

Connecting Cisco Unified Customer Voice Portal with AudioCodes Session Border Controller

May 01, 2015

Overview

This note summarizes the interoperability support for the AudioCodes Session Border Controller when deployed in place of Cisco Unified Border element (CUBE) for call delivery through SIP trunks to Cisco Unified Customer Voice Portal (CVP) in a Cisco Unified Contact Center Enterprise (CCE) solution.

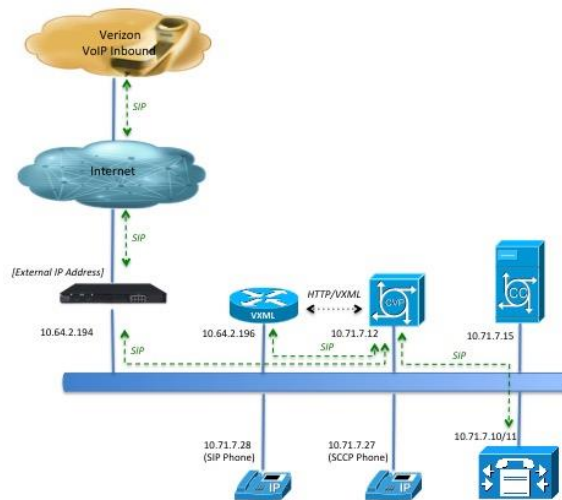
This document serves as guidance for integration. However, it does not guarantee interoperability for every use case. Under the same conditions, this document may also be leveraged with different component versions and different service providers. As in any third-party interoperability, Cisco provides support for its own components, but may not be able to fully assist in end-to-end troubleshooting or provide timely diagnostics and fixes.

Versions of products used in testing

- IOS 15.1.4M5 (VXML Browser)
- Unified Contact Center Enterprise 10.5 (UCCE)
- Unified Customer Voice Portal 10.5 (CVP)
- Unified Communications Manager 10.5 (CUCM)
- Phone firmware 41.9
- AudioCodes Mediant 2600 Session Border Controller, load M2600_SIP_F6.80A.264.014

Network topology

Basic Call Flow



Tested features

- G.711ulaw, G.711alaw and G.729 (no Annex B) codecs
- DNIS and ANI presentation
- SIP/TCP on AudioCodes internal interface, and SIP/UDP on external interface
- CVP-based Queuing
- CVP applications with DTMF
- CVP-based intra-site transfers using reINVITE
- CUCM-based intra-site transfers and conferences
- AudioCodes midcall codec negotiation
- CUCM midcall codec negotiation (with transcoder insertion where needed)
- AudioCodes converting SIP INFO messages from CVP to RFC2833 tones (DTMF-based transfers)
- REFER transfers with AudioCodes in REFER pass-through mode
- REFER transfers with AudioCodes in REFER consume mode
- SIP 302 Redirect responses with AudioCodes in consume mode
- CVP-based Redirect on No Answer
- Call hold



Features not supported

- SIP over TLS and SRTP
- REFER with Replaces
- CVP using H.323
- AudioCodes performing protocol conversion (H.323 to SIP)
- The features listed above are not a result of limitations in the AudioCodes platform (they are also present when the CUBE is used). However, some CCE and CVP features rely on specific *CUBE* capabilities and are not available when AudioCodes is used. Example:
 - Call survivability (survivability.tcl script)
 - Courtesy Callback
 - Network Trunk Group Utilization and Reporting
 - CVP controlled outbound calls (custom application)
 - Outbound Option with SIP Call Progress Analysis
 - Queue at the edge (using CVP SendToOriginator feature)
 - The list is subject to change.
- AudioCodes configured as a SIP proxy (example, instead of Cisco Unified SIP Proxy, or CUSP) for messages between Cisco components (supported configurations use AudioCodes as an ingress or egress border element).

Notes and Caveats

- AudioCodes does not generate a Cisco-Guid header for end-to-end call tracking.
- High availability was not tested, but it is expected to work similar to other third party SBCs.



- The service provider used in the test immediately accepted REFER requests (“202 Accepted”) and disconnected (“BYE”) the call to AudioCodes (while completing the transfer as instructed). It was not possible to evaluate whether AudioCodes was able to generate a BYE message toward CVP if the service provider had not sent one – as is CUBE’s behavior. The impact of the lack of the BYE message is that the CVP port stays in use until either the transferred call is terminated, 60 seconds elapse after the REFER is sent, or the service provider sends a BYE in CVP’s direction (whatever happens first). This longer utilization impacts the CVP capacity and license sizing.
- There may be some scenarios CVP should send busy and ring-no-answer notifications to AudioCodes. In such cases the Remote-Party-ID header must be used and manipulated to include "--CVP" at the end of the display name.
- CVP Standalone Model has not been tested.
- Interoperability with third party telephony systems (PBXs, contact center systems, voice portals, etc.) and AudioCodes has not been tested.
- Advanced features such as REFER and DTMF transfers require the releases tested as part of this application note or higher.
- DTMF transfers require the ability to convert INFO messages to RFC2833 tones. This test required a patch for this feature to work.
- Not all SIP service providers support advanced features such as REFER, 302 Redirect, DTMF-based take-back-and-transfer, or data transport (UUI, GTD, NSS, etc.). Please verify before planning on deploying these capabilities.
- **Support Caveats:**
 - Cisco’s ability to diagnose interoperability issues and test fixes is restricted to “best effort” as Cisco’s support engineers are not equipped with diagnostic tools for the third party equipment. Issues found to be solely related to third party components will not be supported by Cisco. Root cause analysis may not always be possible.
 - Cisco will support its products to the extent that their interfaces and capacity characteristics perform as designed. Instabilities and interoperability issues that arise from different product behavior expectations may not be addressed by Cisco. Upgrades to Cisco or third-party components may introduce different and undesired behaviors. In order to minimize production issues, call flows should be thoroughly tested in a lab environment with the desired product version combinations, including patches.

Configurations

This section provides information on the Audiocodes configuration that was used in this test.

1 REFER pass through

See below within IPprofile settings

2 REFER Consume

See below within IPprofile settings

3 GTD MIME pass through

Nothing needs to be done. Native basic routing will allow everything received to be sent to the destination route.

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4 GTD MIME consume

To consume the misc headers, usage of a header manipulation rule is required. the following entry is applied to the ITSP route on the outgoing leg. This is done by adding an entry in message manipulation and then point to the entry from table IPGroup for the ITSP entry.

```
MessageManipulations 4 = "content-type", 3, "invite", "", "Message", 7, "", 0;
```

```
IPGroup 2 = 0, "ITSP Verizon", 2, "[Service Provider IP address] [Service Provider IP address]", "", 0, -1, -1, 0, -1, 2, "WAN_Realm", 1, 2, -1, 1, 3, 0, 0, "", 0, -1, -1, "[AudioCodes External IP Address]", "", "$1$gQ==", 0, "", "", "", 0, "", "", "", 0, 0;
```

To add the Remote Party-ID header, usage of a header manipulation rule is required. the following entry is applied to the CVP route on the outgoing leg. This is done by adding an entry in message manipulation and then point to the entry from table IPGroup for the CVP entry.

5 Modifying the Remote Party-ID and adding the "- -CVP"

```
MessageManipulations 2 = "add RPID name", 2, "Invite", "", "header.Remote-Party-ID.Name", 0, "'TEKVIZION--CVP'", 0;
```

```
IPGroup 1 = 0, "CVP", 1, "10.64.2.194", "", 0, -1, -1, 0, -1, 1, "LAN_Realm", 1, 1, -1, 7, 2, 0, 0, "", 0, -1, -1, "", "", "$1$gQ==", 0, "", "", "", 0, "", "", "", 0, 0;
```

6 Modifying the "From" header for Mobile Agent calls

for the interaction with Mobile agents and REFER usage back to the ITSP message manipulation is required for the proper 'To' and 'From' headers to be populated in the manner in which the ITSP will accept. Add the following message manipulation rules for the ITSP outgoing manipulations. This is mapped via the IPGroup entry for the ITSP.

```
MessageManipulations 10 = "refer header to", 3, "invite", "", "header.to.url.host", 2, "[Service Provider IP address]", 0;
```

```
MessageManipulations 11 = "refer", 3, "invite", "", "header.from.url.host", 2, "[AudioCodes External IP Address]", 0;
```

```
IPGroup 2 = 0, "ITSP Verizon", 2, "[Service Provider IP address]", "", 0, -1, -1, 0, -1, 2, "WAN_Realm", 1, 2, -1, 1, 3, 0, 0, "", 0, -1, -1, "[AudioCodes External IP Address]", "", "$1$gQ==", 0, "", "", "", 0, "", "", "", 0, 0;
```

7 302 Moved Temporary pass through

Nothing needs to be done. native basic routing will allow a 302 recieved to be sent to the destination route without changing the Contact header.

8 302 Moved Temporary Consume

To consume the 302 message utilize the IPprofile for the respective route to set the device to Handle Locally. The devices handles the SIP 3xx responses on behalf of the dialog-initiating UA and retries the request (e.g., INVITE). The device sends a new request to the alternative destination according to the IP-to-IP Routing table (the 'Call Trigger' field must be set to 3xx).

9 SIP INFO to DTMF 2833

This is also set within the IPprofile for the respective route. In this specific utilization, it was set within the IPprofile for the ITSP. it was set with 4 different sub parameters within the IPprofile settings:

```
IpProfile_SBCRFC2833Behavior = 1 ( 0 = as is. what was received from the originating route source would be sent to the destination route. 1 = 'extend' each outgoing offer/answer includes RFC2833 within the offered SDP)
```

```
IpProfile_SBCAlternativeDTMFMethod = 1 ( 0 = as is. what was received from
```

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the originating route source would be sent to the destination route. 1 = 'in band' to support interworking for detection/generation of DTMF digits a DSP resource is required)

IpProfile_SBCRemoteReinviteSupport = 1 (2 = 'default' re-invite supported with and without SDP. 1 = Supported only with SDP. re-Invite is supported, but only with SDP. If incoming re-INVITE arrives without SDP, the device creates an SDP and adds it to the outgoing re-INVITE)

IpProfile_SBC2833DTMFPayloadType = 101 (0 = 'default' DTMF RFC 2833 is sent as received. Entry is a user defined definition for the payload type to be used with SIP entity if other than '0')

IPprofile settings detailed. The IPprofile is indexed from within the IPgroup entry for each route individually. See below for details.

FORMAT IpProfile_Index = IpProfile_ProfileName, IpProfile_IpPreference, IpProfile_CodersGroupID, IpProfile_IsFaxUsed, IpProfile_JitterBufMinDelay, IpProfile_JitterBufOptFactor, IpProfile_IPDiffServ, IpProfile_SigIPDiffServ, IpProfile_SCE, IpProfile_RTPRedundancyDepth,

IpProfile_RemoteBaseUDPPort, IpProfile_CNGmode, IpProfile_VxxTransportType, IpProfile_NSEMode, IpProfile_IsDTMFUsed, IpProfile_PlayRBTone2IP, IpProfile_EnableEarlyMedia, IpProfile_ProgressIndicator2IP, IpProfile_EnableEchoCanceller, IpProfile_CopyDest2RedirectNumber,

IpProfile_MediaSecurityBehaviour, IpProfile_CallLimit, IpProfile_DisconnectOnBrokenConnection, IpProfile_FirstTxDtmfOption, IpProfile_SecondTxDtmfOption, IpProfile_RxDTMFOption, IpProfile_EnableHold, IpProfile_InputGain, IpProfile_VoiceVolume, IpProfile_AddIEInSetup,

IpProfile_SBCExtensionCodersGroupID, IpProfile_MediaIPVersionPreference, IpProfile_TranscodingMode, IpProfile_SBCAllowedMediaTypes, IpProfile_SBCAllowedCodersGroupID, IpProfile_SBCAllowedVideoCodersGroupID, IpProfile_SBCAllowedCodersMode, IpProfile_SBCMediaSecurityBehaviour, IpProfile_SBCRFC2833Behavior, IpProfile_SBCAlternativeDTMFMethod,

IpProfile_SBCAssertIdentity, IpProfile_AMDSensitivityParameterSuit, IpProfile_AMDSensitivityLevel, IpProfile_AMDMaxGreetingTime, IpProfile_AMDMaxPostSilenceGreetingTime, IpProfile_SBCDiversionsMode, IpProfile_SBCHistoryInfoMode, IpProfile_EnableQSIGTunneling, IpProfile_SBCFaxCodersGroupID, IpProfile_SBCFaxBehavior,

IpProfile_SBCFaxOfferMode, IpProfile_SBCFaxAnswerMode, IpProfile_SbcPrackMode, IpProfile_SBCSessionExpiresMode, IpProfile_SBCRemoteUpdateSupport, IpProfile_SBCRemoteReinviteSupport, IpProfile_SBCRemoteDelayedOfferSupport, IpProfile_SBCRemoteReferBehavior, IpProfile_SBCRemote3xxBehavior, IpProfile_SBCRemoteMultiple18xSupport,

IpProfile_SBCRemoteEarlyMediaResponseType, IpProfile_SBCRemoteEarlyMediaSupport, IpProfile_EnableSymmetricMKI, IpProfile_MKISize, IpProfile_SBCEnforceMKISize, IpProfile_SBCRemoteEarlyMediaRTP, IpProfile_SBCRemoteSupportsRFC3960, IpProfile_SBCRemoteCanPlayRingback, IpProfile_EnableEarly183, IpProfile_EarlyAnswerTimeout,

IpProfile_SBC2833DTMFPayloadType, IpProfile_SBCUserRegistrationTime, IpProfile_ResetSRTPStateUponRekey, IpProfile_AmdMode, IpProfile_SBCReliableHeldToneSource, IpProfile_GenerateSRTPKeys, IpProfile_SBCPlayHeldTone, IpProfile_SBCRemoteHoldFormat, IpProfile_SBCRemoteReplacesBehavior, IpProfile_SBCSDPptimeAnswer,

IpProfile_SBCPreferredPTime, IpProfile_SBCUseSilenceSupp, IpProfile_SBCRTPRedundancyBehavior, IpProfile_SBCPlayRBTToTransferee,



```
IpProfile_SBCRTCPMode, IpProfile_SBCJitterCompensation,  
IpProfile_SBCRemoteRenegotiateOnFaxDetection,  
IpProfile_JitterBufMaxDelay, IpProfile_SBCRemoteMultipleAnswersMode,  
IpProfile_SBCKeepVIAHeaders,  
IpProfile_SBCKeepUserAgentHeader,  
IpProfile_SBCUserBehindUdpNATRegistrationTime,  
IpProfile_SBCUserBehindTcpNATRegistrationTime;
```

```
IpProfile 1 = "Cisco CVP", 1, 0, 0, 10, 10, 46, 40, 0, 0,  
0, 0, 2, 0, 0, 0, 0, -1, 1, 0,  
0, -1, 0, 3, -1, 1, 1, 0, 0, "",  
1, 0, 0, "", 1, -1, 0, 0, 2, 2,  
0, 0, 8, 300, 400, 0, 0, 0, -1, 0,  
0, 1, 3, 3, 0, 2, 0, 3, 2, 1,  
0, 1, 0, 0, 0, 0, 0, 1, 0, 0,  
0, 0, 0, 0, 1, 0, 0, 1, 1, 0,  
0, 0, 0, 0, 0, 0, 0, 300, 0, -1,  
-1, -1, -1;
```

```
IpProfile 2 = "ITSP Verizon", 1, 0, 0, 10, 10, 46, 40, 0, 0,  
0, 0, 2, 0, 0, 0, 0, -1, 1, 0,  
0, -1, 0, 4, -1, 1, 1, 0, 0, "",  
2, 0, 0, "", 2, -1, 1, 0, 1, 1,  
0, 0, 8, 300, 400, 1, 2, 0, -1, 0,  
0, 1, 3, 3, 0, 1, 0, 3, 2, 1,  
0, 1, 0, 0, 0, 0, 0, 1, 0, 0,  
101, 0, 0, 0, 1, 0, 0, 0, 1, 0,  
0, 0, 0, 0, 0, 0, 0, 300, 1, -1,  
-1, -1, -1;
```

```
IpProfile 3 = "CUCM", 1, 0, 0, 10, 10, 46, 40, 0, 0,  
0, 0, 2, 0, 0, 0, 0, -1, 1, 0,  
0, -1, 0, 4, -1, 1, 1, 0, 0, "",  
3, 0, 0, "", 3, -1, 0, 0, 0, 0,  
0, 0, 8, 300, 400, 0, 0, 0, -1, 0,  
0, 1, 3, 3, 0, 2, 0, 3, 2, 1,  
0, 1, 0, 0, 0, 0, 0, 1, 0, 0,  
0, 0, 0, 0, 1, 0, 0, 0, 1, 0,  
0, 0, 0, 0, 0, 0, 0, 300, 0, -1,  
-1, -1, -1;
```

For SBC Remote REFER Behavior utilize the IPProfile for the proper expected behavior.

0 = Regular = (Default) Refer-To header is unchanged and the device forwards the REFER as is.

3 = Handle Locally = Handles the incoming REFER request itself without forwarding the REFER. The device generates a new INVITE to the



alternative destination according to the rules in the IP-to-IP Routing table (the 'Call Trigger' field must be set to REFER within the routing table entry).

For SBC Remote 3XX Behavior utilize the IPProfile for the proper expected behavior.

0 = Transparent = (Default) 3XX message received is unchanged and the device forwards the 3XX as is.

2 = Handle Locally = Handles the incoming 3XX request itself without forwarding the 3XX. The device generates a new INVITE to the alternative destination according to the rules in the IP-to-IP Routing table (the 'Call Trigger' field must be set to 3XX within the routing table entry).

```
FORMAT IPGroup_Index = IPGroup_Type, IPGroup_Description,
IPGroup_ProxySetId, IPGroup_SIPGroupName, IPGroup_ContactUser,
IPGroup_EnableSurvivability, IPGroup_ServingIPGroup,
IPGroup_SipReRoutingMode, IPGroup_AlwaysUseRouteTable,
IPGroup_RoutingMode, IPGroup_SRD, IPGroup_MediaRealm,
IPGroup_ClassifyByProxySet, IPGroup_ProfileId, IPGroup_MaxNumOfRegUsers,
IPGroup_InboundManSet, IPGroup_OutboundManSet, IPGroup_RegistrationMode,
IPGroup_AuthenticationMode, IPGroup_MethodList,
IPGroup_EnableSBCCClientForking, IPGroup_SourceUriInput,
IPGroup_DestUriInput, IPGroup_ContactName, IPGroup_Username,
IPGroup_Password, IPGroup_UIFormat, IPGroup_QOEProfile,
IPGroup_BWProfile, IPGroup_MediaEnhancementProfile,
IPGroup_AlwaysUseSourceAddr, IPGroup_MsgManUserDef1,
IPGroup_MsgManUserDef2, IPGroup_SIPConnect,
IPGroup_SBCRouteUsingRequestURIPort;

IPGroup 1 = 0, "CVP", 1, "10.64.2.194", "", 0, -1, -1, 0, -1, 1,
"LAN_Realm", 1, 1, -1, 7, 2, 0, 0, "", 0, -1, -1, "", "", "$1$gQ==", 0,
"", "", "", 0, "", "", 0, 0;

IPGroup 2 = 0, "ITSP Verizon", 2, "[Service Provider IP address]", "", 0, -
1, -1, 0, -1, 2, "WAN_Realm", 1, 2, -1, 1, 3, 0, 0, "", 0, -1, -1,
"[AudioCodes External IP Address]", "", "$1$gQ==", 0, "", "", "", 0, "",
"", 0, 0;

IPGroup 3 = 0, "CUCM", 3, "10.71.7.10", "", 0, -1, -1, 0, -1, 1,
"LAN_Realm", 1, 3, -1, -1, 5, 0, 0, "", 0, -1, -1, "", "", "$1$gQ==", 0,
"", "", "", 0, "", "", 0, 0;
```

```
FORMAT IpProfile_Index = IpProfile_ProfileName, IpProfile_IpPreference,
IpProfile_CodersGroupID, IpProfile_IsFaxUsed,
IpProfile_JitterBufMinDelay, IpProfile_JitterBufOptFactor,
IpProfile_IPDiffServ, IpProfile_SigIPDiffServ, IpProfile_SCE,
IpProfile_RTPRedundancyDepth, IpProfile_RemoteBaseUDPPort,
IpProfile_CNGmode, IpProfile_VxxTransportType, IpProfile_NSEMode,
IpProfile_IsDTMFUsed, IpProfile_PlayRBTone2IP,
IpProfile_EnableEarlyMedia, IpProfile_ProgressIndicator2IP,
IpProfile_EnableEchoCanceller, IpProfile_CopyDest2RedirectNumber,
IpProfile_MediaSecurityBehaviour, IpProfile_CallLimit,
IpProfile_DisconnectOnBrokenConnection, IpProfile_FirstTxDtmfOption,
IpProfile_SecondTxDtmfOption, IpProfile_RxDTMFOption,
IpProfile_EnableHold, IpProfile_InputGain, IpProfile_VoiceVolume,
IpProfile_AddIEInSetup, IpProfile_SBCExtensionCodersGroupID,
IpProfile_MediaIPVersionPreference, IpProfile_TranscodingMode,
IpProfile_SBCAllowedMediaTypes, IpProfile_SBCAllowedCodersGroupID,
IpProfile_SBCAllowedVideoCodersGroupID, IpProfile_SBCAllowedCodersMode,
IpProfile_SBCMediaSecurityBehaviour, IpProfile_SBCRFC2833Behavior,
IpProfile_SBCAlternativeDTMFMethod, IpProfile_SBCAssertIdentity,
IpProfile_AMDSensitivityParameterSuit, IpProfile_AMDSensitivityLevel,
IpProfile_AMDMaxGreetingTime, IpProfile_AMDMaxPostSilenceGreetingTime,
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```




```
IpProfile_SBCDiversioMode, IpProfile_SBCHistoryInfoMode,
IpProfile_EnableQSIGTunneling, IpProfile_SBCFaxCodersGroupID,
IpProfile_SBCFaxBehavior, IpProfile_SBCFaxOfferMode,
IpProfile_SBCFaxAnswerMode, IpProfile_SbcPrackMode,
IpProfile_SBCSessionExpiresMode, IpProfile_SBCRemoteUpdateSupport,
IpProfile_SBCRemoteReinviteSupport,
IpProfile_SBCRemoteDelayedOfferSupport,
IpProfile_SBCRemoteReferBehavior, IpProfile_SBCRemote3xxBehavior,
IpProfile_SBCRemoteMultiple18xSupport,
IpProfile_SBCRemoteEarlyMediaResponseType,
IpProfile_SBCRemoteEarlyMediaSupport, IpProfile_EnableSymmetricMKI,
IpProfile_MKISize, IpProfile_SBCEnforceMKISize,
IpProfile_SBCRemoteEarlyMediaRTP, IpProfile_SBCRemoteSupportsRFC3960,
IpProfile_SBCRemoteCanPlayRingback, IpProfile_EnableEarly183,
IpProfile_EarlyAnswerTimeout, IpProfile_SBC2833DTMFPayloadType,
IpProfile_SBCUserRegistrationTime, IpProfile_ResetSRTPStateUponRekey,
IpProfile_AmdMode, IpProfile_SBCReliableHeldToneSource,
IpProfile_GenerateSRTPKeys, IpProfile_SBCPlayHeldTone,
IpProfile_SBCRemoteHoldFormat, IpProfile_SBCRemoteReplacesBehavior,
IpProfile_SBCSDPPTimeAnswer, IpProfile_SBCPreferredPTIME,
IpProfile_SBCUseSilenceSupp, IpProfile_SBCRTPRedundancyBehavior,
IpProfile_SBCPlayRBTToTransferee, IpProfile_SBCRTCPMode,
IpProfile_SBCJitterCompensation,
IpProfile_SBCRemoteRenegotiateOnFaxDetection,
IpProfile_JitterBufMaxDelay, IpProfile_SBCRemoteMultipleAnswersMode,
IpProfile_SBCKeepVIAHeaders, IpProfile_SBCKeepUserAgentHeader,
IpProfile_SBCUserBehindUdpNATRegistrationTime,
IpProfile_SBCUserBehindTcpNATRegistrationTime;

IpProfile 1 = "Cisco CVP", 1, 0, 0, 10, 10, 46, 40, 0, 0, 0, 0, 2, 0, 0, 0,
0, -1, 1, 0, 0, -1, 0, 3, -1, 1, 1, 0, 0, "", 1, 0, 0, "", 1, -1, 0, 0,
2, 2, 0, 0, 8, 300, 400, 0, 0, 0, -1, 0, 0, 1, 3, 3, 0, 2, 0, 3, 2, 1,
0, 1, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 1, 1, 0, 0, 0, 0, 0,
0, 0, 0, 300, 0, -1, -1, -1, -1;

IpProfile 2 = "ITSP Verizon", 1, 0, 0, 10, 10, 46, 40, 0, 0, 0, 0, 2, 0, 0,
0, 0, -1, 1, 0, 0, -1, 0, 4, -1, 1, 1, 0, 0, "", 2, 0, 0, "", 2, -1, 1,
0, 1, 1, 0, 0, 8, 300, 400, 1, 2, 0, -1, 0, 0, 1, 3, 3, 0, 1, 0, 3, 2,
1, 0, 1, 0, 0, 0, 0, 0, 1, 0, 0, 101, 0, 0, 0, 1, 0, 0, 0, 1, 0, 0, 0,
0, 0, 0, 0, 0, 300, 1, -1, -1, -1, -1;

IpProfile 3 = "CUCM", 1, 0, 0, 10, 10, 46, 40, 0, 0, 0, 0, 2, 0, 0, 0, 0, -
1, 1, 0, 0, -1, 0, 4, -1, 1, 1, 0, 0, "", 3, 0, 0, "", 3, -1, 0, 0, 0,
0, 0, 0, 8, 300, 400, 0, 0, 0, -1, 0, 0, 1, 3, 3, 0, 2, 0, 3, 2, 1, 0,
1, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0,
0, 0, 300, 0, -1, -1, -1, -1;
```

For the REFER and 3XX triggers from within the routing table. Below is how it is mapped for the IPprofile settings to become active:

IP2IPRouting_ReRouteIPGroupID = the source IPgroup that is initiating the REFER or 3XX

In this instance the redirects were coming from the CVP which happens to be source IPgroup 1.

IP2IPRouting_Trigger = the specific trigger the device will be looking for to initiate the routing process

1 = 3XX reroutes the request if it was triggered as a result of a received 3XX response

2= REFER reroutes the INVITE if it was triggered as a result of a received REFER request

3 = 3XX or REFER reroutes the request if it was triggered as a result of a received 3XX response or a REFER request.



```
[ IP2IPRouting ]
```

```
FORMAT IP2IPRouting_Index = IP2IPRouting_RouteName,  
IP2IPRouting_SrcIPGroupID, IP2IPRouting_SrcUsernamePrefix,  
IP2IPRouting_SrcHost, IP2IPRouting_DestUsernamePrefix,  
IP2IPRouting_DestHost, IP2IPRouting_RequestType,  
IP2IPRouting_MessageCondition, IP2IPRouting_ReRouteIPGroupID,  
IP2IPRouting_Trigger, IP2IPRouting_CallSetupRulesSetId,  
IP2IPRouting_DestType, IP2IPRouting_DestIPGroupID,  
IP2IPRouting_DestSRDID, IP2IPRouting_DestAddress, IP2IPRouting_DestPort,  
IP2IPRouting_DestTransportType, IP2IPRouting_AltRouteOptions,  
IP2IPRouting_GroupPolicy, IP2IPRouting_CostGroup;  
IP2IPRouting 1 = "", -1, "*", "*", "*", "*", 6, "", -1, 0, -1, 1, -1, "",  
"internal", 0, -1, 0, 0, "";  
IP2IPRouting 2 = "blocker", -1, "*", "*", "719", "*", 0, "", 1, 2, -1, 0,  
5, "", "", 0, -1, 0, 0, "";  
IP2IPRouting 3 = "Refer", -1, "*", "*", "*", "*", 0, "", 1, 3, -1, 0, 3,  
"1", "", 0, -1, 0, 0, "";  
IP2IPRouting 4 = "", 2, "*", "*", "972", "*", 0, "", 1, 1, -1, 0, 2, "",  
"", 0, -1, 0, 0, "";  
IP2IPRouting 5 = "CVP 2 CUCM", 1, "*", "*", "1xxx#", "*", 0, "", -1, 0, -1,  
0, 3, "1", "", 0, -1, 0, 0, "";  
IP2IPRouting 6 = "", 1, "*", "*", "26xx#", "*", 0, "", -1, 0, -1, 0, 3,  
"1", "", 0, -1, 0, 0, "";  
IP2IPRouting 7 = "", 1, "*", "*", "*", "*", 0, "", -1, 0, -1, 0, 2, "2",  
"", 0, -1, 0, 0, "";  
IP2IPRouting 8 = "", 2, "*", "*", "*", "*", 0, "", -1, 0, -1, 0, 1, "1",  
"", 0, -1, 0, 0, "";  
IP2IPRouting 9 = "", 1, "100", "*", "*", "100", 0, "", -1, 0, -1, 0, 1, "",  
"", 0, -1, 0, 0, "";  
IP2IPRouting 10 = "", 3, "*", "*", "*", "*", 0, "", -1, 0, -1, 0, 2, "2",  
"", 0, -1, 0, 0, "";
```

```
[ \IP2IPRouting ]
```





Acronyms

Acronym	Definitions
SIP	Session Initiation Protocol
SCCP	Skinny Client Control Protocol
CUCM	Cisco Unified Communications Manager
CUBE	Cisco Unified Border Element
CVP	Cisco Unified Customer Voice Portal
UCCE	Cisco Unified Contact Center Enterprise

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