

MRA Calls Fail with Service Unavailable

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Introduction

This document describes how to troubleshoot Mobile and Remote Access (MRA) when calls fail due to "503 Service Unavailable" error.

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Prerequisites

Requirements

Cisco recommends that you have knowledge of the next topics:

- Cisco Video Communication Server (VCS) or Expressway-C and Expressway-E platform
- Cisco Unified Communication Manager (CUCM)

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Problem

Calls between two Jabber clients registered to the CUCM via MRA fails with error message "503 Service Unavailable"

Call flow:

Jabber client 1 > Expressway-E > Expressway-C > CUCM > Expressway-C > Expressway-E

> Jabber client 2

Note: In the call flow, both Jabber client 1 and Jabber client 2, are registered to the same MRA deployment, that means the Expressway pair is the same before and after the CUCM.

Solution

A Session Initiation Protocol (SIP) INVITE goes from CUCM to Expressway-C

```
2014-06-06T10:27:20+10:00 kcec tvcs: UTCTime="2014-06-06 00:27:20,782" Module="network.sip"
Level="DEBUG": Action="Received" Local-ip="10.200.1.220" Local-port="5060" Src-
ip="10.200.1.210" Src-port="49071" Msg-Hash="12136618272786736242"
SIPMSG:
|INVITE sip:80d713ba-514d-fc2a-6b7e-af527f9eb37f@10.200.1.220:5060;transport=tcp;orig-
hostport=10.100.94.116:58991 SIP/2.0
Via: SIP/2.0/TCP 10.200.1.210:5060;branch=z9hG4bK4ca27d4986
Call-ID: 50f2a980-39110ae8-1fb3-d201c80a@10.200.1.210
CSeq: 101 INVITE
Remote-Party-ID: "Jabber client 1" <sip:sip%3Ajabber.client1@domain.com;x-cisco-number=168;x-
cisco-callback-number=168>;party=calling;screen=yes;privacy=off
Contact: <sip:sip%3Ajabber.client1i@10.200.1.210:5060;transport=tcp>
From: "Jabber Client 1" <sip:sip%3Ajabber.client1@domain.com>;tag=132472~2b8aa2ec-85b4-4b2c-
b662-3d078784a480-27388704
To: <sip:jabber.client2@10.200.1.210>
Max-Forwards: 70
Allow: INVITE,OPTIONS,INFO,BYE,CANCEL,ACK,PRACK,UPDATE,REFER,SUBSCRIBE,NOTIFY
User-Agent: Cisco-CUCM9.1
Expires: 180
Date: Fri, 06 Jun 2014 00:27:20 GMT
Supported: timer,resource-priority,replaces
Min-SE: 1800
Allow-Events: presence
Send-Info: conference,x-cisco-conference
Call-Info: <urn:x-cisco-remotecallinfo>; security= NotAuthenticated; orientation= from; gci=
1-7197; call-instance= 2
Alert-Info: <file://Bellcore-dr1/>
Content-Length: 0
```

The Expressway-C tried to invoke call license.

```
Module="network.http" Level="DEBUG": Message="Request" Method="POST"
URL="http://127.0.0.1:4370/status/call/call/uid/86cc754d-eec2-4202-aa07-ea89c8afc47d";
Ref="0x7fd3780034e0"
Module="network.http" Level="DEBUG": Message="Response" Src-ip="127.0.0.1" Src-port="4370" Dst-
ip="127.0.0.1" Dst-port="32769" Response="200 OK" ResponseTime="0.002091" Ref="0x7fd3780034e0"
Module="developer.licenseanager.service.licensepool" Level="INFO"
CodeLocation="licensepool(818)" Detail="Call license limit reached"license_type="nontraversal"
tokens="2" cluster_token_inuse="0" cluster_token_limit="0"
Module="developer.licenseanager.service.licensepool" Level="INFO"
CodeLocation="licensepool(818)" Detail="Call license limit reached"license_type="traversal"
tokens="2" cluster_token_inuse="0" cluster_token_limit="0"
Module="developer.licenseanager.service.manager" Level="INFO"
CodeLocation="licenseanager(155)" Detail="License not granted" call_id="6355985b-0d26-4a48-
8b24-balac5de38c6" lic_type="nontraversal" tokens=2 licenseanager: Level="INFO" Detail="License
not granted" call_id="6355985b-0d26-4a48-8b24-balac5de38c6" lic_type="nontraversal" tokens=2
UTCTime="2014-06-06 00:27:20,799"
Module="network.http" Level="DEBUG": Message="Response" Src-ip="127.0.0.1" Src-port="9999" Dst-
```

```
ip="127.0.0.1" Dst-port="32516" Response="200 OK" ResponseTime="0.012601" Ref="0x7fd366097b00"
Event="Search Completed" Reason="Service Unavailable" Service="SIP" Src-alias-type="SIP" Src-
alias="sip%3Ajabber.client1@domain.com" Dst-alias-type="SIP" Dst-alias="sip:80d713ba-514d-fc2a-
6b7e-af527f9eb37f@10.100.94.116:58991;transport\=tls" Call-serial-number="86cc754d-eec2-4202-
aa07-ea89c8afc47d" Tag="92f548cb-a8a6-4339-8b3b-814cb85ae25a" Detail="found:false,
searchtype:INVITE, Info:No License Available" Level="1" UTCTime="2014-06-06 00:27:20,800"
Event="Call Rejected" Service="SIP" Src-ip="10.200.1.210" Src-port="5060" Src-alias-type="SIP"
Src-alias="sip:sip%3Ajabber.client1@domain.com" Dst-alias-type="SIP" Dst-alias="sip:80d713ba-
514d-fc2a-6b7e-af527f9eb37f@10.100.94.116:58991;transport\=tls" Call-serial-number="86cc754d-
eec2-4202-aa07-ea89c8afc47d" Tag="92f548cb-a8a6-4339-8b3b-814cb85ae25a" Detail="Service
Unavailable" Protocol="TCP" Response-code="503" Level="1" UTCTime="2014-06-06 00:27:20,801"
Module="network.sip" Level="INFO": Action="Sent" Local-ip="10.200.1.220" Local-port="5060"
Dst-ip="10.200.1.210" Dst-port="49071" Detail="Sending Response Code=503, Method=INVITE,
CSeq=101, To=sip:168@10.200.1.210, Call-ID=50f2a980-39110ae8-1fb3-d201c80a@10.200.1.210, From-
Tag=132472~2b8aa2ec-85b4-4b2c-b662-3d078784a480-27388704, To-Tag=111a6c358c828b39, Msg-
Hash=17852441825048296421"
```

As there is no license available, the Expressway-C replies with the error "Service unavailable"

```
2014-06-06T10:27:20+10:00 kcec tvcs: UTCTime="2014-06-06 00:27:20,801" Module="network.sip"
Level="DEBUG": Action="Sent" Local-ip="10.200.1.220" Local-port="5060" Dst-
ip="10.200.1.210" Dst-port="49071" Msg-Hash="17852441825048296421"
SIPMSG:
|SIP/2.0 503 Service Unavailable
Via: SIP/2.0/TCP 10.200.1.210:5060;branch=z9hG4bK4ca27d4986;received=10.200.1.210;ingress-
zone=CEtcp102001210
Call-ID: 50f2a980-39110ae8-1fb3-d201c80a@10.200.1.210
CSeq: 101 INVITE
From: "Jabber Client 1" <sip:sip%3Ajabber.client1@domain.com>;tag=132472~2b8aa2ec-85b4-4b2c-
b662-3d078784a480-27388704
To: <sip:jabber.client2@10.200.1.210>;tag=111a6c358c828b39
Server: TANDBERG/4129 (X8.1.1)
Warning: 399 10.200.1.220:5061 "No License Available"
Content-Length: 0
```

The call fails because it does not find an available license, but a call between two jabber clients registered in the same CUCM via MRA does not require any license in the Expressway-C. This issue happens when the Expressway-C Unified communication traversal zone is pointed to the Expressway-E internal IP address instead to the Expressway-E public IP address.

In single NIC Expressway-E deployment, the Unified Communication Traversal zone must be pointed to the public IP address of the Expressway-E and the firewall between Expressway-E and the Internet must be configured with Network Address Translation (NAT) reflexion to allow communication between Expressway-C and Expressway-E.