Ribbon SBC Core 10.1.0R000 Interop with Cisco CUCM 12.5 for Vodafone SIP Trunk

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Interoperable Vendors

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Document Overview

This document outlines Avaya's configuration best practices involving Ribbon SBC 5400 and SBC 7000 when deployed with Cisco Unified Communications Manager 12.5. This document also provides the configuration snapshot of the interoperability performed between Ribbon's SBC 5400 and Cisco Unified Communications Manager 12.5.

Scope

This document provides configuration best practices for deploying Ribbon's SBC 5400 and SBC 7000 with Cisco Unified Communications Manager 12.5, and associated users. These are configuration best practices and customers may have unique needs and networks. Ribbon recommends that customers work with network design and deployment engineers to establish the network design which best meets their requirements.

Non-Goals

It is not the goal of this document to provide detailed configurations that will meet the requirements of every customer. Use this document as a starting point and build the SBC configurations in consultation with network design and deployment engineers.

Audience

This technical document is intended for telecommunications engineers with the purpose of configuring both the Ribbon SBC 5400 and SBC 7000 with the Cisco Unified Communications Manager 12.5, and associated users.

Steps will require navigating the third-party product as well as the Ribbon product using graphical user interface (GUI) or command line interface (CLI). An understanding of the basic concepts of TCP/UDP/TLS, IP/Routing, and SIP/RTP/SRTP is needed to complete the configuration and any necessary troubleshooting.

Pre-Requisites

The following aspects are required before proceeding with Ribbon SBC 5400 and SBC 7000 with Cisco Unified Communications Manager 12.5:

- Cisco Unified Communications Manager 12.5 needs an active license.
- Cisco IP Communicator needs a PC or VM to install.

Product and Device Details

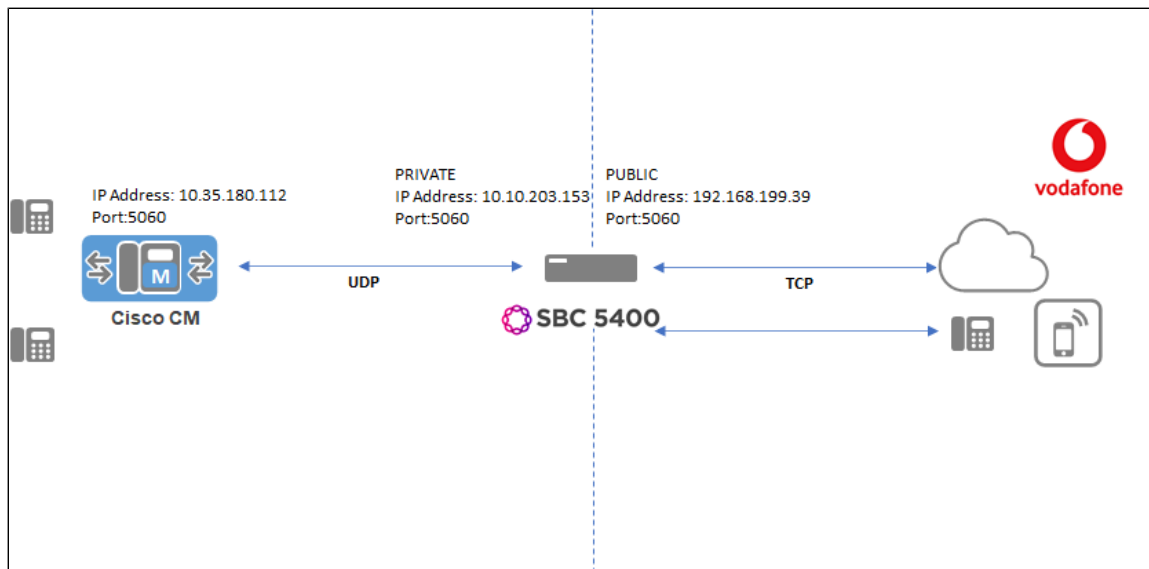|	Equipment/Product	Software Version
Ribbon Communications	SBC 5400	V10.01.00-R000
Third-Party Products	Cisco Unified Communications Manager	V12.5.1.10000-22
	Cisco IP Communicator	V8.6.2.0
	Microsip	V3.20.7

Network Topology Diagram

Deployment Topology

The deployment topology diagram is depicted below.

Figure 1: Deployment Topology

Section-A: SBC Core Configuration

The following steps provide an example of how to configure the Ribbon SBC Core.

Complete Configuration

```
#----------CUCM Codecs----------#
set profiles media codecEntry G711_CUCM_Alaw codec g711
set profiles media codecEntry G711_CUCM_Alaw packetSize 20
set profiles media codecEntry G711_CUCM_Alaw fax failureHandling continue
set profiles media codecEntry G711_CUCM_Alaw fax toneTreatment none
set profiles media codecEntry G711_CUCM_Alaw fax honorToneDetection disable
set profiles media codecEntry G711_CUCM_Alaw modem failureHandling continue
set profiles media codecEntry G711_CUCM_Alaw modem toneTreatment none
set profiles media codecEntry G711_CUCM_Alaw modem honorToneDetection disable
set profiles media codecEntry G711_CUCM_Alaw law ALaw
set profiles media codecEntry G711_CUCM_Alaw dtmf relay rfc2833
set profiles media codecEntry G711_CUCM_Alaw dtmf removeDigits enable

set profiles media codecEntry G711_CUCM_Alaw codec g711
set profiles media codecEntry G711_CUCM_Alaw packetSize 20
set profiles media codecEntry G711_CUCM_Alaw fax failureHandling continue
set profiles media codecEntry G711_CUCM_Alaw fax toneTreatment none
set profiles media codecEntry G711_CUCM_Alaw fax honorToneDetection disable
set profiles media codecEntry G711_CUCM_Alaw modem failureHandling continue
set profiles media codecEntry G711_CUCM_Alaw modem toneTreatment none
set profiles media codecEntry G711_CUCM_Alaw modem honorToneDetection disable
set profiles media codecEntry G711_CUCM_Alaw law ALaw
set profiles media codecEntry G711_CUCM_Alaw dtmf relay rfc2833
set profiles media codecEntry G711_CUCM_Alaw dtmf removeDigits enable


#----------Vodafone Codecs----------#
set profiles media codecEntry G711_VODAFONE_Alaw codec g711
set profiles media codecEntry G711_VODAFONE_Alaw packetSize 20
set profiles media codecEntry G711_VODAFONE_Alaw fax failureHandling continue
set profiles media codecEntry G711_VODAFONE_Alaw fax toneTreatment none
set profiles media codecEntry G711_VODAFONE_Alaw fax honorToneDetection disable
set profiles media codecEntry G711_VODAFONE_Alaw modem failureHandling continue
set profiles media codecEntry G711_VODAFONE_Alaw modem toneTreatment none
set profiles media codecEntry G711_VODAFONE_Alaw modem honorToneDetection disable
set profiles media codecEntry G711_VODAFONE_Alaw law ALaw
set profiles media codecEntry G711_VODAFONE_Alaw dtmf relay rfc2833
set profiles media codecEntry G711_VODAFONE_Alaw dtmf removeDigits enable

set profiles media codecEntry G711_VODAFONE_Ulaw codec g711
set profiles media codecEntry G711_VODAFONE_Ulaw packetSize 20
set profiles media codecEntry G711_VODAFONE_Ulaw fax failureHandling continue
```

```
set profiles media codecEntry G711_VODAFONE_Ulaw fax toneTreatment none
set profiles media codecEntry G711_VODAFONE_Ulaw fax honorToneDetection disable
set profiles media codecEntry G711_VODAFONE_Ulaw modem failureHandling continue
set profiles media codecEntry G711_VODAFONE_Ulaw modem toneTreatment none
set profiles media codecEntry G711_VODAFONE_Ulaw modem honorToneDetection disable
set profiles media codecEntry G711_VODAFONE_Ulaw law ULaw
set profiles media codecEntry G711_VODAFONE_Ulaw dtmf relay rfc2833
set profiles media codecEntry G711_VODAFONE_Ulaw dtmf removeDigits enable

#----------SMM----------#
set profiles signaling sipAdaptorProfile PAID_CHANGE state enabled
set profiles signaling sipAdaptorProfile PAID_CHANGE advancedSMM disabled
set profiles signaling sipAdaptorProfile PAID_CHANGE profileType messageManipulation
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 applyMatchHeader one
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 criterion 1 type message
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 criterion 1 message
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 criterion 1 message messageTypes request
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 criterion 1 message methodTypes [ invite ]
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 criterion 2 type header
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 criterion 2 header
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 criterion 2 header name P-Asserted-Identity
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 criterion 2 header condition exist
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 criterion 2 header hdrInstance all
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 action 1 type header
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 action 1 operation modify
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 action 1 headerInfo fieldValue
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 action 1 from
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 action 1 from type value
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 action 1 from value <sip:+4940182110301@192.168.199.39:
5060>
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 action 1 to
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 action 1 to type header
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 action 1 to value P-Asserted-Identity

set profiles signaling sipAdaptorProfile REMOVE_PLUS state enabled
set profiles signaling sipAdaptorProfile REMOVE_PLUS advancedSMM disabled
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 applyMatchHeader one
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 1 type message
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 1 message
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 1 message messageTypes request
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 1 message methodTypes [ invite ]
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 2 type header
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 2 header
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 2 header name to
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 2 header condition exist
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 2 header hdrInstance all
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 3 type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 3 token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 3 token condition exist
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 3 token tokenType uriusername
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 action 1 type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 action 1 operation regdel
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 action 1 to
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 action 1 to type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 action 1 to tokenValue uriusername
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 action 1 regexp
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 action 1 regexp string "^\+"
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 action 1 regexp matchInstance all
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 applyMatchHeader one
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 1 type message
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 1 message
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 1 message messageTypes request
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 1 message methodTypes [ invite ]
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 2 type header
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 2 header
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 2 header name request-line
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 2 header condition exist
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 2 header hdrInstance all
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 3 type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 3 token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 3 token condition exist
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 3 token tokenType uriusername
```

```
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 action 1 type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 action 1 operation regdel
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 action 1 to
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 action 1 to type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 action 1 to tokenValue uriusername
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 action 1 regexp
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 action 1 regexp string "^\+"
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 action 1 regexp matchInstance all
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 applyMatchHeader one
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 1 type message
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 1 message
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 1 message messageTypes request
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 1 message methodTypes [ cancel ]
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 2 type header
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 2 header
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 2 header name to
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 2 header condition exist
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 2 header hdrInstance all
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 3 type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 3 token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 3 token condition exist
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 3 token tokenType uriusername
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 action 1 type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 action 1 operation regdel
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 action 1 to
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 action 1 to type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 action 1 to tokenValue uriusername
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 action 1 regexp
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 action 1 regexp string "^\+"
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 action 1 regexp matchInstance all
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 applyMatchHeader one
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 1 type message
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 1 message
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 1 message messageTypes request
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 1 message methodTypes [ cancel ]
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 2 type header
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 2 header
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 2 header name request-line
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 2 header condition exist
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 2 header hdrInstance all
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 3 type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 3 token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 3 token condition exist
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 3 token tokenType uriusername
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 action 1 type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 action 1 operation regdel
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 action 1 to
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 action 1 to type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 action 1 to tokenValue uriusername
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 action 1 regexp
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 action 1 regexp string "^\+"
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 action 1 regexp matchInstance all
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 applyMatchHeader one
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 applyMatchHdrRange undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 1 type message
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 1 message
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 1 message messageTypes request
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 1 message methodTypes [ invite ]
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 1 message condition undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 2 type header
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 2 header
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 2 header name P-Asserted-Identity
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 2 header value ""
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 2 header condition exist
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 2 header hdrInstance all
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 2 header hdrRange undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 2 header numberOfInstances number 0
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 criterion 2 header numberOfInstances qualifier
undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 action 1 type header
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 action 1 operation modify
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 action 1 headerInfo fieldValue
```

```
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 action 1 headerPosition undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 action 1 paramType undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 action 1 from
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 action 1 from type value
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 action 1 from value <sip:+4940182110301@192.168.199.39:
5060>
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 action 1 to
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 action 1 to type header
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 5 action 1 to value P-Asserted-Identity




############################ Internal Configuration (PRIVATE) ############################

#----------IP Interface Group----------#

set addressContext default ipInterfaceGroup PRIVATE ipInterface PRIVATE portName pkt0
set addressContext default ipInterfaceGroup PRIVATE ipInterface PRIVATE ipAddress 10.10.203.137
set addressContext default ipInterfaceGroup PRIVATE ipInterface PRIVATE prefix 25
set addressContext default ipInterfaceGroup PRIVATE ipInterface PRIVATE mode inService
set addressContext default ipInterfaceGroup PRIVATE ipInterface PRIVATE state enabled
set addressContext default ipInterfaceGroup PRIVATE ipInterface PRIVATE vlanTag 2626


#----------IP Static Routes----------#
set addressContext default staticRoute 0.0.0.0 0 10.10.203.129 PRIVATE PRIVATE

#----------Packet Service Profile----------#
set profiles media packetServiceProfile CUCM_PSP dataCalls preferredRtpDataPayloadType 56
set profiles media packetServiceProfile CUCM_PSP dataCalls initialPlayoutBufferDelay 50
set profiles media packetServiceProfile CUCM_PSP dataCalls packetSize 20
set profiles media packetServiceProfile CUCM_PSP silenceFactor 40
set profiles media packetServiceProfile CUCM_PSP typeOfService 0
set profiles media packetServiceProfile CUCM_PSP voiceInitialPlayoutBufferDelay 10
set profiles media packetServiceProfile CUCM_PSP silenceInsertionDescriptor g711SidRtpPayloadType 13
set profiles media packetServiceProfile CUCM_PSP silenceInsertionDescriptor heartbeat enable
set profiles media packetServiceProfile CUCM_PSP aal1PayloadSize 47
set profiles media packetServiceProfile CUCM_PSP codec codecEntry1 G711_CUCM_Ulaw
set profiles media packetServiceProfile CUCM_PSP codec codecEntry2 G711_CUCM_Alaw
set profiles media packetServiceProfile CUCM_PSP packetToPacketControl transcode conditional


#----------Signaling profiles----------#
set profiles signaling signalingProfile DEFAULT_IP_PROFILE ingress ingressFlags discardRedirectionCountForRelease
enable
set profiles signaling signalingProfile DEFAULT_IP_PROFILE egress redirectCapability enable
set profiles signaling signalingProfile DEFAULT_IP_PROFILE egress redirectCount enable
set profiles signaling signalingProfile DEFAULT_IP_PROFILE egress redirectInformation enable
set profiles signaling signalingProfile DEFAULT_IP_PROFILE egress egressFlags resetOlipForTollFreeCalls enable
set profiles signaling signalingProfile DEFAULT_IP_PROFILE accessTransport enable
set profiles signaling signalingProfile DEFAULT_IP_PROFILE userToUserInformation enable


#----------ZONEs----------#
set addressContext default zone PRIVATE_ZONE id 3

#----------SIP signaling ports----------#
set addressContext default zone PRIVATE_ZONE sipSigPort 2 ipInterfaceGroupName PRIVATE
set addressContext default zone PRIVATE_ZONE sipSigPort 2 ipAddressV4 10.10.203.153
set addressContext default zone PRIVATE_ZONE sipSigPort 2 mode inService
set addressContext default zone PRIVATE_ZONE sipSigPort 2 state enabled
set addressContext default zone PRIVATE_ZONE sipSigPort 2 transportProtocolsAllowed sip-udp


#----------IPPEERs----------#
set addressContext default zone PRIVATE_ZONE ipPeer CUCM ipAddress 10.35.180.112
set addressContext default zone PRIVATE_ZONE ipPeer CUCM ipPort 5060
set addressContext default zone PRIVATE_ZONE ipPeer CUCM policy description ""
set addressContext default zone PRIVATE_ZONE ipPeer CUCM policy sip fqdn ""
set addressContext default zone PRIVATE_ZONE ipPeer CUCM policy sip fqdnPort 0
set addressContext default zone PRIVATE_ZONE ipPeer CUCM pathCheck profile OPTION
```

```
set addressContext default zone PRIVATE_ZONE ipPeer CUCM pathCheck state enabled


#---------- sipTrunkGroup----------#
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM state enabled
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM mode inService
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM policy carrier 0000
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM policy country 1
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM policy localizationVariant northAmerica
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM policy digitParameterHandling numberingPlan
NANP_ACCESS
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM policy callRouting elementRoutingPriority
DEFAULT_IP
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM policy media packetServiceProfile CUCM_PSP
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM policy services classOfService DEFAULT_IP
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM policy signaling ipSignalingProfile DEFAULT_SIP
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM policy featureControlProfile DEFAULT_IP
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM policy ingress flags
nonZeroVideoBandwidthBasedRoutingForSip enable
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM signaling messageManipulation outputAdapterProfile
REMOVE_PLUS
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM signaling transportPreference preference1 udp
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM signaling transportPreference preference2 none
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM media mediaIpInterfaceGroupName PRIVATE
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM callRouting internationalNoaPlus enabled
set addressContext default zone PRIVATE_ZONE sipTrunkGroup CUCM ingressIpPrefix 10.35.180.112 32




############################ External Configuration (PUBLIC) ############################

#----------IP Interface Group----------#
set addressContext default ipInterfaceGroup PUBLIC ipInterface PUBLIC portName pkt1
set addressContext default ipInterfaceGroup PUBLIC ipInterface PUBLIC ipAddress 192.168.199.54
set addressContext default ipInterfaceGroup PUBLIC ipInterface PUBLIC prefix 25
set addressContext default ipInterfaceGroup PUBLIC ipInterface PUBLIC mode inService
set addressContext default ipInterfaceGroup PUBLIC ipInterface PUBLIC state enabled


#----------IP Static Routes----------#
set addressContext default staticRoute 0.0.0.0 0 192.168.199.1 PUBLIC PUBLIC

#----------Packet Service Profile----------#
set profiles media packetServiceProfile VODAFONE_PSP dataCalls preferredRtpDataPayloadType 56
set profiles media packetServiceProfile VODAFONE_PSP dataCalls initialPlayoutBufferDelay 50
set profiles media packetServiceProfile VODAFONE_PSP dataCalls packetSize 20
set profiles media packetServiceProfile VODAFONE_PSP silenceFactor 40
set profiles media packetServiceProfile VODAFONE_PSP typeOfService 0
set profiles media packetServiceProfile VODAFONE_PSP voiceInitialPlayoutBufferDelay 10
set profiles media packetServiceProfile VODAFONE_PSP silenceInsertionDescriptor g711SidRtpPayloadType 13
set profiles media packetServiceProfile VODAFONE_PSP silenceInsertionDescriptor heartbeat enable
set profiles media packetServiceProfile VODAFONE_PSP aal1PayloadSize 47
set profiles media packetServiceProfile VODAFONE_PSP codec codecEntry1 G711_VODAFONE_Alaw
set profiles media packetServiceProfile VODAFONE_PSP codec codecEntry2 G711_VODAFONE_Ulaw
set profiles media packetServiceProfile VODAFONE_PSP packetToPacketControl transcode conditional


#----------IP Signaling profiles----------#
set profiles signaling ipSignalingProfile VODAFONE_IP ipProtocolType sipOnly
set profiles signaling ipSignalingProfile VODAFONE_IP egressIpAttributes numberGlobalizationProfile VODAFONE_GP
set profiles signaling ipSignalingProfile VODAFONE_IP egressIpAttributes flags disable2806Compliance enable
set profiles signaling ipSignalingProfile VODAFONE_IP egressIpAttributes transport type1 tcp
set profiles signaling ipSignalingProfile VODAFONE_IP egressIpAttributes transport type2 udp


#----------prefixProfile Entry----------#
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 113 0 1 5 callType nationalType
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 113 0 1 5 digitType subscriber
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 113 0 1 5 natureOfAddress none
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 113 0 1 5 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 113 0 1 5 numberLeadingPrefixDigits 0
```

```
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 113 0 1 5 numberLeadingPrefixDigitsToStrip 1
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 113 0 1 5 applyDmRule disable
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 113 0 1 5 determineArea disable
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 49 0 1 15 callType internationalType
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 49 0 1 15 digitType international
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 49 0 1 15 dmPmRule addPlus
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 49 0 1 15 natureOfAddress international
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 49 0 1 15 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 49 0 1 15 numberLeadingPrefixDigits 0
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 49 0 1 15 numberLeadingPrefixDigitsToStrip 0
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 49 0 1 15 applyDmRule disable
set profiles digitParameterHandling prefixProfile NA_DIAL_PLAN entry 49 0 1 15 determineArea disable


#----------ZONE----------#
set addressContext default zone PUBLIC_ZONE id 2

#----------SIP signaling ports----------#
set addressContext default zone PUBLIC_ZONE sipSigPort 1 ipInterfaceGroupName PUBLIC
set addressContext default zone PUBLIC_ZONE sipSigPort 1 ipAddressV4 192.168.199.39
set addressContext default zone PUBLIC_ZONE sipSigPort 1 state enabled
set addressContext default zone PUBLIC_ZONE sipSigPort 1 transportProtocolsAllowed sip-udp,sip-tcp


#----------IPPEERs----------#
set addressContext default zone PUBLIC_ZONE ipPeer VODAFONE_1 ipAddress 2.207.165.132
set addressContext default zone PUBLIC_ZONE ipPeer VODAFONE_1 ipPort 5060
set addressContext default zone PUBLIC_ZONE ipPeer VODAFONE_1 policy description ""
set addressContext default zone PUBLIC_ZONE ipPeer VODAFONE_1 policy sip fqdn ""
set addressContext default zone PUBLIC_ZONE ipPeer VODAFONE_1 policy sip fqdnPort 0
set addressContext default zone PUBLIC_ZONE ipPeer VODAFONE_1 pathCheck state disabled


#----------sipTrunkGroups----------#
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE state enabled
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE mode inService
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE policy carrier 0000
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE policy country 49
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE policy localizationVariant northAmerica
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE policy tgIPVersionPreference both-ipv4-and-ipv6
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE policy digitParameterHandling numberingPlan
NANP_ACCESS
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE policy callRouting elementRoutingPriority
DEFAULT_IP
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE policy media packetServiceProfile VODAFONE_PSP
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE policy services classOfService DEFAULT_IP
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE policy signaling ipSignalingProfile VODAFONE_IP
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE policy featureControlProfile DEFAULT_IP
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE policy ingress flags
nonZeroVideoBandwidthBasedRoutingForSip enable
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE policy ingress flags hdPreferredRouting disable
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE policy ingress flags hdSupportedRouting disable
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE signaling transportPreference preference1 tcp
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE signaling transportPreference preference2 udp
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE media mediaIpInterfaceGroupName PUBLIC
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE callRouting internationalNoaPlus disabled
set addressContext default zone PUBLIC_ZONE sipTrunkGroup VODAFONE ingressIpPrefix 2.207.165.132 32


############################ Global Configuration ############################


#----------CUCM Routing----------#
set global callRouting routingLabel TO_CUCM overflowNumber ""
set global callRouting routingLabel TO_CUCM overflowNOA none
set global callRouting routingLabel TO_CUCM overflowNPI none
set global callRouting routingLabel TO_CUCM routePrioritizationType sequence
set global callRouting routingLabel TO_CUCM action routes
set global callRouting routingLabel TO_CUCM numRoutesPerCall 10
set global callRouting routingLabel TO_CUCM routingLabelRoute 0 routeType trunkGroup
set global callRouting routingLabel TO_CUCM routingLabelRoute 0 trunkGroup CUCM
set global callRouting routingLabel TO_CUCM routingLabelRoute 0 ipPeer CUCM
```

```
set global callRouting routingLabel TO_CUCM routingLabelRoute 0 proportion 0
set global callRouting routingLabel TO_CUCM routingLabelRoute 0 cost 1000000
set global callRouting routingLabel TO_CUCM routingLabelRoute 0 inService inService
set global callRouting routingLabel TO_CUCM routingLabelRoute 0 testing normal


set global callRouting route trunkGroup VODAFONE ODINSHADE standard Sonus_NULL 49 all all ALL none Sonus_NULL
routingLabel TO_CUCM


#----------VODAFONE Routing----------#
set global callRouting routingLabel TO_VODAFONE overflowNumber ""
set global callRouting routingLabel TO_VODAFONE overflowNOA none
set global callRouting routingLabel TO_VODAFONE overflowNPI none
set global callRouting routingLabel TO_VODAFONE routePrioritizationType sequence
set global callRouting routingLabel TO_VODAFONE action routes
set global callRouting routingLabel TO_VODAFONE numRoutesPerCall 10
set global callRouting routingLabel TO_VODAFONE routingLabelRoute 0 routeType trunkGroup
set global callRouting routingLabel TO_VODAFONE routingLabelRoute 0 trunkGroup VODAFONE
set global callRouting routingLabel TO_VODAFONE routingLabelRoute 0 ipPeer VODAFONE_1
set global callRouting routingLabel TO_VODAFONE routingLabelRoute 0 proportion 0
set global callRouting routingLabel TO_VODAFONE routingLabelRoute 0 cost 1000000
set global callRouting routingLabel TO_VODAFONE routingLabelRoute 0 inService inService
set global callRouting routingLabel TO_VODAFONE routingLabelRoute 0 testing normal


set global callRouting route trunkGroup CUCM ODINSHADE standard 113 Sonus_NULL all all ALL none Sonus_NULL
routingLabel TO_VODAFONE
set global callRouting route trunkGroup CUCM ODINSHADE standard Sonus_NULL Sonus_NULL all all ALL none Sonus_NULL
routingLabel TO_VODAFONE
```

Section-B: Cisco Unified Communications Manager

Cisco Unified Communications Manager Configuration

This section includes the following new configurations:

1. Security Profile
2. SIP Profile
3. SIP Trunk
4. Route Group
5. Route List
6. Route Pattern

1. Security Profile

Select **System > Security > SIP Trunk Security Profile**

Figure 2: SIP Trunk Security Profile

2. SIP Profile

Select **Device > Device Settings > SIP Profile**

Figure 3: SIP Profile

SIP Profile Information

Name* `SIP OPTIONS Profile`

Description `Default SIP Profile`

Default MTP Telephony Event Payload Type* `101`

Early Offer for G.Clear Calls* `Disabled ▼`

User-Agent and Server header information* `Send Unified CM Version Information as User-Ager ▼`

Version in User Agent and Server Header* `Major And Minor ▼`

Dial String Interpretation* `Phone number consists of characters 0-9, *, #, an ▼`

Confidential Access Level Headers* `Disabled ▼`

☐ Redirect by Application

☐ Disable Early Media on 180

☐ Outgoing T.38 INVITE include audio mline

☐ Offer valid IP and Send/Receive mode only for T.38 Fax Relay

☐ Use Fully Qualified Domain Name in SIP Requests

☐ Assured Services SIP conformance

☐ Enable External QoS**

SDP Information

SDP Session-level Bandwidth Modifier for Early Offer and Re-invites* `TIAS and AS ▼`

SDP Transparency Profile `Pass all unknown SDP attributes ▼`

Accept Audio Codec Preferences in Received Offer* `Default ▼`

☐ Require SDP Inactive Exchange for Mid-Call Media Change

☐ Allow RR/RS bandwidth modifier (RFC 3556)

Parameters used in Phone

Timer Invite Expires (seconds)* `180`

Timer Register Delta (seconds)* `5`

Timer Register Expires (seconds)* `3600`

Timer T1 (msec)* `500`

Timer T2 (msec)* `4000`

Retry INVITE* `6`

Retry Non-INVITE* `10`

Media Port Ranges	● Common Port Range for Audio and Video
	○ Separate Port Ranges for Audio and Video
Start Media Port*	16384
Stop Media Port*	32766
DSCP for Audio Calls	Use System Default ▼
DSCP for Video Calls	Use System Default ▼
DSCP for Audio Portion of Video Calls	Use System Default ▼
DSCP for TelePresence Calls	Use System Default ▼
DSCP for Audio Portion of TelePresence Calls	Use System Default ▼
Call Pickup URI*	x-cisco-serviceuri-pickup
Call Pickup Group Other URI*	x-cisco-serviceuri-opickup
Call Pickup Group URI*	x-cisco-serviceuri-gpickup
Meet Me Service URI*	x-cisco-serviceuri-meetme
User Info*	None ▼
DTMF DB Level*	Nominal ▼
Call Hold Ring Back*	Off ▼
Anonymous Call Block*	Off ▼
Caller ID Blocking*	Off ▼
Do Not Disturb Control*	User ▼
Telnet Level for 7940 and 7960*	Disabled ▼
Resource Priority Namespace	< None > ▼
Timer Keep Alive Expires (seconds)*	120
Timer Subscribe Expires (seconds)*	120
Timer Subscribe Delta (seconds)*	5
Maximum Redirections*	70
Off Hook To First Digit Timer (milliseconds)*	15000
Call Forward URI*	x-cisco-serviceuri-cfwdall
Speed Dial (Abbreviated Dial) URI*	x-cisco-serviceuri-abbrdial

☑ Conference Join Enabled
☐ RFC 2543 Hold
☑ Semi Attended Transfer
☐ Enable VAD

☐ Stutter Message Waiting

☐ MLPP User Authorization

Normalization Script

Normalization Script [< None > ▾]

☐ Enable Trace

	Parameter Name	Parameter Value	
1			⊞ ⊟

External Presentation Information

☐ Anonymous External Presentation

External Presentation Number [   ]

External Presentation Name [   ]

Trunk Specific Configuration

Reroute Incoming Request to new Trunk based on* [Never ▾]

Resource Priority Namespace List [< None > ▾]

SIP Rel1XX Options* [Disabled ▾]

Video Call Traffic Class* [Mixed ▾]

Calling Line Identification Presentation* [Default ▾]

Session Refresh Method* [Invite ▾]

Early Offer support for voice and video calls* [Disabled (Default value) ▾]

☐ Enable ANAT

☐ Deliver Conference Bridge Identifier

☐ Enable External Presentation Name and Number

☐ Reject Anonymous Incoming Calls

☐ Reject Anonymous Outgoing Calls

☐ Send ILS Learned Destination Route String

☐ Connect Inbound Call before Playing Queuing Announcement

SIP OPTIONS Ping

☑ Enable OPTIONS Ping to monitor destination status for Trunks with Service Type "None (Default)"

Ping Interval for In-service and Partially In-service Trunks (seconds)* [60]

Ping Interval for Out-of-service Trunks (seconds)* [120]

Ping Retry Timer (milliseconds)* [500]

Ping Retry Count* [6]

SDP Information

☐ Send send-receive SDP in mid-call INVITE

☐ Allow Presentation Sharing using BFCP

☐ Allow iX Application Media

☐ Allow multiple codecs in answer SDP

3. SIP Trunk

Select **Device > Trunk > Add New**

Figure 4: SIP Trunk

SIP Trunk Status

Service Status: Full Service
Duration: Time In Full Service: 2 days 6 hours 26 minutes

Device Information

Product:	SIP Trunk
Device Protocol:	SIP
Trunk Service Type	None(Default)

Device Name* `SBCShade`

Description `SBCShade`

Device Pool* `711_DP`

Common Device Configuration `< None >`

Call Classification* `Use System Default`

Media Resource Group List `< None >`

Location* `Hub_None`

AAR Group `< None >`

Tunneled Protocol* `None`

QSIG Variant* `No Changes`

ASN.1 ROSE OID Encoding* `No Changes`

Packet Capture Mode* `None`

Packet Capture Duration `0`

☑ Media Termination Point Required
☑ Retry Video Call as Audio
☐ Path Replacement Support
☐ Transmit UTF-8 for Calling Party Name
☐ Transmit UTF-8 Names in QSIG APDU
☐ Unattended Port
☐ SRTP Allowed - When this flag is checked, Encrypted TLS needs to be configured in the network to provide end to end security. Failure to do so will expose keys and other information.

Consider Traffic on This Trunk Secure* `When using both sRTP and TLS`

Route Class Signaling Enabled* `Default`

Use Trusted Relay Point* `Default`

☐ PSTN Access
☐ Run On All Active Unified CM Nodes

Intercompany Media Engine (IME)

E.164 Transformation Profile `< None >`

MLPP and Confidential Access Level Information

MLPP Domain `< None >`

Confidential Access Mode `< None >`

Confidential Access Level `< None >`

Call Routing Information

☑ Remote-Party-Id
☑ Asserted-Identity

Asserted-Type* `Default`

SIP Privacy* `Default`

Trust Received Identity* `Trust All (Default)`

Inbound Calls

Significant Digits* `All`

Connected Line ID Presentation* `Default`

Connected Name Presentation* `Default`

Calling Search Space `< None >`

AAR Calling Search Space `< None >`

Prefix DN

☐ Redirecting Diversion Header Delivery - Inbound

Incoming Calling Party Settings

If the administrator sets the prefix to Default this indicates call processing will use prefix at the next level setting (DevicePool/Service Parameter). Otherwise, the value configured is used as the prefix unless the field is empty in which case there is no prefix assigned.

Clear Prefix Settings | Default Prefix Settings

Number Type	Prefix	Strip Digits	Calling Search Space	Use Device Pool CSS
Incoming Number	Default	0	< None >	☑

Incoming Called Party Settings

If the administrator sets the prefix to Default this indicates call processing will use prefix at the next level setting (DevicePool/Service Parameter). Otherwise, the value configured is used as the prefix unless the field is empty in which case there is no prefix assigned.

Clear Prefix Settings | Default Prefix Settings

Number Type	Prefix	Strip Digits	Calling Search Space	Use Device Pool CSS
Incoming Number	Default	0	< None >	☑

Connected Party Settings

Connected Party Transformation CSS `< None >`

☑ Use Device Pool Connected Party Transformation CSS

Outbound Calls

Called Party Transformation CSS `< None >`

☑ Use Device Pool Called Party Transformation CSS

Calling Party Transformation CSS `< None >`

☑ Use Device Pool Calling Party Transformation CSS

Calling Party Selection* `Originator`

Calling Line ID Presentation* `Allowed`

Calling Name Presentation* `Allowed`

Calling and Connected Party Info Format* `Deliver DN only in connected party`

☑ Redirecting Diversion Header Delivery - Outbound

Redirecting Party Transformation CSS `< None >`

☐ Use Device Pool Redirecting Party Transformation CSS

Presentation Information

☐ Anonymous Presentation

Presentation Number

Presentation Name

☐ Send Presentation Name and Number only in the FROM header and not in the other identity headers

SIP Information

Destination

☐ Destination Address is an SRV

	Destination Address	Destination Address IPv6	Destination Port	Status	Status Reason	Duration	
1*	10.10.203.153		5060	up		Time Up: 2 days 6 hours 26 minutes	⊞ ⊟

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*	SIP OPTIONS Profile View Details
DTMF Signaling Method*	No Preference

Normalization Script

Normalization Script < None >

☐ Enable Trace

	Parameter Name	Parameter Value	
1			⊞ ⊟

Recording Information

🔘 None

⚪ This trunk connects to a recording-enabled gateway

⚪ This trunk connects to other clusters with recording-enabled gateways

Geolocation Configuration

Geolocation	< None >
Geolocation Filter	< None >

☐ Send Geolocation Information

[Save] [Delete] [Reset] [Add New]

4. Route Group

Select **Call Routing > Route/Hunt > Route Group > Add New**

Figure 5: Route Group

5. Route List

Select **Call Routing > Route/Hunt > Route List > Add New**

Figure 6: Route List

6. Route Pattern

Select **Call Routing > Route/Hunt > Route Pattern > Add New**

Figure 7: Route Pattern

Pattern Definition

Field	Value
Route Pattern*	49!
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*	SBC_Shade (Edit)

Route Option
- ⦿ Route this pattern
- ◯ Block this pattern No Error

Field	Value
Call Classification*	OffNet
External Call Control Profile	< None >

☐ Allow Device Override ☑ Provide Outside Dial Tone ☐ Allow Overlap Sending ☐ Urgent Priority
☐ Require Forced Authorization Code
Authorization Level* 0
☐ Require Client Matter Code

Calling Party Transformations

☐ Use Calling Party's External Phone Number Mask

Field	Value
Calling Party Transform Mask	
Prefix Digits (Outgoing Calls)	
Calling Line ID Presentation*	Default
Calling Name Presentation*	Default
Calling Party Number Type*	Cisco CallManager
Calling Party Numbering Plan*	Cisco CallManager

Connected Party Transformations

Field	Value
Connected Line ID Presentation*	Default
Connected Name Presentation*	Default

Called Party Transformations

Field	Value
Discard Digits	< None >
Called Party Transform Mask	
Prefix Digits (Outgoing Calls)	
Called Party Number Type*	Cisco CallManager
Called Party Numbering Plan*	Cisco CallManager

ISDN Network-Specific Facilities Information Element

Field	Value
Network Service Protocol	-- Not Selected --
Carrier Identification Code	

Network Service	Service Parameter Name	Service Parameter Value
-- Not Selected --	< Not Exist >	

[Save] [Delete] [Copy] [Add New]

Supplementary Services and Features Coverage

The following checklist identifies the set of supplementary services/features covered through the configuration defined in this Interop document.

Sr. No.	Supplementary Services/Features	Supported
1.1	Outgoing call CLIP	✔
1.10	Outgoing call: B busy	✔

1.11	Outgoing call: B DND	✔
1.12	Outgoing call: A hangs up	✔
1.13	Incoming call: B rejects	✔
1.14	Incoming call: B does not answer	✔
1.15	Incoming call: B busy	✔
1.16	Incoming call: B DND	✔
1.17	Incoming call: A hangs up	✔
1.18	Outgoing call: A puts B on hold	✔
1.19	Outgoing call: A retrieves B	✔
1.2	Incoming call CLIP	✔
1.20	Outgoing call: B puts A on hold	✔
1.21	Outgoing call: B retrieves A	✔
1.22	Incoming call: A puts B on hold	✔
1.23	Incoming call: A retrieves B	✔
1.24	Incoming call: B puts A on hold	✔
1.25	Incoming call: B retrieves A	✔
1.26	Call forwarding	✔
1.27	Conference Call	✔
1.28	Outgoing call CLIR	✔
1.29	Incoming call CLIR	✔
1.3	Emergency call 113 (Vodafone emergency number) CLIP	✘
1.30	Emergency call 113 (Vodafone emergency number) CLIR	✘
1.31	Outgoing call CLIP No Screening	✔
1.32	Emergency 113 (Vodafone emergency number) CLIP No Screening	✘
1.33	DTMF outgoing call: from A to B	✔
1.34	DTMF outgoing call: from B to A	✔
1.35	DTMF incoming call: from A to B	✔
1.36	DTMF incoming call: from B to A	✔
1.37	COLP No Screening	✔
1.39	COLR	✔
1.4	Outgoing existing call: A hangs up	✔
1.5	Outgoing existing call: B hangs up	✔

1.6	Incoming existing call: A hangs up	✓
1.7	Incoming existing call: B hangs up	✓
1.8	Outgoing call: B rejects	✓
1.9	Outgoing call: B does not answer	✓

Legend

Supported	✓
Not Supported	✗

Caveats

The following items should be noted in relation to this Interop document. These are either limitations, untested elements, or useful information pertaining to the Interoperability.

- Test 1.3, 1.30 an 1.32, Vodafone sent 404 to SBC 5400

Support

For any support related queries about this guide, please contact your local Ribbon representative or use the details below:

- Sales and Support: 1-833-742-2661
- Other Queries: 1-877-412-8867
- Website: https://ribboncommunications.com/about-us

References

For detailed information about Ribbon products and solutions, please visit:

https://ribboncommunications.com/products

Conclusion

This Interoperability document describes a successful configuration and interop involving Ribbon SBC 5400 and Cisco Unified Communications Manager 12.5.

All features and capabilities tested are detailed within this document. Any limitations, notes or observations are also recorded to provide the reader with an accurate understanding of what has been covered, and what has not.

Configuration guidance is provided to enable the reader to replicate the same base setup - there may be additional configuration changes required that are specific to the exact deployment environment.