

# CVPエラーコールフローの仕組みの理解

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## 概要

このドキュメントでは、Cisco Customer Voice Portal(CVP)のエラーコールフローについて説明します。

## 前提条件

### 要件

次の項目に関する知識があることが推奨されます。

- CVP Server
- Cisco Unified Intelligent Contact Management(ICM)

- Cisco Unified Contact Center Enterprise ( UCCE )

## 使用するコンポーネント

このドキュメントの情報は、次のソフトウェアのバージョンに基づいています。

- CVP Server 11.5
- Cisco Virtual Voice Browser(CVVB)11.5
- Cisco Unified Border Element(CUBE)
- Cisco Voice eXtensible Markup Language(VXML)ゲートウェイ
- Cisco Unified Call Manager(CUCM)11.0
- セッション開始プロトコル(SIP)

このドキュメントの情報は、特定のラボ環境にあるデバイスに基づいて作成されました。このドキュメントで使用するすべてのデバイスは、初期 ( デフォルト ) 設定の状態から起動しています。本稼働中のネットワークでは、各コマンドによって起こる可能性がある影響を十分確認してください。

## 背景説明

CUBEまたは入力ゲートウェイで存続可能性サービスが有効になっていない場合、CVPエラーフローは、入力ゲートウェイ/CUBEまたはVXMLゲートウェイ/CVVBのいずれかで設定された `cvperror.tcl` を呼び出します。このTool Command Language(TCL)は、CVPによって生成された 92929292ラベルがSIP 302 Moved TemporarilyまたはSIP REFERメッセージで入力ゲートウェイ/CUBEに送信されるとトリガーされます。

SIP REFERは、CVPがすでにコールに応答した場合にのみ実行されます。CVPは、コールが応答されなかったときにリダイレクトを実行します。この場合、302 Moved Temporarilyをコールのイニシエータ ( 入力ゲートウェイ/CUBE ) に送信します。これには、コンタクトヘッダーにリダイレクト先が含まれます。

SIP REFERまたは302 Moved Temporarilyメッセージに関係なく、`cvperror.tcl`スクリプトの主なタスクは、入力ゲートウェイ/CUBEまたはVXMLゲートウェイ/CVVBのフラッシュに保存された重大なエラーメッセージを再生することです。

## CVPエラーコールフロー – 302の一時的な移動

コールフロー：

公衆交換電話網(PSTN)

電話4008ダイヤル98041 — PSTN(CUCM)—SIP—CVP—ICM – ( ICMがダウン )

CUBEで存続可能性が有効になっていません

### シナリオ 1：ゲートウェイで設定されたCVPエラーTCL

CVPでの設定

図に示すように、CVPダイヤルプランでは、929292ラベルはCUBEを指します。

929292>	Error label
* Local Static Route	IP Address/Hostname/Server Group Name: 10.201.198.21

## CUBEでの関連する設定

CUBE IPアドレス : 10.201.198.21

CVVB IPアドレス : 10.201.198.26

```
voice service voip
no ip address trusted authenticate
allow-connections sip to sip
no supplementary-service sip refer
supplementary-service media-renegotiate
redirect ip2ip
signaling forward unconditional
sip
bind control source-interface GigabitEthernet0/0
bind media source-interface GigabitEthernet0/0
rellxx disable
min-se 360 session-expires 360
header-passing
asymmetric payload full
midcall-signaling passthru
no call service stop

.....
application
service new-call flash:bootstrap.vxml
!
service survivability flash:survivability.tcl
paramspace callfeature med-inact-det enable
param ccb id:10.201.198.21;loc:CALO;trunks:2
!
service CVPSelfService flash:CVPSelfServiceBootstrap.vxml
!
service ringtone flash:ringtone.tcl
!
service cvperror flash:cvperror.tcl
paramspace english index 0
paramspace english language en
paramspace english location flash
paramspace english prefix en
.....
dial-peer voice 929292 voip
description CVP SIP error dial-peer
service cvperror
session protocol sipv2
session target ipv4:10.201.198.26
session transport tcp
incoming called-number 9292T
voice-class sip rellxx disable
dtmf-relay rtp-nte h245-signal h245-alphanumeric
codec g711ulaw
no vad
```

## ログのスニペット

### ゲートウェイで有効なデバッグ : debug ccsip messageおよびdebug voip ccapi inout

--- After the error is identified on CVP, CVP sends a 302 Moved Temporarily to CUBE/Gateway

```
2444742: *May  2 19:30:45.956: //1575870/67C371000000/SIP/Msg/ccsipDisplayMsg:
Received:
SIP/2.0 302 Moved Temporarily
Via: SIP/2.0/UDP 10.201.198.21:5060;branch=z9hG4bK496B721A7
To: <sip:8041@10.201.198.7>;tag=dsa401be35
From: <sip:4008@10.201.198.18>;tag=21E92674-46A
Call-ID: AC32BE77-4D9711E8-91BCBF90-16BB0040@10.201.198.21
CSeq: 101 INVITE
Content-Length: 0
Cisco-Guid: 1740861696-0000065536-0000000041-0315017482
Contact: <sip:92929292@10.201.198.21>
Cisco-Gucid: 67C37100000100000000002912C6C90A
Session-ID: 00000000000000000000000000000000;remote=232199a11000016357f53ee8f467d218
```

--- Gateway responds with ACK

```
Sent:
ACK sip:8041@10.201.198.7:5060 SIP/2.0
Via: SIP/2.0/UDP 10.201.198.21:5060;branch=z9hG4bK496B721A7
From: sip:4008@10.201.198.18;tag=21E92674-46A
To: <sip:8041@10.201.198.7>;tag=dsa401be35
Date: Wed, 02 May 2018 23:30:45 GMT
Call-ID: AC32BE77-4D9711E8-91BCBF90-16BB0040@10.201.198.21
Max-Forwards: 70
CSeq: 101 ACK
Allow-Events: telephone-event
Content-Length: 0
```

-- Gateway forwards the Moved Temporarily message to the original party, in this case the PSTN (CUCM in this lab), since the supplementary service is enabled

```
Sent:
SIP/2.0 302 Moved Temporarily
Via: SIP/2.0/TCP 10.201.198.18:5065;branch=z9hG4bK7d54331a57
From: <sip:4008@10.201.198.18>;tag=88-d18302a7-aed7-454e-85f1-89e6650073de-20554954
To: <sip:98041@10.201.198.21>;tag=21E926A0-192
Date: Wed, 02 May 2018 23:30:45 GMT
Call-ID: 67c37100-aea14613-29-12c6c90a@10.201.198.18
CSeq: 101 INVITE
Allow-Events: telephone-event
Server: Cisco-SIPGateway/IOS-12.x
Diversion: <sip:8041@10.201.198.21>;reason=unconditional;counter=1
Contact: sip:92929292@10.201.198.21:5060
Content-Length: 0
```

--CUCM ACK the message---

```
Received:
ACK sip:98041@10.201.198.21:5060 SIP/2.0
Via: SIP/2.0/TCP 10.201.198.18:5065;branch=z9hG4bK7d54331a57
From: <sip:4008@10.201.198.18>;tag=88-d18302a7-aed7-454e-85f1-89e6650073de-20554954
To: <sip:98041@10.201.198.21>;tag=21E926A0-192
Date: Wed, 02 May 2018 23:13:23 GMT
```

Call-ID: 67c37100-aea14613-29-12c6c90a@10.201.198.18  
User-Agent: Cisco-CUCM11.0  
Max-Forwards: 70  
CSeq: 101 ACK  
Allow-Events: presence, kpml  
Content-Length: 0

--- Gateway received and Invite from PSTN (CUCM) related to the 929292 Error call flow

Received:

**INVITE sip:92929292@10.201.198.21:5060 SIP/2.0**

Via: SIP/2.0/UDP 10.201.198.18:5065;branch=z9hG4bK7e6f8e5100  
From: <sip:4008@10.201.198.18>;tag=88-d18302a7-aed7-454e-85f1-89e6650073de-20554954  
To: <sip:98041@10.201.198.21>  
Date: Wed, 02 May 2018 23:13:23 GMT  
Call-ID: 67c37100-aea14613-29-12c6c90a@10.201.198.18  
Supported: timer,resource-priority,replaces  
Min-SE: 1800  
User-Agent: Cisco-CUCM11.0  
Allow: INVITE, OPTIONS, INFO, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE, NOTIFY  
CSeq: 102 INVITE  
Diversion: <sip:8041@10.201.198.21>;reason=unconditional;counter=1  
Expires: 180  
Allow-Events: presence, kpml  
Supported: X-cisco-srtp-fallback,X-cisco-original-called  
Call-Info: <sip:10.201.198.18:5065>;method="NOTIFY;Event=telephone-event;Duration=500"  
Call-Info: <urn:x-cisco-remotecc:callinfo>;x-cisco-video-traffic-class=VIDEO\_UNSPECIFIED  
Session-ID: a8540c82a4e44c2eba3f04ba20554953;remote=00000000000000000000000000000000  
Cisco-Guid: 1740861696-0000065536-0000000041-0315017482  
Session-Expires: 1800  
P-Asserted-Identity: <sip:4008@10.201.198.18>  
Remote-Party-ID: <sip:4008@10.201.198.18>;party=calling;screen=yes;privacy=off  
Contact: <sip:4008@10.201.198.18:5065;transport=tcp>  
Max-Forwards: 70  
Content-Length: 0

---Match dial-peer 929292

2444797: \*May 2 19:30:45.988: //-1/67C371000000/CCAPI/cc\_api\_call\_setup\_ind\_common:  
Interface=0x4A3A8D84, Call Info(  
Calling Number=sip:4008@10.201.198.18,(Calling Name=)(TON=Unknown, NPI=Unknown,  
Screening=User, Passed, Presentation=Allowed),  
Called Number=sip:92929292@10.201.198.21:5060(TON=Unknown, NPI=Unknown),  
Calling Translated=FALSE, Subscriber Type Str=Unknown, FinalDestinationFlag=TRUE,  
**Incoming Dial-peer=929292**, Progress Indication=NULL(0), Calling IE Present=TRUE,  
Source Trkgrp Route Label=, Target Trkgrp Route Label=, CLID Transparent=FALSE), Call  
Id=1575871

....  
....

-- Run cvperror.tcl

2444810: \*May 2 19:30:45.992: //1575871/67C371000000/CCAPI/cc\_process\_call\_setup\_ind:  
>>>>CCAPI handed cid 1575871 with tag 929292 to app "**\_ManagedAppProcess\_cvperror**"

-- Sent Trying and session progress to PSTN

Sent:  
SIP/2.0 100 Trying  
Via: SIP/2.0/UDP 10.201.198.18:5065;branch=z9hG4bK7e6f8e5100

From: <sip:4008@10.201.198.18>;tag=88-d18302a7-aed7-454e-85f1-89e6650073de-20554954  
To: <sip:98041@10.201.198.21>  
Date: Wed, 02 May 2018 23:30:45 GMT  
Call-ID: 67c37100-aea14613-29-12c6c90a@10.201.198.18  
CSeq: 102 INVITE  
Allow-Events: telephone-event  
Server: Cisco-SIPGateway/IOS-12.x  
Content-Length: 0

2444819: \*May 2 19:30:46.000: //1575871/67C371000000/SIP/Msg/ccsipDisplayMsg:  
Sent:  
SIP/2.0 183 Session Progress  
Via: SIP/2.0/UDP 10.201.198.18:5065;branch=z9hG4bK7e6f8e5100  
From: <sip:4008@10.201.198.18>;tag=88-d18302a7-aed7-454e-85f1-89e6650073de-20554954  
To: <sip:98041@10.201.198.21>;tag=21E926C0-EDA  
Date: Wed, 02 May 2018 23:30:45 GMT  
Call-ID: 67c37100-aea14613-29-12c6c90a@10.201.198.18  
CSeq: 102 INVITE  
Allow: INVITE, OPTIONS, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE, NOTIFY, INFO, REGISTER  
Allow-Events: telephone-event  
Contact: <sip:92929292@10.201.198.21:5060;transport=tcp>  
Server: Cisco-SIPGateway/IOS-12.x  
Content-Length: 0

--Sent 200 OK

2444820: \*May 2 19:30:46.000: //1575871/67C371000000/SIP/Msg/ccsipDisplayMsg:  
Sent:  
SIP/2.0 200 OK  
Via: SIP/2.0/UDP 10.201.198.18:5065;branch=z9hG4bK7e6f8e5100  
From: <sip:4008@10.201.198.18>;tag=88-d18302a7-aed7-454e-85f1-89e6650073de-20554954  
To: <sip:98041@10.201.198.21>;tag=21E926C0-EDA  
Date: Wed, 02 May 2018 23:30:45 GMT  
Call-ID: 67c37100-aea14613-29-12c6c90a@10.201.198.18  
CSeq: 102 INVITE  
Allow: INVITE, OPTIONS, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE, NOTIFY, INFO, REGISTER  
Allow-Events: telephone-event  
Contact: <sip:92929292@10.201.198.21:5060;transport=tcp>  
Supported: replaces  
Supported: sdp-anat  
Server: Cisco-SIPGateway/IOS-12.x  
Require: timer  
Session-Expires: 1800;refresher=uac  
Supported: timer  
Content-Type: application/sdp  
Content-Disposition: session;handling=required  
Content-Length: 250

v=0  
o=CiscoSystemsSIP-GW-UserAgent 7410 4830 IN IP4 10.201.198.21  
s=SIP Call  
c=IN IP4 10.201.198.21  
t=0 0  
m=audio 16526 RTP/AVP 0 101  
c=IN IP4 10.201.198.21  
a=rtpmap:0 PCMU/8000  
a=rtpmap:101 telephone-event/8000  
a=fmtp:101 0-16  
a=ptime:20

--Received ACK of the 200 OK message

```
2444823: *May  2 19:30:46.176: //-1/xxxxxxxxxxxx/SIP/Msg/ccsipDisplayMsg:
Received:
ACK sip:92929292@10.201.198.21:5060;transport=tcp SIP/2.0
Via: SIP/2.0/TCP 10.201.198.18:5065;branch=z9hG4bK7f4b18782f
From: <sip:4008@10.201.198.18>;tag=88~d18302a7-aed7-454e-85f1-89e6650073de-20554954
To: <sip:98041@10.201.198.21>;tag=21E926C0-EDA
Date: Wed, 02 May 2018 23:13:23 GMT
Call-ID: 67c37100-aea14613-29-12c6c90a@10.201.198.18
User-Agent: Cisco-CUCM11.0
Max-Forwards: 70
CSeq: 102 ACK
Allow-Events: presence, kpml
Session-ID: a8540c82a4e44c2eba3f04ba20554953;remote=4c37a896d7446e294d24d877668cab88
Content-Type: application/sdp
Content-Length: 244
```

```
v=0
o=CiscoSystemsCCM-SIP 88 1 IN IP4 10.201.198.18
s=SIP Call
c=IN IP4 10.152.234.20
b=TIAS:64000
b=CT:64
b=AS:64
t=0 0
m=audio 23062 RTP/AVP 0 101
a=ptime:20
a=rtpmap:0 PCMU/8000
a=rtpmap:101 telephone-event/8000
a=fmtp:101 0-15
```

---Play critical error audio file located in flash on CUBE

## 説明シナリオ1

このシナリオでは、**supplementary-service sip moved-temporarily**がデフォルトで有効になっているため、ゲートウェイはコールを発信者(この場合はPSTN (ラボではCUCM))に転送します。

## シナリオ 2 : ゲートウェイで設定されたCVPエラーTCLおよび補足サービスなし

### CVPでの設定

図に示すように、CVPダイヤルプランでは、929292ラベルはCUBEを指します。

<input type="checkbox"/> 929292>	Error label
<input type="checkbox"/> * Local Static Route	IP Address/Hostname/Server Group Name: 10.201.198.21

### CUBEでの関連する設定

CUBE IPアドレス : 10.201.198.21

CVVB IPアドレス : 10.201.198.26

```

voice service voip
  no ip address trusted authenticate
  allow-connections sip to sip
no supplementary-service sip moved-temporarily
  no supplementary-service sip refer
  supplementary-service media-renegotiate
  redirect ip2ip
  signaling forward unconditional
  sip
  bind control source-interface GigabitEthernet0/0
  bind media source-interface GigabitEthernet0/0
  rellxx disable
  min-se 360 session-expires 360
  header-passing
  asymmetric payload full
  midcall-signaling passthru
  no call service stop

.....
application
  service new-call flash:bootstrap.vxml
  !
  service survivability flash:survivability.tcl
  paramspace callfeature med-inact-det enable
  param ccb id:10.201.198.21;loc:CALO;trunks:2
  !
  service CVPSelfService flash:CVPSelfServiceBootstrap.vxml
  !
  service ringtone flash:ringtone.tcl
  !
  service cvperror flash:cvperror.tcl
  paramspace english index 0
  paramspace english language en
  paramspace english location flash
  paramspace english prefix en
.....
dial-peer voice 929292 voip
  description CVP SIP error dial-peer
  service cvperror
  session protocol sipv2
  session target ipv4:10.201.198.26
  session transport tcp
  incoming called-number 9292T
  voice-class sip rellxx disable
  dtmf-relay rtp-nte h245-signal h245-alphanumeric
  codec g711ulaw
  no vad

```

## ログのスニペット

ゲートウェイで有効なデバッグ : **debug ccsip message**および**debug voip ccapi inout**

--- After the error is identified on CVP, CVP sends a 302 Moved Temporarily to CUBE/Gateway

```

2452782: *May  2 21:02:46.120: //1580163/41F099000000/SIP/Msg/ccsipDisplayMsg:
Received:
SIP/2.0 302 Moved Temporarily

```



Via: SIP/2.0/UDP 10.201.198.21:5060;branch=z9hG4bK4980BDED  
To: <sip:8041@10.201.198.7>;tag=ds8369f9d4  
From: <sip:4008@10.201.198.18>;tag=223D6198-B66  
Call-ID: 8678DF8F-4DA411E8-A286BF90-16BB0040@10.201.198.21  
CSeq: 101 INVITE  
Content-Length: 0  
Cisco-Guid: 1106286848-0000065536-0000000042-0315017482  
Contact: <sip:92929292@10.201.198.21>  
Cisco-Gucid: 41F0990000010000000002A12C6C90A  
Session-ID: 00000000000000000000000000000000;remote=2375d4ec100001634a4a6be49573f76d

--- Gateway responds with ACK

Sent:  
ACK sip:8041@10.201.198.7:5060 SIP/2.0  
Via: SIP/2.0/UDP 10.201.198.21:5060;branch=z9hG4bK4980BDED  
From: sip:4008@10.201.198.18;tag=223D6198-B66  
To: <sip:8041@10.201.198.7>;tag=ds8369f9d4  
Date: Thu, 03 May 2018 01:02:46 GMT  
Call-ID: 8678DF8F-4DA411E8-A286BF90-16BB0040@10.201.198.21  
Max-Forwards: 70  
CSeq: 101 ACK  
Allow-Events: telephone-event  
Content-Length: 0

2452813: \*May 2 21:02:46.128: //1580163/41F099000000/CCAPI/cc\_api\_call\_disconnect\_done:  
Disposition=0, Interface=0x4A3A8D84, Tag=0x0, Call Id=1580163,  
Call Entry(Disconnect Cause=16, Voice Class Cause Code=0, Retry Count=0)  
2452814: \*May 2 21:02:46.128: //1580163/41F099000000/CCAPI/cc\_api\_call\_disconnect\_done:  
Call Disconnect Event Sent  
2452815: \*May 2 21:02:46.128: //-1/xxxxxxxxxxxx/CCAPI/cc\_free\_feature\_vsa:  
  
2452816: \*May 2 21:02:46.128: :cc\_free\_feature\_vsa freeing 4C79B7F8  
2452817: \*May 2 21:02:46.128: //-1/xxxxxxxxxxxx/CCAPI/cc\_free\_feature\_vsa:  
  
2452818: \*May 2 21:02:46.128: vsacount in free is 2  
2452819: \*May 2 21:02:46.132: //1580162/41F099000000/CCAPI/ccCallDisconnect:  
Cause Value=16, Tag=0x0, Call Entry(Previous Disconnect Cause=0, Disconnect Cause=0)  
2452820: \*May 2 21:02:46.132: //1580162/41F099000000/CCAPI/ccCallDisconnect:  
Cause Value=16, Call Entry(Responded=TRUE, Cause Value=16)  
2452821: \*May 2 21:02:46.132: //-1/xxxxxxxxxxxx/CCAPI/ccMemPoolTDFreeHelper:  
data = 4D0F39A4  
2452822: \*May 2 21:02:46.132: ccMemPoolTDFreeHelper:mem\_mgr\_mempool\_free:  
mem\_refcnt(4C6D2C38)=0 - mempool cleanup  
2452823: \*May 2 21:02:46.132: //1580162/41F099000000/SIP/Msg/ccsipDisplayMsg:

--Since Moved Supplementary Service is disabled, Gateway reports an error and the call is disconnected:

Sent:  
**SIP/2.0 500 Internal Server Error**  
Via: SIP/2.0/TCP 10.201.198.18:5065;branch=z9hG4bK817c2f8cee  
From: <sip:4008@10.201.198.18>;tag=90-d18302a7-aed7-454e-85f1-89e6650073de-20554956  
To: <sip:98041@10.201.198.21>;tag=223D61C8-24D1  
Date: Thu, 03 May 2018 01:02:46 GMT  
Call-ID: 41f09900-aea15ba3-2a-12c6c90a@10.201.198.18  
CSeq: 101 INVITE  
Allow-Events: telephone-event  
Server: Cisco-SIPGateway/IOS-12.x  
Reason: Q.850;cause=16  
Content-Length: 0

## 説明シナリオ2

このシナリオでは、ゲートウェイでsupplementary-service sip moved-temporarilyが無効になっているため、302 Moved Temporarilyメッセージはサポートされず、ゲートウェイによって内部エラーがCVPに報告されます。

## シナリオ 3 : VXMLゲートウェイ/CVVBで設定されたCVPエラーTCLおよび補足サービスなし

### CVPでの設定

CVPダイヤルプランでは、図に示すように、929292ラベルはCVVBを指します。

<input type="checkbox"/> 929292>	Error label
<input type="checkbox"/> * Local Static Route	IP Address/Hostname/Server Group Name: 10.201.198.26

### CUBEでの関連する設定

CUBE IPアドレス : 10.201.198.21

CVVB IPアドレス : 10.201.198.26

```
voice service voip
  no ip address trusted authenticate
  allow-connections sip to sip
no supplementary-service sip moved-temporarily
  no supplementary-service sip refer
  supplementary-service media-renegotiate
  redirect ip2ip
  signaling forward unconditional
  sip
  bind control source-interface GigabitEthernet0/0
  bind media source-interface GigabitEthernet0/0
  rellxx disable
  min-se 360 session-expires 360
  header-passing
  asymmetric payload full
  midcall-signaling passthru
  no call service stop

.....
application
  service new-call flash:bootstrap.vxml
  !
  service survivability flash:survivability.tcl
  paramspace callfeature med-inact-det enable
  param ccb id:10.201.198.21;loc:CALO;trunks:2
  !
  service CVPSelfService flash:CVPSelfServiceBootstrap.vxml
  !
  service ringtone flash:ringtone.tcl
  !
```

```
service cvperror flash:cvperror.tcl
paramspace english index 0
paramspace english language en
paramspace english location flash
paramspace english prefix en
.....
dial-peer voice 929292 voip
description CVP SIP error dial-peer
service cvperror
session protocol sipv2
session target ipv4:10.201.198.26
session transport tcp
incoming called-number 9292T
voice-class sip rellxx disable
dtmf-relay rtp-nte h245-signal h245-alphanumeric
codec g711ulaw
no vad
```

## ログのスニペット

ゲートウェイで有効なデバッグ : **debug ccsip message**および**debug voip ccapi inout**

Same behavior as Scenario 2

Received:

```
SIP/2.0 302 Moved Temporarily
Via: SIP/2.0/UDP 10.201.198.21:5060;branch=z9hG4bK4984515FB
To: <sip:8041@10.201.198.7>;tag=ds8848a4c6
From: <sip:4008@10.201.198.18>;tag=224B0C80-11DA
Call-ID: 9C5C461D-4DA611E8-A550BF90-16BB0040@10.201.198.21
CSeq: 101 INVITE
Content-Length: 0
Cisco-Guid: 1476352256-0000065536-0000000044-0315017482
Contact: <sip:92929292@10.201.198.26>
Cisco-Gucid: 57FF5900000100000000002C12C6C90A
Session-ID: 00000000000000000000000000000000;remote=23837fd11000016394e369cb85ba7fea
```

Sent:

```
ACK sip:8041@10.201.198.7:5060 SIP/2.0
Via: SIP/2.0/UDP 10.201.198.21:5060;branch=z9hG4bK4984515FB
From: sip:4008@10.201.198.18;tag=224B0C80-11DA
To: <sip:8041@10.201.198.7>;tag=ds8848a4c6
Date: Thu, 03 May 2018 01:17:41 GMT
Call-ID: 9C5C461D-4DA611E8-A550BF90-16BB0040@10.201.198.21
Max-Forwards: 70
CSeq: 101 ACK
Allow-Events: telephone-event
Content-Length: 0
```

Sent:

```
SIP/2.0 500 Internal Server Error
Via: SIP/2.0/TCP 10.201.198.18:5065;branch=z9hG4bK83447b6e69
From: <sip:4008@10.201.198.18>;tag=92-d18302a7-aed7-454e-85f1-89e6650073de-20554960
To: <sip:98041@10.201.198.21>;tag=224B0CA0-E15
Date: Thu, 03 May 2018 01:17:41 GMT
```

Call-ID: 57ff5900-aea15f23-2c-12c6c90a@10.201.198.18  
CSeq: 101 INVITE  
Allow-Events: telephone-event  
Server: Cisco-SIPGateway/IOS-12.x  
Reason: Q.850;cause=16  
Content-Length: 0

## 説明シナリオ3

シナリオ2と同じ動作。ゲートウェイで`supplementary-service sip moved-temporarily`が無効になっているため、302 Moved Temporarilyメッセージはサポートされず、ゲートウェイによって内部エラーがCVPに報告されます。

## シナリオ 4 : VXMLゲートウェイ/CVVBで設定されたCVPエラーTCL

### CVPでの設定

CVPダイヤルプランでは、図に示すように、929292ラベルはCVVBを指します。

929292>	Error label
Local Static Route	IP Address/Hostname/Server Group Name: 10.201.198.26

### CUBEでの関連する設定

CUBE IPアドレス : 10.201.198.21

CVVB IPアドレス : 10.201.198.26

```
voice service voip
  no ip address trusted authenticate
  allow-connections sip to sip
no supplementary-service sip refer
supplementary-service media-renegotiate
redirect ip2ip
signaling forward unconditional
sip
bind control source-interface GigabitEthernet0/0
bind media source-interface GigabitEthernet0/0
rellxx disable
min-se 360 session-expires 360
header-passing
asymmetric payload full
midcall-signaling passthru
no call service stop

.....
application
  service new-call flash:bootstrap.vxml
!
```

```
service survivability flash:survivability.tcl
paramspace callfeature med-inact-det enable
param ccb id:10.201.198.21;loc:CALO;trunks:2
!
service CVPSelfService flash:CVPSelfServiceBootstrap.vxml
!
service ringtone flash:ringtone.tcl
!
service cvperror flash:cvperror.tcl
paramspace english index 0
paramspace english language en
paramspace english location flash
paramspace english prefix en
.....
dial-peer voice 929292 voip
description CVP SIP error dial-peer
service cvperror
session protocol sipv2
session target ipv4:10.201.198.26
session transport tcp
incoming called-number 9292T
voice-class sip rellxx disable
dtmf-relay rtp-nte h245-signal h245-alphanumeric
codec g711ulaw
no vad
```

## ログのスニペット

### ゲートウェイで有効なデバッグ : **debug ccsip message**および**debug voip ccapi inout**

--- After the error is identified on CVP, CVP sends a 302 Moved Temporarily to CUBE/Gateway

```
2455061: *May  2 21:25:10.904: //1581217/639F4F800000/SIP/Msg/ccsipDisplayMsg:
Received:
SIP/2.0 302 Moved Temporarily
Via: SIP/2.0/UDP 10.201.198.21:5060;branch=z9hG4bK4986321AD
To: <sip:8041@10.201.198.7>;tag=ds2cb7f0a
From: <sip:4008@10.201.198.18>;tag=2251E6B8-26BC
Call-ID: A8087055-4DA711E8-A6C0BF90-16BB0040@10.201.198.21
CSeq: 101 INVITE
Content-Length: 0
Cisco-Guid: 1671384960-0000065536-0000000046-0315017482
Contact: <sip:92929292@10.201.198.26>
Cisco-Gucid: 639F4F80000100000000002E12C6C90A
Session-ID: 00000000000000000000000000000000;remote=238a5a0d100001633384b476d5df07da
```

--- Gateway responds with ACK

```
Sent:
ACK sip:8041@10.201.198.7:5060 SIP/2.0
Via: SIP/2.0/UDP 10.201.198.21:5060;branch=z9hG4bK4986321AD
From: sip:4008@10.201.198.18;tag=2251E6B8-26BC
To: <sip:8041@10.201.198.7>;tag=ds2cb7f0a
Date: Thu, 03 May 2018 01:25:10 GMT
Call-ID: A8087055-4DA711E8-A6C0BF90-16BB0040@10.201.198.21
Max-Forwards: 70
CSeq: 101 ACK
Allow-Events: telephone-event
Content-Length: 0
```

-- Gateway forward the Moved Temporarily message to the original party, in this case the PSTN (CUCM in this lab),  
since the supplementary service is enabled

Sent:

SIP/2.0 302 Moved Temporarily  
Via: SIP/2.0/TCP 10.201.198.18:5065;branch=z9hG4bK852a31e4f8  
From: <sip:4008@10.201.198.18>;tag=94-d18302a7-aed7-454e-85f1-89e6650073de-20554964  
To: <sip:98041@10.201.198.21>;tag=2251E6D4-23B1  
Date: Thu, 03 May 2018 01:25:10 GMT  
Call-ID: 639f4f80-aea160e4-2e-12c6c90a@10.201.198.18  
CSeq: 101 INVITE  
Allow-Events: telephone-event  
Server: Cisco-SIPGateway/IOS-12.x  
Diversion: <sip:8041@10.201.198.21>;reason=unconditional;counter=1  
Contact: sip:92929292@10.201.198.26:5060  
Content-Length: 0

---Received ACK form PSTN

Received:

ACK sip:98041@10.201.198.21:5060 SIP/2.0  
Via: SIP/2.0/TCP 10.201.198.18:5065;branch=z9hG4bK852a31e4f8  
From: <sip:4008@10.201.198.18>;tag=94-d18302a7-aed7-454e-85f1-89e6650073de-20554964  
To: <sip:98041@10.201.198.21>;tag=2251E6D4-23B1  
Date: Thu, 03 May 2018 01:07:48 GMT  
Call-ID: 639f4f80-aea160e4-2e-12c6c90a@10.201.198.18  
User-Agent: Cisco-CUCM11.0  
Max-Forwards: 70  
CSeq: 101 ACK  
Allow-Events: presence, kpml  
Content-Length: 0

At this moment the PSTN must sent a SIP Invite to the CVVB, since there is no SIP trunk between the PSTN and the CVVB,  
the critical error message is not played and the call disconnects.

## 説明シナリオ4

このシナリオでは、**supplementary-service sip moved-temporarily**がデフォルトで有効になっているため、ゲートウェイはコールを発信者(この場合はPSTN (ラボではCUCM) に転送します。ただし、PSTNにはCVVBへのSIPトランクがないため、重大なエラーメッセージは再生されず、コールが切断されます。

結論として、929292エラーラベルは、ゲートウェイによって設定および制御される必要があります。このダイヤルピアは発信コールログには使用されないため、ゲートウェイ/CUBEの929292着信ダイヤルピアのセッションターゲットで設定した設定は関係ありません。