

Unified Presence will not work on a Proxy Registered movi Client



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Introduction

This document describes a commonly seen problem with proxy registered clients that will not receive Cisco Unified Presence information.

Problem

When a movi client is proxy registered over the Cisco Telepresence Video Communication Server (VCS) Expressway to the VCS Control Unified Presence, information about other users is not available on this client.

Solution

Default behavior

When Globally Routable User Agent Uniform Resource Identifiers (URIs) (GRUU) mode is the default setting, you can see in the registration process on the VCS Control that both the client and the server announce support for GRUU:

```
|REGISTER sip:domain.com SIP/2.0
Via: SIP/2.0/TLS 10.48.79.123:7001;egress-zone=TraversalZoneEurope;branch=z9hG4bKcff59d8b130b6b8
Via: SIP/2.0/TLS 10.60.193.132:63109;branch=z9hG4bK4c0727d02d38d5db9099ac5cd20214e3.1;received=1
Call-ID: 5dd597732e003035@10.60.193.132
CSeq: 5426 REGISTER
Contact: <sip:eurou6.movi@10.60.193.132:63109;transport=tls>;+sip.instance="<urn:uuid:129a4db3-d
From: <sip:eurou6.movi@domain.com>;tag=39cab584ba0173f4
To: <sip:eurou6.movi@domain.com>
Max-Forwards: 15
Path: <sip:10.48.79.123:7001;transport=tls;lr>
Allow: INVITE,ACK,CANCEL,BYE,INFO,OPTIONS,REFER,NOTIFY
User-Agent: TANDBERG/775 (MCX 4.7.4.17771) - Windows
Expires: 3600
Supported: replaces,timer,gruu
P-Asserted-Identity: <sip:eurou6.movi@domain.com>
X-TAATag: 2264ebb8-9541-11e3-bfeb-000c291377f3
Content-Length: 0
```

```
|SIP/2.0 200 OK
Via: SIP/2.0/TLS 10.48.79.123:7001;egress-zone=TraversalZoneEurope;branch=z9hG4bKcff59d8b130b6b8
Via: SIP/2.0/TLS 10.60.193.132:63109;branch=z9hG4bK4c0727d02d38d5db9099ac5cd20214e3.1;received=1
Call-ID: 5dd597732e003035@10.60.193.132
CSeq: 5426 REGISTER
Contact: <sip:eurou6.movi@10.60.193.132:63109;transport=tls>;+sip.instance="<urn:uuid:129a4db3-d
From: <sip:eurou6.movi@domain.com>;tag=39cab584ba0173f4
To: <sip:eurou6.movi@domain.com>;tag=81990ca7a6c02479
Path: <sip:10.48.79.123:7001;transport=tls;lr>
Server: TANDBERG/4120 (X7.2.2)
Date: Fri, 14 Feb 2014 06:27:53 GMT
Supported: com.tandberg.sdp.extensions.v1,gruu,outbound,path
Content-Length: 0
```

When the client subscribes for Unified Presence event, you can see the contact header contains this ID:
eurou6.movi@domain.com:

```
|SUBSCRIBE sip: SX20@domain.com SIP/2.0
Via: SIP/2.0/TLS 10.48.79.123:7001;egress-zone=TraversalZoneEurope;branch=z9hG4bKcc0a5e2b9377392
Via: SIP/2.0/TLS 10.60.193.132:63109;branch=z9hG4bKb53ba995e30551ea0d8ae654d3fec73e.1;received=1
Call-ID: 04dea85536528f28@10.60.193.132
CSeq: 302 SUBSCRIBE
Contact: <sip:eurou6.movi@domain.com;gr=urn:uuid:129a4db3-da0a-51e2-a052-cb6e99c89e7c>
From: <sip:eurou6.movi@domain.com>;tag=fb0bfaa3afe1724f
To: <sip: SX20@domain.com>
Max-Forwards: 15
Record-Route: <sip:10.48.79.123:7001;transport=tls;lr;apparent=replace;proxy-call-id=2d90b54e-95
Record-Route: <sip:10.48.79.123:7001;transport=tls;lr>
Record-Route: <sip:10.48.79.123:5061;transport=tls;lr>
User-Agent: TANDBERG/775 (MCX 4.7.4.17771) - Windows
Expires: 0
Event: presence
Accept: application/pidf+xml
X-TAATag: 2d90b76a-9541-11e3-961c-000c291377f3
Content-Length: 0
```

When the contact header contain ID, the NOTIFY message is being sent to this ID:
eurou6.movi@domain.com:

```
|NOTIFY sip:eurou6.movi@domain.com;gr=urn:uuid:129a4db3-da0a-51e2-a052-cb6e99c89e7c SIP/2.0
Via: SIP/2.0/TLS 10.48.79.189:5061;egress-zone=TraversalZoneEurope;branch=z9hG4bK03355d2f0bcf721
Via: SIP/2.0/TCP 127.0.0.1:5060;branch=z9hG4bK545d6aa1c303688553aa03ac3b6a80771459184;received=1
Call-ID: 04dea85536528f28@10.60.193.132
CSeq: 1785078080 NOTIFY
Contact: <sip: SX20@domain.com>
From: <sip: SX20@domain.com>;tag=e3e87b37c7461c82
To: <sip:eurou6.movi@domain.com>;tag=fb0bfaa3afe1724f
Max-Forwards: 70
Route: <sip:10.48.79.123:7001;transport=tls;lr>
Route: <sip:10.48.79.123:5061;transport=tls;lr>
Record-Route: <sip:10.48.79.189:5061;transport=tls;lr;apparent=replace;proxy-call-id=2da61b46-95
Record-Route: <sip:10.48.79.189:5061;transport=tls;lr>
Record-Route: <sip:127.0.0.1:5060;transport=tcp;lr>
User-Agent: TANDBERG/4120 (X7.2.2)
Event: presence
P-Asserted-Identity: <sip: SX20@domain.com>
Subscription-State: terminated;reason=timeout
X-TAATag: 2da61d3a-9541-11e3-a660-000c29f5e10e
Content-Type: application/pidf+xml
Content-Length: 375
```

The VCS Control sends this NOTIFY message to the VCS Expressway; unless a Domain Name Server (DNS) zone is configured on the VCS Expressway to replace the domain with an IP address, the message will not reach the client.

When there is a DNS zone configured that resolves the domain, this NOTIFY message is sent back to the VCS Control which in turn sends it back to the VCS Expressway and finally to the client that results in a lot of overhead.

Solution

The solution to the VCS Control Unified Presence problem is to disable GRUU on the VCS Control, this should be done on all peers in the cluster using this command:

```
xConfiguration SIP GRUU Mode: Off
```

for more information about Globally Routable User Agent URIs refer to RFC 5627.

Behavior with GRUU Mode Turned Off

When GRUU is turned off, you can see the difference in the registration procedure in which the server does not add support for GRUU:

```
|REGISTER sip:domain.com SIP/2.0
Via: SIP/2.0/TLS 10.48.79.123:7001;egress-zone=TraversalZoneEurope;branch=z9hG4bK1035cf5a9c05e5b
Via: SIP/2.0/TLS 10.60.193.132:63169;branch=z9hG4bK4bd63a52fb552ded37b2ble784741a14.1;received=1
Call-ID: 5f7fd6a4c9849718@10.60.193.132
CSeq: 16146 REGISTER
Contact: <sip:eurou6.movi@10.60.193.132:63169;transport=tls>;+sip.instance="<urn:uuid:129a4db3-d
From: <sip:eurou6.movi@domain.com>;tag=0d0259e6c42c6f27
To: <sip:eurou6.movi@domain.com>
Max-Forwards: 15
Path: <sip:10.48.79.123:7001;transport=tls;lr>
Allow: INVITE,ACK,CANCEL,BYE,INFO,OPTIONS,REFER,NOTIFY
User-Agent: TANDBERG/775 (MCX 4.7.4.17771) - Windows
Expires: 3600
Supported: replaces,timer,gruu
P-Asserted-Identity: <sip:eurou6.movi@domain.com>
X-TAATag: ace413cc-9541-11e3-bd96-000c291377f3
Content-Length: 0
```

```
|SIP/2.0 200 OK
Via: SIP/2.0/TLS 10.48.79.123:7001;egress-zone=TraversalZoneEurope;branch=z9hG4bK1035cf5a9c05e5b
Via: SIP/2.0/TLS 10.60.193.132:63169;branch=z9hG4bK4bd63a52fb552ded37b2ble784741a14.1;received=1
Call-ID: 5f7fd6a4c9849718@10.60.193.132
CSeq: 16146 REGISTER
Contact: <sip:eurou6.movi@10.60.193.132:63169;transport=tls>;+sip.instance="<urn:uuid:129a4db3-d
From: <sip:eurou6.movi@domain.com>;tag=0d0259e6c42c6f27
To: <sip:eurou6.movi@domain.com>;tag=316baeee8b1593d6
Path: <sip:10.48.79.123:7001;transport=tls;lr>
Server: TANDBERG/4120 (X7.2.2)
Date: Fri, 14 Feb 2014 06:31:45 GMT
Supported: com.tandberg.sdp.extensions.v1,outbound,path
Content-Length: 0
```

When the server does not add support for GRUU, the client adds an IP address instead of the domain name in the contact header of the SUBSCRIBE message:

```
|SUBSCRIBE sip:SX20@domain.com SIP/2.0
Via: SIP/2.0/TLS 10.48.79.123:7001;egress-zone=TraversalZoneEurope;branch=z9hG4bK9ca3687b586c686
Via: SIP/2.0/TLS 10.60.193.132:63169;branch=z9hG4bKccf82657f3d91fa14dceb99131058288.1;received=1
Call-ID: 2d07d978f9c3085e@10.60.193.132
```

CSeq: 302 SUBSCRIBE
Contact: <sip:eurou6.movi@10.60.193.132:63169;transport=tls>
From: <sip:eurou6.movi@domain.com>;tag=d0fe85d523356867
To: <sip:SX20@domain.com>
Max-Forwards: 15
Record-Route: <sip:10.48.79.123:7001;transport=tls;lr;apparent=replace;proxy-call-id=b255215c-9541-11e3-b71e-000c291377f3>
Record-Route: <sip:10.48.79.123:7001;transport=tls;lr>
Record-Route: <sip:10.48.79.123:5061;transport=tls;lr>
User-Agent: TANDBERG/775 (MCX 4.7.4.17771) - Windows
Expires: 0
Event: presence
Accept: application/pidf+xml
X-TAATag: b2552634-9541-11e3-b71e-000c291377f3
Content-Length: 0

When VCS Control sends the NOTIFY message with the presence information, it will send it to this ID:
eurou6.movi@10.60.193.132:63169:

```
|NOTIFY sip:eurou6.movi@10.60.193.132:63169;transport=tls SIP/2.0  
Via: SIP/2.0/TCP 127.0.0.1:5060;branch=z9hG4bK80e65cd5e713a81931d7251be57589561459281;rport  
Call-ID: 2d07d978f9c3085e@10.60.193.132  
CSeq: 1785078080 NOTIFY  
Contact: <sip:SX20@domain.com>  
From: <sip:SX20@domain.com>;tag=d2fcdfa37284aabf  
To: <sip:eurou6.movi@domain.com>;tag=d0fe85d523356867  
Route: <sip:127.0.0.1:5060;transport=tcp;lr>  
Route: <sip:10.48.79.189:5061;transport=tls;lr>  
Route: <sip:10.48.79.123:7001;transport=tls;lr;apparent=replace;proxy-call-id=b255215c-9541-11e3-b71e-000c291377f3>  
Route: <sip:10.48.79.123:7001;transport=tls;lr>  
Route: <sip:10.48.79.123:5061;transport=tls;lr>  
User-Agent: TANDBERG/4120 (X7.2.2)  
Event: presence  
P-Asserted-Identity: <sip:SX20@domain.com>  
Subscription-State: terminated;reason=timeout  
Content-Type: application/pidf+xml  
Content-Length: 375
```

This sample output shows that the NOTIFY message is sent to the client via the VCS Expressway.

Related Information

- RFC 5627 – Obtaining and Using Globally Routable User Agent (UA) URIs (GRUU) in the Session Initiation Protocol (SIP)