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# Ribbon SBC Core SWe V08.01.00-R000 IOT Cisco Unified Communication Manager PlusNet SIP Trunk TLS Application Note

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## Table of Contents

- [Document Overview](#)
- [Introduction](#)
  - [Audience](#)
  - [Equipment](#)
  - [Topology Configuration](#)
  - [Support](#)
  - [Third-Party Product Features](#)
  - [Verify License](#)
- [CUCM 12.0.1 Configuration](#)
  - [1. Security Profile](#)
  - [2. SIP Profile](#)
  - [3. SIP Trunk](#)
  - [4. Route Group](#)
  - [5. Route List](#)
  - [6. Route Pattern](#)
- [Ribbon SBC Core Series Configuration](#)
- [Test Results](#)
- [Conclusion](#)
- [Appendix A](#)

# Document Overview

Use this configuration information to connect a Ribbon Session Border Controller (SBC) with a Cisco Unified Communication Manager (CUCM) system and a PlusNet SIP trunk.

This configuration information is applicable to the Ribbon SBC SWe, SBC 5XX0 series and SBC 7XX0 series.

For more information about the Ribbon SBC, refer to your Ribbon SBC product documentation <http://ribboncommunications.com/>.

## Introduction

The interoperability compliance testing focuses on verifying inbound and outbound call flows between a Ribbon Core SBC and a Cisco Unified Communication Manager (CUCM).

### Audience

This technical document is intended for telecommunication engineers who configure the Ribbon SBC Core aspects of the PlusNet SIP trunk group using the Cisco Unified Communication Manager (CUCM). This configuration requires access to a third-party server and the Ribbon SBC Web browser user interface, Embedded Management Application (EMA). To configure and troubleshoot this solution, engineers must have a basic understanding of IP routing, SIP, RTP, and TLS.

### Equipment

The following table lists the equipment and software used to complete the tests that a PlusNet SIP trunk requires to connect with Ribbon software.

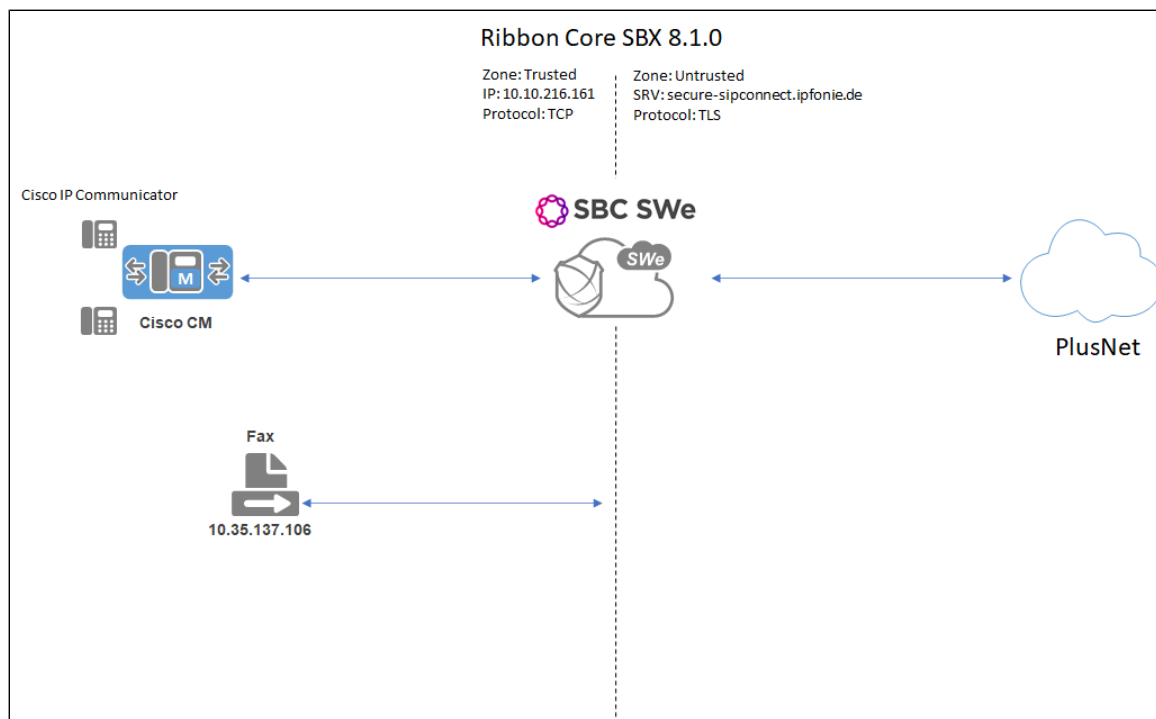
Table 1: Equipment

	Equipment	Software Version
Ribbon Communications	Ribbon SBC SWe ConnexIP OS SonusDB EMA SBX	V08.01.00-R000 V07.01.00-R000 V08.01.00-R000 V08.01.00-R000 V08.01.00-R000
Third-party Equipment	Cisco Unified Communication Manager (CUCM)	12.0.1.21900-7
	Fax Machine VentaFax	7.6.243.616

## Topology Configuration

The following topology illustrates the network connection between Microsoft Skype for Business 2015, Virgin Media network and the Ribbon SBC Core.

Figure 1: Topology



## Support

For issues with connectivity or configuration between Ribbon SBC, PlusNet SIP trunk, and Cisco Unified Communication Manager (CUCM), contact Ribbon Support using either of the following ways:

- Global Support Assistance Center +1-978-614-8589 or +1-888-391-3434 (English language Support)
- Web: <https://ribboncommunications.com/services/ribbon-support-portal-login>

## Third-Party Product Features

We tested the following features between Cisco Unified Communication Manager (CUCM) and PlusNet:

- Basic Calls
- Calling Number Format/Called Number Format
- Call Disconnects
- Call Error Handling
- CLIP/CLIR
- Call Forwarding
- Call Hold
- Conference
- Call Park
- Call Waiting
- DTMF
- Fax
- Long Call

## Verify License

- POL-BASE
- ENCRYPT
- SBC-RTU
- SRTP

## CUCM 12.0.1 Configuration

The following new configurations are included in this section:

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

**Cisco Unified CM Administration**  
For Cisco Unified Communications Solutions

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾

### SIP Trunk Security Profile Configuration

Save Delete Copy Reset Apply Config Add New

**Status**  
Status: Ready

#### SIP Trunk Security Profile Information

Name\* Non Secure SIP Trunk Profile

Description Non Secure SIP Trunk Profile authenticated by null String

Device Security Mode Non Secure ▾

Incoming Transport Type\* TCP+UDP ▾

Outgoing Transport Type UDP ▾

☐ Enable Digest Authentication

Nonce Validity Time (mins)\* 600

X.509 Subject Name

Incoming Port\* 5060

☐ Enable Application level authorization

☐ Accept presence subscription

☒ Accept out-of-dialog refer\*\*

☒ Accept unsolicited notification

☒ Accept replaces header

☒ Transmit security status

☐ Allow charging header


SIP V.150 Outbound SDP Offer Filtering\* Use Default Filter ▾

Save Delete Copy Reset Apply Config Add New

## 2. SIP Profile







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

**Figure 3:** SIP Profile



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SIP Profile Configuration

 Save
 Delete
 Copy
 Reset
 Apply Config
 Add New

**Status**  


 Status: Ready

 All SIP devices using this profile must be restarted before any changes will take affect.

**SIP Profile Information**  
Name\*   
Description   
Default MTP Telephony Event Payload Type\*   
Early Offer for G.Clear Calls\*   
User-Agent and Server header information\*   
Version in User Agent and Server Header\*   
Dial String Interpretation\*   
Confidential Access Level Headers\*   
☐ 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\*   
SDP Transparency Profile   
Accept Audio Codec Preferences in Received Offer\*   
☐ Require SDP Inactive Exchange for Mid-Call Media Change  
☐ Allow RR/RS bandwidth modifier (RFC 3556)

**Figure 4:** SIP Profile1


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### SIP Profile Configuration


 Save
  Delete
  Copy
  Reset
  Apply Config
  Add New

---

#### Parameters used in Phone







Timer Invite Expires (seconds)*	<input type="text" value="180"/>
Timer Register Delta (seconds)*	<input type="text" value="5"/>
Timer Register Expires (seconds)*	<input type="text" value="3600"/>
Timer T1 (msec)*	<input type="text" value="500"/>
Timer T2 (msec)*	<input type="text" value="4000"/>
Retry INVITE*	<input type="text" value="6"/>
Retry Non-INVITE*	<input type="text" value="10"/>
Media Port Ranges	<input checked="" type="radio"/> Common Port Range for Audio and Video <input type="radio"/> Separate Port Ranges for Audio and Video
Start Media Port*	<input type="text" value="16384"/>
Stop Media Port*	<input type="text" value="32766"/>
DSCP for Audio Calls	<input type="text" value="Use System Default"/> ▾
DSCP for Video Calls	<input type="text" value="Use System Default"/> ▾
DSCP for Audio Portion of Video Calls	<input type="text" value="Use System Default"/> ▾
DSCP for TelePresence Calls	<input type="text" value="Use System Default"/> ▾
DSCP for Audio Portion of TelePresence Calls	<input type="text" value="Use System Default"/> ▾
Call Pickup URI*	<input type="text" value="x-cisco-serviceuri-pickup"/>
Call Pickup Group Other URI*	<input type="text" value="x-cisco-serviceuri-opickup"/>
Call Pickup Group URI*	<input type="text" value="x-cisco-serviceuri-gpickup"/>
Meet Me Service URI*	<input type="text" value="x-cisco-serviceuri-meetme"/>
User Info*	<input type="text" value="None"/> ▾
DTMF DB Level*	<input type="text" value="Nominal"/> ▾
Call Hold Ring Back*	<input type="text" value="Off"/> ▾
Anonymous Call Block*	<input type="text" value="Off"/> ▾
Caller ID Blocking*	<input type="text" value="Off"/> ▾
Do Not Disturb Control*	<input type="text" value="User"/> ▾
Telnet Level for 7940 and 7960*	<input type="text" value="Disabled"/> ▾
Resource Priority Namespace	<input type="text" value="&lt; None &gt;"/> ▾
Timer Keep Alive Expires (seconds)*	<input type="text" value="120"/>
Timer Subscribe Expires (seconds)*	<input type="text" value="120"/>
Timer Subscribe Delta (seconds)*	<input type="text" value="5"/>

**Figure 5:** SIP Profile2


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System ▾ | Call Routing ▾ | Media Resources ▾ | Advanced Features ▾ | Device ▾ | Application ▾ | User Management ▾ | Bulk Administration ▾ | Help ▾

### SIP Profile Configuration

 Save
 Delete
 Copy
 Reset
 Apply Config
 Add New

Maximum Redirections\*   
Off Hook To First Digit Timer (milliseconds)\*   
Call Forward URI\*   
Speed Dial (Abbreviated Dial) URI\*   
☒ 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	<input type="text"/>	<input type="text"/>	 

**Incoming Requests FROM URI Settings**  
Caller ID DN   
Caller 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  
☐ Allow Passthrough of Configured Line Device Caller Information  
☐ Reject Anonymous Incoming Calls

**Figure 6:** SIP Profile3


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System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾

SIP Profile Configuration

 Save
 Delete
 Copy
 Reset
 Apply Config
 Add New

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  
☐ Allow Passthrough of Configured Line Device Caller Information  
☐ 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


Save Delete Copy Reset Apply Config Add New

### 3. SIP Trunk

Select **Device > Trunk > Add New**





**Figure 7:** SIP Trunk





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Trunk Configuration

 Save
 Delete
 Reset
 Add New

Status

 Status: Ready


SIP Trunk Status

**Service Status:** Full Service  
**Duration:** Time In Full Service: 28 days 23 hours 36 minutes

Device Information





Product: SIP Trunk  
Device Protocol: SIP  
Trunk Service Type: None(Default)  
Device Name\*: Rewa  
Description: Rewa  
Device Pool\*: Sonus\_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 ▾

**Figure 8: SIP Trunk1**


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Trunk Configuration

 Save
 Delete
 Reset
 Add New

Related Links:

☐ 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 > ▾	<input checked="" type="checkbox"/>

**Figure 9: SIP Trunk2**

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System
Call Routing
Media Resources
Advanced Features
Device
Application
User Management
Bulk Administration
Help

Trunk Configuration

Save
Delete
Reset
Add New

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 >	<input checked="" type="checkbox"/>

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\* Default

Calling Name Presentation\* Default

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

Caller Information

Caller ID DN

Caller Name

☐ Maintain Original Caller ID DN and Caller Name in Identity Headers

**Figure 10: SIP Trunk3**

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System
Call Routing
Media Resources
Advanced Features
Device
Application
User Management
Bulk Administration
Help

Trunk Configuration

Save
Delete
Reset
Add New

SIP Information

Destination

☐ Destination Address is an SRV

	Destination Address	Destination Address IPv6	Destination Port	Status	Status Reason	Duration
1*	10.35.179.136		5060	up		Time Up: 0 day 23 hours 36 minutes

MTP Preferred Originating Codec\* 711ulaw

SLP Presence Group\* Standard Presence group

SIP Trunk Security Profile\* Non Secure SIP Trunk Profile

Rerouting Calling Search Space < None >

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

SUBSCRIBE Calling Search Space < None >

SIP Profile\* Standard SIP Profile - OPTIONS Enable [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 11: Route Group

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### Route Group Configuration

Save  Delete  Add New

**Status**  
 Status: Ready

**Route Group Information**  
Route Group Name\*   
Distribution Algorithm\*

**Route Group Member Information**



**Find Devices to Add to Route Group**  
Device Name contains    
Available Devices\*\*  




CUBE  
Rewa  
USTX-SBCLAB01



  
Port(s)


**Current Route Group Members**  
Selected Devices (ordered by priority)\* 

Rewa (All Ports)



   
  
Removed Devices\*\*\*  




**Route Group Members**  
 [Rwa](#)  

Save Delete Add New





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Route Pattern Configuration

 Save
 Delete
 Copy
 Add New

Status

 Status: Ready

Pattern Definition


Route Pattern\*   
Route Partition 
Description   
Numbering Plan 
Route Filter 
MLPP Precedence\* 
☐ Apply Call Blocking Percentage  
Resource Priority Namespace Network Domain 
Route Class\* 
Gateway/Route List\* (Edit)  
Route Option  
☒ Route this pattern  
☐ Block this pattern 
Call Classification\* 
External Call Control Profile 
☐ Allow Device Override ☒ Provide Outside Dial Tone ☐ Allow Overlap Sending ☐ Urgent Priority  
☐ Require Forced Authorization Code  
Authorization Level\*   
☐ Require Client Matter Code

Calling Party Transformations

☐ Use Calling Party's External Phone Number Mask  
Calling Party Transform Mask   
Prefix Digits (Outgoing Calls)   
Calling Line ID Presentation\* 
Calling Name Presentation\* 
Calling Party Number Type\* 
Calling Party Numbering Plan\*





Figure 14: Route Pattern1

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Route Pattern Configuration

 Save
 Delete
 Copy
 Add New

☐ Allow Device Override
☒ Provide Outside Dial Tone
☐ Allow Overlap Sending
☐ Urgent Priority

☐ Require Forced Authorization Code

Authorization Level\*

☐ Require Client Matter Code

Calling Party Transformations

☐ Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation\*

Calling Name Presentation\*

Calling Party Number Type\*

Calling Party Numbering Plan\*

Connected Party Transformations

Connected Line ID Presentation\*

Connected Name Presentation\*

Called Party Transformations

Discard Digits

Called Party Transform Mask

Prefix Digits (Outgoing Calls)

Called Party Number Type\*

Called Party Numbering Plan\*

ISDN Network-Specific Facilities Information Element

Network Service Protocol

Carrier Identification Code

Network Service	Service Parameter Name	Service Parameter Value
<input type="text" value="-- Not Selected --"/>	<input type="text" value="&lt; Not Exist &gt;"/>	<input type="text"/>

Save Delete Copy Add New

## Ribbon SBC Core Series Configuration

The follow configuration applies to the SWe, 5xxx and 7xxx series Core SBC. It is included in the Cisco Unified Communication Manager and PlusNet SIP trunk configuration.

### SBC Core Configuration

```

configure
#DSP Resources
set system mediaProfile compression 90 tone 10
commit

#CallRouting
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 routingLabel TO_PLUSNET overflowNumber ""
set global callRouting routingLabel TO_PLUSNET overflowNOA none
set global callRouting routingLabel TO_PLUSNET overflowNPI none
set global callRouting routingLabel TO_PLUSNET routePrioritizationType sequence
set global callRouting routingLabel TO_PLUSNET action routes
set global callRouting routingLabel TO_PLUSNET numRoutesPerCall 10
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 0 routeType trunkGroup
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 0 trunkGroup PLUSNET
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 0 ipPeer IPPEER_DURO01

```

```

set global callRouting routingLabel TO_PLUSNET routingLabelRoute 0 proportion 0
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 0 cost 10
set global callRouting routingLabel TO_PLUSNET#Element Routing PriorityT routingLabelRoute 0 inService inService
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 0 testing normal
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 routeType trunkGroup
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 trunkGroup PLUSNET
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 ipPeer IPPEER_DURO02
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 proportion 0
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 cost 20
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 inService inService
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 testing normal
set global callRouting routingLabel TO_VENTAFAX overflowNumber ""
set global callRouting routingLabel TO_VENTAFAX overflowNOA none
set global callRouting routingLabel TO_VENTAFAX overflowNPI none
set global callRouting routingLabel TO_VENTAFAX routePrioritizationType sequence
set global callRouting routingLabel TO_VENTAFAX action routes
set global callRouting routingLabel TO_VENTAFAX numRoutesPerCall 10
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 routeType trunkGroup
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 trunkGroup VENTAFAX
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 ipPeer VENTAFAX
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 proportion 0
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 cost 1000000
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 inService inService
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 testing normal
commit

```

#### #PathCheck Profile

```

set profiles services pathCheckProfile CUCM_OPTIONS protocol sipOptions
set profiles services pathCheckProfile CUCM_OPTIONS sendInterval 60
set profiles services pathCheckProfile CUCM_OPTIONS replyTimeoutCount 6
set profiles services pathCheckProfile CUCM_OPTIONS recoveryCount 6
set profiles services pathCheckProfile CUCM_OPTIONS transportPreference preference1 udp
set profiles services pathCheckProfile CUCM_OPTIONS transportPreference preference2 tcp
commit

```

```

set profiles services pathCheckProfile PLUSNET_OPTIONS protocol sipOptions
set profiles services pathCheckProfile PLUSNET_OPTIONS sendInterval 60
set profiles services pathCheckProfile PLUSNET_OPTIONS replyTimeoutCount 6
set profiles services pathCheckProfile PLUSNET_OPTIONS recoveryCount 6
set profiles services pathCheckProfile PLUSNET_OPTIONS transportPreference preference1 tls-tcp
set profiles services pathCheckProfile PLUSNET_OPTIONS transportPreference preference2 none
set profiles services pathCheckProfile PLUSNET_OPTIONS transportPreference preference3 none
set profiles services pathCheckProfile PLUSNET_OPTIONS transportPreference preference4 none
commit

```

#### #Codecs

```

set profiles media codecEntry G711_PlusNet codec g711
set profiles media codecEntry G711_PlusNet packetSize 20
set profiles media codecEntry G711_PlusNet fax failureHandling continue
set profiles media codecEntry G711_PlusNet fax toneTreatment faxRelay
set profiles media codecEntry G711_PlusNet fax honorToneDetection disable
set profiles media codecEntry G711_PlusNet modem failureHandling continue
set profiles media codecEntry G711_PlusNet modem toneTreatment none
set profiles media codecEntry G711_PlusNet modem honorToneDetection disable
set profiles media codecEntry G711_PlusNet law deriveFromOtherLeg
set profiles media codecEntry G711_PlusNet dtmf relay rfc2833
set profiles media codecEntry G711_PlusNet dtmf removedDigits disable
commit

```

```

set profiles media codecEntry G711_PlusNet_Alaw codec g711
set profiles media codecEntry G711_PlusNet_Alaw packetSize 20
set profiles media codecEntry G711_PlusNet_Alaw fax failureHandling continue
set profiles media codecEntry G711_PlusNet_Alaw fax toneTreatment faxRelay
set profiles media codecEntry G711_PlusNet_Alaw fax honorToneDetection disable
set profiles media codecEntry G711_PlusNet_Alaw modem failureHandling continue
set profiles media codecEntry G711_PlusNet_Alaw modem toneTreatment none
set profiles media codecEntry G711_PlusNet_Alaw modem honorToneDetection disable
set profiles media codecEntry G711_PlusNet_Alaw law ALaw
set profiles media codecEntry G711_PlusNet_Alaw dtmf relay none
set profiles media codecEntry G711_PlusNet_Alaw dtmf removedDigits enable
commit

```

```

set profiles media codecEntry G711_Ventafax packetSize 10
set profiles media codecEntry G711_Ventafax fax failureHandling continue
set profiles media codecEntry G711_Ventafax fax toneTreatment faxRelay
set profiles media codecEntry G711_Ventafax fax honorToneDetection disable
set profiles media codecEntry G711_Ventafax modem failureHandling continue
set profiles media codecEntry G711_Ventafax modem toneTreatment none
set profiles media codecEntry G711_Ventafax modem honorToneDetection disable
set profiles media codecEntry G711_Ventafax law deriveFromOtherLeg
set profiles media codecEntry G711_Ventafax dtmf relay none
set profiles media codecEntry G711_Ventafax dtmf removedDigits enable
commit

set profiles media codecEntry G_722_PlusNet codec g722
set profiles media codecEntry G_722_PlusNet codingRate 64
set profiles media codecEntry G_722_PlusNet packetSize 20
set profiles media codecEntry G_722_PlusNet preferredRtpPayloadType 128
set profiles media codecEntry G_722_PlusNet fax failureHandling continue
set profiles media codecEntry G_722_PlusNet fax toneTreatment none
set profiles media codecEntry G_722_PlusNet modem failureHandling continue
set profiles media codecEntry G_722_PlusNet modem toneTreatment none
set profiles media codecEntry G_722_PlusNet dtmf relay none
set profiles media codecEntry G_722_PlusNet dtmf removedDigits enable
commit

set profiles media codecEntry G729_PlusNet codec g729a
set profiles media codecEntry G729_PlusNet packetSize 20
set profiles media codecEntry G729_PlusNet preferredRtpPayloadType 128
set profiles media codecEntry G729_PlusNet fax failureHandling continue
set profiles media codecEntry G729_PlusNet fax toneTreatment none
set profiles media codecEntry G729_PlusNet modem failureHandling continue
set profiles media codecEntry G729_PlusNet modem toneTreatment none
set profiles media codecEntry G729_PlusNet dtmf relay none
set profiles media codecEntry G729_PlusNet dtmf removedDigits enable
commit

#PSPs
set profiles media packetServiceProfile PlusNet dataCalls preferredRtpDataPayloadType 56
set profiles media packetServiceProfile PlusNet dataCalls initialPlayoutBufferDelay 50
set profiles media packetServiceProfile PlusNet dataCalls packetSize 20
set profiles media packetServiceProfile PlusNet silenceFactor 40
set profiles media packetServiceProfile PlusNet typeOfService 0
set profiles media packetServiceProfile PlusNet voiceInitialPlayoutBufferDelay 10
set profiles media packetServiceProfile PlusNet peerAbsenceAction none
set profiles media packetServiceProfile PlusNet silenceInsertionDescriptor g711SidRtpPayloadType 13
set profiles media packetServiceProfile PlusNet silenceInsertionDescriptor heartbeat enable
set profiles media packetServiceProfile PlusNet aallPayloadSize 47
set profiles media packetServiceProfile PlusNet codec codecEntry1 G711_PlusNet
set profiles media packetServiceProfile PlusNet codec codecEntry2 G711_PlusNet_Alaw
set profiles media packetServiceProfile PlusNet packetToPacketControl transcode conditional
set profiles media packetServiceProfile PlusNet packetToPacketControl codecsAllowedForTranscoding thisLeg ""
set profiles media packetServiceProfile PlusNet packetToPacketControl codecsAllowedForTranscoding otherLeg ""
set profiles media packetServiceProfile PlusNet t38 dataRateManagementType type2TransferOfTcf
set profiles media packetServiceProfile PlusNet t38 ecm ecmPreferred disable
set profiles media packetServiceProfile PlusNet t38 lowSpeedNumberOfRedundantPackets 1
set profiles media packetServiceProfile PlusNet t38 maxBitRate 14.4Kbits_s
set profiles media packetServiceProfile PlusNet t38 numberOfRedundantPackets 1
set profiles media packetServiceProfile PlusNet t38 protocolVersion 0
set profiles media packetServiceProfile PlusNet secureRtpRtcp cryptoSuiteProfile PLUSNET
set profiles media packetServiceProfile PlusNet secureRtpRtcp flags allowFallback disable
set profiles media packetServiceProfile PlusNet secureRtpRtcp flags enableSrtp enable
set profiles media packetServiceProfile PlusNet secureRtpRtcp flags resetROConKeyChange disable
set profiles media packetServiceProfile PlusNet secureRtpRtcp flags resetEncDecROConDecKeyChange disable
set profiles media packetServiceProfile PlusNet secureRtpRtcp flags updateCryptoKeysOnModify disable
set profiles media packetServiceProfile PlusNet secureRtpRtcp flags allowPassthru disable
set profiles media packetServiceProfile PlusNet preferredRtpPayloadTypeForDtmfRelay 128
set profiles media packetServiceProfile PlusNet videoCalls maxVideoBandwith 0
set profiles media packetServiceProfile PlusNet videoCalls videoBandwidthReductionFactor 0
set profiles media packetServiceProfile PlusNet videoCalls ipv4Tos 0
set profiles media packetServiceProfile PlusNet videoCalls ipv6TrafficClass 0
set profiles media packetServiceProfile PlusNet videoCalls ieee8021QVLanCos 0
set profiles media packetServiceProfile PlusNet videoCalls audioOnlyIfVideoIsPrevented enable
set profiles media packetServiceProfile PlusNet qosValues msrpDscp 0

```



```

set profiles media packetServiceProfile PlusNet qosValues dtlsSctpDscp 0
set profiles media packetServiceProfile PlusNet qosValues t140Dscp 0
set profiles media packetServiceProfile PlusNet qosValues applicationDscp 0
set profiles media packetServiceProfile PlusNet nonRtpStream maxNonRtpBandwidth 0
set profiles media packetServiceProfile PlusNet audioTransparency unknownCodecPacketSize 10
set profiles media packetServiceProfile PlusNet audioTransparency unknownCodecBitRate 124
set profiles media packetServiceProfile PlusNet mediaPacketCos 0
commit

set profiles media packetServiceProfile VENTAFAX dataCalls preferredRtpDataPayloadType 56
set profiles media packetServiceProfile VENTAFAX dataCalls initialPlayoutBufferDelay 50
set profiles media packetServiceProfile VENTAFAX dataCalls packetSize 20
set profiles media packetServiceProfile VENTAFAX silenceFactor 40
set profiles media packetServiceProfile VENTAFAX typeOfService 0
set profiles media packetServiceProfile VENTAFAX voiceInitialPlayoutBufferDelay 10
set profiles media packetServiceProfile VENTAFAX peerAbsenceAction none
set profiles media packetServiceProfile VENTAFAX silenceInsertionDescriptor g711SidRtpPayloadType 13
set profiles media packetServiceProfile VENTAFAX silenceInsertionDescriptor heartbeat enable
set profiles media packetServiceProfile VENTAFAX aallPayloadSize 47
set profiles media packetServiceProfile VENTAFAX codec codecEntry1 G711_Ventafax
set profiles media packetServiceProfile VENTAFAX packetToPacketControl transcode conditional
set profiles media packetServiceProfile VENTAFAX packetToPacketControl codecsAllowedForTranscoding thisLeg ""
set profiles media packetServiceProfile VENTAFAX packetToPacketControl codecsAllowedForTranscoding otherLeg ""
set profiles media packetServiceProfile VENTAFAX t38 dataRateManagementType type2TransferOfTcf
set profiles media packetServiceProfile VENTAFAX t38 lowSpeedNumberOfRedundantPackets 1
set profiles media packetServiceProfile VENTAFAX t38 maxBitRate 14.4Kbits_s
set profiles media packetServiceProfile VENTAFAX t38 numberOfRedundantPackets 1
set profiles media packetServiceProfile VENTAFAX t38 protocolVersion 0
set profiles media packetServiceProfile VENTAFAX preferredRtpPayloadTypeForDtmfRelay 128
set profiles media packetServiceProfile VENTAFAX videoCalls maxVideoBandwidth 0
set profiles media packetServiceProfile VENTAFAX videoCalls videoBandwidthReductionFactor 0
set profiles media packetServiceProfile VENTAFAX videoCalls ipv4Tos 0
set profiles media packetServiceProfile VENTAFAX videoCalls ipv6TrafficClass 0
set profiles media packetServiceProfile VENTAFAX videoCalls ieee8021QVlanCos 0
set profiles media packetServiceProfile VENTAFAX videoCalls audioOnlyIfVideoIsPrevented enable
set profiles media packetServiceProfile VENTAFAX qosValues msrpDscp 0
set profiles media packetServiceProfile VENTAFAX qosValues dtlsSctpDscp 0
set profiles media packetServiceProfile VENTAFAX qosValues t140Dscp 0
set profiles media packetServiceProfile VENTAFAX qosValues applicationDscp 0
set profiles media packetServiceProfile VENTAFAX nonRtpStream maxNonRtpBandwidth 0
set profiles media packetServiceProfile VENTAFAX audioTransparency unknownCodecPacketSize 10
set profiles media packetServiceProfile VENTAFAX audioTransparency unknownCodecBitRate 124
set profiles media packetServiceProfile VENTAFAX mediaPacketCos 0
commit

#Security cryptoSuiteProfile PLUSNET Configuration
set profiles security cryptoSuiteProfile PLUSNET entry 0 cryptoSuite AES-CM-128-HMAC-SHA1-80
set profiles security cryptoSuiteProfile PLUSNET entry 0 sessionParameterFlags unencryptedSRTCP disable
set profiles security cryptoSuiteProfile PLUSNET entry 0 sessionParameterFlags unencryptedSRTP disable
set profiles security cryptoSuiteProfile PLUSNET entry 0 sessionParameterFlags unauthenticatedSRTP disable

#DNS
set addressContext default dnsGroup DNS1 server PRIMARY state enabled
set addressContext default dnsGroup DNS1 server PRIMARY ipAddress 8.8.8.8
commit

#Internal Side Configuration

#IP Interface Group
set addressContext default ipInterfaceGroup IPIG0 ipsec disabled
set addressContext default ipInterfaceGroup IPIG0 ipInterface IPIF0 portName pkt0
set addressContext default ipInterfaceGroup IPIG0 ipInterface IPIF0 ipAddress 10.10.216.161
set addressContext default ipInterfaceGroup IPIG0 ipInterface IPIF0 prefix 26
set addressContext default ipInterfaceGroup IPIG0 ipInterface IPIF0 mode inService
set addressContext default ipInterfaceGroup IPIG0 ipInterface IPIF0 action dryUp
set addressContext default ipInterfaceGroup IPIG0 ipInterface IPIF0 dryupTimeout 60
set addressContext default ipInterfaceGroup IPIG0 ipInterface IPIF0 state enabled
set addressContext default ipInterfaceGroup IPIG0 ipInterface IPIF0 bwContingency 0
set addressContext default ipInterfaceGroup IPIG0 ipInterface IPIF0 bandwidth 0
commit

#IP Static Route

```

```

set addressContext default staticRoute 0.0.0.0 0 10.10.216.129 IPIG0 IPIF0 preference 100
commit

#Zone
set addressContext default zone CUCM id 2
commit

#SIP signaling port
set addressContext default zone CUCM sipSigPort 2 ipInterfaceGroupName IPIG0
set addressContext default zone CUCM sipSigPort 2 ipAddressV4 10.10.216.161
set addressContext default zone CUCM sipSigPort 2 portNumber 5060
set addressContext default zone CUCM sipSigPort 2 mode inService
set addressContext default zone CUCM sipSigPort 2 transportProtocolsAllowed sip-udp,sip-tcp
set addressContext default zone CUCM sipSigPort 2 state enabled
commit

#CUCM IP peer
set addressContext default zone CUCM ipPeer CUCM ipAddress 10.35.180.111
set addressContext default zone CUCM ipPeer CUCM ipPort 5060
set addressContext default zone CUCM ipPeer CUCM policy description ""
set addressContext default zone CUCM ipPeer CUCM policy sip fqdn ""
set addressContext default zone CUCM ipPeer CUCM policy sip fqdnPort 0
set addressContext default zone CUCM ipPeer CUCM pathCheck profile CUCM_OPTIONS
set addressContext default zone CUCM ipPeer CUCM pathCheck state enabled
set addressContext default zone CUCM ipPeer CUCM surrogateRegistration userPart XXXX
set addressContext default zone CUCM ipPeer CUCM surrogateRegistration authUserName XXXX
set addressContext default zone CUCM ipPeer CUCM surrogateRegistration regAuthPassword XXXX
set addressContext default zone CUCM ipPeer CUCM surrogateRegistration state enabled
set addressContext default zone CUCM ipPeer CUCM surrogateRegistration sendCredentials
challengeForAnyMessageAndInDialogRequests
set addressContext default zone CUCM ipPeer CUCM surrogateRegistration useNextSurrRegForCall disabled
set addressContext default zone CUCM ipPeer CUCM surrogateRegistration hostPart secure-sipconnect.ipfonie.de
set addressContext default zone CUCM ipPeer CUCM authentication intChallengeResponse enabled
set addressContext default zone CUCM ipPeer CUCM authentication incInternalCredentials enabled
commit

#Fax IP peer
set addressContext default zone CUCM ipPeer VENTAFAX ipAddress 10.35.137.106
set addressContext default zone CUCM ipPeer VENTAFAX ipPort 5060
set addressContext default zone CUCM ipPeer VENTAFAX policy description ""
set addressContext default zone CUCM ipPeer VENTAFAX policy sip fqdn ""
set addressContext default zone CUCM ipPeer VENTAFAX policy sip fqdnPort 0
set addressContext default zone CUCM ipPeer VENTAFAX pathCheck profile CUCM_OPTIONS
set addressContext default zone CUCM ipPeer VENTAFAX pathCheck state enabled
set addressContext default zone CUCM ipPeer VENTAFAX surrogateRegistration userPart XXXX
set addressContext default zone CUCM ipPeer VENTAFAX surrogateRegistration authUserName XXXX
set addressContext default zone CUCM ipPeer VENTAFAX surrogateRegistration regAuthPassword XXXX
set addressContext default zone CUCM ipPeer VENTAFAX surrogateRegistration state disabled
set addressContext default zone CUCM ipPeer VENTAFAX surrogateRegistration sendCredentials
challengeForAnyMessageAndInDialogRequests
set addressContext default zone CUCM ipPeer VENTAFAX surrogateRegistration hostPart secure-sipconnect.ipfonie.de
set addressContext default zone CUCM ipPeer VENTAFAX authentication intChallengeResponse enabled
set addressContext default zone CUCM ipPeer VENTAFAX authentication incInternalCredentials enabled
commit

#CUCM IP trunk
set addressContext default zone CUCM sipTrunkGroup CUCM state enabled
set addressContext default zone CUCM sipTrunkGroup CUCM mode inService
set addressContext default zone CUCM sipTrunkGroup CUCM policy carrier 0000
set addressContext default zone CUCM sipTrunkGroup CUCM policy country 1
set addressContext default zone CUCM sipTrunkGroup CUCM policy localizationVariant northAmerica
set addressContext default zone CUCM sipTrunkGroup CUCM policy tgIPVersionPreference both-ipv4-and-ipv6
set addressContext default zone CUCM sipTrunkGroup CUCM policy preferredIdentity disable
set addressContext default zone CUCM sipTrunkGroup CUCM policy digitParameterHandling numberingPlan CUCM_NP
set addressContext default zone CUCM sipTrunkGroup CUCM policy callRouting elementRoutingPriority DEFAULT_IP
set addressContext default zone CUCM sipTrunkGroup CUCM policy media packetServiceProfile DEFAULT
set addressContext default zone CUCM sipTrunkGroup CUCM policy services classOfService DEFAULT_IP
set addressContext default zone CUCM sipTrunkGroup CUCM policy signaling ipSignalingProfile CUCM_IPSP
set addressContext default zone CUCM sipTrunkGroup CUCM policy featureControlProfile DEFAULT_IP
set addressContext default zone CUCM sipTrunkGroup CUCM policy ipSignalingPeerGroup Cisco_CUCM
set addressContext default zone CUCM sipTrunkGroup CUCM policy ingress flags
nonZeroVideoBandwidthBasedRoutingForSip enable

```

```

set addressContext default zone CUCM sipTrunkGroup CUCM policy ingress flags
nonZeroVideoBandwidthBasedRoutingForH323 disable
set addressContext default zone CUCM sipTrunkGroup CUCM policy ingress flags hdPreferredRouting disable
set addressContext default zone CUCM sipTrunkGroup CUCM policy ingress flags hdSupportedRouting disable
set addressContext default zone CUCM sipTrunkGroup CUCM signaling messageManipulation outputAdapterProfile
REMOVE_PLUS
set addressContext default zone CUCM sipTrunkGroup CUCM signaling authentication intChallengeResponse enabled
set addressContext default zone CUCM sipTrunkGroup CUCM signaling authentication incInternalCredentials enabled
set addressContext default zone CUCM sipTrunkGroup CUCM media mediaIpInterfaceGroupName IPIGO
set addressContext default zone CUCM sipTrunkGroup CUCM ingressIpPrefix 10.10.216.13 32
set addressContext default zone CUCM sipTrunkGroup CUCM ingressIpPrefix 10.35.150.134 32
set addressContext default zone CUCM sipTrunkGroup CUCM ingressIpPrefix 10.35.180.111 32
commit

#ipSignalingPeer Group Cisco
set profiles ipSignalingPeerGroup Cisco_CUCM description ""
set profiles ipSignalingPeerGroup Cisco_CUCM sendAllIpAddressAndFQDN enable
set profiles ipSignalingPeerGroup Cisco_CUCM ipSignalingPeerGroupData 0 serviceStatus inService
set profiles ipSignalingPeerGroup Cisco_CUCM ipSignalingPeerGroupData 0 ipAddress 10.35.180.111
set profiles ipSignalingPeerGroup Cisco_CUCM ipSignalingPeerGroupData 0 ipPort 5060
set profiles ipSignalingPeerGroup Cisco_CUCM ipSignalingPeerGroupData 0 fqdn ""
set profiles ipSignalingPeerGroup Cisco_CUCM ipSignalingPeerGroupData 0 fqdnPort 0

#Fax IP trunk
set addressContext default zone CUCM sipTrunkGroup VENTAFAX state disabled
set addressContext default zone CUCM sipTrunkGroup VENTAFAX mode outOfService
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy carrier 0000
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy country 1
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy localizationVariant northAmerica
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy tgIPVersionPreference both-ipv4-and-ipv6
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy preferredIdentity disable
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy digitParameterHandling numberingPlan CUCM_NP
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy callRouting elementRoutingPriority DEFAULT_IP
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy media packetServiceProfile VENTAFAX
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy services classOfService DEFAULT_IP
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy signaling ipSignalingProfile DEFAULT_SIP
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy featureControlProfile DEFAULT_IP
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy ingress flags
nonZeroVideoBandwidthBasedRoutingForSip enable
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy ingress flags
nonZeroVideoBandwidthBasedRoutingForH323 disable
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy ingress flags hdPreferredRouting disable
set addressContext default zone CUCM sipTrunkGroup VENTAFAX policy ingress flags hdSupportedRouting disable
set addressContext default zone CUCM sipTrunkGroup VENTAFAX signaling messageManipulation outputAdapterProfile
REMOVE_PLUS
set addressContext default zone CUCM sipTrunkGroup VENTAFAX signaling authentication intChallengeResponse disabled
set addressContext default zone CUCM sipTrunkGroup VENTAFAX signaling authentication incInternalCredentials
disabled
set addressContext default zone CUCM sipTrunkGroup VENTAFAX media mediaIpInterfaceGroupName IPIGO
set addressContext default zone CUCM sipTrunkGroup VENTAFAX ingressIpPrefix 10.35.137.106 32
commit

#IP Signaling Profile
set profiles signaling ipSignalingProfile CUCM_IPSP ipProtocolType sipOnly
set profiles signaling ipSignalingProfile CUCM_IPSP commonIpAttributes callTransferFlags
handleIpAddressesNotPresentInNetworkSelectorTableNst routeViaTransferringIptg
set profiles signaling ipSignalingProfile CUCM_IPSP commonIpAttributes transparencyFlags pCalledPartyID enable
set profiles signaling ipSignalingProfile CUCM_IPSP egressIpAttributes numberPortabilityAttributes npdiOptions
includeNpdiYes
set profiles signaling ipSignalingProfile CUCM_IPSP egressIpAttributes privacy privacyInformation pPreferredId
set profiles signaling ipSignalingProfile CUCM_IPSP egressIpAttributes privacy flags includePrivacy enable
set profiles signaling ipSignalingProfile CUCM_IPSP egressIpAttributes redirect mode acceptRedirection
set profiles signaling ipSignalingProfile CUCM_IPSP egressIpAttributes redirect contactHandling
mergeReceivedContacts
set profiles signaling ipSignalingProfile CUCM_IPSP egressIpAttributes sipHeadersAndParameters callForwarding
dataMapping diversion
set profiles signaling ipSignalingProfile CUCM_IPSP egressIpAttributes sipHeadersAndParameters
includeChargeInformation includeNone
set profiles signaling ipSignalingProfile CUCM_IPSP egressIpAttributes sipHeadersAndParameters sipToHeaderMapping
none
set profiles signaling ipSignalingProfile CUCM_IPSP egressIpAttributes sipHeadersAndParameters
destinationTrunkGroupOptions includeNone

```

```

set profiles signaling ipSignalingProfile CUCM_IPSP egressIpAttributes sipHeadersAndParameters
originatingTrunkGroupOptions includeNone
set profiles signaling ipSignalingProfile CUCM_IPSP egressIpAttributes sipHeadersAndParameters generateCallIdUsing
doNotUseIngressCallId
set profiles signaling ipSignalingProfile CUCM_IPSP trfParameters preferredMrbUri ""
set profiles signaling ipSignalingProfile CUCM_IPSP trfParameters preferredTrfUri ""

#Numbering Plan
set profiles digitParameterHandling numberingPlan CUCM_NP prefixProfile CUCM_PP
set profiles digitParameterHandling numberingPlan CUCM_NP lengths nationalNumber min 0
set profiles digitParameterHandling numberingPlan CUCM_NP lengths nationalNumber max 0
set profiles digitParameterHandling numberingPlan CUCM_NP lengths subscriberNumber min 0
set profiles digitParameterHandling numberingPlan CUCM_NP lengths subscriberNumber max 0
set profiles digitParameterHandling numberingPlan CUCM_NP lengths line min 0
set profiles digitParameterHandling numberingPlan CUCM_NP lengths line max 0
set profiles digitParameterHandling numberingPlan CUCM_NP lengths exchangeCode min 0
set profiles digitParameterHandling numberingPlan CUCM_NP lengths exchangeCode max 0
set profiles digitParameterHandling numberingPlan CUCM_NP lengths areaCode min 0
set profiles digitParameterHandling numberingPlan CUCM_NP lengths areaCode max 0

#PrefixProfile
set profiles digitParameterHandling prefixProfile CUCM_PP entry + 0 1 31 callType internationalType
set profiles digitParameterHandling prefixProfile CUCM_PP entry + 0 1 31 digitType international
set profiles digitParameterHandling prefixProfile CUCM_PP entry + 0 1 31 natureOfAddress international
set profiles digitParameterHandling prefixProfile CUCM_PP entry + 0 1 31 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile CUCM_PP entry + 0 1 31 numberLeadingPrefixDigits 1
set profiles digitParameterHandling prefixProfile CUCM_PP entry + 0 1 31 numberLeadingPrefixDigitsToStrip 1
set profiles digitParameterHandling prefixProfile CUCM_PP entry + 0 1 31 applyDmRule disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry + 0 1 31 determineArea disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 0 0 1 31 callType nationalType
set profiles digitParameterHandling prefixProfile CUCM_PP entry 0 0 1 31 digitType unknown
set profiles digitParameterHandling prefixProfile CUCM_PP entry 0 0 1 31 natureOfAddress none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 0 0 1 31 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 0 0 1 31 numberLeadingPrefixDigits 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 0 0 1 31 numberLeadingPrefixDigitsToStrip 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 0 0 1 31 applyDmRule disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 0 0 1 31 determineArea disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 1 0 1 31 callType nationalType
set profiles digitParameterHandling prefixProfile CUCM_PP entry 1 0 1 31 digitType unknown
set profiles digitParameterHandling prefixProfile CUCM_PP entry 1 0 1 31 natureOfAddress none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 1 0 1 31 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 1 0 1 31 numberLeadingPrefixDigits 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 1 0 1 31 numberLeadingPrefixDigitsToStrip 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 1 0 1 31 applyDmRule disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 1 0 1 31 determineArea disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 2 0 1 31 callType nationalType
set profiles digitParameterHandling prefixProfile CUCM_PP entry 2 0 1 31 digitType unknown
set profiles digitParameterHandling prefixProfile CUCM_PP entry 2 0 1 31 natureOfAddress none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 2 0 1 31 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 2 0 1 31 numberLeadingPrefixDigits 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 2 0 1 31 numberLeadingPrefixDigitsToStrip 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 2 0 1 31 applyDmRule disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 2 0 1 31 determineArea disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 3 0 1 31 callType nationalType
set profiles digitParameterHandling prefixProfile CUCM_PP entry 3 0 1 31 digitType unknown
set profiles digitParameterHandling prefixProfile CUCM_PP entry 3 0 1 31 natureOfAddress none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 3 0 1 31 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 3 0 1 31 numberLeadingPrefixDigits 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 3 0 1 31 numberLeadingPrefixDigitsToStrip 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 3 0 1 31 applyDmRule disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 3 0 1 31 determineArea disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 4 0 1 31 callType nationalType
set profiles digitParameterHandling prefixProfile CUCM_PP entry 4 0 1 31 digitType unknown
set profiles digitParameterHandling prefixProfile CUCM_PP entry 4 0 1 31 natureOfAddress none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 4 0 1 31 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 4 0 1 31 numberLeadingPrefixDigits 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 4 0 1 31 numberLeadingPrefixDigitsToStrip 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 4 0 1 31 applyDmRule disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 4 0 1 31 determineArea disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 5 0 1 31 callType nationalType
set profiles digitParameterHandling prefixProfile CUCM_PP entry 5 0 1 31 digitType unknown
set profiles digitParameterHandling prefixProfile CUCM_PP entry 5 0 1 31 natureOfAddress none

```

```

set profiles digitParameterHandling prefixProfile CUCM_PP entry 5 0 1 31 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 5 0 1 31 numberLeadingPrefixDigits 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 5 0 1 31 numberLeadingPrefixDigitsToStrip 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 5 0 1 31 applyDmRule disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 5 0 1 31 determineArea disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 6 0 1 31 callType nationalType
set profiles digitParameterHandling prefixProfile CUCM_PP entry 6 0 1 31 digitType unknown
set profiles digitParameterHandling prefixProfile CUCM_PP entry 6 0 1 31 natureOfAddress none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 6 0 1 31 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 6 0 1 31 numberLeadingPrefixDigits 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 6 0 1 31 numberLeadingPrefixDigitsToStrip 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 6 0 1 31 applyDmRule disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 6 0 1 31 determineArea disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 7 0 1 31 callType nationalType
set profiles digitParameterHandling prefixProfile CUCM_PP entry 7 0 1 31 digitType unknown
set profiles digitParameterHandling prefixProfile CUCM_PP entry 7 0 1 31 natureOfAddress none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 7 0 1 31 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 7 0 1 31 numberLeadingPrefixDigits 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 7 0 1 31 numberLeadingPrefixDigitsToStrip 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 7 0 1 31 applyDmRule disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 7 0 1 31 determineArea disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 8 0 1 31 callType nationalType
set profiles digitParameterHandling prefixProfile CUCM_PP entry 8 0 1 31 digitType unknown
set profiles digitParameterHandling prefixProfile CUCM_PP entry 8 0 1 31 natureOfAddress none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 8 0 1 31 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 8 0 1 31 numberLeadingPrefixDigits 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 8 0 1 31 numberLeadingPrefixDigitsToStrip 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 8 0 1 31 applyDmRule disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 8 0 1 31 determineArea disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 9 0 1 31 callType nationalType
set profiles digitParameterHandling prefixProfile CUCM_PP entry 9 0 1 31 digitType unknown
set profiles digitParameterHandling prefixProfile CUCM_PP entry 9 0 1 31 natureOfAddress none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 9 0 1 31 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile CUCM_PP entry 9 0 1 31 numberLeadingPrefixDigits 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 9 0 1 31 numberLeadingPrefixDigitsToStrip 0
set profiles digitParameterHandling prefixProfile CUCM_PP entry 9 0 1 31 applyDmRule disable
set profiles digitParameterHandling prefixProfile CUCM_PP entry 9 0 1 31 determineArea disable

```

#### #External Side SBC Configuration

##### #IP Interface Group

```

set addressContext default ipInterfaceGroup IPIG1 ipInterface IPIF1 portName pkt1
set addressContext default ipInterfaceGroup IPIG1 ipInterface IPIF1 ipAddress 10.10.216.211
set addressContext default ipInterfaceGroup IPIG1 ipInterface IPIF1 prefix 26
set addressContext default ipInterfaceGroup IPIG1 ipInterface IPIF1 mode inService
set addressContext default ipInterfaceGroup IPIG1 ipInterface IPIF1 action dryUp
set addressContext default ipInterfaceGroup IPIG1 ipInterface IPIF1 dryupTimeout 60
set addressContext default ipInterfaceGroup IPIG1 ipInterface IPIF1 state enabled
set addressContext default ipInterfaceGroup IPIG1 ipInterface IPIF1 bwContingency 0
set addressContext default ipInterfaceGroup IPIG1 ipInterface IPIF1 bandwidth 0
commit

```

##### #IP static route

```

set addressContext default staticRoute 0.0.0.0 0 10.10.216.193 IPIG1 IPIF1 preference 100
commit

```

##### #Zone

```

set addressContext default zone PLUSNET id 3
set addressContext default zone PLUSNET dnsGroup DNS1
commit

```

##### #SIP signaling port

```

set addressContext default zone PLUSNET sipSigPort 3 ipInterfaceGroupName IPIG1
set addressContext default zone PLUSNET sipSigPort 3 ipAddressV4 10.10.216.211
set addressContext default zone PLUSNET sipSigPort 3 portNumber 5060
set addressContext default zone PLUSNET sipSigPort 3 mode inService
set addressContext default zone PLUSNET sipSigPort 3 state enabled
set addressContext default zone PLUSNET sipSigPort 3 recorder disabled
set addressContext default zone PLUSNET sipSigPort 3 siprec disabled
set addressContext default zone PLUSNET sipSigPort 3 tcpConnectTimeout 5
set addressContext default zone PLUSNET sipSigPort 3 dscpValue 0
set addressContext default zone PLUSNET sipSigPort 3 tlsProfileName defaultTlsProfile
set addressContext default zone PLUSNET sipSigPort 3 transportProtocolsAllowed sip-udp,sip-tcp,sip-tls-tcp

```

```

set addressContext default zone PLUSNET sipSigPort 3 sctpProfileName defaultSctpProfile
set addressContext default zone PLUSNET sipSigPort 3 tcpKeepaliveTime 0
set addressContext default zone PLUSNET sipSigPort 3 tcpKeepaliveInterval 60
set addressContext default zone PLUSNET sipSigPort 3 tcpKeepaliveProbes 2
set addressContext default zone PLUSNET sipSigPort 3 maskPortforRcb disabled
set addressContext default zone PLUSNET sipSigPort 3 maskIpAddressforRcb disabled
set addressContext default zone PLUSNET sipSigPort 3 enforceAORMatch disabled
set addressContext default zone PLUSNET sipSigPort 3 action force
set addressContext default zone PLUSNET sipSigPort 3 tcpUserTimeout 0
set addressContext default zone PLUSNET sipSigPort 3 sipTcpConnectionAgingState enabled
commit

#IP peers
set addressContext default zone PLUSNET ipPeer IPPEER_DURO01 policy description ""
set addressContext default zone PLUSNET ipPeer IPPEER_DURO01 policy sip fqdn secure-duro01.sipconnect.ipfonie.de
set addressContext default zone PLUSNET ipPeer IPPEER_DURO01 policy sip fqdnPort 5060
set addressContext default zone PLUSNET ipPeer IPPEER_DURO01 policy packetServiceProfile PlusNet
set addressContext default zone PLUSNET ipPeer IPPEER_DURO01 pathCheck profile PLUSNET_OPTIONS
set addressContext default zone PLUSNET ipPeer IPPEER_DURO01 pathCheck hostName secure-duro01.sipconnect.ipfonie.de
set addressContext default zone PLUSNET ipPeer IPPEER_DURO01 pathCheck hostPort 5060
set addressContext default zone PLUSNET ipPeer IPPEER_DURO01 pathCheck state enabled
commit

set addressContext default zone PLUSNET ipPeer IPPEER_DURO02 policy description ""
set addressContext default zone PLUSNET ipPeer IPPEER_DURO02 policy sip fqdn secure-duro02.sipconnect.ipfonie.de
set addressContext default zone PLUSNET ipPeer IPPEER_DURO02 policy sip fqdnPort 5060
set addressContext default zone PLUSNET ipPeer IPPEER_DURO02 policy packetServiceProfile PlusNet
set addressContext default zone PLUSNET ipPeer IPPEER_DURO02 pathCheck profile PLUSNET_OPTIONS
set addressContext default zone PLUSNET ipPeer IPPEER_DURO02 pathCheck hostName secure-duro02.sipconnect.ipfonie.de
set addressContext default zone PLUSNET ipPeer IPPEER_DURO02 pathCheck hostPort 5060
set addressContext default zone PLUSNET ipPeer IPPEER_DURO02 pathCheck state enabled
commit

set addressContext default zone PLUSNET ipPeer IPPEER_DURO03 policy description ""
set addressContext default zone PLUSNET ipPeer IPPEER_DURO03 policy sip fqdn secure-duro03.sipconnect.ipfonie.de
set addressContext default zone PLUSNET ipPeer IPPEER_DURO03 policy sip fqdnPort 5060
set addressContext default zone PLUSNET ipPeer IPPEER_DURO03 policy packetServiceProfile PlusNet
set addressContext default zone PLUSNET ipPeer IPPEER_DURO03 pathCheck profile PLUSNET_OPTIONS
set addressContext default zone PLUSNET ipPeer IPPEER_DURO03 pathCheck hostName secure-duro03.sipconnect.ipfonie.de
set addressContext default zone PLUSNET ipPeer IPPEER_DURO03 pathCheck hostPort 5060
set addressContext default zone PLUSNET ipPeer IPPEER_DURO03 pathCheck state enabled
commit

set addressContext default zone PLUSNET ipPeer IPPEER_DURO04 policy description ""
set addressContext default zone PLUSNET ipPeer IPPEER_DURO04 policy sip fqdn secure-duro04.sipconnect.ipfonie.de
set addressContext default zone PLUSNET ipPeer IPPEER_DURO04 policy sip fqdnPort 5060
set addressContext default zone PLUSNET ipPeer IPPEER_DURO04 policy packetServiceProfile PlusNet
set addressContext default zone PLUSNET ipPeer IPPEER_DURO04 pathCheck profile PLUSNET_OPTIONS
set addressContext default zone PLUSNET ipPeer IPPEER_DURO04 pathCheck hostName secure-duro04.sipconnect.ipfonie.de
set addressContext default zone PLUSNET ipPeer IPPEER_DURO04 pathCheck hostPort 5060
set addressContext default zone PLUSNET ipPeer IPPEER_DURO04 pathCheck state enabled
commit

#PlusNet trunks
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET state enabled
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET mode inService
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy carrier 0000
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy country 1
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy localizationVariant northAmerica
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy tgIPVersionPreference both-ipv4-and-ipv6
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy preferredIdentity disable
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy digitParameterHandling numberingPlan
PLUSNET_NP
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy digitParameterHandling egressDmPmRule AddPlus
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy callRouting elementRoutingPriority DEFAULT_IP
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy media packetServiceProfile PlusNet
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy services classOfService DEFAULT_IP
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy signaling ipSignalingProfile PLUSNET_IPSP
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy featureControlProfile DEFAULT_IP
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy ingress flags
nonZeroVideoBandwidthBasedRoutingForSip enable
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy ingress flags

```

```

nonZeroVideoBandwidthBasedRoutingForH323 disable
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy ingress flags hdPreferredRouting disable
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET policy ingress flags hdSupportedRouting disable
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET signaling messageManipulation inputAdapterProfile
pCalledPid
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET signaling messageManipulation outputAdapterProfile
ADD_PLUS_DIVERSION
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET signaling registration requireRegistration none
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET signaling authentication authUserPart XXXX
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET signaling authentication authPassword XXXX
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET signaling authentication intChallengeResponse
disabled
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET signaling authentication incInternalCredentials
disabled
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET signaling transportPreference preference1 tls-tcp
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET signaling skipDTGLookupForRouteHdr disabled
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET signaling factorValue 50
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET signaling sipFilterProfile default
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET services dnsSupportType a-srv-naptr
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET services dnsNaptrAlways enabled
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET media mediaIpInterfaceGroupName IPIG1
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET ingressIpPrefix 62.206.3.2 32
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET ingressIpPrefix 62.206.3.66 32
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET ingressIpPrefix 213.148.136.190 32
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET ingressIpPrefix 213.148.136.222 32
commit

#IP Signaling Profile
set profiles signaling ipSignalingProfile PLUSNET_IPSP ipProtocolType sipOnly
set profiles signaling ipSignalingProfile PLUSNET_IPSP commonIpAttributes callTransferFlags
handleIpAddressesNotPresentInNetworkSelectorTableNst routeViaTransferringIptg
set profiles signaling ipSignalingProfile PLUSNET_IPSP commonIpAttributes transparencyFlags pCalledPartyID enable
set profiles signaling ipSignalingProfile PLUSNET_IPSP egressIpAttributes numberPortabilityAttributes npdiOptions
includeNpdiYes
set profiles signaling ipSignalingProfile PLUSNET_IPSP egressIpAttributes transport type1 tlsOverTcp
set profiles signaling ipSignalingProfile PLUSNET_IPSP egressIpAttributes privacy privacyInformation pPreferredId
set profiles signaling ipSignalingProfile PLUSNET_IPSP egressIpAttributes privacy flags includePrivacy enable
set profiles signaling ipSignalingProfile PLUSNET_IPSP egressIpAttributes redirect mode acceptRedirection
set profiles signaling ipSignalingProfile PLUSNET_IPSP egressIpAttributes redirect contactHandling
mergeReceivedContacts
set profiles signaling ipSignalingProfile PLUSNET_IPSP egressIpAttributes sipHeadersAndParameters callForwarding
dataMapping diversion
set profiles signaling ipSignalingProfile PLUSNET_IPSP egressIpAttributes sipHeadersAndParameters
includeChargeInformation includeNone
set profiles signaling ipSignalingProfile PLUSNET_IPSP egressIpAttributes sipHeadersAndParameters
sipToHeaderMapping none
set profiles signaling ipSignalingProfile PLUSNET_IPSP egressIpAttributes sipHeadersAndParameters
destinationTrunkGroupOptions includeNone
set profiles signaling ipSignalingProfile PLUSNET_IPSP egressIpAttributes sipHeadersAndParameters
originatingTrunkGroupOptions includeNone
set profiles signaling ipSignalingProfile PLUSNET_IPSP egressIpAttributes sipHeadersAndParameters
generateCallIdUsing doNotUseIngressCallId
set profiles signaling ipSignalingProfile PLUSNET_IPSP trfParameters preferredMrbUri ""
set profiles signaling ipSignalingProfile PLUSNET_IPSP trfParameters preferredTrfUri ""

#Numbering Plan
set profiles digitParameterHandling numberingPlan PLUSNET_NP prefixProfile PLUSNET_PP
set profiles digitParameterHandling numberingPlan PLUSNET_NP lengths nationalNumber min 0
set profiles digitParameterHandling numberingPlan PLUSNET_NP lengths nationalNumber max 0
set profiles digitParameterHandling numberingPlan PLUSNET_NP lengths subscriberNumber min 0
set profiles digitParameterHandling numberingPlan PLUSNET_NP lengths subscriberNumber max 0
set profiles digitParameterHandling numberingPlan PLUSNET_NP lengths line min 0
set profiles digitParameterHandling numberingPlan PLUSNET_NP lengths line max 0
set profiles digitParameterHandling numberingPlan PLUSNET_NP lengths exchangeCode min 0
set profiles digitParameterHandling numberingPlan PLUSNET_NP lengths exchangeCode max 0
set profiles digitParameterHandling numberingPlan PLUSNET_NP lengths areaCode min 0
set profiles digitParameterHandling numberingPlan PLUSNET_NP lengths areaCode max 0

#Prefix Profile
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry + 0 1 31 callType internationalType
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry + 0 1 31 digitType international

```







```

set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 8 0 1 31 natureOfAddress none
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 8 0 1 31 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 8 0 1 31 numberLeadingPrefixDigits 0
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 8 0 1 31 numberLeadingPrefixDigitsToStrip 0
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 8 0 1 31 applyDmRule disable
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 8 0 1 31 determineArea disable
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 9 0 1 31 callType nationalType
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 9 0 1 31 digitType unknown
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 9 0 1 31 natureOfAddress none
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 9 0 1 31 numberingPlanIndicator none
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 9 0 1 31 numberLeadingPrefixDigits 0
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 9 0 1 31 numberLeadingPrefixDigitsToStrip 0
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 9 0 1 31 applyDmRule disable
set profiles digitParameterHandling prefixProfile PLUSNET_PP entry 9 0 1 31 determineArea disable

```

#### #dmPmRule

```

set profiles digitParameterHandling dmPmRule AddPlus subRule 0 ruleType digit
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation numberType calledNumber
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation numberParameterManipulation
natureOfAddress national
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation numberParameterManipulation
numberingPlanIndicator isdn
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation numberParameterManipulation
numberLength noInput
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation numberParameterManipulation
presentation none
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation numberParameterManipulation
screening none
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation numberParameterManipulation
includeInEgress none
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation digitStringManipulation
startDigitPosition 0
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation digitStringManipulation
numberOfDigits 0
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation digitStringManipulation
replacement type constant
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation digitStringManipulation
replacement digitString calledNumber
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation digitStringManipulation
replacement startDigitPosition 0
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation digitStringManipulation
replacement numberOfDigits 0
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation digitStringManipulation
replacement value +
set profiles digitParameterHandling dmPmRule AddPlus subRule 0 digitManipulation digitStringManipulation action
none
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 ruleType digit
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation numberType callingNumber
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation numberParameterManipulation
natureOfAddress national
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation numberParameterManipulation
numberingPlanIndicator isdn
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation numberParameterManipulation
numberLength noInput
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation numberParameterManipulation
presentation none
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation numberParameterManipulation
screening none
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation numberParameterManipulation
includeInEgress none
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation digitStringManipulation
startDigitPosition 0
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation digitStringManipulation
numberOfDigits 0
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation digitStringManipulation
replacement type constant
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation digitStringManipulation
replacement digitString callingNumber
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation digitStringManipulation
replacement startDigitPosition 0
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation digitStringManipulation
replacement numberOfDigits 0

```

```

set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation digitStringManipulation
replacement value +
set profiles digitParameterHandling dmPmRule AddPlus subRule 1 digitManipulation digitStringManipulation action
none

#Global Configuration
#Route Labels
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
commit
set global callRouting routingLabel TO_PLUSNET overflowNumber ""
set global callRouting routingLabel TO_PLUSNET overflowNOA none
set global callRouting routingLabel TO_PLUSNET overflowNPI none
set global callRouting routingLabel TO_PLUSNET routePrioritizationType sequence
set global callRouting routingLabel TO_PLUSNET action routes
set global callRouting routingLabel TO_PLUSNET numRoutesPerCall 10
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 0 routeType trunkGroup
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 0 trunkGroup PLUSNET
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 0 ipPeer IPPEER_DURO01
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 0 proportion 0
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 0 cost 10
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 0 inService inService
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 0 testing normal
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 routeType trunkGroup
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 trunkGroup PLUSNET
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 ipPeer IPPEER_DURO02
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 proportion 0
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 cost 20
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 inService inService
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 1 testing normal
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 2 routeType trunkGroup
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 2 trunkGroup PLUSNET
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 2 ipPeer IPPEER_DURO03
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 2 proportion 0
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 2 cost 20
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 2 inService inService
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 2 testing normal
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 3 routeType trunkGroup
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 3 trunkGroup PLUSNET
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 3 ipPeer IPPEER_DURO04
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 3 proportion 0
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 3 cost 20
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 3 inService inService
set global callRouting routingLabel TO_PLUSNET routingLabelRoute 3 testing normal
commit

set global callRouting routingLabel TO_VENTAFAX overflowNumber ""
set global callRouting routingLabel TO_VENTAFAX overflowNOA none
set global callRouting routingLabel TO_VENTAFAX overflowNPI none
set global callRouting routingLabel TO_VENTAFAX routePrioritizationType sequence
set global callRouting routingLabel TO_VENTAFAX action routes
set global callRouting routingLabel TO_VENTAFAX numRoutesPerCall 10
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 routeType trunkGroup
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 trunkGroup VENTAFAX
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 ipPeer VENTAFAX
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 proportion 0
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 cost 1000000
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 inService inService
set global callRouting routingLabel TO_VENTAFAX routingLabelRoute 0 testing normal
commit

set global callRouting routingLabel TO_CUCM1 overflowNumber ""
set global callRouting routingLabel TO_CUCM1 overflowNOA none
set global callRouting routingLabel TO_CUCM1 overflowNPI none
set global callRouting routingLabel TO_CUCM1 routePrioritizationType sequence
set global callRouting routingLabel TO_CUCM1 action routes

```

```

set global callRouting routingLabel TO_CUCM1 numRoutesPerCall 10
set global callRouting routingLabel TO_CUCM1 routingLabelRoute 0 routeType trunkGroup
set global callRouting routingLabel TO_CUCM1 routingLabelRoute 0 trunkGroup CUCM1
set global callRouting routingLabel TO_CUCM1 routingLabelRoute 0 ipPeer CUCM1
set global callRouting routingLabel TO_CUCM1 routingLabelRoute 0 proportion 0
set global callRouting routingLabel TO_CUCM1 routingLabelRoute 0 cost 1000000
set global callRouting routingLabel TO_CUCM1 routingLabelRoute 0 inService inService
set global callRouting routingLabel TO_CUCM1 routingLabelRoute 0 testing normal

#Routes
set global callRouting route none Sonus_NULL Sonus_NULL standard 91147726289 49 all all ALL none Sonus_NULL
routingLabel TO_CUCM1
set global callRouting route none Sonus_NULL Sonus_NULL standard Sonus_NULL 49 all all ALL none Sonus_NULL
routingLabel TO_CUCM
set global callRouting route trunkGroup CUCM SBC standard Sonus_NULL Sonus_NULL all all ALL none Sonus_NULL
routingLabel TO_PLUSNET
set global callRouting route trunkGroup CUCM1 SBC standard Sonus_NULL Sonus_NULL all all ALL none Sonus_NULL
routingLabel TO_PLUSNET
set global callRouting route trunkGroup VENTAFAX SBC standard Sonus_NULL Sonus_NULL all all ALL none Sonus_NULL
routingLabel TO_PLUSNET
commit

```

## Test Results

The following table provides information about the tests that Ribbon performed to complete all scenarios that PlusNet needs for their customers.

**Table 2:** Interoperability Compliance Test Results

Test Number	Test Scenario	Setup / Test Results	Status	Comment
4.1	Registration and authentication (registration mode)	The PBX is able to execute the correct resolution of the DNS SRV record	Pass	
4.3	Basic call	The basic call tests the standard call scenarios and the CLIP/CLIR features <ul style="list-style-type: none"> <li>Only en-bloc dialing is supported, overlap sending is not possible</li> </ul>	Pass	
4.3.1	Normal call	Outgoing call from PBX to PSTN <ul style="list-style-type: none"> <li>En-bloc dialing</li> <li>Local area call (without area code); area code must be set by the PBX</li> <li>Setting of the correct calling number with all available telephone number blocks</li> <li>If two or more locations with different area codes are assigned to one SIP trunk, the number in the PAI header must be the geographic number which belongs to the user's location. This is very important in case of emergency calls, because Plusnet uses the number of the PAI header to route the emergency call to the proper emergency call center.</li> </ul>	Pass	
4.3.1.1	Normal call	The geographic number in the PAI header corresponds to the location 11 of the user	Pass	Is it possible to configure several PAI per SIP trunk? Yes
4.3.1.2	Normal call	Display of A-number in B-party CLIP (national PSTN)	Pass	
4.3.1.3	Normal call	Display of A-number in B-party CLIP (international PSTN)	Pass	
4.3.1.4	Normal call	Display of A-number in B-party CLIP (mobile)	Pass	

4.3.1.5	Normal call	Call to mobile <ul style="list-style-type: none"> <li>Outgoing call to mobile =&gt; mobile phone turned off</li> </ul>	Pass	
4.3.1.6	Normal call	Suppression of A-number => CUR	Pass	
4.3.1.7	Normal call	Outgoing call from analog extension	Not Executed	Because COVID19, tests are from home
4.3.1.8	Normal call	Outgoing call (> 5 min.) => PSTN	Pass	Hold connection for 5 minutes => RTP still correct? Yes
4.3.2	Normal call	Incoming call from PSTN (national) => PBX <ul style="list-style-type: none"> <li>Test all available telephone number blocks</li> </ul>	Pass	
4.3.2.1	Normal call	Display of A-number => CLIP	Pass	
4.3.2.2	Normal call	Incoming call from mobile => PBX Display of A-number => CLIP	Pass	
4.3.2.3	Normal call	Suppression of A-number => CLIR	Pass	
4.3.3	Normal call	Two simultaneous outgoing/incoming calls	Pass	
4.3.4	Normal call	Enabled feature DND (do not disturb)	Pass	
4.3.5	Normal call	Test call with codec G.711	Pass	
4.3.6	Normal call	Test call with codec G.722 (only SIP <=> SIP)	Fail	PlusNet did not support G. 722
4.3.7	Normal call	Test call with codec G.729	Pass	
4.3.2.8	Clip No Screening	Outgoing call from PBX to PSTN <ul style="list-style-type: none"> <li>With feature Clip No Screening</li> <li>Test with several different A-numbers</li> <li>If two or more locations with different area codes are assigned to one SIP trunk, the number in the PAI header must be the geographic number which belongs to the user's location. This is very important in case of emergency calls, because PlusNet uses the number</li> </ul>	Pass	
4.3.2.8.1	Clip No Screening	Despite Clip No Screening, the geographic number in the PAI header corresponds to the location of the user	Pass	Is it possible to configure several PAI per SIP trunk? Yes
4.3.2.8.2	Clip No Screening	Display of A-number (NoSClip) at B-party (PSTN)	Pass	
4.3.2.8.3	Clip No Screening	Display of A-number (NoSClip) at B-party (international PSTN; depending on the destination carrier, the NoSClip telephone number may not be displayed)	Pass	
4.3.2.8.3	Clip No Screening	Call made from a PSTN line to an IP-PBX line with call forward to a line within the same IP-PBX, Answer Call. <ul style="list-style-type: none"> <li>Either party terminates the call</li> </ul>	Pass	Does the IP-PBX have configuration settings to send SIP status 181 messages to the soft switch? Yes
4.3.2.8.4	Clip No Screening	Display of A-number (NoSClip) at B-party (mobile)	Pass	

4.3.3.9	Special call situations	Outgoing call PBX => PSTN <ul style="list-style-type: none"> <li>• Call is rejected by B-party</li> </ul>	Pass	
4.3.3.10	Special call situations	Outgoing call PBX=> PSTN <ul style="list-style-type: none"> <li>• B-party does not answer; clearing after timer</li> </ul>	Pass	
4.3.3.11	Special call situations	Outgoing call PBX => PSTN <ul style="list-style-type: none"> <li>• B-party busy; busy tone</li> </ul>	Pass	
4.3.3.12	Special call situations	Outgoing call PBX=> PSTN <ul style="list-style-type: none"> <li>• A-party hangs up before the call is established (cancel)</li> </ul>	Pass	
4.3.3.13	Special call situations	Incoming call PSTN => PBX <ul style="list-style-type: none"> <li>• Call is rejected by PBX party</li> </ul>	Pass	
4.3.3.14	Special call situations	Incoming call PSTN => PBX <ul style="list-style-type: none"> <li>• PBX party does not answer; clearing after timer</li> </ul>	Pass	
4.3.3.15	Special call situations	Incoming call PSTN => PBX <ul style="list-style-type: none"> <li>• PBX party busy; busy tone</li> </ul>	Pass	
4.3.3.16	Special call situations	Incoming call PSTN => PBX <ul style="list-style-type: none"> <li>• A-party hangs up before the call is established (cancel)</li> </ul>	Pass	
4.3.4.17	Call clearing	Incoming / outgoing call; clearing after established call. Correct clearing on both sides <ul style="list-style-type: none"> <li>• PBX party hangs up</li> <li>• PSTN party hangs up</li> </ul>	Pass	
4.3.4.18	Call clearing	Interrupting the network connection of the SIP terminal device during a call <ul style="list-style-type: none"> <li>• Call should be cleared correctly</li> </ul>	Pass	
4.4.19	Hold	PBX => PSTN and PSTN => PBX <ul style="list-style-type: none"> <li>• Test call in both directions</li> </ul>	Pass	
4.4.19.1	Hold	Putting an external call on hold in the PBX	Pass	
4.4.19.2	Hold	If applicable, MoH (music on hold) at A-party (PSTN)	Pass	
4.4.19.3	Hold	HOLD RETRIEVE: retrieving the external call	Pass	
4.4.19.4	Hold	Clearing the connection of the A-party while it is put on hold	Pass	
4.4.20	Hold	PBX => PSTN and PSTN => PBX <ul style="list-style-type: none"> <li>• Test call in both directions</li> </ul>	Pass	
4.4.20.1	Hold	Putting an external call on hold in the PSTN	Pass	
4.4.20.2	Hold	If applicable, MoH (music on hold) at A-party (PBX)	Pass	
4.4.20.3	Hold	HOLD RETRIEVE: retrieving the external call	Pass	
4.4.20.4	Hold	Clearing the connection of the A-party while it is put on hold	Pass	
4.5.21	Call transfer	Internal call is transferred to an external party: internal => PBX => external	Pass	
4.5.21.1	Call transfer	Call transfer from PBX party => PSTN party with an announcement (attendant transfer)	Pass	
4.5.21.2	Call transfer	Call transfer from PBX party => PSTN party without an announcement (blind transfer)	Pass	

4.5.21.3	Call transfer	Call transfer from PBX party => PSTN party without an announcement (blind transfer) <ul style="list-style-type: none"> <li>• Call is rejected or not answered</li> </ul>	Pass	
4.5.21.4	Call transfer	Call transfer from PBX party => PSTN party without an announcement (blind transfer) <ul style="list-style-type: none"> <li>• PSTN party busy</li> </ul>	Pass	
4.5.22	Call transfer	Transferred call from external party to PBX: PSTN => PBX	Pass	
4.5.22.1	Call transfer	Call transfer from PSTN => PBX party with an announcement (attendant transfer)	Pass	
4.5.22.2	Call transfer	Call transfer from PSTN => PBX party without an announcement (blind transfer)	Pass	
4.5.22.3	Call transfer	Call transfer from PSTN => PBX party without an announcement (blind transfer) <ul style="list-style-type: none"> <li>• Call is rejected or not answered</li> </ul>	Pass	
4.5.22.4	Call transfer	Call transfer from PSTN => PBX party without an announcement (blind transfer) <ul style="list-style-type: none"> <li>• PBX party busy</li> </ul>	Pass	
4.5.23	Call transfer	Call from external party transferred to another external party: external => PBX => external	Pass	
4.5.23.1	Call transfer	PSTN => PBX party => PSTN with an announcement (attendant transfer)	Pass	
4.5.23.2	Call transfer	PSTN => PBX party => PSTN without an announcement (blind transfer)	Pass	
4.5.23.3	Call transfer	PSTN => PBX party => PSTN without an announcement (blind transfer) <ul style="list-style-type: none"> <li>• Call is rejected or not answered</li> </ul>	Pass	
4.5.23.4	Call transfer	PSTN => PBX party => PSTN without an announcement (blind transfer) <ul style="list-style-type: none"> <li>• PSTN party busy</li> </ul>	Pass	
4.6.24	Call diversion	PBX party CFU to an external party (PSTN)	Pass	
4.6.24.1	Call diversion	Internal call (CFU) => PSTN	Pass	
4.6.24.2	Call diversion	PSTN party busy, rejects the call, does not answer	Pass	
4.6.24.3	Call diversion	A-party clears in ring phase	Pass	
4.6.24.4	Call diversion	External => PBX party (CFU) => PSTN	Pass	
4.6.24.5	Call diversion	PSTN party busy, rejects the call, does not answer	Pass	
4.6.24.6	Call diversion	A-party clears in ring phase	Pass	
4.6.25	Call diversion	PBX party CFNR to an external party	Pass	
4.6.25.1	Call diversion	Internal call (CFNR) => PSTN	Pass	
4.6.25.2	Call diversion	PSTN party busy, rejects the call, does not answer	Pass	
4.6.25.3	Call diversion	A-party clears in ring phase	Pass	
4.6.25.4	Call diversion	External => PBX party (CFNR) => PSTN	Pass	
4.6.25.5	Call diversion	PSTN party busy, rejects the call, does not answer	Pass	

4.6.25.6	Call diversion	A-party clears in ring phase	Pass	
4.6.26	Call diversion	PBX party CFB to an external party	Pass	
4.6.26.1	Call diversion	Internal call (CFB) => PSTN	Pass	
4.6.26.2	Call diversion	PSTN party busy, rejects the call, does not answer	Pass	
4.6.26.3	Call diversion	A-party clears in ring phase	Pass	
4.6.26.4	Call diversion	External => PBX party (CFB) => PSTN	Pass	
4.6.26.5	Call diversion	PSTN party busy, rejects the call, does not answer	Pass	
4.6.26.6	Call diversion	A-party clears in ring phase	Pass	
4.6.27	Call diversion	External party (PSTN, mobile, etc.) CFU to PBX party:	Pass	
4.6.27.1	Call diversion	External (CFU) => PBX party	Pass	
4.6.27.2	Call diversion	PBX party busy, rejects the call, does not answer	Pass	
4.6.27.3	Call diversion	A-party clears in ring phase	Pass	
4.6.27.4	Call diversion	External (CFNR) => PBX party	Pass	
4.6.27.5	Call diversion	PBX party busy, rejects the call, does not answer	Pass	
4.6.27.6	Call diversion	A-party clears in ring phase	Pass	
4.6.28	Call diversion	External party (PSTN, mobile, etc.) CFB to PBX party:	Pass	
4.6.28.1	Call diversion	PBX party busy, rejects the call, does not answer	Pass	
4.6.28.2	Call diversion	A-party clears in ring phase	Pass	
4.6.29	Call diversion	Call deflection: diversion during the ring phase	Pass	
4.6.29.1.1	Call diversion	Internal call PBX party CD => PBX party	Pass	
4.6.29.1.2	Call diversion	PBX party busy	Pass	
4.6.29.1.3	Call diversion	PBX party does not answer	Pass	
4.6.29.1.4	Call diversion	A-party clears in ring phase	Pass	
4.6.29.2.1	Call diversion	External call to PBX party CD => PBX party	Pass	
4.6.29.2.2	Call diversion	PBX party busy	Pass	
4.6.29.2.3	Call diversion	PBX party does not answer	Pass	

4.6.29.2.4	Call diversion	A-party clears in ring phase	Pass	
4.6.29.3.1	Call diversion	External call to PBX party CD => external PSTN party	Pass	
4.6.29.3.2	Call diversion	PSTN party busy	Pass	
4.6.29.3.3	Call diversion	PSTN party does not answer	Pass	
4.6.29.3.4	Call diversion	A-party clears in ring phase	Pass	
4.7.30	Call waiting	Incoming call during an active internal call	Pass	
4.7.30.1	Call waiting	Call waiting tone	Pass	
4.7.30.2	Call waiting	Display of number of waiting party	Pass	
4.7.30.3	Call waiting	Acceptance of waiting call	Pass	
4.7.30.4	Call waiting	Putting the waiting call on hold	Pass	
4.7.30.5	Call waiting	Retrieval of waiting call	Pass	
4.7.30.6	Call waiting	Holding the 2nd call	Pass	
4.7.30.7	Call waiting	Terminating the active call	Pass	
4.7.30.8	Call waiting	Disregarding the waiting call	Pass	
4.7.30.9	Call waiting	Rejecting the waiting call	Pass	
4.8.31	3-party conference	Establishing a conference according to the operating instructions of the PBX Internal - internal - external	Pass	
4.8.31.1	3-party conference	Selecting a party (internal or external); 3rd party is put on hold <ul style="list-style-type: none"> <li>• Switching to 3rd party; 2nd party is put on hold</li> <li>• Reactivating the conference</li> <li>• Clearing one party (internal or external)</li> <li>• Terminating the conference</li> </ul>	Pass	
4.8.32	3-party conference	Establishing a conference according to the operating instructions of the PBX internal - external - external	Pass	
4.8.32.1	3-party conference	Selecting a party (external); 3rd party is put on hold <ul style="list-style-type: none"> <li>• Switching to 3rd party; 2nd party is put on hold</li> <li>• Reactivating the conference</li> <li>• Clearing one party (external)</li> <li>• Terminating the conference</li> </ul>	Pass	
4.9.33	Pick up	Picking up a call from another extension of the PBX	Pass	
4.10.34	Call list	Entries in the call list <ul style="list-style-type: none"> <li>• Incoming from PSTN</li> <li>• Incoming from mobile</li> <li>• Incoming CLIR</li> <li>• Dialing prefix for outside line in the call list</li> </ul>	Pass	
4.10.35	Call list	Call-back from call list <ul style="list-style-type: none"> <li>• To PSTN</li> <li>• To mobile</li> </ul>	Pass	
4.11.36	DTMF	DTMF support (G.711) <ul style="list-style-type: none"> <li>• PSTN =&gt; PBX (SIP terminal device)</li> <li>• PSTN =&gt; PBX (analog or system terminal device)</li> <li>• PBX (SIP terminal device) =&gt; PSTN</li> <li>• PBX (analog or system terminal device) =&gt; PSTN</li> </ul>	Pass	Analog device was not possible to test because COVID19



4.11.37	DTMF	DTMF support (G.729) - PSTN => PBX (SIP terminal device) - PSTN => PBX (analog or system terminal device) - PBX (SIP terminal device) => PSTN - PBX (analog or system terminal device) => PSTN	Pass	Analog device was not possible to test because COVID19
4.12.38	Fax	Fax reception (G.711 only)	Pass	
4.12.38.1	Fax	Network-side T.38 re-invite rejected by PBX (response 488) or only G.711 codec is confirmed  <ul style="list-style-type: none"> <li>One-page fax</li> <li>Multi-page fax (at least 5 pages)</li> </ul>	Pass	
4.12.39	Fax	Fax sending (G.711 only)	Pass	
4.12.39.1	Fax	Network-side T.38 re-invite rejected by PBX (response 488) or only G.711 codec is confirmed  <ul style="list-style-type: none"> <li>One-page fax</li> <li>Multi-page fax (at least 5 pages)</li> </ul>	Pass	
4.12.40	Fax	Fax reception via T.38	Pass	
4.12.40.1	Fax	Re-invite to T.38 by PBX or network  <ul style="list-style-type: none"> <li>One-page fax</li> <li>Multi-page fax (at least 5 pages)</li> </ul>	Pass	
4.12.41	Fax	Fax sending via T.38 (not possible in conjunction with the encryption option)	Pass	
4.12.41.1	Fax	Re-invite to T.38 by PBX or network  <ul style="list-style-type: none"> <li>T.38-only invites are not supported</li> <li>One-page fax</li> <li>Multi-page fax (at least 5 pages)</li> </ul>	Pass	
5.42	Redundancy	Test of redundancy:  <ul style="list-style-type: none"> <li>Only if redundant connection is possible on the PBX side</li> <li>This requires at least two PBX servers to be online on the SIP trunk in registration mode, or exactly two PBX servers in peering mode.</li> </ul>	Pass	
5.42.1	Redundancy	1. Register all available PBX systems the Plusnet SBC. 2. Calls from Plusnet => PBX are routed by round robin procedure 3. Deliberately de-register one PBX system => no more calls are routed to this PBX 4. and/or disconnect the PBX system from LAN => after the register expire period, no more calls are routed to this PBX. 5. Calls are only routed to the remaining PBX systems.	Pass	

## Conclusion

Ribbon successfully completed the configuration and testing for the Ribbon SBC Core to interoperate with a Cisco Unified Communication Manager (CUCM) system and a PlusNet SIP trunk. All feature and serviceability issues were completed with the noted exceptions and observations.

## Appendix A

- Modifying the PAI:

## CHANGEPAI

```
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 applyMatchHdrRange undefined
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 1 message condition undefined
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 value ""
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 criterion 2 header hdrRange undefined
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 criterion 2 header numberOfInstances number 0
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 criterion 2 header numberOfInstances qualifier
undefined
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 headerPosition undefined
set profiles signaling sipAdaptorProfile PAID_CHANGE rule 1 action 1 paramType undefined
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:+4932211057459@10.10.216.211:5060>
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

# Apply this AdaptorProfile only if you need to modify the PAI in the outgoing trunk PLUSNET
```

- Removing the "+" from the INVITE to Cisco CUCM:

## REMOVE\_PLUS

```
set profiles signaling sipAdaptorProfile REMOVE_PLUS state enabled
set profiles signaling sipAdaptorProfile REMOVE_PLUS advancedSMM disabled
set profiles signaling sipAdaptorProfile REMOVE_PLUS profileType messageManipulation
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 applyMatchHeader one
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 applyMatchHdrRange undefined
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 1 message condition undefined
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 value ""
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 2 header hdrRange undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 2 header numberOfInstances number 0
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 criterion 2 header numberOfInstances qualifier
undefined
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 criterion 3 token value ""
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 headerInfo undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 action 1 headerPosition undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 1 action 1 paramType undefined
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 applyMatchHdrRange undefined
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 1 message condition undefined
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 value ""
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 2 header hdrRange undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 2 header numberOfInstances number 0
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 criterion 2 header numberOfInstances qualifier
undefined
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 criterion 3 token value ""
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 headerInfo undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 action 1 headerPosition undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 2 action 1 paramType undefined
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 applyMatchHdrRange undefined
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 1 message condition undefined
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 value ""
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 2 header hdrRange undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 2 header numberOfInstances number 0
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 2 header numberOfInstances qualifier
undefined
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 criterion 3 token value ""
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 3 token regexp
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 3 token regexp string "^\\+"
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 criterion 3 token regexp numMatch match
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 headerInfo undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 action 1 headerPosition undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 action 1 paramType undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 action 1 from
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 action 1 from type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 3 action 1 from tokenValue uriusername
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 applyMatchHdrRange undefined
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 1 message condition undefined
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 value ""
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 2 header hdrRange undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 2 header numberOfInstances number 0
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 2 header numberOfInstances qualifier
undefined
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 criterion 3 token value ""
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 3 token regexp
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 3 token regexp string "^\\+"
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 criterion 3 token regexp numMatch match
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 headerInfo undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 action 1 headerPosition undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 action 1 paramType undefined
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 action 1 from
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 action 1 from type token
set profiles signaling sipAdaptorProfile REMOVE_PLUS rule 4 action 1 from tokenValue uriusername
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

#Assign the Adapter Profile in Trunk as outgoing
set addressContext default zone CUCM sipTrunkGroup CUCM1 signaling messageManipulation outputAdapterProfile
REMOVE_PLUS

```

- Changing PlusNet Called Party IDs:

#### P-Called-Party-ID

```

set profiles signaling sipAdaptorProfile pCalledPid state enabled
set profiles signaling sipAdaptorProfile pCalledPid advancedSMM disabled
set profiles signaling sipAdaptorProfile pCalledPid rule 1 applyMatchHeader all
set profiles signaling sipAdaptorProfile pCalledPid rule 1 criterion 1 type message
set profiles signaling sipAdaptorProfile pCalledPid rule 1 criterion 1 message
set profiles signaling sipAdaptorProfile pCalledPid rule 1 criterion 1 message messageTypes all
set profiles signaling sipAdaptorProfile pCalledPid rule 1 criterion 2 type header
set profiles signaling sipAdaptorProfile pCalledPid rule 1 criterion 2 header

```

[illegible]

```

ipfonie.de>
set profiles signaling sipAdaptorProfile pCalledPid rule 4 action 1 to
set profiles signaling sipAdaptorProfile pCalledPid rule 4 action 1 to type header
set profiles signaling sipAdaptorProfile pCalledPid rule 4 action 1 to value P-Called-Party-ID
set profiles signaling sipAdaptorProfile pCalledPid rule 4 action 1 regexp
set profiles signaling sipAdaptorProfile pCalledPid rule 4 action 1 regexp string "sip:\+4964342076661@sipconnect.
ipfonie\.de"
set profiles signaling sipAdaptorProfile pCalledPid rule 4 action 1 regexp matchInstance all
set profiles signaling sipAdaptorProfile pCalledPid rule 5 applyMatchHeader all
set profiles signaling sipAdaptorProfile pCalledPid rule 5 criterion 1 type message
set profiles signaling sipAdaptorProfile pCalledPid rule 5 criterion 1 message
set profiles signaling sipAdaptorProfile pCalledPid rule 5 criterion 1 message messageTypes all
set profiles signaling sipAdaptorProfile pCalledPid rule 5 criterion 2 type header
set profiles signaling sipAdaptorProfile pCalledPid rule 5 criterion 2 header
set profiles signaling sipAdaptorProfile pCalledPid rule 5 criterion 2 header name P-Called-Party-ID
set profiles signaling sipAdaptorProfile pCalledPid rule 5 criterion 2 header condition exist
set profiles signaling sipAdaptorProfile pCalledPid rule 5 criterion 2 header hdrInstance all
set profiles signaling sipAdaptorProfile pCalledPid rule 5 action 1 type header
set profiles signaling sipAdaptorProfile pCalledPid rule 5 action 1 operation regsub
set profiles signaling sipAdaptorProfile pCalledPid rule 5 action 1 headerInfo headerValue
set profiles signaling sipAdaptorProfile pCalledPid rule 5 action 1 from
set profiles signaling sipAdaptorProfile pCalledPid rule 5 action 1 from type value
set profiles signaling sipAdaptorProfile pCalledPid rule 5 action 1 from value <sip:+4964342076660@sipconnect.
ipfonie.de>
set profiles signaling sipAdaptorProfile pCalledPid rule 5 action 1 to
set profiles signaling sipAdaptorProfile pCalledPid rule 5 action 1 to type header
set profiles signaling sipAdaptorProfile pCalledPid rule 5 action 1 to value P-Called-Party-ID
set profiles signaling sipAdaptorProfile pCalledPid rule 5 action 1 regexp
set profiles signaling sipAdaptorProfile pCalledPid rule 5 action 1 regexp string "sip:\+4964342076660@sipconnect.
ipfonie\.de"
set profiles signaling sipAdaptorProfile pCalledPid rule 5 action 1 regexp matchInstance all

#Assign the Adapter Profile in Trunk as outgoing
set addressContext default zone PLUSNET sipTrunkGroup PLUSNET signaling messageManipulation inputAdapterProfile
pCalledPid

```

- Enabling audio CFU, CFB, or Call Forwarding in PlusNet:
  - In the Cisco CUCM go to **Device > Trunk**.
  - Select the Trunk that you are using with the SBC:

**Figure 15: CFU CUCM**

The screenshot shows the Cisco Unified CM Administration interface. The top navigation bar includes 'System', 'Call Routing', 'Media Resources', 'Advanced Features', 'Device', 'Application', 'User Management', 'Bulk Administration', and 'Help'. The 'Trunk Configuration' page is displayed, showing the configuration for a SIP Trunk. The 'Device Information' section is expanded, showing various configuration options. The 'Media Termination Point Required' checkbox is highlighted with a red box.

Device Information	
Product:	SIP Trunk
Device Protocol:	SIP
Trunk Service Type	None(Default)
Device Name*	SBC_SK_PlusNet
Description	SBC_SK_PlusNet
Device Pool*	711_DP
Common Device Configuration	< None >
Call Classification*	Use System Default
Media Resource Group List	< None >
Location*	Hub_None
ASR Group	< None >
Tunneled Protocol*	None
QSIG Variant*	No Changes
ASN.1 ROSE OID Encoding*	No Changes
Packet Capture Mode*	None
Packet Capture Duration	0
<input checked="" type="checkbox"/> Media Termination Point Required	
<input checked="" type="checkbox"/> Retry Video Call as Audio	
<input type="checkbox"/> Path Replacement Support	
<input type="checkbox"/> Transmit UTF-8 for Calling Party Name	
<input type="checkbox"/> Transmit UTF-8 Names in QSIG APDU	
<input type="checkbox"/> Unattended Port	
<input type="checkbox"/> 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

- When you received an incoming call in the Cisco\_CUCM and you need to enable CFU, CFB or any call forwarding to PlusNet, add + in the header diversion and use the next outputAdapterProfile ADD\_PLUS\_DIVERSION:

## ADD\_PLUS\_DIVERSION

```
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION state enabled
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION advancedSMM disabled
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION profileType messageManipulation
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 applyMatchHeader one
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 applyMatchHdrRange undefined
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 1 type message
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 1 message
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 1 message messageTypes requestAll
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 1 message methodTypes [ invite ]
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 1 message condition undefined
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 2 type header
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 2 header
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 2 header name Diversion
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 2 header value ""
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 2 header condition exist
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 2 header hdrInstance all
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 2 header hdrRange undefined
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 2 header numberOfInstances number 0
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 criterion 2 header numberOfInstances qualifier
undefined
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 action 1 type header
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 action 1 operation modify
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 action 1 headerInfo headerValue
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 action 1 headerPosition undefined
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 action 1 paramType undefined
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 action 1 from
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 action 1 from type value
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 action 1 from value "<sip:+4964342076660@10.
10.216.211:5061>;privacy=off;screen=yes;reason=unconditional;counter=1"
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 action 1 to
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 action 1 to type header
set profiles signaling sipAdaptorProfile ADD_PLUS_DIVERSION rule 1 action 1 to value Diversion
```