Contents

Introduction

This document describes the behavior of Cisco Unified Border Element (CUBE) when the Session Initiation Protocol (SIP) control and media binding is configured with dialer interface that gets dynamic IP. When there is a dialer interface configured on CUBE that gets IP address dynamically, if the SIP control and media binding is configured with that dialer interface globally, the SIP binding happens with the available physical interface as per the routing. If the SIP control and media binding is configured under dial-peer, then the binding fails.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- How to configure and use Cisco IOS Voice.
- How to configure and use CUBE.
- How to configure dialer interface.

Components Used

The information in this document is based on these software and hardware versions:

- Router Platform CISCO2911/K9

- IOS 15.1.2T

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, make sure that you understand the potential impact of any command.

Related Products

This document can also be used with these hardware and software versions:

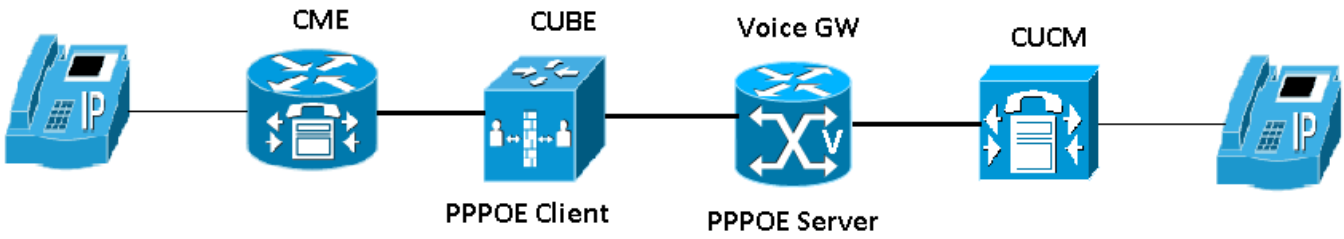
- Integrated Services Routers Generation 1 (ISR G1)
- ISR G2
- IOS 15.1.2T or later

Background Information

Configure dialer interface with dynamic IP on the CUBE that acts as a Cisco Unified Communications Manager Express (CME). IP Phones are registered with the CME and are integrated with Cisco Unified Communications Manager (CUCM) cluster using SIP.

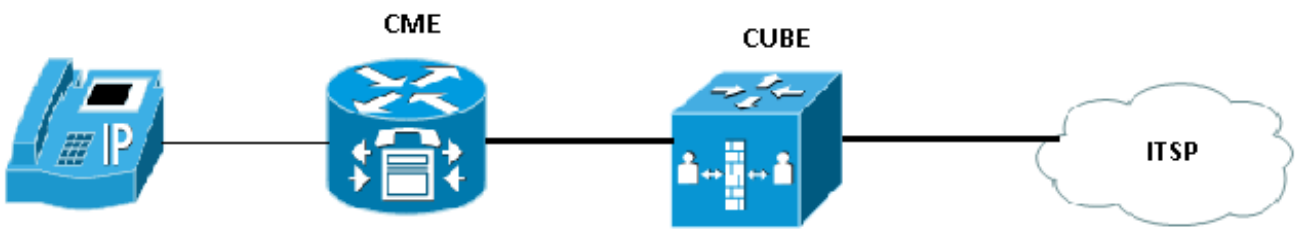
Call Flow to Simulate the Dialer Setup

The CME & the CUBE reside on the same router. In addition to that, voice gateway acts as Point-to-Point Protocol over Ethernet (pppoe) server and CME/CUBE as pppoe client as shown in this image.



Note: The call flow shows how to simulate the dialer interface setup.

The actual call flow is shown in this image.



Configure

On the pppoe server

On the pppoe client

> **Note**: Routing is not configured as both pppoe server & client have a back to back connectivity.

Verify

There is currently no verification procedure available for this configuration.

Troubleshoot

Test Scenarios and Log Analysis

Test Scenario 1. Bind control & media with dialer interface globally

Result: Binding happens with the available physical interface IP as shown.

```
Mar 7 07:41:32.095: //10/BB96E2038018/SIP/Info/verbose/513/resolve_media_ip_address_to_bind:
peer_tag=3
Mar 7 07:41:32.095: //-1/xxxxxxxxxxxx/SIP/Info/info/8192/resolve_ip_address_to_bind:
ip_get_ifaddress IPv4 0.0.0.0 for SIP
Mar 7 07:41:32.095: //10/BB96E2038018/SIP/Error/resolve_media_ip_address_to_bind:
bind interface address not available
Mar 7 07:41:32.095: //-1/xxxxxxxxxxxx/SIP/Info/info/8192/resolve_media_ip_address_to_bind:
ip_best_local_address 10.106.124.61 for SIP
Mar 7 07:41:32.095: //-1/xxxxxxxxxxxx/SIP/Info/info/8192/resolve_media_ip_address_to_bind:
return addr 10.106.124.61
Mar 7 07:41:32.095: //10/BB96E2038018/SIP/Media/sipSPISetMediaSrcAddr: Media src addr for stream
1 = 10.106.124.61
```

Test Scenario 2. Bind control & media at dial-peer level

```
Mar 7 07:41:32.095: //10/BB96E2038018/SIP/Info/verbose/513/resolve_media_ip_address_to_bind:
peer_tag=3
Mar 7 07:41:32.095: //-1/xxxxxxxxxxxx/SIP/Info/info/8192/resolve_ip_address_to_bind:
ip_get_ifaddress IPv4 0.0.0.0 for SIP
Mar 7 07:41:32.095: //10/BB96E2038018/SIP/Error/resolve_media_ip_address_to_bind:
bind interface address not available
Mar 7 07:41:32.095: //-1/xxxxxxxxxxxx/SIP/Info/info/8192/resolve_media_ip_address_to_bind:
ip_best_local_address 10.106.124.61 for SIP
Mar 7 07:41:32.095: //-1/xxxxxxxxxxxx/SIP/Info/info/8192/resolve_media_ip_address_to_bind:
return addr 10.106.124.61
Mar 7 07:41:32.095: //10/BB96E2038018/SIP/Media/sipSPISetMediaSrcAddr: Media src addr for stream
1 = 10.106.124.61
```

Result: The binding fails resulting in call failure as shown.

```
Mar 7 10:28:46.406: //-1/xxxxxxxxxxxx/SIP/Info/info/8192/resolve_ip_address_to_bind:
ip_get_ifaddress IPv4 0.0.0.0 for SIP
```

```
Mar 7 10:28:46.406: //69/188C458A8068/SIP/Error/resolve_media_ip_address_to_bind:
bind interface address not available
Mar 7 10:28:46.406: //69/188C458A8068/SIP/Error/resolve_media_ip_address_to_bind:
Invalid dialpeer bind media config
Mar 7 10:28:46.406: //69/188C458A8068/SIP/Error/sipSPICreateOutboundStreams:
Failed to get source addres for IPv4 stream
Mar 7 10:28:46.406: //69/188C458A8068/SIP/Info/critical/1/sipSPIOutgoingCallSDP: Failure in
creating outbound streams
Mar 7 10:28:46.406: //69/188C458A8068/SIP/Error/sipSPICreateOutboundSDP:
Error in creating an SDP for the outbound call - Check for supported codecs
Mar 7 10:28:46.406: //69/188C458A8068/SIP/Error/preprocessSetup:
Error during outbound SDP creation
```

Test Scenario 3. Bind only control at the dial-peer level

```
Mar 7 10:28:46.406: //-1/xxxxxxxxxxxx/SIP/Info/info/8192/resolve_ip_address_to_bind:
ip_get_ifaddress IPv4 0.0.0.0 for SIP
Mar 7 10:28:46.406: //69/188C458A8068/SIP/Error/resolve_media_ip_address_to_bind:
bind interface address not available
Mar 7 10:28:46.406: //69/188C458A8068/SIP/Error/resolve_media_ip_address_to_bind:
Invalid dialpeer bind media config
Mar 7 10:28:46.406: //69/188C458A8068/SIP/Error/sipSPICreateOutboundStreams:
Failed to get source addres for IPv4 stream
Mar 7 10:28:46.406: //69/188C458A8068/SIP/Info/critical/1/sipSPIOutgoingCallSDP: Failure in
creating outbound streams
Mar 7 10:28:46.406: //69/188C458A8068/SIP/Error/sipSPICreateOutboundSDP:
Error in creating an SDP for the outbound call - Check for supported codecs
Mar 7 10:28:46.406: //69/188C458A8068/SIP/Error/preprocessSetup:
Error during outbound SDP creation
```

Result: Binding still fails but with a different error message as shown.

```
Mar 7 10:14:08.874: //-1/xxxxxxxxxxxx/SIP/Info/info/8192/resolve_ip_address_to_bind:
ip_get_ifaddress IPv4 0.0.0.0 for SIP
Mar 7 10:14:08.874: //-1/xxxxxxxxxxxx/SIP/Error/resolve_sig_ip_address_to_bind:
Dialpeer bind configured, interface addr failure
Mar 7 10:14:08.874: //51/0D80BDA18043/SIP/Error/sipSPIOutgoingCallSDP:
resolve_sig_ip_address_to_bind failed
Mar 7 10:14:08.874: //-1/xxxxxxxxxxxx/SIP/Media/sipSPIReserveRtpPort: reserved port 16392 for
stream 1
Mar 7 10:14:08.874: //51/0D80BDA18043/SIP/Info/info/1/sipSPIDoBearerCapToCodecMapping: Bearer
capability to Codec Mapping: DISABLED
```

Bug Details

A bug # CSCun85947 has been reported for this behaviour and has been fixed in below mentioned IOS versions.

15.3(3)M2.4
15.3(3)M3
15.3(3)S2.9
15.3(3)S3
15.4(2.1.2)S
15.4(2.12.1)PIH25
15.4(2.15)S
15.4(2.9)T
15.4(3)S

Note: The work around for the affected IOS versions is to configure dialer interface with

static IP.

Tip: For further details, refer to Cisco bug ID CSCun85947.