

Informazioni sul funzionamento del flusso di chiamate di errore CVP

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Introduzione

Questo documento descrive come funziona il flusso di chiamate in errore di Cisco Customer Voice Portal (CVP).

Prerequisiti

Requisiti

Cisco raccomanda la conoscenza dei seguenti argomenti:

- Server CVP
- Cisco Unified Intelligent Contact Management (ICM)
- Cisco Unified Contact Center Enterprise (UCCE)

Componenti usati

Le informazioni di questo documento si basano sulle seguenti versioni software:

- CVP Server 11.5
- Cisco Virtual Voice Browser (CVB) 11.5
- CUBE (Cisco Unified Border Element)
- Gateway Cisco Voice eXtensible Markup Language (VXML)
- Cisco Unified Call Manager (CUCM) 11.0
- SIP (Session Initiation Protocol)

Le informazioni discusse in questo documento fanno riferimento a dispositivi usati in uno specifico ambiente di emulazione. Su tutti i dispositivi menzionati nel documento la configurazione è stata ripristinata ai valori predefiniti. Se la rete è operativa, valutare attentamente eventuali conseguenze derivanti dall'uso dei comandi.

Premesse

Quando il servizio di sopravvivenza non è abilitato in CUBE o in Ingress Gateway, il flusso di errori CVP richiama un file `cvperror.tcl` configurato in Ingress Gateway/CUBE o VXML Gateway/CVB. Questo Tool Command Language (TCL) viene attivato quando un'etichetta 92929292 generata da CVP viene inviata al gateway/CUBE in ingresso in un messaggio SIP 302 Spostato temporaneamente o SIP REFERENCE.

SIP REFERENCE viene eseguito solo quando CVP ha già risposto alla chiamata. Il CVP esegue un reindirizzamento quando la chiamata non ha ricevuto risposta. In questo caso, invia un 302 Spostato temporaneamente all'iniziatore della chiamata (Gateway/CUBE in ingresso), che include una destinazione di reindirizzamento nell'intestazione del contatto.

Indipendentemente dal messaggio SIP REF o 302 Spostato temporaneamente, il compito principale dello script `cvperror.tcl` è riprodurre un messaggio di errore critico memorizzato nella memoria flash sul Gateway/CUBE in entrata o VXML Gateway/CVB.

Flusso chiamata di errore CVP - 302 spostato temporaneamente

Flusso di chiamata:

PSTN (Public Switch Telephone Network)

Telefono 4008: chiamate 98041 — PSTN (CUCM)—SIP—CVP—ICM— (ICM non attivo)

Sopravvivenza non abilitata in CUBE

Scenario 1: Errore CVP TCL configurato nel gateway

Configurazione in CVP

Nel dial plan CVP, l'etichetta 929292 punta a CUBE, come mostrato nell'immagine.

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

Configurazione rilevante in CUBE

Indirizzo IP CUBO: 10.201.198.21

Indirizzo IP CVB: 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

Frammento di log

Debug abilitati nel gateway: debug ccsip message e 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

Spiegazione scenario 1

In questo scenario, poiché il sip del servizio supplementare spostato temporaneamente è abilitato per impostazione predefinita, il gateway inoltra la chiamata al mittente, in questo caso la PSTN (in laboratorio, CUCM).

Scenario 2: Errore CVP TCL configurato nel gateway e nessun servizio supplementare

Configurazione in CVP

Nel dial plan CVP, l'etichetta 929292 punta a CUBE, come mostrato nell'immagine.

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

Configurazione rilevante in CUBE

Indirizzo IP CUBO: 10.201.198.21

Indirizzo IP CVB: 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
```

Frammento di log

Debug abilitati nel gateway: **debug ccsip message** e **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: 41F09900000100000000002A12C6C90A
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

Spiegazione scenario 2

In questo scenario, poiché il sip del servizio supplementare spostato temporaneamente è disabilitato nel gateway, il messaggio 302 Spostato temporaneamente non è supportato e il gateway segnala un errore interno al CVP.

Scenario 3: Errore CVP TCL configurato in VXML Gateway/CVB e nessun servizio supplementare

Configurazione in CVP

Nel dial plan CVP, l'etichetta 929292 punta a CVB, come mostrato nell'immagine.

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

Configurazione rilevante in CUBE

Indirizzo IP CUBO: 10.201.198.21

Indirizzo IP CVB: 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
```

Frammento di log

Debug abilitati nel gateway: **debug ccsip message** e **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

Scenario esplicativo 3

Analogo comportamento della scenario 2, poiché il sip del servizio supplementare spostato temporaneamente è disabilitato nel gateway, il messaggio 302 Spostato temporaneamente non è supportato e il gateway segnala un errore interno al CVP.

Scenario 4: Errore CVP TCL configurato in VXML Gateway/CVB

Configurazione in CVP

Nel dial plan CVP, l'etichetta 929292 punta a CVB, come mostrato nell'immagine.

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

Configurazione rilevante in CUBE

Indirizzo IP CUBO: 10.201.198.21

Indirizzo IP CVB: 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
```

Frammento di log

Debug abilitati nel gateway: debug ccsip message e 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.

Scenario esplicativo 4

In questo scenario, poiché il **sip del servizio supplementare spostato temporaneamente** è abilitato per impostazione predefinita, il gateway inoltra la chiamata al mittente, in questo caso la PSTN (in laboratorio, CUCM). Tuttavia, poiché la PSTN non ha un trunk SIP sul CVB, il messaggio di errore critico non viene riprodotto e la chiamata si disconnette.

In conclusione, l'etichetta di errore 929292 deve essere configurata e controllata dal gateway. Non è rilevante la configurazione effettuata nell'oggetto sessione sul dial-peer in entrata 929292 nel gateway/CUBE, poiché questo dial-peer non viene utilizzato per alcun segmento di chiamata in uscita.