

## CUCM SIP Trunks – Intersite SIP Trunk using CUBE: HQ & Site B

« SIP Gateway (/workbook/view/ccie-collaboration/task/sip-gateway-MzAzMA%3D%3D) | Codec Negotiation (/workbook/view/ccie-collaboration/task/codec-negotiation-MzAzMg%3D%3D) »

Last updated: November 13, 2017

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### Tasks

- Configure R2 as Cisco Unified Border Element interconnecting HQ & Site B CUCM clusters using SIP protocol and source its traffic using the local voice vlan interface.
- All 4 digit inter-site calls between HQ & Site B must go through R2, which must terminate media traffic and signaling. Make sure iLBC codec is used on R2 for all inter-site calls between HQ & SiteB.
- Make sure VAD is disabled.

### Configuration: [Click to collapse](#)

#### Site B – R2

```
voice service voip
  no ip address trusted authenticate
  allow-connections sip to sip
  allow-connections h323 to h323
  allow-connections h323 to sip
  allow-connections sip to h323
!
sip
  bind control source-interface Vlan302
  bind media source-interface Vlan302 !
!
dial-peer voice 2300 voip
  incoming called-number 3...$
  session protocol sipv2
  codec iLBC
  no vad
!
dial-peer voice 2301 voip
  destination-pattern 3...$
  session protocol sipv2
  session target ipv4:11.100.65.11
  codec iLBC
  no vad
!
dial-peer voice 3200 voip
  destination-pattern 2...$
  session protocol sipv2
  session target ipv4:11.100.64.12
  codec iLBC
  no vad
!
dial-peer voice 3201 voip
  preference 1
  destination-pattern 2...$
  session protocol sipv2
  session target ipv4:11.100.64.11
  codec iLBC
  no vad
!
dial-peer voice 3202 voip
  incoming called-number 2...$
  session protocol sipv2
  codec iLBC
  no vad
```

## HQ – Publisher

Device > Trunk

Add New SIP Trunk

### Trunk Configuration

Save Delete Reset Add New

**Status**  
Status: Ready

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**Device Information**

|                     |               |
|---------------------|---------------|
| Product:            | SIP Trunk     |
| Device Protocol:    | SIP           |
| Trunk Service Type: | None(Default) |
| Device Name*:       | R2-Cube       |
| Description:        |               |
| Device Pool*:       | Default       |

---

**SIP Information**

Destination Address is an SRV

| Destination Address | Destination Address IPv6 | Destination Port |
|---------------------|--------------------------|------------------|
| 1* 11.102.65.254    |                          | 5060             |

MTP Preferred Originating Codec\*: 711ulaw

BLF Presence Group\*: Standard Presence group

SIP Trunk Security Profile\*: Non Secure SIP Trunk Profile

Rerouting Calling Search Space: < None >

Out-Of-Dialog Refer Calling Search Space: < None >

SUBSCRIBE Calling Search Space: < None >

SIP Profile\*: Standard SIP Profile

Call Routing > Route/Hunt > Route Pattern

### Route Pattern Configuration

Save Delete Copy Add New

**Status**  
Status: Ready

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**Pattern Definition**

|  |  |
|--|--|
| Route Pattern*:  | 3XXX   |
| Route Partition:   | < None >   |
| Description:   |  |
| Numbering Plan:  | -- Not Selected --   |
| Route Filter:  | < None >   |
| MLPP Precedence*:  | Default  |
| <input type="checkbox"/> Apply Call Blocking Percentage: |  |
| Resource Priority Namespace Network Domain:              | < None >   |
| Route Class*:  | Default  |
| Gateway/Route List*:                                     | R2-Cube <a href="#">(Edit)</a>   |
| Route Option:  | <input checked="" type="radio"/> Route this pattern<br><input type="radio"/> Block this pattern No Error |

Site B – Publisher

Device > Trunk  
Add New SIP Trunk

### Trunk Configuration

Save Delete Reset Add New

**Status**  
Status: Ready

---

**Device Information**

|                     |               |
|---------------------|---------------|
| Product:            | SIP Trunk     |
| Device Protocol:    | SIP           |
| Trunk Service Type: | None(Default) |
| Device Name*:       | R2-Cube       |
| Description:        |               |
| Device Pool*:       | Default       |

**SIP Information**

**Destination**

Destination Address is an SRV

| Destination Address | Destination Address IPv6 | Destination Port |
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SUBSCRIBE Calling Search Space < None >

SIP Profile\* Standard SIP Profile

Call Routing > Route/Hunt > Route Pattern

**Route Pattern Configuration**

Save Delete Copy Add New

**Status**

Status: Ready

**Pattern Definition**

Route Pattern\* 2XXXX

Route Partition < None >

Description

Numbering Plan -- Not Selected --

Route Filter < None >

MLPP Precedence\* Default

Apply Call Blocking Percentage

Resource Priority Namespace Network Domain < None >

Route Class\* Default

Gateway/Route List\* R2-Cube (Edit)

Route Option

Route this pattern

Block this pattern No Error

## Verification

Make a call from either HQ Phones or Site B Phone and pickup the call.  
Issue **show call active voice brief** on R2 CUBE router to verify the two SIP call legs.

```

Telephony call-legs: 0
SIP call-legs: 2
H323 call-legs: 0
Call agent controlled call-legs: 0
SCCP call-legs: 0
Multicast call-legs: 0
Total call-legs: 2
0 : 7 104998220ms.1 (00:35:24.361 CST Tue Jan 5 2016) +2190 pid:3202 Answer 3001 connected
dur 00:00:15 tx:728/27664 rx:728/27664 dscp:0 media:0 audio tos:0xB8 video tos:0x0
IP 11.102.65.50:32578 SRTP: off rtt:0ms pl:0/0ms lost:0/0/0 delay:0/0/0ms ilbc TextRelay: off Transcoded: No
media inactive detected:n media contrl rcvd:n/a timestamp:n/a
long duration call detected:n long duration call duration:n/a timestamp:n/a
0 : 8 104998220ms.2 (00:35:24.365 CST Tue Jan 5 2016) +2180 pid:3200 Originate 2001 connected
dur 00:00:15 tx:728/27664 rx:728/27664 dscp:0 media:0 audio tos:0xB8 video tos:0x0
IP 11.102.64.45:18566 SRTP: off rtt:0ms pl:0/0ms lost:0/0/0 delay:0/0/0ms ilbc TextRelay: off Transcoded: No
media inactive detected:n media contrl rcvd:n/a timestamp:n/a
long duration call detected:n long duration call duration:n/a timestamp:n/a

Telephony call-legs: 0
SIP call-legs: 2
H323 call-legs: 0
Call agent controlled call-legs: 0
SCCP call-legs: 0
Multicast call-legs: 0
Total call-legs: 2
R2#

```

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