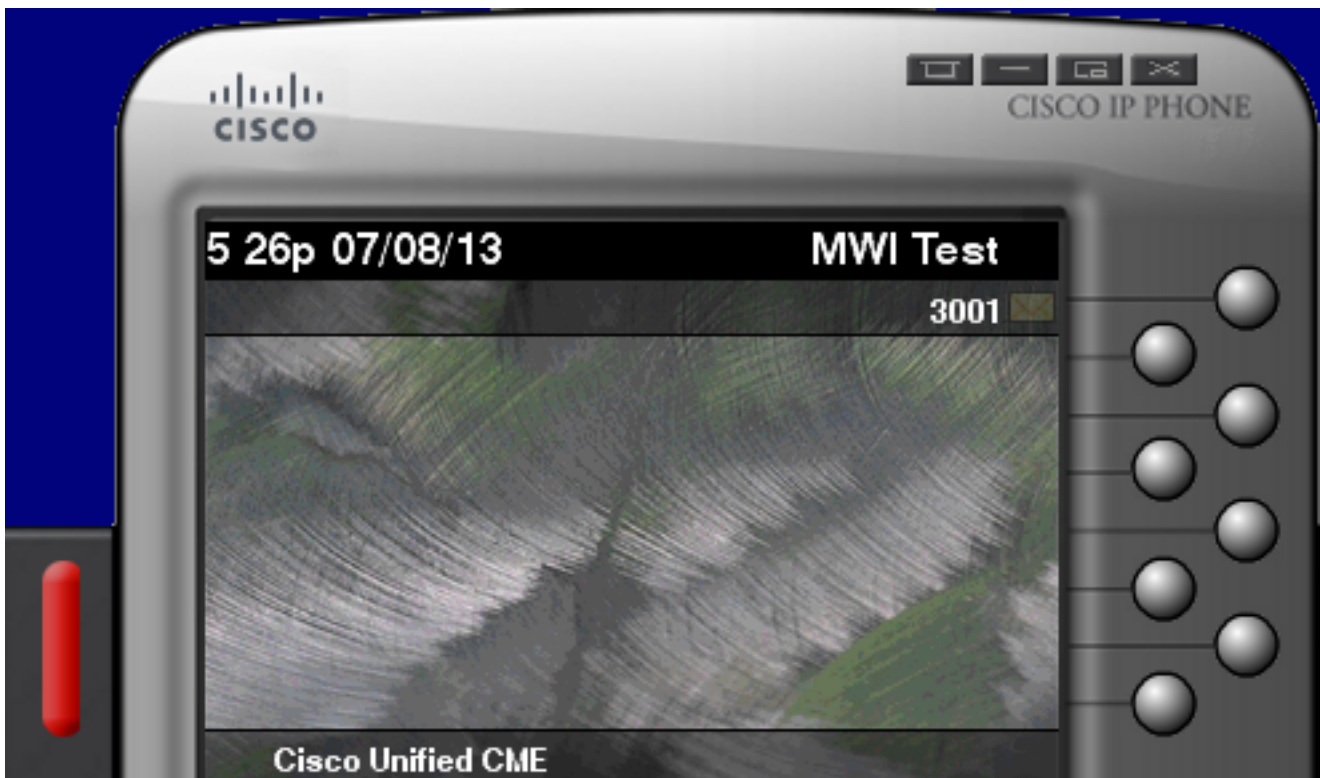
相关产品

本文档也可用于以下硬件和软件版本：

- 可以使用任何CUE和CME版本
- 可以使用任何CUE模块或CME路由器

背景信息

MWI用于指示语音邮箱中留有新留言。要指示新消息，IP电话上的红灯和线路显示旁的信封图标一起打开。



注意：本文档基于与CUE模块集成的CUCME服务器。

当CUE与CUCME集成时，有三种MWI机制可用：

- 外呼
- SIP订用通知
- SIP未经请求

当CUE与CUCM集成时，有一种MWI机制可用：

- Java电话API(JTAPI)/计算机电话集成(CTI)

注意： [CUE JTAPI问题和案例研究文](#)档提供了有关如何在CUE中启用JTAPI跟踪以及如何通过JTAPI排除MWI故障的信息。

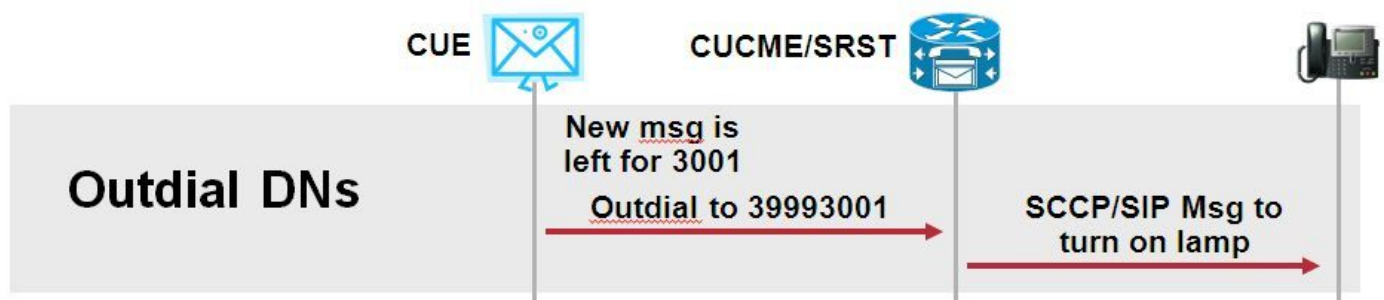
配置

SIP外呼方法

Outcall是CUE中用于为可用系统提供向后兼容性的默认方法。尽管建议对MWI通知使用订阅通知或未经请求通知，但在多个网络环境中使用外拨方法为注册到CME的SCCP IP电话配置和启用MWI。

注意： 外拨机制在思科可存活远程站点电话(SRST)部署中不起作用。 不支持SIP终端。

在此机制中，当用户有新语音邮件时，CUE会向CUCME发送INVITE。



在CUCME上配置两个ephone-dn。两个DN代表CUE必须拨打的分机号，以启用或禁用给定分机的MWI。

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

注意： DN末尾的点数必须与注册到CUCME的电话使用的分机长度相匹配。

确保CUCME配置已完成，然后继续CUE配置。在CUE的初始配置中，MWI DN会自动填充到初始化向导的呼叫处理部分。

Cisco Unity Express Initialization Wizard

Steps | **Call Handling**

1. CallManager Express Login
2. Import CCME Users
3. Defaults
- 4. Call Handling**
5. Commit

Enter the Call in Numbers for Voice Mail, Auto Attendant and the Administration via telephone (AVT) system.

Voice Mail Number *:

Voice Mail Operator Extension:

Auto Attendant Access Number:

Auto Attendant Operator Extension:

Administration via Telephone Number:

SIP MWI Notification Mechanism:

MWI ON Number (Outcalling mechanism):

MWI OFF Number (Outcalling mechanism):

* indicates a mandatory field

注意：要访问初始化向导，CME必须与CUE集成，以便图形用户界面(GUI)访问。在生产系统上，DN信息与CUE同步。导航至**Voice Mail > Message Waiting Indicators > Settings**，查看DN。

配置DN并与CUE同步后的MWI设置页面示例：

Voice Mail > Message Waiting Indicators > Settings

Apply **Help**

SIP MWI Notification Mechanism

Subscribe - Notify
 Currently active subscriptions: 0
 Include envelope information in the notifications.

Unsolicited Notify
 Failures in last 5 tries: 0

Outcalling
 MWI On Number:

MWI Off Number:

注意：此处也启用了“订阅通知”。这不是必需的，但支持同时配置**Subscribe-Notify**和**Outcalling**。CUE发送两个通知，每个方法发送一个，以打开或关闭MWI。

注意：不支持同时配置外呼和未经请求的通知。

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命令可确定当前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
```

注意：在示例配置中，MWI扩展定义不带点。点仅在CME中定义，以指示电话DN分机长度。show ccn subsystem sip命令输出可能因CUE版本而异。

为确保正确的入站拨号对等体与外呼SIP INVITE匹配，必须对用于CUE的拨号对等体进行更改。还可以创建新的拨号对等体作为入站拨号对等体：

```
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  
!
```

或者

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

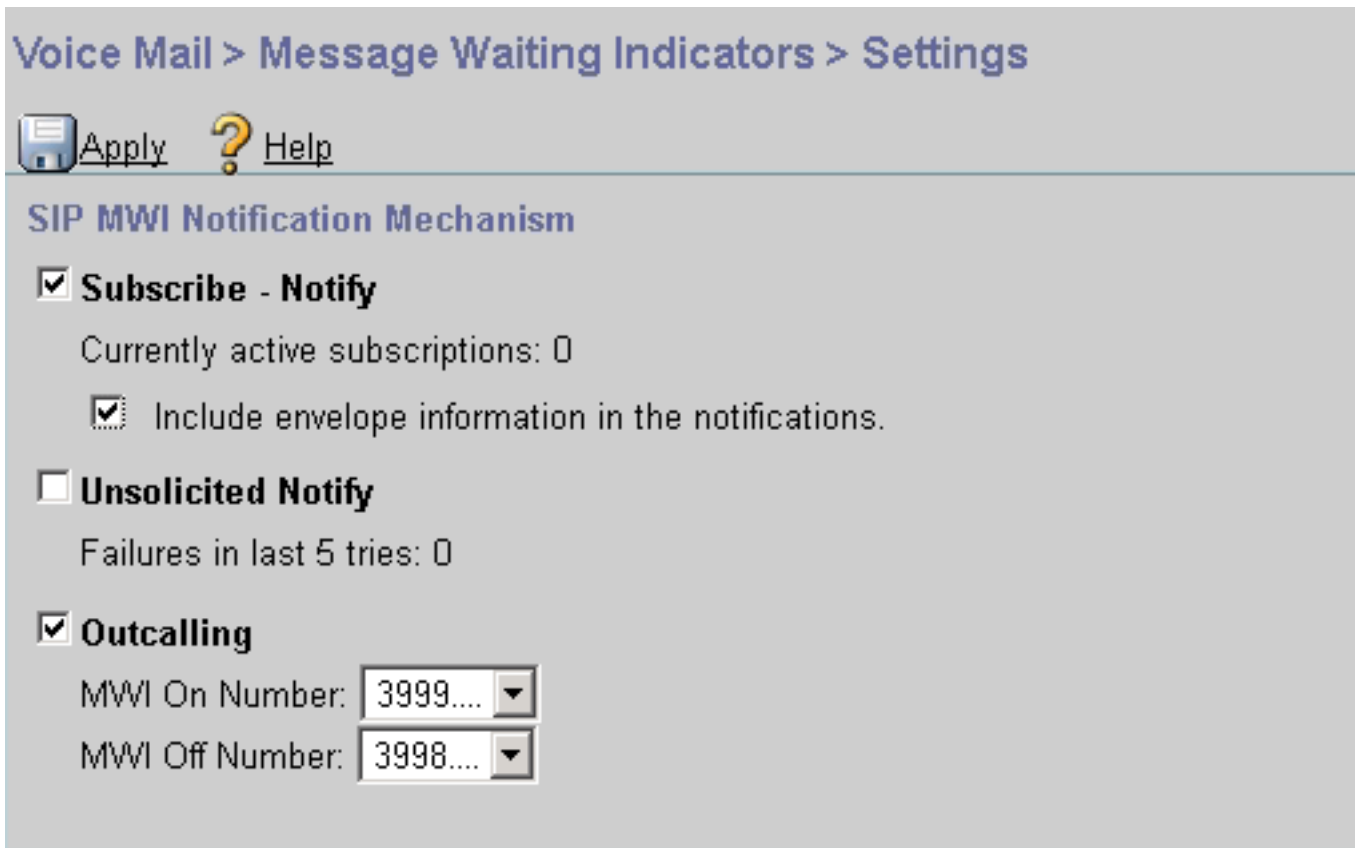
SIP订用通知

在Subscribe-Notify机制中，DN最初使用CUE订用。订用后，CUE的NOTIFY消息被接受用于MWI通知。

注意：建议将此方法用于SRST和CUCME部署。



启用用户通知以使用此通知方法：



或者，可以在命令行界面(CLI)上启用用户通知方法：

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

在sip-ua部分中使用MWI服务器(CUE)IP地址配置CME。您可以通过使用show run interface命令托管CUE的服务模块的接口配置确认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
```

在sip-ua下的mwi-server ipv4:10.10.202.50命令足以支持MWI的Subscribe-Notify事件。过期、端口和传输将自动包含在配置中，并使用默认设置。

将DN配置为使用CUE订用以接收MWI通知事件。此方法可用于注册到CME路由器的SCCP和SIP IP电话。

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

输入命令后，电话会向CUE发送SUBSCRIBE 消息以请求MWI更新，CUE会以202个接受的SIP消息作出响应：

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
```

接受订用后，CUE将发送一条NOTIFY消息，其中包含该特定DN的MWI的当前状态。在本例中，MWI Notification (MWI通知) 设置为Yes (是) ：

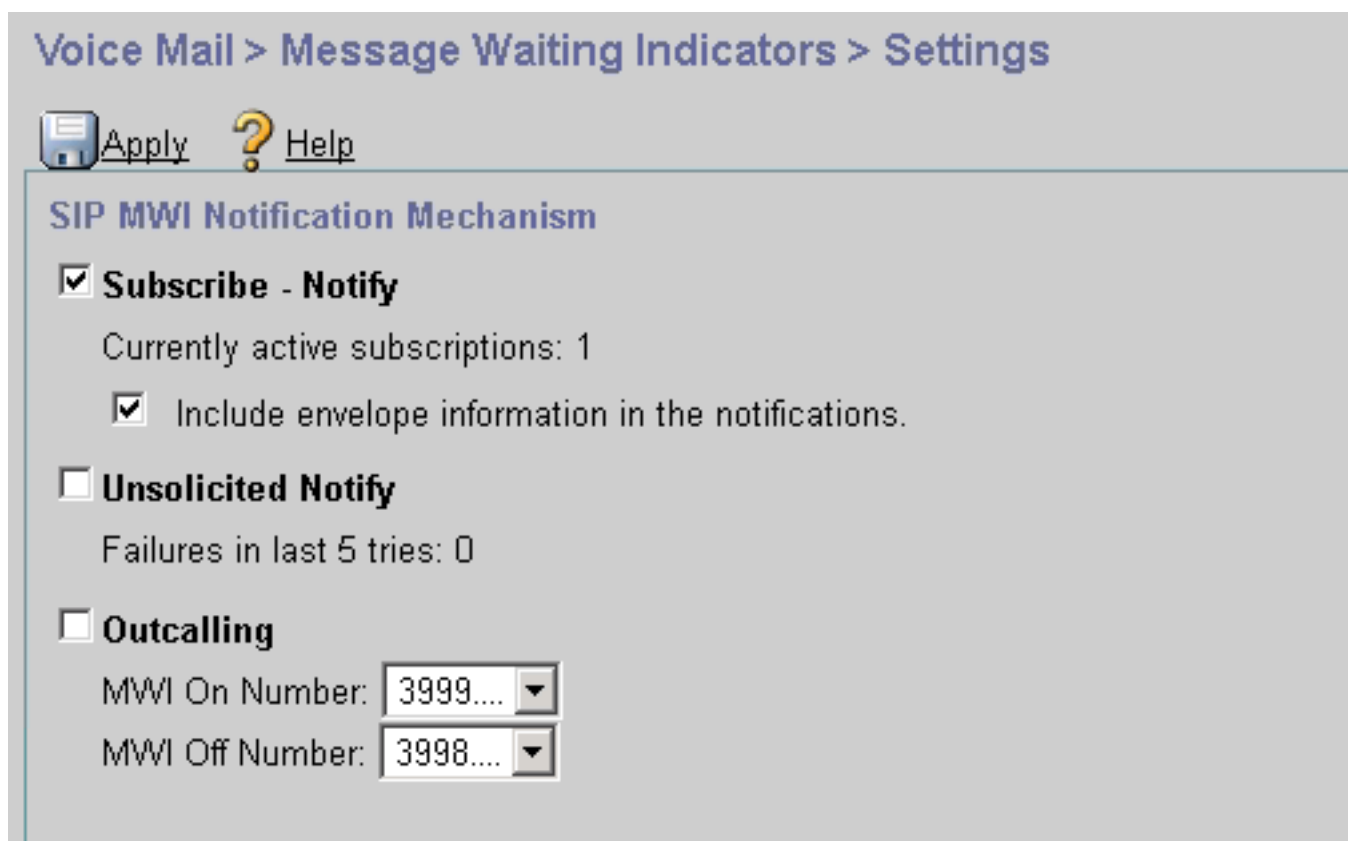
```
Received:
NOTIFY sip:3001@10.10.202.1:5060 SIP/2.0
```

Via: SIP/2.0/UDP 10.10.202.50:5060;branch=z9hG4bKkuJtPQPUBreuy0GkQB1Qw~~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=z9hG4bKkuJtPQPUBreuy0GkQB1Qw~~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，注意Currently active subscriptions(当前活动订用)每收到一条Subscribe(订用)消息，递增1:



Voice Mail > Message Waiting Indicators > Settings

 Apply  Help

SIP MWI Notification Mechanism

Subscribe - Notify
Currently active subscriptions: 1
 Include envelope information in the notifications.

Unsolicited Notify
Failures in last 5 tries: 0

Outcalling
MWI On Number:
MWI Off Number:

使用show ccn sip subscription mwi命令查看订用状态。

DN	Subscription Time	Expires
3001	Mon Sep 22 13:40:02 EDT 2008	3600

SRST中的MWI订用通知：

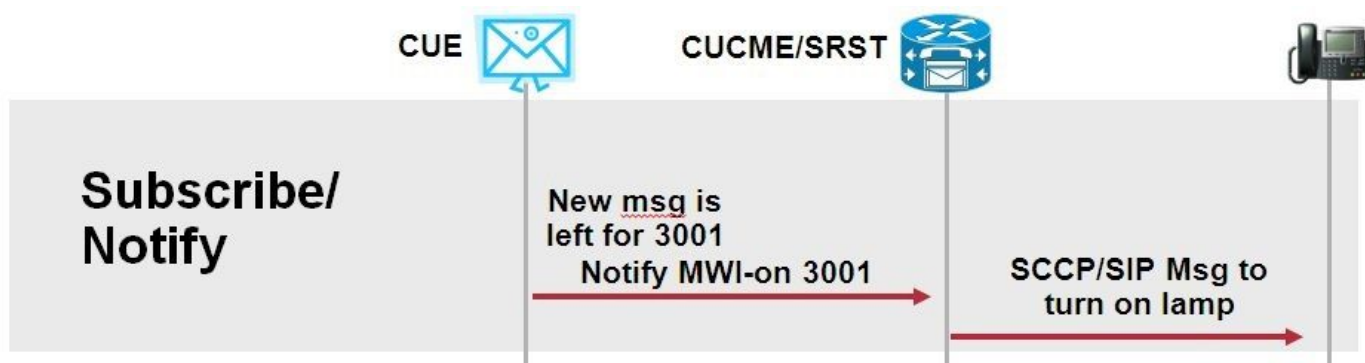
在call-manager-fallback下为传统SRST配置mwi中继，或为CME-SRST部署配置电话服务。

```
call-manager-fallback
  mwi relay
```

```
telephony-service
  mwi relay
```

SIP未经请求通知



SIP主动通知方法支持CUCME和SRST。此方法使用SIP NOTIFY消息来启用或禁用MWI。与Subscribe-Notify不同，CUE未维护任何订阅。



在call-manager-fallback 或CME-SRST 下配置mwi relay 命令以支持SRST部署，并配置sip-ua MWI配置命令。

启用未经请求的通知选项：

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:

MWI Off Number:

或者，可以在CUE CLI上启用未经请求的通知：

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

在CME CLI上启用未经请求的通知：

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

警告：除非在mwi-server命令上配置未经请求，否则CME将继续使用Subscribe-Notify，而MWI不起作用，因为CME上的配置与CUE上的配置不匹配。

注意：不能同时使用“不可解决通知”机制和任何其他机制。

MWI与Cisco Unified Communications Manager(CUCM)

当CUE与CUCM集成时，JTAPI协议使用setMessageWaiting消息来切换MWI开/关。由JTAPI控制的CTI端口分配有呼叫搜索空间(CSS)，该空间具有电话的目录号码的部分。在CUE的更高版本中，您可以配置专用CTI端口以提供MWI通知。如果端口不可用，CUE将使用由JTAPI控制的任何可用端口。

由于JTAPI对MWI事件使用setMessageWaiting消息，因此CUCM中未配置MWI扩展。如果配置了扩展，则它们会被忽略，并且不会导致JTAPI的互操作性问题。

在CUE版本7.x及更高版本中，您可以配置CUCME路由器和CUE以使用未经请求通知方法，以在SRST中保持完整的MWI功能。

故障排除

本部分提供了可用于对配置进行故障排除的信息。

调试和跟踪

CUCME

要排除MWI问题，请使用以下调试：

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

要使用MWI外拨方法对注册到CUCME路由器的SCCP电话的MWI问题进行故障排除，请使用以下调试：

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

show ephone reg命令用于确认MWI的状态，而与使用的机制无关。当电话位于远程站点时，此命令非常有用。

```
#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
```

CUE

在CUE中，您可以使用以下show命令来验证配置：

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

CUE还提供跟踪，以排除与MWI相关的任何问题。您可以使用CUE中已启用的默认跟踪，或使用更易于收集和读取的特定跟踪。

可在CUE中启用的特定跟踪是：

```
trace ccn stacksip dbug
```

此跟踪提供SIP信令信息，以便确定MWI的SIP外呼或通知消息是否正确发送。

您还可以与stacksip trace一起启用**trace voicemail all**，以获取有关呼叫和MWI事件的详细信息，或至少启用**trace voicemail vxml all**和**trace voicemail mwi all**。

注意：有关MWI问题的详细信息，请参阅[排除Unity Express消息等待指示\(MWI\)故障](#)。

CUE许可

在CUE中，确保安装许可证以支持正确的呼叫代理（CUCME或CUCM）和语音邮件端口。

在CUE版本7.0.x中，命令为**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，命令为**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
```

您还可以使用**show license all**，该命令提供有关许可证的详细信息。此show命令对于确定CUE是否具有评估许可证以及在到期之前剩余的时间或安装的许可证是否是永久许可证非常有用：

```
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外呼故障

SIP外呼方法生成CUCME的SIP呼叫事件，以便为特定分机打开或关闭MWI。CUE等待180振铃消息。一旦收到，就可以断开呼叫。

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=CONTACTINGcenter connect
4524 07/04 09:35:16.489 ACCN SIPL 0 sip-ltp17: 3602, State=CONTACTINGcenter 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-1000-4000-001125CUC68

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-1000-4000-001125CUC68

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=z9hG4bKkuJtPQPUBreuy0GkQBlQw~~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=z9hG4bKkuJtPQPUBreuy0GkQBlQw~~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=z9hG4bKkuJtPQPUBreuy0GkQBlQw~~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-1000-4000-001125CUC68
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=z9hG4bKkuJtPQPUBreuy0GkQBlQw~~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=z9hG4bKkuJtPQPUBreuy0GkQBlQw~~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=z9hG4bKkuJtPQPUBreuy0GkQBlQw~~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=z9hG4bKkuJtPQPUBreuy0GkQBlQw~~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=z9hG4bKkuJtPQPUBreuy0GkQBlQw~~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
```

排除SIP订用通知故障

DN初始订用后，CUE向CUCME发送通知消息，以通知哪些分机需要打开或关闭MWI。

在CUE中：

```
CUE#no trace all
CUE#trace ccn stacksip debug
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 debug 1 com.cisco.aesop.voicemail.LdapAgent : getAttributeValue:
/sw/local/users/MWI1/TelephoneNumbers/primaryExtension
4430 07/04 10:43:39.264 VMSS vmwi 0x000000000000f1206 2 3001,true
4430 07/04 10:43:39.264 VMSS debug 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 debug 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 debug 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 debug 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_000000000000000000000000
4430 07/04 10:43:39.273 VMSS debug 1 com.cisco.aesop.voicemail.VMDatabase :
PERSONAL_000000000000000000000000
4430 07/04 10:43:39.273 VMSS debug 1 com.cisco.aesop.voicemail.VMUser : getMailboxInfo:
personalMailboxId=PERSONAL_000000000000000000000000
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 debug 1 com.cisco.aesop.voicemail.VMDatabase : Freed connection: 1,
inUse: 1, active: 2
4430 07/04 10:43:39.273 VMSS vmmsg 8 populateSenderDetails: sender entity:
id=MW2,type=1,ext=3002,cn=MW2,desc=
4430 07/04 10:43:39.273 VMSS vmmsg 8 populateSenderDetails: localPart=MW2
4430 07/04 10:43:39.273 VMSS vmmsg 8 populateSenderDetails: imapSender="MW2 \ (MW2\)"
<MW2@localdomain>, mwiFrom="MW2" <sip:3002@sip.invalid>, subjectLine=3002
4430 07/04 10:43:39.273 VMSS debug 1 com.cisco.aesop.voicemail.Message : getLengthMillisec():
msgid: FTX1242A3S6-NME-FOC12394L3Y-1372949852538 totalMsgLength: 14287
4430 07/04 10:43:39.273 VMSS debug 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: 26300000053GetListMember: 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=z9hG4bKkuJtPQPUBreuy0GkQBlQw~~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=z9hG4bKkuJtPQPUBreuy0GkQBlQw~~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

排除SIP未经请求的故障

CUE向CUCME发送NOTIFY消息。无需预先订用。

在CUE中：

```
2922 07/04 11:07:59.028 VMSS vmwi 0x000000000000f1206 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_000000000000000000000000,ownerDn
2924 07/04 11:07:59.037 VMSS dbug 1 com.cisco.aesop.voicemail.VMSysdbMailboxNode : Get
attribute: ownerDn Mailbox: PERSONAL_000000000000000000000000
2921 07/04 11:07:59.039 VMSS sydb 1 MailboxNode: PERSONAL_000000000000000000000000,mailboxDesc
2921 07/04 11:07:59.039 VMSS dbug 1 com.cisco.aesop.voicemail.VMSysdbMailboxNode : Get
attribute: mailboxDesc Mailbox: PERSONAL_000000000000000000000000
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=z9hG4bKkuJtPQPUBreuy0GkQB1Qw~~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=z9hG4bKkuJtPQPUBreuy0GkQB1Qw~~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

常见问题

问题1. MWI在SIP绑定命令后不起作用

SIP Bind命令在语音服务voip下配置，该接口不是用于CUE的接口。这是一个非常常见的问题，使用CME中的故障排除工具难以检测。从CME的角度来看，没有显示SIP消息。

在CME中，如果运行debug ip udp，则可以注意到来自CUE的数据包，但调试ccsip消息或debug csip all中未显示任何消息：

```
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
```

如果直接从CUE接口收集数据包捕获，并导出ip流量，您会注意到CUCME确实收到了INVITE:

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显示为已发送，但由于没有来自CUCME的响应，它会继续发送INVITE，直到达到重试计数，然后连接因为没有响应而终止：

```
4480 07/08 10:30:59.377 ACCN HTTPS 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=cuefb95ddea
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-1000-4000-001125CUC68
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=cuefb95ddea
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-1000-4000-001125CUC68
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 debug 1 com.cisco.aesop.voicemail.Mailbox : refreshMWI: 3001
2882 07/08 10:36:30.909 VMSS debug 1 com.cisco.aesop.voicemail.LdapAgent : getUserByPhoneNo: 3001
2882 07/08 10:36:30.918 VMSS debug 1 com.cisco.aesop.voicemail.LdapAgent : getUserByPhoneNo: id
MWIOne
2882 07/08 10:36:30.918 VMSS debug 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 debug 1 com.cisco.aesop.voicemail.VMUser : getMailboxInfo:
personalMailboxId=PERSONAL_000000000000000000000000
2882 07/08 10:36:30.920 VMSS debug 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_000000000000000000000000';
2882 07/08 10:36:30.922 VMSS debug 1 com.cisco.aesop.voicemail.LdapAgent : getAttributeValue:
/sw/local/users/MWIOne/TelephoneNumbers/primaryExtension
2882 07/08 10:36:30.923 VMSS debug 1 com.cisco.aesop.voicemail.Mailbox : **setMessageWaiting:
3001,true**
2882 07/08 10:36:30.923 VMSS debug 1 MessageWaitingThread : adding job
3400 07/08 10:36:30.923 VMSS debug 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-1000-4000-001125CUC68
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-1000-4000-001125CUC68

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

解决方案：

bind 接口命令允许您将信令和媒体数据包的源IP地址配置为特定接口的IP地址。因此，数据包上传出的地址将绑定到使用**bind**命令指定的接口的IP地址。不发往绑定地址的数据包将被丢弃。

1. 检查用于配置CUE的接口。
2. 建议CUCME中在ip source-address内使用的接口与CUE使用的接口相同。
3. 进行适当调整以接受来自CUE接口的SIP流量：
 - 3.1您可以从语音服务voip中删除**bind**命令。这允许网关接受来自任何接口的SIP流量。


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

3.2您可以基于拨号对等体配置SIP绑定命令。当您拥有到运营商或防火墙的SIP中继，需要特定IP地址才能允许时，通常会使用此功能：

```
dial-peer voice tag voip
session protocol sipv2
voice-class sip bind {control | media} source interface interface-id[ipv6-address ipv6-address]
exit
```

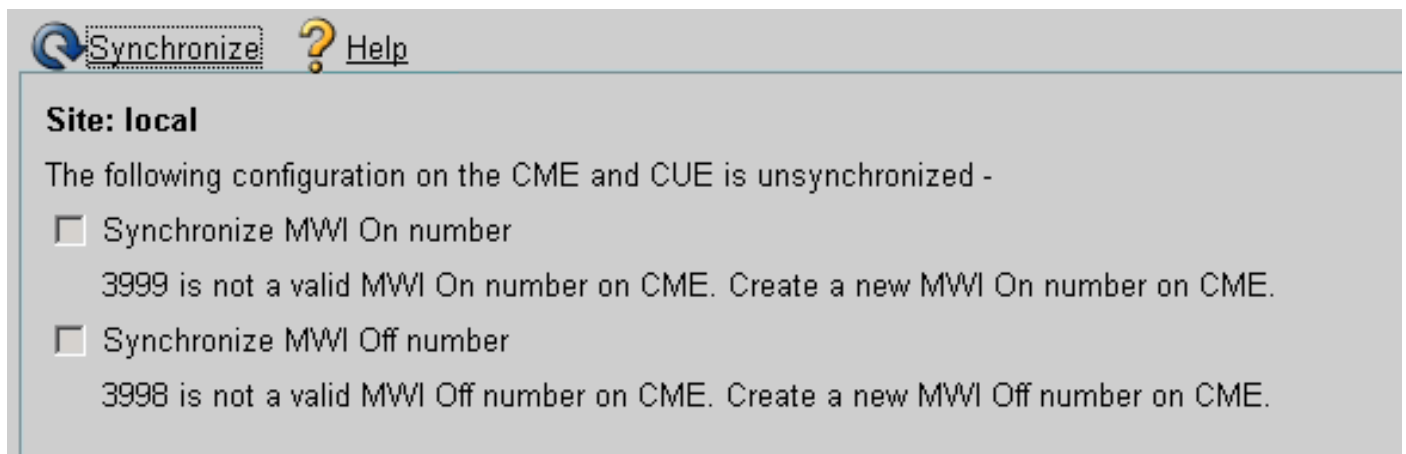
问题2.在ephone-dn中未定义正确的分机长度

CUCME中的MWI DN配置在CUCME拨号方案中未正确配置MWI的呼出方法的正确分机长度。

可能的原因#1

如果eclated-dn仅配置了MWI扩展，且无点('.')CUE同步失败：

导航至管理>同步信息



可能的原因#2

分机长度与用户分机的正确位数不匹配。

在CUCME中，您可以使用debug ccsip messages，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-1000-4000-001125CUC68
```

```
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
```

解决方案：

确保在MWI分机号后配置适当数量的点('.')，以便与CUCME中为用户使用的分机长度匹配：

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

问题3.订用 — 通知，无订用

当使用SIP Subscribe-Notify方法且之前未订用目录号码时，MWI不起作用，并且MWI事件不发送SIP Notify。

在离开或检索语音邮件后的CUCME中，不会从CUE发送SIP通知以打开/关闭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

解决方案：

配置正确的MWI订用命令，以便获取DN为MWI事件使用CUE订用：

```
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

问题4. 488不可接受介质

当CUE发送MWI的呼出邀请时，CUCME发送488 Not Acceptable Media。

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

解决方案：

CUE仅支持G711ulaw

确保正确的传入拨号对等体匹配支持编解码器G711ulaw。您可以创建新的拨号对等体，或使用现有拨号对等体进行语音邮件访问：

```
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
!
```

相关信息

- [3.0及更高版本的Cisco Unity Express VoiceMail和自动总机CLI管理员指南](#)
- [Unity Express消息等待指示\(MWI\)问题故障排除](#)
- [将语音邮件与Cisco Unified SRST集成](#)
- [绑定命令的SIP网关支持](#)
- [Cisco CallManager Express/Cisco Unity Express 配置示例](#)