

Shared Call Appearance: SPA IP Phones & Broadsoft

This Application Note describes how to configure Shared Call Appearance feature (SCA) on Cisco SPA phones that are registered to Broadsoft's Broadworks environment.

Scenario:

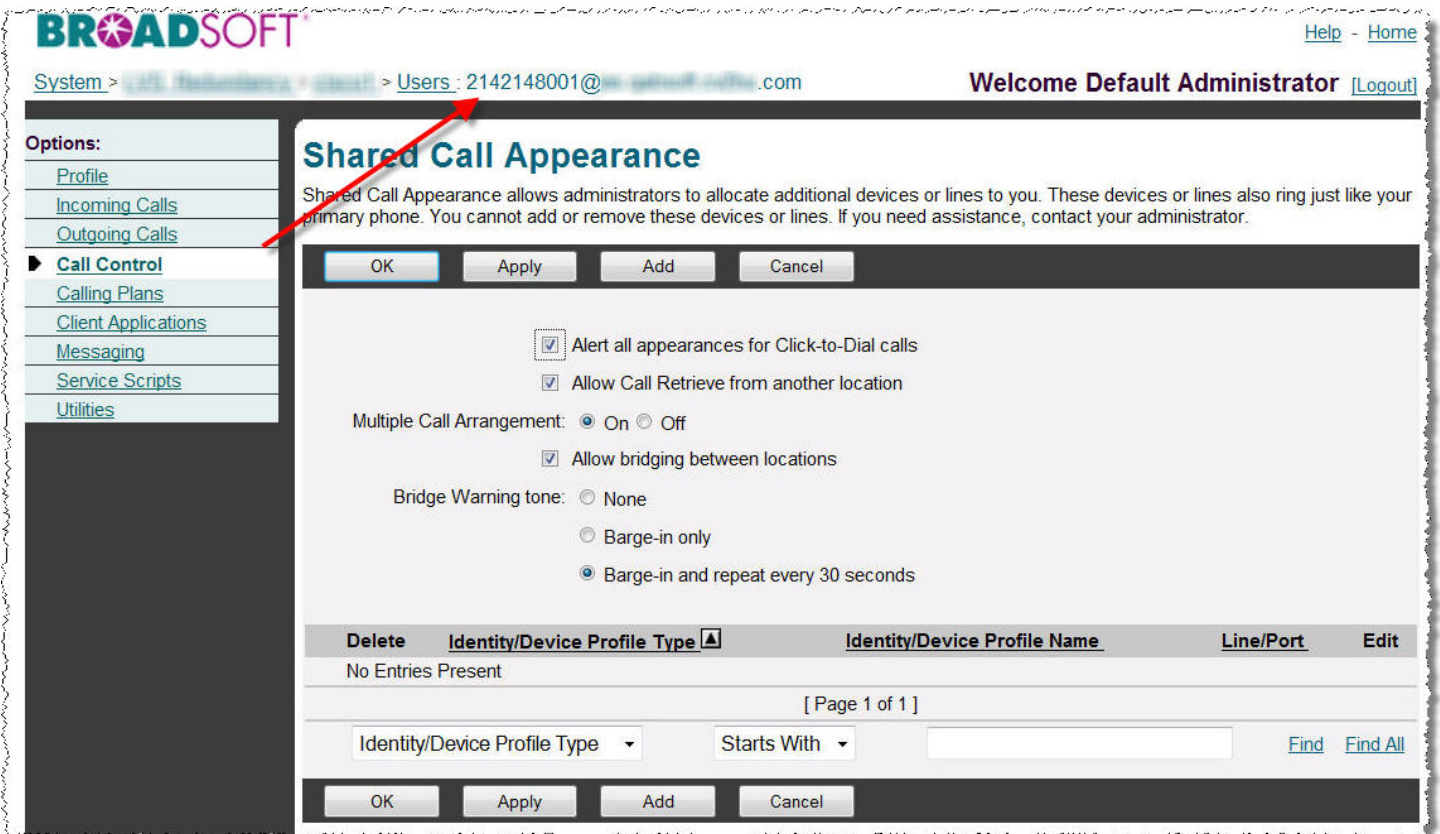
- Phone A == 2142148001 on ext1
- Phone B == 2142148003 on ext1

Configuration Goal

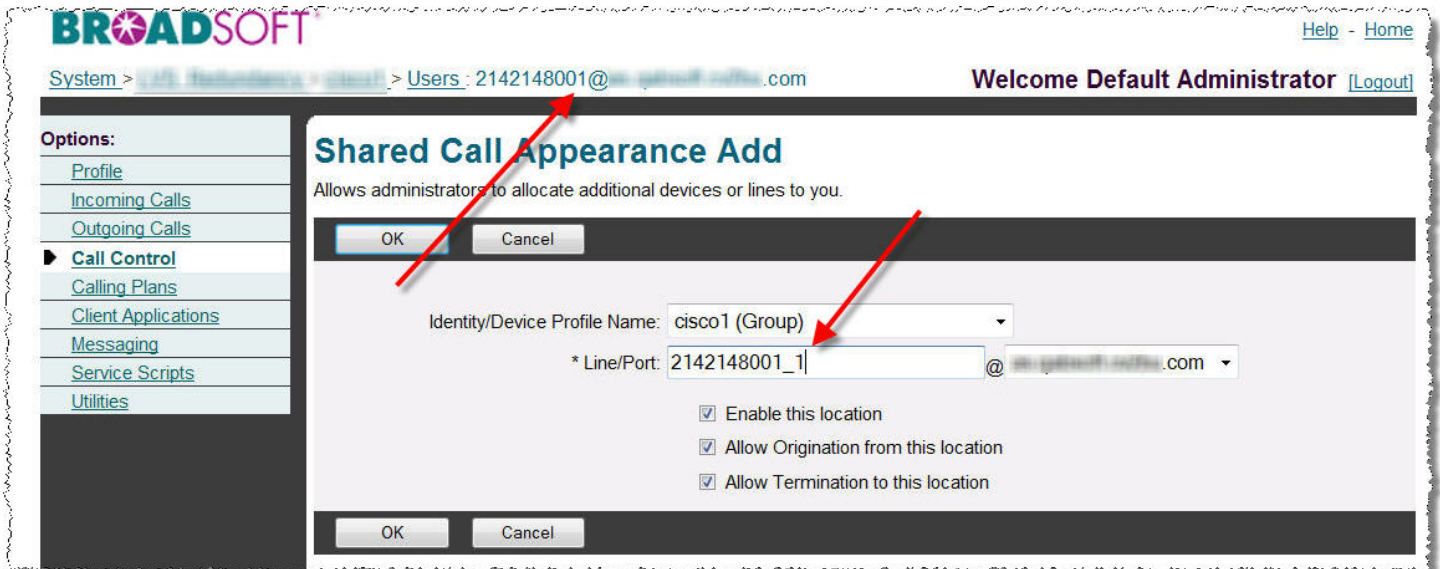
- Share 2142148001 on phone B ext2 [note: it's not a best practice to share a user's primary extension]

More detail is in the Broadsoft PartnerConfigGuide_Cisco_500_Series document.

1. Configure the line to be shared [2142148001] in Broadworks as follows:



2. Click Add



System > > Users : 2142148001@ .com Welcome Default Administrator [Logout]

BROADSOFT

Options:

- Profile
- Incoming Calls
- Outgoing Calls
- Call Control
- Calling Plans
- Client Applications
- Messaging
- Service Scripts
- Utilities

Shared Call Appearance Add

Allows administrators to allocate additional devices or lines to you.

OK Cancel

Identity/Device Profile Name: cisco1 (Group)

* Line/Port: 2142148001_1 @ .com

Enable this location

Allow Origination from this location

Allow Termination to this location

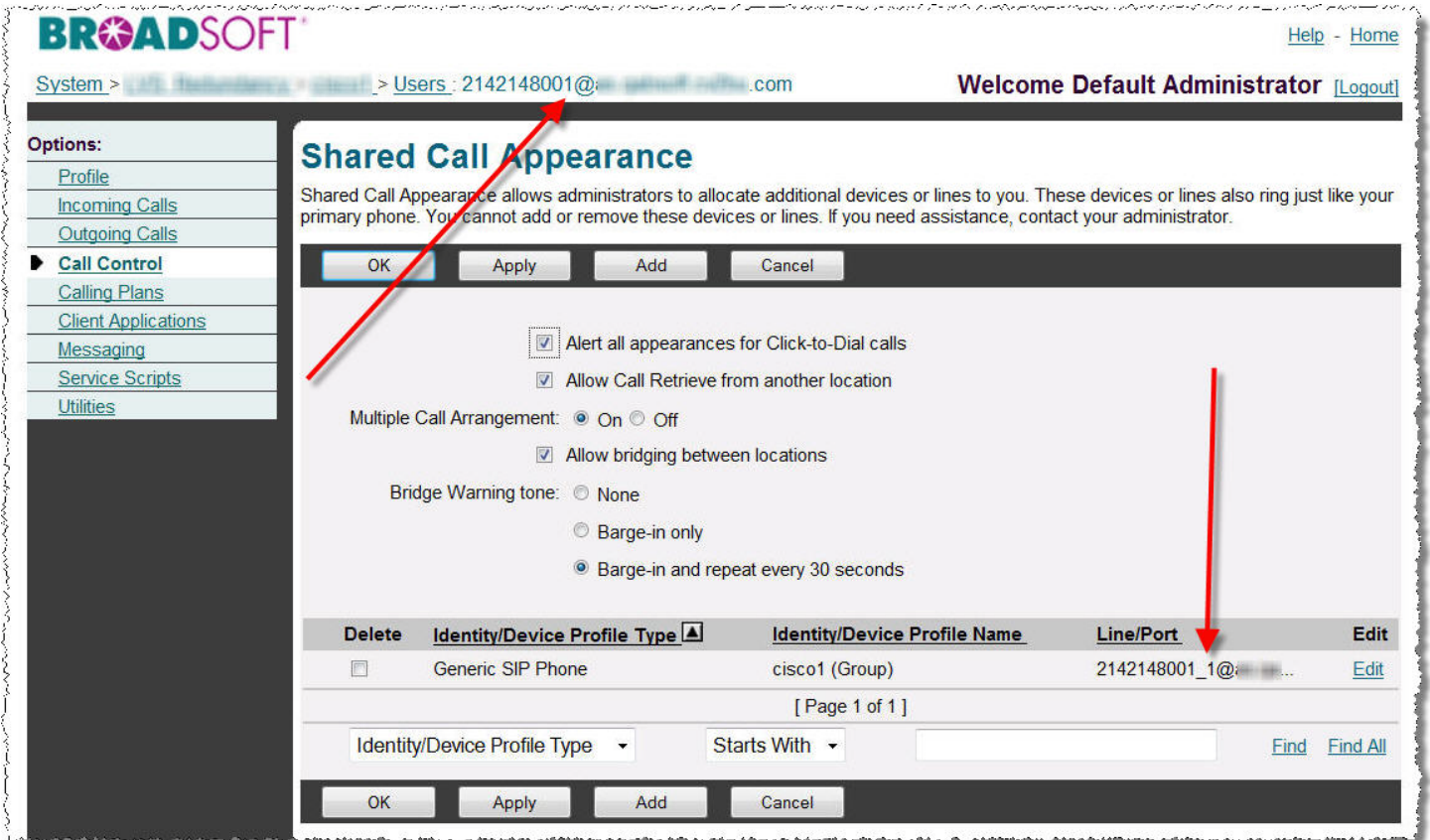
OK Cancel

3. Type in the number to be shared and add an underscore¹, example: 2142148001_1

NOTE: the 1 is not optional, you must use 1

4. Click OK

The updated Shared Call Appearance information will display.



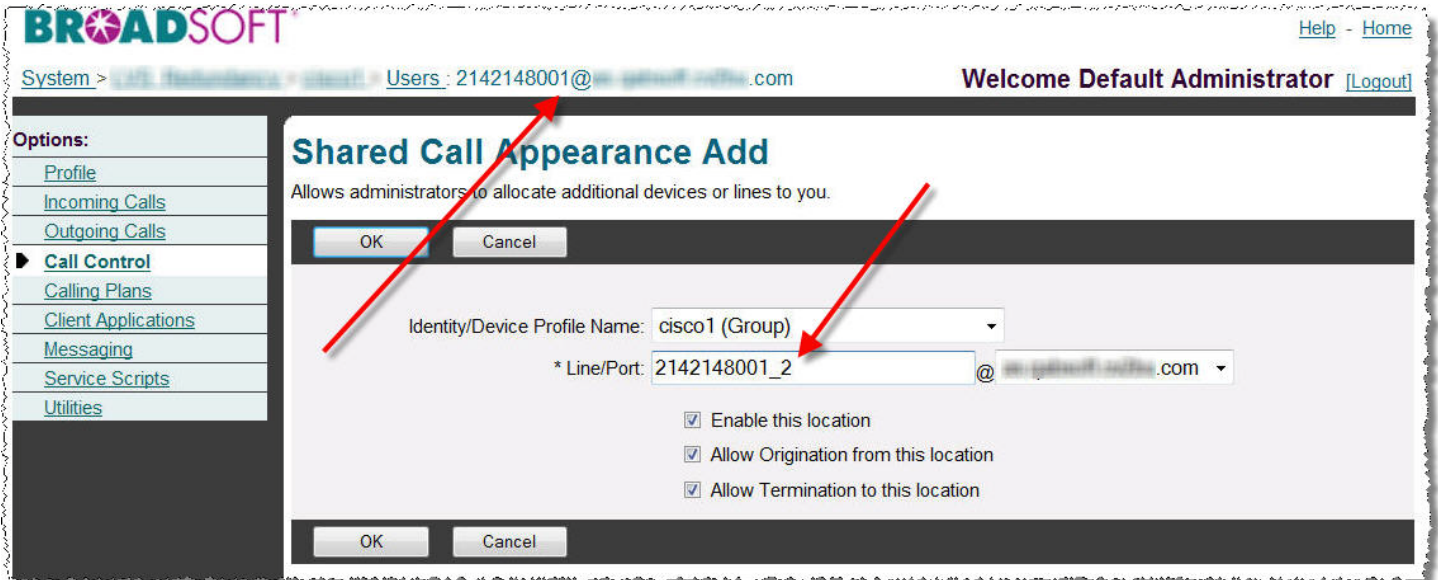
The screenshot shows the Broadsoft administration interface for Shared Call Appearance. The page title is "Shared Call Appearance" and it includes a description: "Shared Call Appearance allows administrators to allocate additional devices or lines to you. These devices or lines also ring just like your primary phone. You cannot add or remove these devices or lines. If you need assistance, contact your administrator." The configuration options include checkboxes for "Alert all appearances for Click-to-Dial calls" and "Allow Call Retrieve from another location", a radio button for "Multiple Call Arrangement" (set to "On"), and checkboxes for "Allow bridging between locations" and "Bridge Warning tone" (set to "Barge-in and repeat every 30 seconds"). Below the options is a table with one entry:

Delete	Identity/Device Profile Type	Identity/Device Profile Name	Line/Port	Edit
<input type="checkbox"/>	Generic SIP Phone	cisco1 (Group)	2142148001_1@...	Edit

At the bottom of the table, there are search filters for "Identity/Device Profile Type" and "Starts With", and "Find" and "Find All" buttons. The "Add" button in the top navigation bar is highlighted with a red arrow.

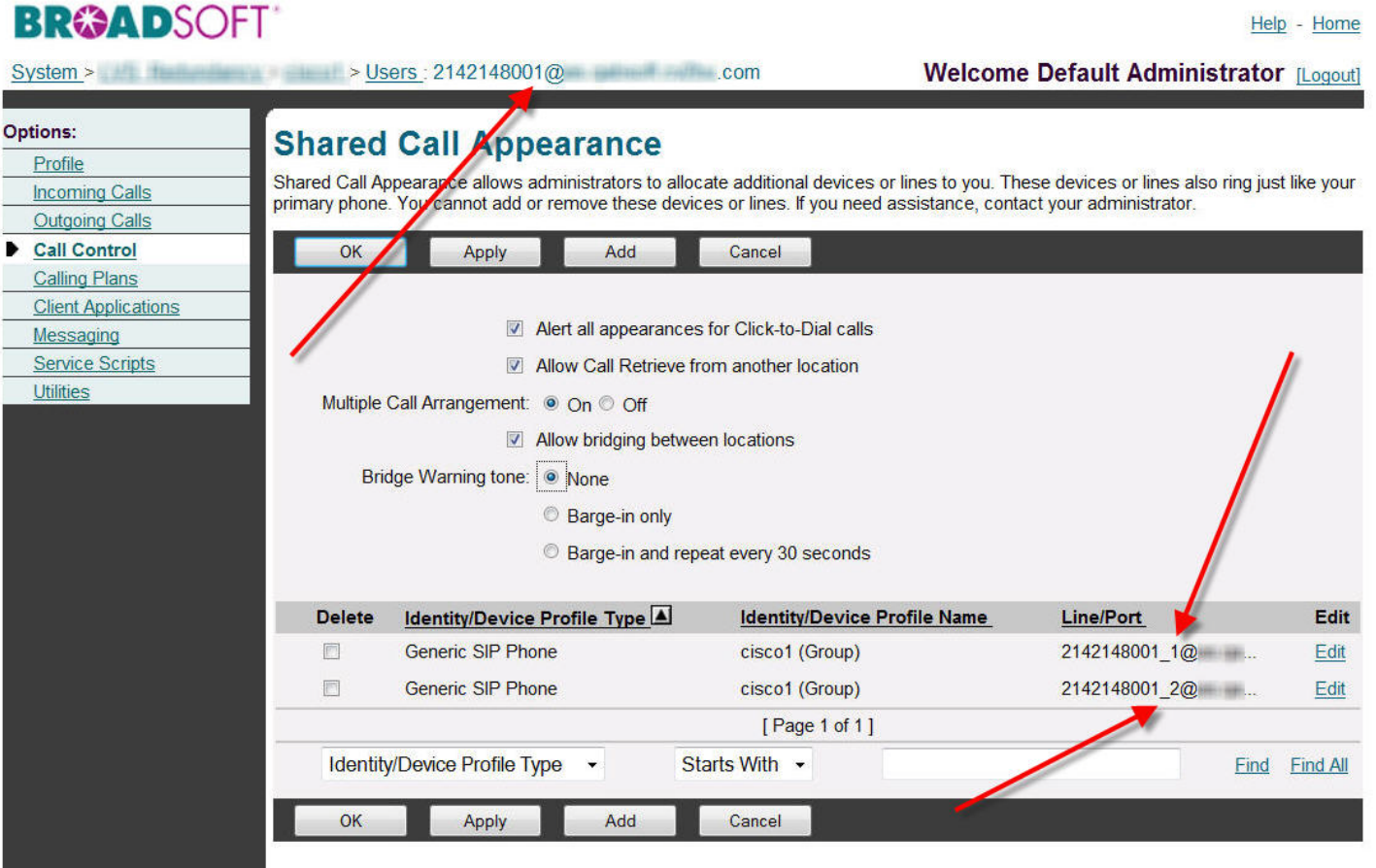
5. Click Add

6. Type in the number to be shared and add an underscore², example: 2142148001_2



7. Click OK

8. The updated Shared Call Appearance information will display.



BROADSOFT [Help](#) - [Home](#)

System > [Users](#) : 2142148001@... .com Welcome Default Administrator [Logout](#)

Options:

- [Profile](#)
- [Incoming Calls](#)
- [Outgoing Calls](#)
- ▶ **Call Control**
- [Calling Plans](#)
- [Client Applications](#)
- [Messaging](#)
- [Service Scripts](#)
- [Utilities](#)

Shared Call Appearance

Shared Call Appearance allows administrators to allocate additional devices or lines to you. These devices or lines also ring just like your primary phone. You cannot add or remove these devices or lines. If you need assistance, contact your administrator.

Alert all appearances for Click-to-Dial calls
 Allow Call Retrieve from another location
 Multiple Call Arrangement: On Off
 Allow bridging between locations
 Bridge Warning tone: None
 Barge-in only
 Barge-in and repeat every 30 seconds

Delete	Identity/Device Profile Type ▲	Identity/Device Profile Name	Line/Port	Edit
<input type="checkbox"/>	Generic SIP Phone	cisco1 (Group)	2142148001_1@...	Edit
<input type="checkbox"/>	Generic SIP Phone	cisco1 (Group)	2142148001_2@...	Edit

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Identity/Device Profile Type ▼ Starts With ▼ [Find](#) [Find All](#)

9. Click OK

This completes the Broadsoft configuration process.

10. Configure as follows, **phoneA**, which is going to share its line 1:

Phone tab > Line Key 1 >
Extension: **1**
Share Call Appearance: **shared**
Ext 1 tab > Share Line Appearance >
Share Ext: **shared**
Shared User ID: **2142148001_1**
Ext 1 tab > Subscriber Information >
User ID: **2142148001_1**
Password: <same as password set for 2142148001>
User Auth ID: **yes**
Auth ID: <auth password>

11. Submit All Changes.

Note:

- The phone will reboot and line 1's LED should be green. If not, troubleshoot registration before continuing.
- In addition, line 1's icon on the phone's display will have changed to represent that the line is shared.

12. Configure as follows, **phoneB**, which is going to be sharing phoneA's line:

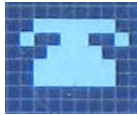







Phone tab > Line Key 2 >
Extension: **2**
Share Call Appearance: **shared**
Ext 2 tab > Subscriber Information >
Proxy: <same proxy server as configured for phoneA>
Register: **yes**
User ID: **2142148001_2**
Password: <same as password set for 2142148001>
User Auth ID: **yes**
Auth ID: <auth password>

13. Submit All Changes.

Note:

- The phone will reboot and line 2's LED should be green. If not, troubleshoot registration as follows:
 - i. Carefully review step 10
 - ii. If the LED is flashing orange, this indicates that the phone has not received a NOTIFY from the Application Server. You can either wait until the next registration, or reboot the phone.
- Once line 2's LED is green, its icon on the phone's display will have changed to represent that the line is shared.

SPA Phone Display Icons

Icon		Status
SPA525G	SPA50xG / SPA303	
n/a		On hook [Status Bar]
		Registered private line
		Registered shared line
 Or 		Unregistered line

Call Flow Overview:

The Broadworks Application Server (AS) sends SIP NOTIFY messages to the phoneB in this scenario to enable the phone to correctly display appropriate line information.

Receiving a Call

When phoneA **receives a call**, the Broadworks (AS) sends SIP NOTIFY. You can see the state changes in the:

SIP > Message Header > Call-Info section: **appearance-state=progressing appearance-uri=...**

Following is an example:

```
Frame 416: 777 bytes on wire (6216 bits), 777 bytes captured (6216 bits)
Ethernet II, Src: Cisco_eb:3d:4d (00:1e:4a:eb:3d:4d), Dst: Cisco_d8:cf:99 (00:25:84:d8:cf:99)
Internet Protocol, Src: 10.10.11.11 (10.10.11.11), Dst: 192.168.2.4 (192.168.2.4)
User Datagram Protocol, Src Port: sip (5060), Dst Port: sip (5060)
Session Initiation Protocol
    Request-Line: NOTIFY sip:2142148001_1@192.168.2.4:5060 SIP/2.0
    Message Header
        Via:SIP/2.0/UDP 10.10.11.11;branch=z9hG4bKBroadWorks.2uhv-24.153.145.212V1153-0-240707581-1382825122-1279067191735
        Transport: UDP
        Sent-by Address: 10.10.11.11
        Branch: z9hG4bKBroadWorks.2uhv-24.153.145.212V1153-0-240707581-1382825122-1279067191735
        From:"BS8001"<sip:2142148001_1@myServer.com>;tag=1382825122-1279067191735
        To:"BS8001"<sip:2142148001_1@myServer.com>;tag=c68f4cceb72a8f7
        Call-ID:a9612eda-7054e5b@192.168.2.4
        CSeq:240707581 NOTIFY
        Contact:<sip:myServer.com>
        Call-Info:<sip:10.10.11.11>;appearance-state=progressing;appearance-uri="\Patrick2 Born\<sip:8002@myServer.com;user=phone>" ;appearance-index=1,<sip:10.10.11.11>;appearance-state=idle;appearance-index=*
        Event:call-info
        Subscription-State:active;expires=3570
        Max-Forwards: 10
        Content-Length:0
```


Busy on a Call

When phoneA is busy on a call, the Broadworks (AS) sends SIP NOTIFY. You can see the state changes in the:

SIP > Message Header > Call-Info section: **appearance-state=progressing appearance-uri=...**

Following is an example:

Frame 454: 772 bytes on wire (6176 bits), 772 bytes captured (6176 bits)

Ethernet II, Src: Cisco_eb:3d:4d (00:1e:4a:eb:3d:4d), Dst: Cisco_d8:cf:99 (00:25:84:d8:cf:99)

Internet Protocol, Src: 10.10.11.11 (10.10.11.11), Dst: 192.168.2.4 (192.168.2.4)

User Datagram Protocol, Src Port: sip (5060), Dst Port: sip (5060)

Session Initiation Protocol

Request-Line: NOTIFY sip:2142148001_1@192.168.2.4:5060 SIP/2.0

Message Header

Via:SIP/2.0/UDP 10.10.11.11;branch=z9hG4bKBroadWorks.2uhv-24.153.145.212V1153-0-240710482-1382825122-1279067191735

Transport: UDP

Sent-by Address: 10.10.11.11

Branch: z9hG4bKBroadWorks.2uhv-24.153.145.212V1153-0-240710482-1382825122-1279067191735

From: "BS8001" <sip:2142148001_1@myServer.com>;tag=1382825122-1279067191735

To: "BS8001" <sip:2142148001_1@myServer.com>;tag=c68f4cceb72a8f7

Call-ID:a9612eda-7054e5b@192.168.2.4

CSeq:240710482 NOTIFY

Contact:<sip:myServer.com>

Call-Info:<sip:10.10.11.11>;**appearance-state=active**;appearance-uri="\Patrick2 Born" <sip:8002@myServer.com;user=phone>;appearance-index=1,<sip:10.10.11.11>;appearance-state=idle;appearance-index=*

Event:call-info

Subscription-State:active;expires=3567

Max-Forwards: 10

Content-Length:0

Call on Hold

When phoneA places a call on hold, the Broadworks (AS) sends SIP NOTIFY. You can see the state changes in the:

SIP > Message Header > Call-Info section: **appearance-state= held appearance-uri=...**

Following is an example:

Frame 515: 770 bytes on wire (6160 bits), 770 bytes captured (6160 bits)

Ethernet II, Src: Cisco_eb:3d:4d (00:1e:4a:eb:3d:4d), Dst: Cisco_d8:cf:99 (00:25:84:d8:cf:99)

Internet Protocol, Src: 10.10.11.11 (10.10.11.11), Dst: 192.168.2.4 (192.168.2.4)

User Datagram Protocol, Src Port: sip (5060), Dst Port: sip (5060)

Session Initiation Protocol

Request-Line: NOTIFY sip:2142148001_1@192.168.2.4:5060 SIP/2.0

Message Header

Via:SIP/2.0/UDP 10.10.11.11;branch=z9hG4bKBroadWorks.2uhv-24.153.145.212V1153-0-240714881-1382825122-1279067191735

Transport: UDP

Sent-by Address: 10.10.11.11

Branch: z9hG4bKBroadWorks.2uhv-24.153.145.212V1153-0-240714881-1382825122-1279067191735

From: "BS8001" <sip:2142148001_1@myServer.com>;tag=1382825122-1279067191735

To: "BS8001" <sip:2142148001_1@myServer.com>;tag=c68f4cceb72a8f7

Call-ID:a9612eda-7054e5b@192.168.2.4

CSeq:240714881 NOTIFY

Contact:<sip:myServer.com>

Call-Info:<sip:10.10.11.11>;**appearance-state=held**;appearance-uri="\Patrick2 Born" <sip:8002@myServer.com;user=phone>;appearance-index=1,<sip:10.10.11.11>;appearance-state=idle;appearance-index=*

Event:call-info

Subscription-State:active;expires=3563

Max-Forwards: 10

Content-Length:0

Call Over

When phoneA ends the call, the Broadworks (AS) sends SIP NOTIFY. You can see the state changes in the:

SIP > Message Header > Call-Info section: **appearance-state=idle;appearance-index=***

Following is an example:

Frame 601: 631 bytes on wire (5048 bits), 631 bytes captured (5048 bits)

Ethernet II, Src: Cisco_eb:3d:4d (00:1e:4a:eb:3d:4d), Dst: Cisco_d8:cf:99 (00:25:84:d8:cf:99)

Internet Protocol, Src: 10.10.11.11 (10.10.11.11), Dst: 192.168.2.4 (192.168.2.4)

User Datagram Protocol, Src Port: sip (5060), Dst Port: sip (5060)

Session Initiation Protocol

Request-Line: NOTIFY sip:2142148001_1@192.168.2.4:5060 SIP/2.0

Message Header

Via:SIP/2.0/UDP 10.10.11.11;branch=z9hG4bKBroadWorks.2uhv-24.153.145.212V1153-0-240720591-1382825122-1279067191735

Transport: UDP

Sent-by Address: 10.10.11.11

Branch: z9hG4bKBroadWorks.2uhv-24.153.145.212V1153-0-240720591-1382825122-1279067191735

From: "BS8001" <sip:2142148001_1@myServer.com>;tag=1382825122-1279067191735

To: "BS8001" <sip:2142148001_1@myServer.com>;tag=c68f4cceb72a8f7

Call-ID:a9612eda-7054e5b@192.168.2.4

CSeq:240720591 NOTIFY

Contact:<sip:myServer.com>

Call-Info:<sip:10.10.11.11>;**appearance-state=idle;appearance-index=***

Event:call-info

Subscription-State:active;expires=3557

Max-Forwards: 10

Content-Length:0

<end>