
Sonus SBC 5XX0 4.2.4R2 IOT Lync 2013 TELUS SIP Trunk over Public Internet Application Notes

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Document Overview

This document provides a configuration guide for Sonus SBC 5xx0 Series (Session Border Controller) when connecting to Lync 2013 and Telus SIP Trunk.

This configuration guide s features given in Lync 2013 configuration guides.


- For additional information on Lync 2013, please visit <http://microsoft.com/>
- For additional information on Sonus SBC, please visit <http://sonus.net>.

Introduction

The interoperability compliance testing focuses on verifying various inbound and outbound calls flows between Sonus SBC 5xx0 and Lync 2013.

Audience

This technical document is intended for telecommunication engineers with the purpose of configuring the Sonus SBC 5xx0 aspects of the Telus SIP trunk group together with the Lync 2013. Some steps will require navigating a third-party and Sonus SBC Web browser user interface. Understanding IP/Routing and SIP/RTP basic concepts are also necessary to complete the configuration and perform any troubleshooting, if necessary.

 This configuration guide is offered as a convenience to Sonus customers. The specifications and information regarding the product in this guide are subject to change without notice. All statements, information, and recommendations in this guide are believed to be accurate but are presented without warranty of any kind, express or implied, and are provided "AS IS". Users must take full responsibility for the application of the specifications and information in this guide.

Requirements

The following equipment and software were used for the sample configuration provided:

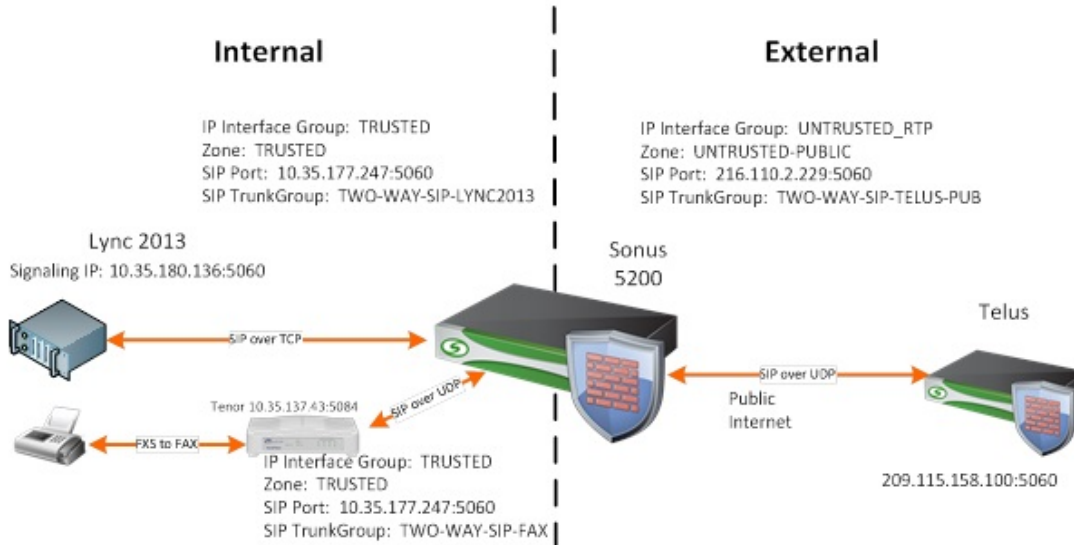
Table 1: Requirements

	Equipment	Version
Sonus Networks	SBC	V04.02.04-R002
	BMC	V02.10.00
	BIOS	V02.06.00
	ConnexIP OS	V02.02.04-R001
	SonusDB	V04.02.04-R002
	EMA	V04.02.04-R002
Third-Party Equipment	Microsoft Lync 2013	5.0.8308.420
	Polycom CX500 Lync Edition	4.0.7577.4372
Telus Equipment	Oracle AP6300 Session Border Controller	7.1.2 MR 3 P 2
	Genband EXPERiUS Application Server	MCP-17.0.22.12
	Genband C20 Call Session Controller	CVM17

Reference Configuration

The following reference configuration shows connectivity between third-party and Sonus SBC 5xx0.

Figure 1: Connectivity Between Third-Party and Sonus SBC 5XX0



Support

For any questions regarding this document or the content herein, please contact your maintenance and support provider.

Third-party Product Features

The testing was executed with the Telus test plan, and the following features were tested for PSTN, BVOIP and Mobile clients:

- Basic originated and terminated calls
- Basic inbound/outbound call
- Basic inbound/outbound call with privacy
- Hold and resume
- Call Transfer (Blind transfer)
- Call Transfer (Consult transfer)
- Call Forwarding Unconditional
- Call Forwarding Busy
- Call Forwarding Don't Answer
- Voicemail
- Conference call
- Long calls
- FAX
- DTMF

Verify License

SBC-POL-RTU

Lync 2013 Configuration

The following new configurations are included in this section:

1. PSTN Gateway
2. Route

1. PSTN Gateway

Topology Builder > Shared Components > PSTN Gateways

Figure 2: Define a new IP/PSTN Gateway

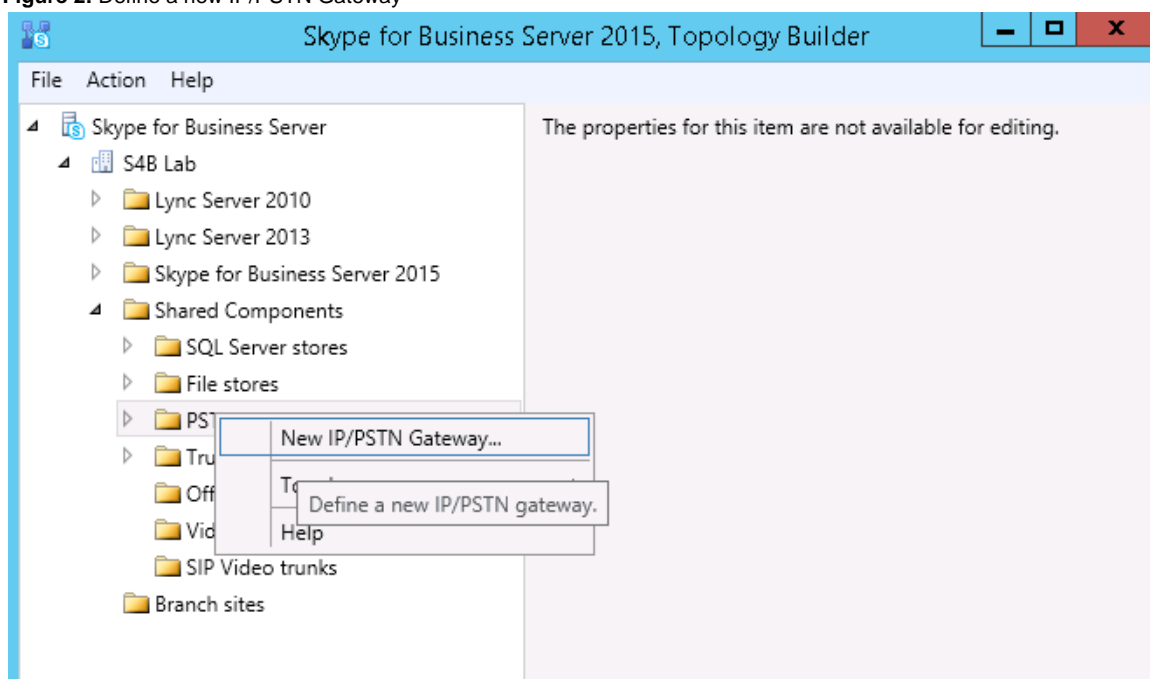


Figure 3: Define FQDN

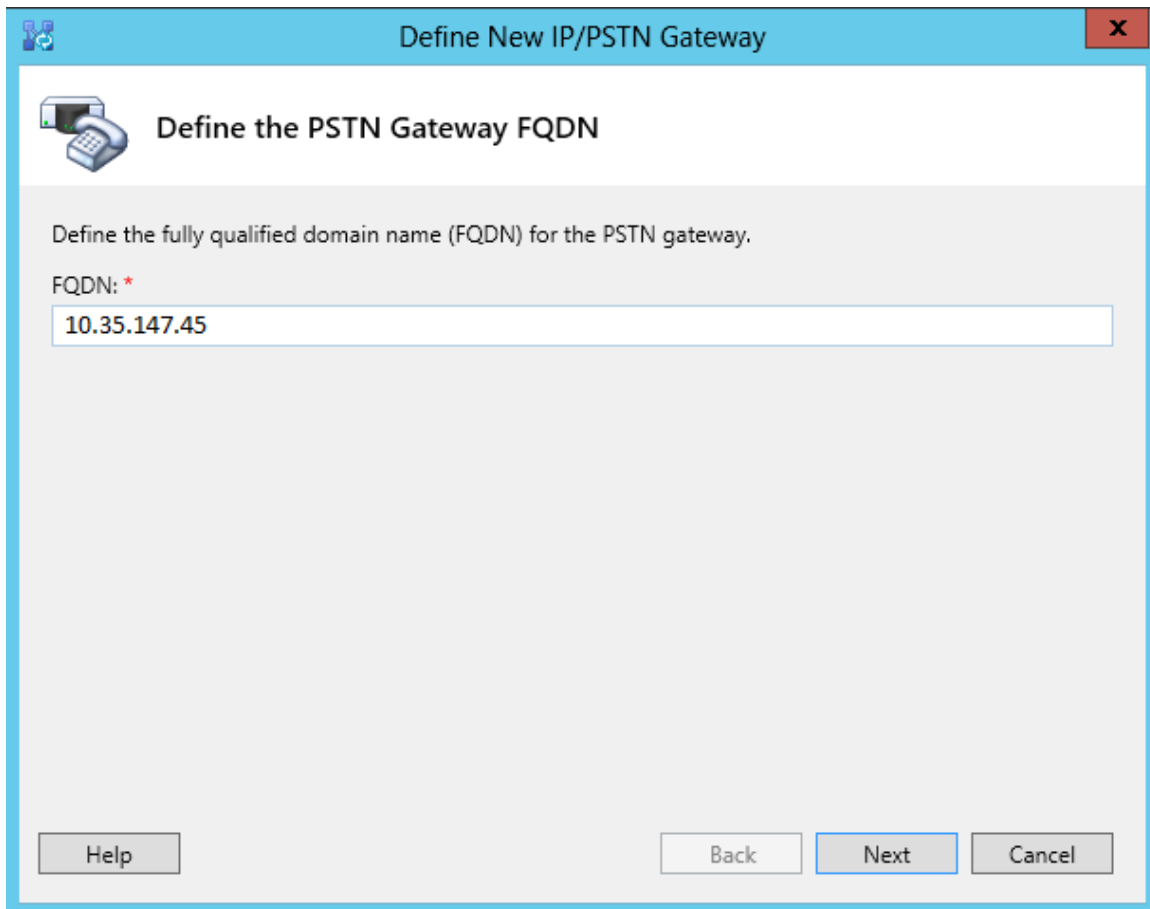


Figure 4: Define IP Address

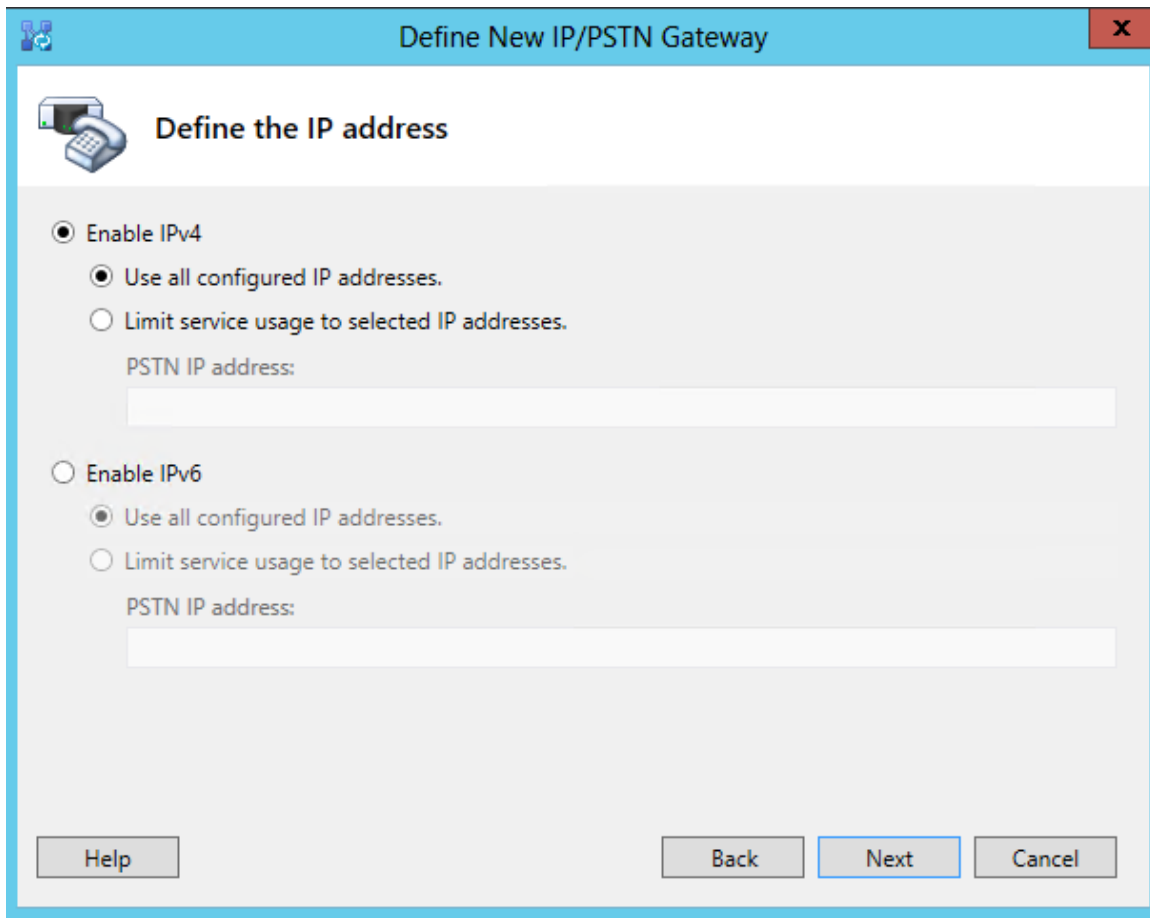


Figure 5: Define Root Trunk

Define New IP/PSTN Gateway

Define the root trunk

Trunk name: *

10.35.147.45

Listening port for IP/PSTN gateway: *

5060

SIP Transport Protocol:

TCP

Associated Mediation Server:

fe.lync2013.sonusnet.com SONUS

Associated Mediation Server port: *

5068

Help Back Finish Cancel

2. Route

Control Panel > Voice Routing > Route

Figure 6: Edit Voice Route

Suppress caller ID

Alternate caller ID:

Associated trunks:

PstnGateway:10.35.147.45	Add...
	Remove

Associated PSTN Usages

Select... Remove ↑ ↓

PSTN usage record	Associated voice policies
Local	Global

Translated number to test:
 Go

PstnGateway:10.35.177.158	SONUS
PstnGateway:10.35.180.71	SONUS
PstnGateway:bsft.vo.sonusnet.c...	SONUS
PstnGateway:newport.lync2013...	newport
PstnGateway:MG1000B.lync201...	newport
PstnGateway:10.35.177.247	SONUS
PstnGateway:10.35.177.239	SONUS
PstnGateway:10.35.147.45	SONUS
PstnGateway:powder.lync2013....	SONUS

OK Cancel

Sonus SBC 5xx0 Series Configuration

Complete Configuration

```
configure
#UDP Port Range for RTP (media)
set system media mediaPortRange baseUdpPort 1024 maxUdpPort 65148
commit
#DSP Resources
set system mediaProfile compression 90 tone 10
commit
#SMM Profiles
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 1 criterion 1 type message
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 1 criterion 1 message messageTypes request
methodTypes invite
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 1 criterion 2 type header
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 1 criterion 2 header name REFERRED-BY
condition exist hdrInstance one
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 1 criterion 3 type token
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 1 criterion 3 token condition regex-match
tokenType uriusername
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 1 criterion 3 token regexp string ^\+1.*$
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 1 action 1 type token operation regdel
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 1 action 1 regexp string ^\+1
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 1 action 1 to type token tokenValue
uriusername
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 1 applyMatchHeader one
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 2 criterion 1 type message
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 2 criterion 1 message messageTypes request
methodTypes invite
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 2 criterion 2 type header
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 2 criterion 2 header name REFERRED-BY
condition exist hdrInstance one
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 2 action 1 type header operation store
headerInfo fieldValue
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 2 action 1 from type header value
REFERRED-BY
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 2 action 1 to type variable variableValue
var1 variableScopeValue local
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 2 action 2 type header operation add
headerPosition last
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 2 action 2 from type variable variableValue
var1
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 2 action 2 to type header value Diversion
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 2 applyMatchHeader one
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 3 criterion 1 type message
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 3 criterion 1 message messageTypes request
methodTypes register
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 3 criterion 2 type header
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 3 criterion 2 header name To condition exist
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 3 action 1 type header operation regsub
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 3 action 1 from type value value
fe.lync2013.sonusnet.com
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 3 action 1 regexp string 10.35.180.136
matchInstance all
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 3 action 1 to type header value To
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 3 applyMatchHeader one
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 4 criterion 1 type message
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 4 criterion 1 message messageTypes request
methodTypes invite condition exist
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 4 criterion 2 type messageBody
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 4 criterion 2 messageBody condition exist
messageBodyType all
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 4 criterion 2 messageBody regexp numMatch
match
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 4 action 1 type messageBody operation regsub
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 4 action 1 from type value
```

```

set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 4 action 1 regexp string 13 matchInstance
all
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 4 action 1 to type messageBody
messageBodyValue all
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 4 action 2 to type messageBody
messageBodyValue all
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 4 action 2 type messageBody operation regdel
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 4 action 2 regexp string a=rtmpa:13
CN/8000[^\r\n]*\r\n matchInstance all
set profiles signaling sipAdaptorProfile LYNC_INBOUND rule 4 applyMatchHeader one
set profiles signaling sipAdaptorProfile LYNC_INBOUND state enabled
commit
set profiles signaling sipAdaptorProfile DiversionToPAID rule 1 criterion 1 type message
set profiles signaling sipAdaptorProfile DiversionToPAID rule 1 criterion 1 message messageTypes
request methodTypes invite
set profiles signaling sipAdaptorProfile DiversionToPAID rule 1 criterion 2 type header
set profiles signaling sipAdaptorProfile DiversionToPAID rule 1 criterion 2 header name Diversion
condition exist hdrInstance one
set profiles signaling sipAdaptorProfile DiversionToPAID rule 1 criterion 3 type token
set profiles signaling sipAdaptorProfile DiversionToPAID rule 1 criterion 3 token condition regex-match
tokenType uriusername
set profiles signaling sipAdaptorProfile DiversionToPAID rule 1 criterion 3 token regexp string ^\+1.*$
set profiles signaling sipAdaptorProfile DiversionToPAID rule 1 action 1 type token operation regdel
set profiles signaling sipAdaptorProfile DiversionToPAID rule 1 action 1 regexp string ^\+1
set profiles signaling sipAdaptorProfile DiversionToPAID rule 1 action 1 to type token tokenValue
uriusername
set profiles signaling sipAdaptorProfile DiversionToPAID rule 1 applyMatchHeader one
set profiles signaling sipAdaptorProfile DiversionToPAID rule 2 criterion 1 type message
set profiles signaling sipAdaptorProfile DiversionToPAID rule 2 criterion 1 message messageTypes
request methodTypes invite
set profiles signaling sipAdaptorProfile DiversionToPAID rule 2 criterion 2 type header
set profiles signaling sipAdaptorProfile DiversionToPAID rule 2 criterion 2 header name Diversion
condition exist hdrInstance one
set profiles signaling sipAdaptorProfile DiversionToPAID rule 2 action 1 type header operation store
headerInfo fieldValue
set profiles signaling sipAdaptorProfile DiversionToPAID rule 2 action 1 from type header value
Diversion
set profiles signaling sipAdaptorProfile DiversionToPAID rule 2 action 1 to type variable variableValue
var2 variableScopeValue local
set profiles signaling sipAdaptorProfile DiversionToPAID rule 2 applyMatchHeader one
set profiles signaling sipAdaptorProfile DiversionToPAID rule 3 criterion 1 type message
set profiles signaling sipAdaptorProfile DiversionToPAID rule 3 criterion 1 message messageTypes
request methodTypes invite
set profiles signaling sipAdaptorProfile DiversionToPAID rule 3 criterion 2 type header
set profiles signaling sipAdaptorProfile DiversionToPAID rule 3 criterion 2 header name
P-Asserted-Identity condition exist hdrInstance one
set profiles signaling sipAdaptorProfile DiversionToPAID rule 3 action 1 type header operation modify
headerInfo headerValue
set profiles signaling sipAdaptorProfile DiversionToPAID rule 3 action 1 from type variable
variableValue var2
set profiles signaling sipAdaptorProfile DiversionToPAID rule 3 action 1 to type header value
P-Asserted-Identity
set profiles signaling sipAdaptorProfile DiversionToPAID rule 3 applyMatchHeader one
set profiles signaling sipAdaptorProfile DiversionToPAID rule 4 criterion 1 type message
set profiles signaling sipAdaptorProfile DiversionToPAID rule 4 criterion 1 message messageTypes
request methodTypes invite
set profiles signaling sipAdaptorProfile DiversionToPAID rule 4 criterion 2 type header
set profiles signaling sipAdaptorProfile DiversionToPAID rule 4 criterion 2 header name Diversion
condition exist
set profiles signaling sipAdaptorProfile DiversionToPAID rule 4 action 1 type header operation delete
set profiles signaling sipAdaptorProfile DiversionToPAID rule 4 action 1 to type header value Diversion
set profiles signaling sipAdaptorProfile DiversionToPAID rule 4 applyMatchHeader one
set profiles signaling sipAdaptorProfile DiversionToPAID state enabled
commit
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 1 criterion 1 type message
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 1 criterion 1 message messageTypes
request methodTypes options
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 1 criterion 2 type header
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 1 criterion 2 header name Max-Forwards
condition exist
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 1 action 1 type header operation modify
headerInfo headerValue

```

```

set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 1 action 1 from type value value 0
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 1 action 1 to type header value
Max-Forwards
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 1 applyMatchHeader one
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 2 criterion 1 type message
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 2 criterion 1 message messageTypes
request methodTypes update
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 2 action 1 type messageBody operation
regdel
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 2 action 1 regexp string a=T38.*$
matchInstance all
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 2 action 1 to type messageBody
messageBodyValue all
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 2 action 2 type messageBody operation
regdel
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 2 action 2 regexp string m=image.*$
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 2 action 2 to type messageBody
messageBodyValue all
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM rule 2 applyMatchHeader all
set profiles signaling sipAdaptorProfile TELUS_INBOUND_SMM state enabled
commit
#Lync codecs
set profiles media codecEntry LYNC_G711U_SS_20ms_2833 codec g711ss packetSize 20
preferredRtpPayloadType 128 law ULaw sendSid enable
set profiles media codecEntry LYNC_G711A_SS_20ms_2833 codec g711ss packetSize 20
preferredRtpPayloadType 128 law ALaw sendSid enable
set profiles media codecEntry LYNC_G711U_SS_20ms_2833 dtmf relay rfc2833 removeDigits enable
set profiles media codecEntry LYNC_G711A_SS_20ms_2833 dtmf relay rfc2833 removeDigits enable
set profiles media codecEntry LYNC_G711U_SS_20ms_2833 fax failureHandling continue toneTreatment none
set profiles media codecEntry LYNC_G711A_SS_20ms_2833 fax failureHandling continue toneTreatment none
set profiles media codecEntry LYNC_G711U_SS_20ms_2833 modem failureHandling continue toneTreatment none
set profiles media codecEntry LYNC_G711A_SS_20ms_2833 modem failureHandling continue toneTreatment none
commit
#Telus codecs
set profiles media codecEntry TELUS-G729A-2833-T38 codec g729a packetSize 20 preferredRtpPayloadType
128
set profiles media codecEntry TELUS_G711A_SS_2833_T38 codec g711ss packetSize 20
preferredRtpPayloadType 128 law ALaw sendSid enable
set profiles media codecEntry TELUS_G711U_SS_2833_T38 codec g711ss packetSize 20
preferredRtpPayloadType 128 law ULaw sendSid enable
set profiles media codecEntry TELUS_G711A_SS_2833_T38 dtmf relay rfc2833 removeDigits enable
set profiles media codecEntry TELUS-G729A-2833-T38 dtmf relay rfc2833 removeDigits enable
set profiles media codecEntry TELUS_G711U_SS_2833_T38 dtmf relay rfc2833 removeDigits enable
set profiles media codecEntry TELUS_G711U_SS_2833_T38 fax failureHandling continue toneTreatment
faxRelay
set profiles media codecEntry TELUS_G711A_SS_2833_T38 fax failureHandling continue toneTreatment
faxRelay
set profiles media codecEntry TELUS-G729A-2833-T38 fax failureHandling continue toneTreatment faxRelay
set profiles media codecEntry TELUS_G711U_SS_2833_T38 modem failureHandling continue toneTreatment
applyFaxTreatment
set profiles media codecEntry TELUS-G729A-2833-T38 modem failureHandling continue toneTreatment
applyFaxTreatment
set profiles media codecEntry TELUS_G711A_SS_2833_T38 modem failureHandling continue toneTreatment
applyFaxTreatment
commit
#DNS entry
set addressContext default dnsGroup DNS localRecord LYNC2013 hostName fe.lync2013.sonusnet.com state
enabled order priority
set addressContext default dnsGroup DNS localRecord LYNC2013 data 1 type a priority 0 ipAddress
10.35.180.136 state enabled
commit
#Internal Side Configuration
#IP Interface Group
set addressContext default ipInterfaceGroup TRUSTED ipInterface pkt0 ceName little portName pkt0
ipAddress 10.35.177.246 prefix 26 mode outOfService state disabled
commit
set addressContext default ipInterfaceGroup TRUSTED ipInterface pkt0 mode inService state enabled
commit
#IP Static Route
set addressContext default staticRoute 0.0.0.0 0 10.35.177.193 TRUSTED pkt0 preference 100
commit
#Assign DNS group to zone

```

```

set addressContext default zone TRUSTED dnsGroup DNS
commit
#SBC Configuration for Lync 2013 Trunk
#Packet Service Profile (PSP)
set profiles media packetServiceProfile LYNC_PSP codec codecEntry1 LYNC_G711U_SS_20ms_2833 codecEntry2
LYNC_G711A_SS_20ms_2833
set profiles media packetServiceProfile LYNC_PSP packetToPacketControl codecsAllowedForTranscoding
thisLeg g711a g711u g729 otherLeg g711a g711u g729
set profiles media packetServiceProfile LYNC_PSP packetToPacketControl
conditionsInAdditionToNoCommonCodec applyFaxToneTreatment disable differentDtmfRelay enable
differentPacketSize enable differentSilenceSuppression enable honorOfferPreference disable
honorAnswerPreference disable different2833PayloadType enable
set profiles media packetServiceProfile LYNC_PSP packetToPacketControl transcode conditional
commit
#IP Signaling profiles
set profiles signaling ipSignalingProfile LYNC_IPSP ipProtocolType sipOnly
set profiles signaling ipSignalingProfile LYNC_IPSP commonIpAttributes flags disableMediaLockDown
enable includeReasonHeader enable
set profiles signaling ipSignalingProfile LYNC_IPSP commonIpAttributes flags
minimizeRelayingOfMediaChangesFromOtherCallLegAll enable publishIPInHoldSDP enable routeUsingRecvdFqdn
enable sendPtimeInSdp enable
set profiles signaling ipSignalingProfile LYNC_IPSP commonIpAttributes flags sendRtcpPortInSdp enable
storePChargingVector enable
set profiles signaling ipSignalingProfile LYNC_IPSP commonIpAttributes optionTagInRequireHeader
suppressReplaceTag enable
set profiles signaling ipSignalingProfile LYNC_IPSP ingressIpAttributes flags
sendSdpIn2000kIf18xReliable enable sendSdpInSubsequent18x enable
set profiles signaling ipSignalingProfile LYNC_IPSP egressIpAttributes useLowerCaseDomainNames enable
useSipDomainNameInFromField enable useSipDomainNameInRequestUri enable
set profiles signaling ipSignalingProfile LYNC_IPSP egressIpAttributes flags disable2806Compliance
enable
set profiles signaling ipSignalingProfile LYNC_IPSP egressIpAttributes privacy flags includePrivacy
enable msLyncPrivacySupport enable
set profiles signaling ipSignalingProfile LYNC_IPSP egressIpAttributes privacy transparency disable
privacyInformation pAssertedId
set profiles signaling ipSignalingProfile LYNC_IPSP egressIpAttributes transport type1 tcp type2 none
type3 none type4 none
set profiles signaling ipSignalingProfile LYNC_IPSP egressIpAttributes numberGlobalizationProfile
LYNC2013
commit
#Feature Control Profile
set profiles featureControlProfile LYNC_FCP processDestinationTgrp disable
processDestinationTrunkContext disable processEnumdi disable
set profiles featureControlProfile LYNC_FCP ipProtocolFlags useIpProtocol enable defaultCalledUser
enable honorPhoneContextParameter disable
commit
#zone
set addressContext default zone TRUSTED id 3
commit
#SIP signaling port
set addressContext default zone TRUSTED sipSigPort 3 ipInterfaceGroupName TRUSTED ipAddressV4
10.35.177.247 portNumber 5060 mode outOfService state disabled siprec disabled
transportProtocolsAllowed sip-udp sip-tcp
set addressContext default zone TRUSTED sipSigPort 3 mode inService state enabled
commit
#IP Peer
set addressContext default zone TRUSTED ipPeer LYNC2013-FQDN policy sip fqdnPort 0
set addressContext default zone TRUSTED ipPeer LYNC2013-FQDN ipAddress 10.35.180.136 ipPort 5068
set addressContext default zone TRUSTED ipPeer LYNC2013-FQDN pathCheck profile Lync2013 hostName
fe.lync2013.sonusnet.com hostPort 5068 state disabled
set addressContext default zone TRUSTED ipPeer LYNC2013-FQDN policy description LYNC2013
packetServiceProfile LYNC_PSP ipSignalingProfile LYNC_IPSP
set addressContext default zone TRUSTED ipPeer LYNC2013-FQDN authentication incInternalCredentials
enabled
set addressContext default zone TRUSTED ipPeer LYNC2013-FQDN authentication intChallengeResponse
enabled
set addressContext default zone TRUSTED ipPeer LYNC2013-FQDN surrogateRegistration userPart p5872330304
authUserName p5872330304 regAuthPassword panal2345 state enabled sendCredentials
challengeForAnyMessageAndInDialogRequests hostPart ipinet3.com
commit
#SIP trunk group
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-LYNC2013 media

```

```

mediaIpInterfaceGroupName TRUSTED
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-LYNC2013 signaling
messageManipulation inputAdapterProfile LYNC_INBOUND includeAppHdrs disabled
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-LYNC2013 signaling rel100Support
enabled acceptHistoryInfo enabled
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-LYNC2013 ingressIpPrefix
10.35.180.136 32
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-LYNC2013 policy callRouting
elementRoutingPriority TELUS
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-LYNC2013 policy
digitParameterHandling numberingPlan GENERIC_NUM_PLAN
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-LYNC2013 policy media
packetServiceProfile LYNC_PSP
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-LYNC2013 policy services
classOfService DEFAULT_IP
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-LYNC2013 policy signaling
ipSignalingProfile LYNC_IPSP signalingProfile DEFAULT_IP_PROFILE
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-LYNC2013 policy carrier 0000 country
1 sipDomain FE.LYNC2013.SONUSNET.COM localizationVariant northAmerica tgIPVersionPreference
both-ipv4-and-ipv6 featureControlProfile LYNC_FCP
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-LYNC2013 state enabled mode inService
commit
#SBC Configuration for Fax Trunk
#Packet Service Profile
set profiles media packetServiceProfile TELUS_FAX_PSP codec codecEntry1 G711U-20ms-2833-T38 codecEntry2
G711A-20ms-2833-T38 codecEntry3 G729A-20ms-2833-T38
set profiles media packetServiceProfile TELUS_FAX_PSP packetToPacketControl codecsAllowedForTranscoding
thisLeg g711a g711u g729 t38 otherLeg g711a g711u g729 t38
set profiles media packetServiceProfile TELUS_FAX_PSP packetToPacketControl transcode only
set profiles media packetServiceProfile TELUS_FAX_PSP rtcpOptions rtcp enable
commit
#IP signaling profile
set profiles signaling ipSignalingProfile FAX_IPSP ipProtocolType sipOnly
set profiles signaling ipSignalingProfile FAX_IPSP commonIpAttributes flags disableMediaLockDown enable
set profiles signaling ipSignalingProfile FAX_IPSP commonIpAttributes flags
minimizeRelayingOfMediaChangesFromOtherCallLegAll enable
set profiles signaling ipSignalingProfile FAX_IPSP commonIpAttributes flags sendRtcpPortInSdp enable
storePChargingVector enable suppressReplaceTag enable
set profiles signaling ipSignalingProfile FAX_IPSP egressIpAttributes useLowerCaseDomainNames enable
useSipDomainNameInFromField enable useSipDomainNameInRequestUri enable
set profiles signaling ipSignalingProfile FAX_IPSP egressIpAttributes flags disable2806Compliance
enable
set profiles signaling ipSignalingProfile FAX_IPSP egressIpAttributes privacy flags includePrivacy
enable privacyRequiredByProxy disable msLyncPrivacySupport enable
set profiles signaling ipSignalingProfile FAX_IPSP egressIpAttributes privacy transparency disable
privacyInformation pAssertedId
commit
#IP peer
set addressContext default zone TRUSTED ipPeer FAX policy sip fqdnPort 0
set addressContext default zone TRUSTED ipPeer FAX ipAddress 10.35.137.43 ipPort 5084 defaultForIp
false
set addressContext default zone TRUSTED ipPeer FAX policy description LYNC2013 packetServiceProfile
TELUS_FAX_PSP ipSignalingProfile FAX_IPSP
set addressContext default zone TRUSTED ipPeer FAX authentication incInternalCredentials enabled
set addressContext default zone TRUSTED ipPeer FAX authentication intChallengeResponse enabled
set addressContext default zone TRUSTED ipPeer FAX surrogateRegistration userPart p5872330304
authUserName p5872330304 regAuthPassword panal2345 state enabled sendCredentials
challengeForAnyMessageAndInDialogRequests hostPart ipinet3.com
commit
#SIP trunk group
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-FAX mediaIpInterfaceGroupName TRUSTED
sourceAddressFiltering enabled
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-FAX signaling rel100Support enabled
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-FAX ingressIpPrefix 10.35.137.43 32
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-FAX policy callRouting
elementRoutingPriority TELUS
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-FAX policy digitParameterHandling
numberingPlan GENERIC_NUM_PLAN
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-FAX policy media packetServiceProfile
TELUS_FAX_PSP
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-FAX policy services classOfService
DEFAULT_IP

```

```

set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-FAX policy signaling
ipSignalingProfile TELUS_IPSP signalingProfile DEFAULT_IP_PROFILE
set addressContext default zone TRUSTED sipTrunkGroup TWO-WAY-SIP-FAX state enabled mode inService
commit
#External Side SBC Configuration
#IP Interface Group
set addressContext default ipInterfaceGroup UNTRUSTED_RTP ipInterface pkt3 ceName little portName pkt3
ipAddress 216.110.2.229 prefix 28 mode outOfService state disabled
commit
set addressContext default ipInterfaceGroup UNTRUSTED_RTP ipInterface pkt3 mode inService state enabled
set addressContext default ipInterfaceGroup UNTRUSTED_RTP ipsec disabled
commit
#IP static route
set addressContext default staticRoute 0.0.0.0 0 216.110.2.225 UNTRUSTED_RTP pkt3 preference 100
commit
#SBC Configuration for TELUS SIP Trunk
#Packet Service Profile
set profiles media packetServiceProfile TELUS_PSP codec codecEntry1 TELUS_G711U_SS_2833-T38 codecEntry2
TELUS_G711A_SS_2833-T38 codecEntry3 TELUS-G729A-2833-T38
set profiles media packetServiceProfile TELUS_PSP packetToPacketControl codecsAllowedForTranscoding
thisLeg g711a g711u g729 t38 otherLeg g711a g711u g729 t38
set profiles media packetServiceProfile TELUS_PSP packetToPacketControl
conditionsInAdditionToNoCommonCodec differentDtmfRelay enable differentPacketSize enable
differentSilenceSuppression enable honorOfferPreference enable honorAnswerPreference enable
set profiles media packetServiceProfile TELUS_PSP packetToPacketControl transcode conditional
commit
#IP signaling profile
set profiles signaling ipSignalingProfile TELUS_IPSP ipProtocolType sipOnly
set profiles signaling ipSignalingProfile TELUS_IPSP commonIpAttributes flags disableMediaLockDown
enable includeReasonHeader enable
set profiles signaling ipSignalingProfile TELUS_IPSP commonIpAttributes flags
minimizeRelayingOfMediaChangesFromOtherCallLegAll enable sendPtimeInSdp enable sendRtcpPortInSdp enable
storePChargingVector enable
set profiles signaling ipSignalingProfile TELUS_IPSP egressIpAttributes flags disable2806Compliance
enable disableOptionalRegisterParameters enable
set profiles signaling ipSignalingProfile TELUS_IPSP egressIpAttributes privacy flags includePrivacy
enable
set profiles signaling ipSignalingProfile TELUS_IPSP egressIpAttributes privacy transparency disable
privacyInformation pAssertedId
commit
#Zone
set addressContext default zone UNTRUSTED-PUBLIC id 4
commit
#SIP signaling port
set addressContext default zone UNTRUSTED-PUBLIC sipSigPort 229 ipInterfaceGroupName UNTRUSTED_RTP
ipAddressV4 216.110.2.229 portNumber 5060 mode outOfService state transportProtocolsAllowed sip-udp
set addressContext default zone UNTRUSTED-PUBLIC sipSigPort 229 mode inService state enabled
commit
#IP peer
set addressContext default zone UNTRUSTED-PUBLIC ipPeer TELUS-PUBLIC policy sip fqdnPort 0
set addressContext default zone UNTRUSTED-PUBLIC ipPeer TELUS-PUBLIC ipAddress 209.115.158.100 ipPort
5060 defaultForIp false
set addressContext default zone UNTRUSTED-PUBLIC ipPeer TELUS-PUBLIC policy packetServiceProfile
TELUS_PSP ipSignalingProfile TELUS_IPSP
commit
#SIP trunk group
set addressContext default zone UNTRUSTED-PUBLIC sipTrunkGroup TWO-WAY-SIP-TELUS-PUB media
mediaIpInterfaceGroupName UNTRUSTED_RTP sourceAddressFiltering enabled
set addressContext default zone UNTRUSTED-PUBLIC sipTrunkGroup TWO-WAY-SIP-TELUS-PUB signaling
messageManipulation inputAdapterProfile TELUS_INBOUND_SMM outputAdapterProfile DiversionToPAID
set addressContext default zone UNTRUSTED-PUBLIC sipTrunkGroup TWO-WAY-SIP-TELUS-PUB signaling
rell00Support enabled
set addressContext default zone UNTRUSTED-PUBLIC sipTrunkGroup TWO-WAY-SIP-TELUS-PUB ingressIpPrefix
209.115.158.100 32
set addressContext default zone UNTRUSTED-PUBLIC sipTrunkGroup TWO-WAY-SIP-TELUS-PUB policy callRouting
elementRoutingPriority TELUS
set addressContext default zone UNTRUSTED-PUBLIC sipTrunkGroup TWO-WAY-SIP-TELUS-PUB policy
digitParameterHandling numberingPlan NANP_ACCESS
set addressContext default zone UNTRUSTED-PUBLIC sipTrunkGroup TWO-WAY-SIP-TELUS-PUB policy media
packetServiceProfile TELUS_PSP
set addressContext default zone UNTRUSTED-PUBLIC sipTrunkGroup TWO-WAY-SIP-TELUS-PUB policy services
classOfService DEFAULT_IP

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set addressContext default zone UNTRUSTED-PUBLIC sipTrunkGroup TWO-WAY-SIP-TELUS-PUB policy signaling
ipSignalingProfile TELUS_IPSP
set addressContext default zone UNTRUSTED-PUBLIC sipTrunkGroup TWO-WAY-SIP-TELUS-PUB state enabled mode
inService
commit
#Global Call Routing Configuration
#Element Routing Priority
set profiles callRouting elementRoutingPriority TELUS entry nationalType 2 entityType none
set profiles callRouting elementRoutingPriority TELUS entry nationalType 1 entityType trunkGroup
set profiles callRouting elementRoutingPriority TELUS entry _private 2 entityType none
set profiles callRouting elementRoutingPriority TELUS entry _private 1 entityType trunkGroup
set profiles callRouting elementRoutingPriority TELUS entry nationalOperator 2 entityType none
set profiles callRouting elementRoutingPriority TELUS entry nationalOperator 1 entityType trunkGroup
set profiles callRouting elementRoutingPriority TELUS entry transit 2 entityType none
set profiles callRouting elementRoutingPriority TELUS entry transit 1 entityType trunkGroup
set profiles callRouting elementRoutingPriority TELUS entry carrierCutThrough 2 entityType none
set profiles callRouting elementRoutingPriority TELUS entry carrierCutThrough 1 entityType trunkGroup
set profiles callRouting elementRoutingPriority TELUS entry localOperator 2 entityType none
set profiles callRouting elementRoutingPriority TELUS entry localOperator 1 entityType trunkGroup
set profiles callRouting elementRoutingPriority TELUS entry userName 2 entityType none
set profiles callRouting elementRoutingPriority TELUS entry userName 1 entityType trunkGroup
set profiles callRouting elementRoutingPriority TELUS entry internationalOperator 2 entityType none
set profiles callRouting elementRoutingPriority TELUS entry internationalOperator 1 entityType
trunkGroup
set profiles callRouting elementRoutingPriority TELUS entry longDistanceOperator 2 entityType none
set profiles callRouting elementRoutingPriority TELUS entry longDistanceOperator 1 entityType
trunkGroup
set profiles callRouting elementRoutingPriority TELUS entry otherCarrierChosen 2 entityType none
set profiles callRouting elementRoutingPriority TELUS entry otherCarrierChosen 1 entityType trunkGroup
set profiles callRouting elementRoutingPriority TELUS entry internationalType 2 entityType none
set profiles callRouting elementRoutingPriority TELUS entry internationalType 1 entityType trunkGroup
set profiles callRouting elementRoutingPriority TELUS entry mobile 2 entityType none
set profiles callRouting elementRoutingPriority TELUS entry mobile 1 entityType trunkGroup
set profiles callRouting elementRoutingPriority TELUS entry test 2 entityType none
set profiles callRouting elementRoutingPriority TELUS entry test 1 entityType trunkGroup
commit
#Global Configuration
set global sipDomain fe.lync2013.sonusnet.com
commit
#Lync 2013 Routing
set global callRouting routingLabel TO_TWO_WAY_LYNC2013 routingLabelRoute 0 trunkGroup
TWO-WAY-SIP-LYNC2013 ipPeer LYNC2013-FQDN proportion 0 cost 1000000 inService inService testing normal
set global callRouting routingLabel TO_TWO_WAY_LYNC2013 overflowNOA none overflowNPI none
routePrioritizationType sequence action routes numRoutesPerCall 10
commit
set global callRouting route trunkGroup TWO-WAY-SIP-TELUS-PUB LITTLECE standard Sonus_NULL Sonus_NULL
all all ALL none Sonus_NULL routingLabel TO_TWO_WAY_LYNC2013
commit
set global callRouting route none Sonus_NULL Sonus_NULL username Sonus_NULL Sonus_NULL all all ALL none
FE.LYNC2013.SONUSNET.COM routingLabel TO_TWO_WAY_LYNC2013
set global callRouting route none Sonus_NULL Sonus_NULL standard Sonus_NULL Sonus_NULL all all ALL none
FE.LYNC2013.SONUSNET.COM routingLabel TO_TWO_WAY_LYNC2013
commit
#Telus routing
set global callRouting routingLabel TO_TWO_WAY_TELUS_PUB routingLabelRoute 0 trunkGroup
TWO-WAY-SIP-TELUS-PUB ipPeer TELUS-PUBLIC proportion 0 cost 1000000 inService inService testing normal
set global callRouting routingLabel TO_TWO_WAY_TELUS_PUB overflowNOA none overflowNPI none
routePrioritizationType sequence action routes numRoutesPerCall 10
commit
set global callRouting route trunkGroup TWO-WAY-SIP-LYNC2013 LITTLECE standard Sonus_NULL Sonus_NULL
all all ALL none Sonus_NULL routingLabel TO_TWO_WAY_TELUS_PUB

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set global callRouting route trunkGroup TWO-WAY-SIP-LYNC2013 LITTLECE username P5872330304 Sonus_NULL
all all ALL none FE.LYNC2013.SONUSNET.COM routingLabel TO_TWO_WAY_TELUS_PUB
commit

```

Test Results

Table 2: Test Results

S.No	Procedure	Observation	Result	Comment
Basic originated and terminated calls				
TELUS_TC1	<p>Call to following number from PBX:</p> <p>647-837-0597 Toronto Local</p> <p>403-532-8075 Calgary Local</p> <p>1-877-353-9586 Toll Free North America</p> <p>When hearing the prompt, press 1234# to interrupt the prompt. Should hear "invalid access code" prompt to confirm the DTMF tone detection.</p> <p>Note that you may need to dial 1 as it could be a LD call.</p>		Pass	
TELUS_TC2	<p>Call to the following test line - 9056352304.</p> <p>After the call is answered, you will hear a "confirmation tone" and you could disconnect the call.</p> <p>Note that you may need to dial 1 as it could be a LD call.</p>		Pass	
Test with PSTN line				
Basic inbound/outbound call				
TELUS_TC3	<p>Call from PSTN phone to IP PBX phone</p> <ol style="list-style-type: none"> 1. Confirm 2-way voice 2. Confirm the proper calling number is shown 3. Confirm the proper call display name is shown 		Pass	
TELUS_TC4	<p>Call from IP PBX phone to PSTN phone</p> <ol style="list-style-type: none"> 1. Confirm 2-way voice 2. Confirm the proper calling number is shown 3. Confirm the proper call display name is shown 		Pass	
Basic inbound/outbound call with privacy				

TELUS_TC5	Call from PSTN phone to IP PBX phone, prefix the IP PBX phone number with *63 1. Confirm 2-way voice 2. Confirm the proper calling number is not shown 3. Confirm the proper call display name is not shown		Pass	
TELUS_TC6	Call from IP PBX phone to PSTN phone, when dialling from the IP PBX phone, use the prefix if applicable to temporarily suppress the call display 1. Confirm 2-way voice 2. Confirm the proper calling number is not shown 3. Confirm the proper call display name is not shown		Pass	
Hold and resume				
TELUS_TC7	Call from PSTN to IP PBX - after the call setup the PBX phone puts the call on-hold or (MOH), waits 30 seconds, resumes. Confirm audio both way after resume.		Pass	
TELUS_TC8	Call from IP PBX to PSTN - after the call setup, use PSTN phone to put the call on-hold, wait 30 seconds, resume. Confirm audio both way after resume.		Pass	
Call Transfer (Blind transfer)				
TELUS_TC9	IP PBX phone 1 calls IP PBX phone 2 IP PBX phone 2 performs a blind transfer to PSTN phone Confirm audio both way after the transfer Repeat the same test using SIP REFER		Pass	
TELUS_TC10	PSTN phone calls IP PBX phone 1 IP PBX phone 1 performs a blind transfer to IP PBX phone 2 Confirm audio both way after the transfer Repeat the same test using SIP REFER		Pass	
TELUS_TC11	PSTN phone calls IP PBX phone 1 IP PBX phone 1 performs a blind transfer to another PSTN Confirm both way audio. Repeat the same test using SIP REFER		Pass	
TELUS_TC12	PSTN phone calls IP PBX phone 1 IP PBX phone 1 performs a blind transfer to Telus mobile client Confirm both way audios Repeat the same test using SIP REFER		Pass	
Call Transfer (Consult transfer)				

TELUS_TC13	IP PBX phone 1 calls IP PBX phone 2 IP PBX phone 2 performs a consult transfer to PSTN phone Confirm audio both way after the transfer Repeat the same test using SIP REFER		Pass	
TELUS_TC14	PSTN phone calls IP PBX phone 1 IP PBX phone 1 performs a consult transfer to IP PBX phone 2 Confirm audio both way after the transfer Repeat the same test using SIP REFER		Pass	
TELUS_TC15	PSTN phone calls IP PBX phone 1 IP PBX phone 1 performs a consult transfer to another PSTN Confirm both way audio. Repeat the same test using SIP REFER		Pass	
TELUS_TC16	PSTN phone calls IP PBX phone 1 IP PBX phone 1 performs a consult transfer to Telus mobile client Confirm both way audios Repeat the same test using SIP REFER		Pass	
Call Forwarding Unconditional				
TELUS_TC17	Configure IP PBX phone 1 to CFU to PSTN phone IP PBX phone 2 calls phone 1 and should CFU to PSTN phone 1. Confirm 2-way voice 2. Confirm phone 1 number and display at PSTN phone			
TELUS_TC18	Configure IP PBX phone 1 to CFU to PSTN phone IP PBX phone 2 calls phone 1 and should CFU to PSTN phone 1. Confirm 2-way voice 2. Confirm phone 1 number and display at PSTN phone			
TELUS_TC19	Configure IP PBX phone 1 to CFU to telus mobile client PSTN phone calls phone 1 to trigger the call forwarding 1. Confirm audio prompt 2, confirm the phone 1 number and display Mobile client			
Call Forwarding Busy				
TELUS_TC20	Configure IP PBX phone 1 to CFB to PSTN phone IP PBX phone 2 calls phone 1 and should CFB to PSTN phone 1. Confirm 2-way voice 2. Confirm phone 1 number and display at PSTN phone		Pass	
TELUS_TC21	Configure IP PBX phone 1 to CFB to PSTN phone from PSTN calls phone 1 and should CFB to PSTN phone 1. Confirm 2-way voice 2. Confirm phone 1 number and display at PSTN phone		Pass	

TELUS_TC22	Configure IP PBX phone 1 to CFU to Telus Mobile client PSTN phone calls phone 1 to trigger the call forwarding 1. Confirm audio prompt 2. Press 1234# to interrupt the prompt		Pass	
Call Forwarding Don't Answer				
TELUS_TC23	Configure IP PBX phone 1 to CFDA to PSTN phone IP PBX phone 2 calls phone 1 and should CFDA to PSTN phone 1. Confirm 2-way voice 2. Confirm phone 1 number and display at PSTN phone		Pass	
TELUS_TC24	Configure IP PBX phone 1 to CFDA to PSTN phone from PSTN calls phone 1 and should CFDA to PSTN phone 1. Confirm 2-way voice 2. Confirm phone 1 number and display at PSTN phone		Pass	
TELUS_TC25	Configure IP PBX phone 1 to CFU to Telus Mobile client PSTN phone calls phone 1 to trigger the call forwarding 1. Confirm audio prompt 2. confirm phone 1 number and display on mobile client		Pass	
Voicemail				
TELUS_TC26	IP PBX phone 1 calls PSTN phone, Don't answer the call in the PSTN phone; after 4 ring, voicemail kick in Record a message Follow the prompt to play back the message Follow the prompt to cancel the recording then hang up.		Pass	
Conference call				
TELUS_TC27	PSTN phone calls IP PBX phone 1 IP PBX phone 1 performs a conference call with IP PBX phone 2 Confirm audio among the parties		Pass	
TELUS_TC28	PSTN phone calls IP PBX phone 1 IP PBX phone 1 performs a conference call with PSTN Confirm audio with PSTN phone and IP PBX phone		Pass	
Long calls - minimum recommendation				
TELUS_TC29	long duration call: 2 hours - to PSTN phone		Pass	
TELUS_TC30	long duration call on hold: Call to PSTN, PBX places call on hold for 20 min, resume call, verify 2 way audio		Pass	
TELUS_TC31	IP PBX phone 1 calls PSTN phone IP PBX phone 1 performs a conference call to Telus Mobile client Confirm audio with PSTN phone and IP PBX phone		Pass	

FAX				
TELUS_TC32	Repeat the test by setup the call with both G.711 and G.729. Outbound (from IP PBX to PSTN) T.38 testing , set up the call with G711, PBX re-invite with T38. verified the fax passed with T.38.		Pass	
TELUS_TC33	Setup the call with G.711 as preferred codec . Outbound (from IP PBX to PSTN) FAX G.711 pass-through testing,test G711 fax pass through.		Pass	
TELUS_TC34	Inbound (from PSTN to IP PBX) T.38 testing		Pass	
TELUS_TC35	Inbound (from PSTN to IP PBX) FAX G.711 pass-through testing		Pass	
Test with TELUS VoIP Account				
Basic inbound/outbound call				
TELUS_TC36	Repeat the test by both G.711 and G.729. Call from TELUS VoIP client to IP PBX phone, 1. Confirm 2-way voice 2. Confirm the proper calling number is shown 3. Confirm the proper call display name is shown		Pass	
TELUS_TC37	Repeat the test by setup the call with both G.711 and G.729. Call from IP PBX phone to TELUS VoIP client, 1. Confirm 2-way voice 2. Confirm the proper calling number is shown 3. Confirm the proper call display name is shown		Pass	
Basic inbound/outbound call with privacy				
TELUS_TC38	Call from TELUS VoIP client to IP PBX phone with privacy 1. CConfirm 2-way voice 2. Confirm the proper calling number is not shown 3. Confirm the proper call display name is not shown		Pass	
TELUS_TC39	Call from IP PBX phone to TELUS VoIP client, when dialling from the IP PBX phone, use the prefix if applicable to temporary suppress the call display 1. Confirm 2-way voice 2. Confirm the proper calling number is not shown 3. Confirm the proper call display name is not shown		Pass	
Hold and resume				
TELUS_TC40	Call from TELUS VoIP to IP PBX - after the call setup the PBX phone puts the call on-hold or (MOH), waits 30 seconds, resumes. Confirm audio both way after resume.		Pass	

TELUS_TC41	Call from IP PBX to TELUS VoIP - after the call setup, use TELUS VoIP to put the call on-hold or (MOH), waits 30 seconds, resumes. Confirm 2-way voice after resume.		Pass	
Call Transfer (Blind transfer)				
TELUS_TC42	IP PBX phone 1 calls IP PBX phone 2 IP PBX phone 2 performs a blind transfer to TELUS VoIP client Confirm 2-way voice after the transfer Repeat the same test using SIP REFER		Pass	
TELUS_TC43	TELUS VoIP client calls IP PBX phone 1 IP PBX phone 1 performs a blind transfer to PSTN Confirm 2-way voice after the transfer Repeat the same test using SIP REFER		Pass	
TELUS_TC44	TELUS VoIP client calls IP PBX phone 1 IP PBX phone 1 performs a blind transfer to Telus mobile client Repeat the same test using SIP REFER		Pass	
Call Transfer (Consult transfer)				
TELUS_TC45	IP PBX phone 1 calls IP PBX phone 2 IP PBX phone 2 performs a consult transfer to TELUS VoIP client Confirm 2-way voice after the transfer Repeat the same test using SIP REFER		Pass	
TELUS_TC46	TELUS VoIP client calls IP PBX phone 1 IP PBX phone 1 performs a consult transfer to PSTN Confirm 2-way voice after the transfer Repeat the same test using SIP REFER		Pass	
TELUS_TC47	TELUS VoIP client calls IP PBX phone 1 IP PBX phone 1 performs a consult transfer to Telus mobile client Repeat the same test using SIP REFER		Pass	
Call Forwarding Unconditional				
TELUS_TC48	Configure IP PBX phone 1 to CFU to TELUS VoIP client IP PBX phone 2 calls phone 1 and should CFU to TELUS VoIP client 1. Confirm 2-way voice 2. Confirm phone 1 number and display at TELUS VoIP client		Pass	

TELUS_TC49	Configure IP PBX phone 1 to CFU to 1-877-353-9586 TELUS VoIP client calls phone 1 to trigger the call forwarding 1. Confirm 2-way voice 2. Press 1234# to interrupt the prompt		Pass	
TELUS_TC50	TELUS VoIP client calls IP PBX phone 1 IP PBX phone 1 performs a CFU to Telus mobile client Repeat the same test using SIP REFER		Pass	
Voicemail				
TELUS_TC51	Repeat for both G.711 and G.729. IP PBX phone 1 calls TELUS VoIP client, Don't answer the call in the TELUS VoIP client; after 4 ring, voicemail kick in Record a message Follow the prompt to play back the message Follow the prompt to cancel the recording then hang up		Pass	
Conference call				
TELUS_TC52	TELUS VoIP client calls IP PBX phone 1 IP PBX phone 1 performs a conference call with IP PBX phone 2 Confirm audio among the parties		Pass	
TELUS_TC53	IP PBX phone 1 calls TELUS VoIP client BVOIP performs a conference call to Telus mobile Client Confirm audio with VoIP client and IP PBX phone		Pass	
Test with TELUS mobile				
Basic inbound/outbound call				
TELUS_TC54	Call from TELUS mobile client to IP PBX phone 1. Confirm 2-way voice 2. Confirm the proper calling number is shown 3. Confirm the proper call display name is shown		Pass	
TELUS_TC55	Repeat the test by setup the call with both G.711 and G.729. Call from IP PBX phone to TELUS mobile client 1. Confirm 2-way voice 2. Confirm the proper calling number is shown 3. Confirm the proper call display name is shown		Pass	
Basic inbound/outbound call with privacy				

TELUS_TC56	Call from TELUS mobile client to IP PBX phone with privacy enabled. 1. Confirm 2-way voice 2. Confirm the proper calling number is not shown 3. Confirm the proper call display name is not shown		Pass	
TELUS_TC57	Call from IP PBX phone to TELUS mobile client, when dialling from the IP PBX phone, use the prefix if applicable to temporary suppress the call display 1. Confirm 2-way voice 2. Confirm the proper calling number is not shown 3. Confirm the proper call display name is not shown		Pass	
Hold and resume				
TELUS_TC58	Call from TELUS mobile to IP PBX - after the call setup the PBX phone puts the call on-hold or (MOH), waits 30 seconds, resumes. Confirm audio both way after resume.		Pass	
TELUS_TC59	Call from IP PBX to TELUS mobile - after the call setup, use TELUS mobile to put the call on-hold or (MOH), waits 30 seconds, resumes. Confirm 2-way voice after resume.		Pass	
Call Transfer (Blind transfer)				
TELUS_TC60	IP PBX phone 1 calls IP PBX phone 2 IP PBX phone 2 performs a blind transfer to telus mobile client Confirm 2-way voice after the transfer Repeat the same test using SIP REFER		Pass	
TELUS_TC61	TELUS mobile client calls IP PBX phone 1 IP PBX phone 1 performs a blind transfer to IP PBX phone 2 Confirm 2-way voice after the transfer Repeat the same test using SIP REFER		Pass	
TELUS_TC62	TELUS mobile client calls IP PBX phone 1 IP PBX phone 1 performs a blind transfer to 1-877-353-9586 Confirm the prompt and interrupt the prompt with 1234# Repeat the same test using SIP REFER		Pass	
TELUS_TC63	TELUS mobile client calls IP PBX phone 1 IP PBX phone 1 performs a blind transfer to 1-877-353-9586 Confirm the prompt and interrupt the prompt with 1234# Repeat the same test using SIP REFER		Pass	
Call Transfer (Consult transfer)				

TELUS_TC64	IP PBX phone 1 calls IP PBX phone 2 IP PBX phone 2 performs a consult transfer to Telus mobile client Confirm 2-way voice after the transfer Repeat the same test using SIP REFER		Pass	
TELUS_TC65	TELUS mobile client calls IP PBX phone 1 IP PBX phone 1 performs a consult transfer to IP PBX phone 2 Confirm 2-way voice after the transfer Repeat the same test using SIP REFER		Pass	
TELUS_TC66	TELUS mobile client calls IP PBX phone 1 IP PBX phone 1 performs a consult transfer to 1-877-353-9586 Confirm the prompt and interrupt the prompt with 1234# Repeat the same test using SIP REFER		Pass	
TELUS_TC67	TELUS mobile client calls IP PBX phone 1 IP PBX phone 1 performs a blind transfer to another Telus Mobile client Confirm 2-way voice after the transfer Repeat the same test using SIP REFER		Pass	
Call Forwarding Don't Answer				
TELUS_TC68	Configure a Mobile Phone to Forward calls to a PSTN when Dont Answer. Test both G711 and G729 Mobile Phone to CFNA to TELUS PSTN Number IP PBX phone 1 calls Mobile Phone and should CFNA to TELUS PSTN Number 1. Confirm 2-way voice 2. Confirm phone 1 number and display at PSTN number		Pass	
Call Forwarding Unconditional				
TELUS_TC69	Configure IP PBX phone 1 to CFU to TELUS mobile client IP PBX phone 2 calls phone 1 and should CFU to TELUS mobile client 1. Confirm 2-way voice 2. Confirm phone 1 number and display at TELUS mobile client		Pass	
TELUS_TC70	Configure IP PBX phone 1 to CFU to 1-877-353-9586 TELUS mobile client calls phone 1 to trigger the call forwarding 1. Confirm audio prompt 2. Press 1234# to interrupt the prompt		Pass	
Voicemail				

TELUS_TC71-1	Repeat the test by setup the call with G.711 and G.729. Test with both Mpathix and Movius VM platforms. IP PBX phone 1 calls TELUS mobile client Don't answer the call in the TELUS mobile client; after 4 ring, voicemail kick in Record a message Follow the prompt to play back the message Follow the prompt to cancel the recording then hang up		Pass	
TELUS_TC71-2	From UMTS call PBX phone, CFB to VM or CFDA to PBX VM Record a message Follow the prompt to play back the message Follow the prompt to cancel the recording then hang up		Pass	
Conference call				
TELUS_TC72	TELUS mobile client calls IP PBX phone 1 IP PBX phone 1 performs a conference call with IP PBX phone 2 Confirm audio among the parties		Pass	
TELUS_TC73	TELUS mobile client calls IP PBX phone 1 IP PBX phone 1 performs a conference call with Telus VOIP Confirm audio with mobile client and IP PBX phone		Pass	
TELUS_TC74	IP PBX phone 1 calls TELUS mobile client client a conference call to Telus VOIP Confirm audio with mobile client and IP PBX phone		Pass	
DTMF				
TELUS_TC75	From PBX dial 4036929600 (conference bridge) When hearing the prompt, enter valid Telus conference code. Follow prompts and verify connected to conference bridge. Verify that pressed keys are recognized and successfully accessed conference bridge. Verify by calling to conference bridge from PSTN. Test Inband DTMF by programming PBX end point		Pass	
TELUS_TC76	From PBX dial 1-877-353-9586 When hearing the prompt, enter valid Telus conference code. Follow prompts and verify connected to conference bridge. Verify that pressed keys are recognized and successfully accessed conference bridge. Verify by calling to conference bridge from PSTN. Test RFC2833 by programming PBX endpoint		Pass	
Automatic CLID Blocking				

TELUS_TC77	<p>Automatic Blocking Feature to be setup for the SIP PBX in the switch.</p> <p>Call from SIP PBX to a Bell Land Line Number.</p> <ol style="list-style-type: none"> 1. Confirm 2-way voice 2. Confirm the proper calling number (IPTR2 DID or Alternate Number from SIP PBX) is not shown 3. Confirm that SIP PBX is not sending out Name in the call. 		Not Applicable	
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Conclusion

This Application Notes document describes the configuration steps required for Sonus SBC 5xx0 to successfully interoperate with Lync 2013. All feature and serviceability test cases were completed and passed with the exceptions/observations noted in [Test Results](#).

This configuration guide supports features