

Amazon Chime Voice Connector Fax Configuration Guide: OpenText RightFax and Cisco Unified Border Element (CUBE)

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Document History

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1 Audience

This document is intended for technical staff and Value Added Resellers (VAR) with installation and operational responsibilities. This configuration guide provides steps for configuring Fax (G711 Passthrough & T.38) using **OpenText RightFax (RightFax)** and **Cisco Unified Border Element (CUBE)** to connect to **Amazon Chime Voice Connector** for inbound and/or outbound fax capabilities.

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1.1 Amazon Chime Voice Connector

Amazon Chime Voice Connector is a pay-as-you-go service that enables companies to make or receive secure phone calls over the internet or AWS Direct Connect using their existing telephone system or session border controller (SBC). The service has no upfront fees, elastically scales based on demand, supports calling both landline and mobile phone numbers in over 100 countries, and gives customers the option to enable inbound calling, outbound calling, or both.

Amazon Chime Voice Connector uses the industry-standard Session Initiation Protocol (SIP). Amazon Chime Voice Connector does not require dedicated data circuits. A company can use their existing Internet connection or AWS Direct Connect public virtual interface for SIP connectivity to AWS. Voice connectors can be configured in minutes using the AWS Management Console or Amazon Chime API. Amazon Chime Voice Connector offers costeffective rates for inbound and outbound calls. Calls into Amazon Chime meetings, as well as calls to other Amazon Chime Voice Connector customers are at no additional cost. With Amazon Chime Voice Connector, companies can reduce their voice calling costs without having to replace their on-premises phone system.

2 SIP Trunking Network Components

The network for Fax reference configuration is illustrated below and is representative of RightFax with CUBE configuration.



Figure 1 Network Topology

2.1 Hardware Components

- UCS-C240 VMWare server running ESXi 5.5 or later used for the following virtual machines
 - OpenText RightFax Server
- Cisco UBE (CUBE) on Cisco ISR 4321 router

2.2 Software Requirements

- OpenText RightFax 20.2
- Cisco UBE: 12.7.0 running on IOS-XE 16.12.04(isr4300-universalk9.16.12.04.SPA.bin)

3 Features

3.1 Features Supported

- T.38 Fax Inbound and Outbound
- G711 Passthrough Inbound and Outbound

3.2 Features Not Supported

• None

3.3 Features Not Tested

• None

3.4 Caveats and Limitations

 Amazon Chime Voice Connector provides T.38 Passthrough. Actual speeds negotiated and achieved depend on the capabilities of your equipment and the equipment of the remote party

4 Configuration

The specific values listed in this guide are used in the lab configuration described in this document and are for illustrative purposes only. You must obtain and use the appropriate values for your deployment. Encryption is always recommended if supported.

4.1 Configuration Checklist

In this section we present an overview of the steps that are required to configure **RightFax** and **CUBE** for sending Fax using **Amazon Chime Voice Connector**.

Steps	Description	Reference
Step 1	RightFax Configuration	Section 4.3
Step 2	CUBE Configuration	Section 4.4
Step 3	Amazon Chime Voice Connector Configuration	Amazon Chime Voice
		Connector

Table 1 – PBX Configuration Steps

4.2 IP Address Worksheet

Component	Lab Value
CU	BE
LAN IP Address	10.80.11.9
LAN Subnet Mask	255.255.255.0
Righ	tFax
IP Address	192.168.55.200
Subnet Mask	255.255.255.0

Table 2 – IP Addresses

4.3 RightFax Server Configuration

This section with screen shots taken from RightFax Server used for the interoperability testing gives a general overview of the RightFax Server configuration.

4.3.1 RightFax Login and Version

1. Open the application RightFax, browse to File > Open Server > Choose the Server Name, set the Protocol to Automatic selection and click on OK

🙍 RightFax Enterp	rise Fax Manager
File Edit Utility	Help
Fax Serve	rs
Fax Servers	Open Server X
	Server Name: WIN-VG8HB0F2ART ~ Protocol: Automatic Selection ~
	Also open associated servers

Figure 2: RightFax Login

2. To verify the system version being tested, browse to **Help** and select **About Enterprise Fax Manager** to find the version of **Right Fax**

About RightFax	Enterprise Fax Mar	nager			Х	
opentext ~ RightFax [®] RightFax [®] Enterprise Fax Manager 20.2.0.0 20.2.0.846 (English (United States)				er s))		
OS: Microsoft W Windows type: RFAPI Version 2 C:\Program File Locale: 0x409, L	'indows Windows Serve Workstation 20.2.0.846 Process Def es (x86)\RightFax\Shar .anguage 9, Sublangua	er 2016 Standard, ault Language, bu ed Files\RFWIN3 age 1, Sort 0	, Version 10.0, Bu uilt 4/16/2020 2:5 2.dll	uild 14393 56 PM	* •	
Name 🗸	Date/Time	Version	Description	Path	^	
RFaxUI	4/16/2020 3:23 PM	20.2.0.846	RightFax® F	C:\Program F	ile: 🗸	
<					>	
© 1990-2020 Op a trademark or re other trademarks service names m	© 1990-2020 Open Text. All rights reserved. Trademarks owned by Open Text. OpenText is a trademark or registered trademark of Open Text. The list of trademarks is not exhaustive of other trademarks, registered trademarks, product names, company names, brands and service names mentioned herein are property of Open Text or other respective owners.					
One or more patents may cover this product. For more information, please visit, https://www.opentext.com/patents.						
					~	
				OK		

Figure 3: Right Fax Version

4.3.1 User Configuration

- 1. Choose the **Server Name > Users**
- 2. Right Click on **Users** and Click on **New**
- 3. The following are the values that are configured in the **User** in **Identification** Tab, Enter the **User ID**, **User Name**, **Password** and **Subscriber ID** will be auto populated.

User Ec	dit				X	
Defa Ident	ault Inbound Settings tification Permissio	Notification Ins Routing	Other Default O	Messaging utbound Settings	Administrative Alerts Automatic Printing	
	User ID: AWS1					
		Select NT A	ccount	Security		
	User Name:	aws1				
	Password:	•••••)			
	Confirm password:	•••••)			
	Distinguished Name:					
	Group ID:	EVERYONE		\sim		
Voi	ice Mail Subscriber ID:	100				
	Email address:					
	SMS/Mobile Address:					
C	Compute Disk Usage	May take several :	seconds on a	server with many f	axes	

Figure 4 User Configuration

4. The following are the values that are configured in the **User** in **Routing** Tab, Enter the **DID** in **Fax Number / Routing Code** to route the inbound fax to the user.

User Edit						×
Default Inbound	Settings Permissions	Notification Routing	Other Default O	Messaging utbound Settings	Administrativ Automatic	e Alerts Printing
Fax Number/Rou 919 Routing Type: Fax Mailbox File Format: TIFF(G3-1D)	uting Code:	~	~			
Routing Info:]	
When routing notifications o Routing Info fi	to a Fax Mailb ccur through er eld.]	ox, no additional nail, the email ac	l information i Idress should	s necessary. If I be specified in the	~	
Routing Filename	e Format:					
Received Fax R	outing Form:					
Advanced Ou	tlook Form		\sim			
ser Edit Default Inbound Settings Notification Other Messaging Administrative Alerts Identification Permissions Routing Default Outbound Settings Automatic Printing Fax Number/Routing Code: 919 Routing Type: Fax Mailbox File Format: TIFF(G3-1D) Routing Info: When routing to a Fax Mailbox, no additional information is necessary. If notification occur through email, the email address should be specified in the Routing Info field] Routing Filename Format: Received Fax Routing Form: Advanced Outlook Form Include Web Delivery URL						
Delete after n	outing					

Figure 5 User Contd.,

4.3.2 RightFax OEM Configuration

- 1. Navigate to **Services** > Choose the Service **"RightFax Doc Transport Module"** > Right Click and Choose **Configure Service**
- 2. Expand Brooktrout > choose RightFax OEM > Click on Configure Brooktrout

66	Fax Servers	Service Name		Status	Running Time (dddd:hh:mm:ss)	Startup	
<u> </u>	WIN-VG8HB0F2ART [ADMINISTRATOR]	RightFax DocTransport Module		Running	0000:00:03:35	Automatic	
	Services	DocTransport Configuration - LOCAL					×
	🎍 Users 🎎 Groups	-Auto Billing Code Settings - Global DocTransport Settings - Brooktrout	Boa Nur	rd module number:	vitch on the board.	DID Settin Number o	ngs f digits for routing: 10 ~
	─ Signatures I Stamps ─ Printers ─ Billing Codes	Global Transport Settings Advanced Settings GriphEax OEM Channel #0 Channel #1 Channel #1 Channel #2 Channel #3		Set Fax ID for all cha Set Capability for all c Configure Brooktrou Configure Brook	nnels: Fax Server hannels: Both t Board trout		×
	Cover Sheets Library Documents Messaging Services V Alets & Monitors Conversions El Client Connections Fax Numbers			umber of SR140 chan Illing Party Apply SIP character Illing Party:	nels: 4 v		

Figure 6 SIP Configuration

3. Enter the **Credentials** and **Login**

4. Click on Advanced Mode



Figure 7 SIP Configuration-Contd.,

- 5. Expand IP Call Control Modules and Choose SIP
- 6. **General** tab contains the following information

Brooktrout Configuration Tool - Advance	ed Mode	_	×
File View Options Help			
Image: Constraint of the sector of the s	Icense P		
Brooktrout (Boston Host Service - Running)	General Information IP Parameters T.38 Parameters RTP Parameters		
	Library Path: brktsip.dll		
Call Control Parameters	Stack Name: SIP		
IP Call Control Modules	Vendor Name: Dialogic Corporation		
SIP	Version: 6.5.0.14		

Figure 8 SIP Configuration-General Information,

 In the IP Parameters tab Enter the Primary Gateway - CUBE LAN IP address and the Port number, From Value – DID@RightFax IP address, Contact IPv4 Address – RightFax IP Address, Session Name – RightFax Server and the leave the rest of the fields to default values.

Brooktrout Configuration Tool - Advan File View Options Help	iced Mode	- 0	×
Home Back Next Save Apply	Eicense Help		
Brooktrout (Boston Host Service - Running)	General Information IP Parameters T.38 Para	meters RTP Parameters	
BTCall Parameters (All boards)	Maximum SIP Sessions:	256	
⊡ Call Control Parameters Module 0x41: SR140	Primary Gateway:	10.80.11.9 : 506	0
⊡ · IP Call Control Modules	Additional SIP Gateway #2:	:0	
···· 5IF	Additional SIP Gateway #3:	:0	
	Additional SIP Gateway #4:	:0	
	Primary Proxy Server:	:0	
	Additional Proxy Server #2:	:0	
	Additional Proxy Server #3:	:[0	
	Additional Proxy Server #4:	:0	
	Primary Registrar Server URL:	:[0	
	Additional Registrar Server #2:	:[0	
	Additional Registrar Server #3:	:[0	
	Additional Registrar Server #4:	:0	
	From Value:	919 @192.168.55.200	
	Contact IPv4 Address:	192.168.55.200	
	Usemame:		
	Session Name:	RightFaxServer	

Figure 9 SIP Configuration-IP Parameters

 In the T.38 Parameters tab, choose the Fax Transporting Protocol based on the requirement – T.38 only or G711 Pass-through only. Set the Media Renegotiate Delay Inbound msec to 1000 and Set the Media Renegotiate Delay Outbound msec to 2000 to trigger the Fax Re-Invite from RightFax.

Brooktrout Configuration Tool - Advance	ed Mode		_		×
File View Options Help					
Home Back Next Save Apply	Icense P				
Brooktrout (Boston Host Service - Running) Driver Parameters (All boards)	General Information IP Parameters T.38 Parameters RT	P Parameters			
BTCall Parameters (All boards)	Fax Transporting Protocol:	T.38 only			
Module 0x41: SR140	Generate CED tone over RTP:	Yes			-
⊡ ·· IP Call Control Modules	Maximum Bit Rate, bps:	14400			-
	Media Passthrough Timeout Inbound, msec:	1000			
	Media Passthrough Timeout Outbound, msec:	4000			
	Media Renegotiate Delay Inbound, msec:	1000			
	Media Renegotiate Delay Outbound, msec:	2000			
	T30 Fast Notify:	No			-
	UDPTL Redundancy Depth Control:	<u>5</u> 0 J 5			
	UDPTL Redundancy Depth Image:	2 0 2 2			
			Show	Advanced	d >>>

Figure 10 SIP Configuration-T.38 Parameters

- 9. To Transmit Fax with G3 & Super G3 Speeds using T.38 set the following values in the Advanced section of the T.38 Parameters tab
 - a. G3 Speed Maximum T.38 Version: 0 & Maximum Bit Rate bps: 14400
 - b. Super G3 Speed Maximum T.38 Version: 3 & Maximum Bit Rate bps: 33600

Advanced Settings Do not change these parameters unless you have been instructed to do so				
Maximum T.38 Version:	0	-		
Support G.711 Fallback SIP RTP reINVITE:	False	•		
T.38 Media Stream Renegotiation:	Single	-		
		[Hide Advanced <<]		

Figure 11 SIP Configuration-T.38 Parameters-G3 & Super G3 Speeds

c. Navigate to **BTCall Parameters** and the **enable** the following **V.34** parameters as shown below to send fax using **Super G3 speeds**. Choose **disable** to send fax using **G3 speeds**.



Figure 12 BTCall Parameters-T.38 -G3 & Super G3 Speeds

- 10. To Transmit Fax with G3 & Super G3 Speeds using G711 Pass-Through only set the following values in T.38 Parameters tab
 - a. G3 Speed Maximum Bit Rate bps: 14400
 - b. Super G3 Speed -Maximum Bit Rate bps: 33600

Brooktrout Configuration Tool - Advance	ed Mode	- 🗆 X			
File View Options Help					
Home Back Next Save Apply	Icense P				
Brooktrout (Boston Host Service - Running) Driver Parameters (All boards)	General Information IP Parameters T.38 Parameters RTP Parameters				
BTCall Parameters (All boards)	Fax Transporting Protocol:	G.711 pass-through only			
Call Control Parameters					
· ···· Module 0x41: SR140 ⊡- IP Call Control Modules ····· SIP	Generate CED tone over RTP:	Yes 💌			
	Maximum Bit Rate, bps:	14400 🔽			
	Media Passthrough Timeout Inbound, msec:	1000			

Figure 13 SIP Configuration- G.711 Pass-Through -G3 & Super G3 Speeds

c. Navigate to **BTCall Parameters** and the **enable** the following **V.34** parameters as shown below to send fax using **Super G3 speeds**. Choose **disable** to send fax using **G3 speeds**.



Figure 14 BTCall Parameters-G.711 Pass-Through-G3 & Super G3 speed

11. In the **RTP Parameters** tab set the **RTP codec list** to **pcmu.** Once all the required parameters are set, click on **Save** and **Apply**.



Figure 15 RTP Parameters-Codec List

4.4 Cisco UBE Configuration

```
4.4.1 Global Cisco UBE settings
voice service voip
ip address trusted list
ipv4 192.168.55.200
ipv4 3.80.xx.xx 255.255.xx.xx
ipv4 52.55.xx.xx 255.255.xx.xx
ipv4 52.55.xx.xx 255.255.xx.xx
ipv4 34.212.xx.xx 255.255.xx.xx
ipv4 34.223.xx.xx 255.255.xx.xx
address-hiding
mode border-element license capacity 20
allow-connections sip to sip
no supplementary-service sip handle-replaces
fax protocol t38 version 0 ls-redundancy 0 hs-redundancy 0 fallback
none
sip
session refresh
asserted-id pai
early-offer forced
midcall-signaling passthru
privacy-policy passthru
g729 annexb-all
pass-thru headers unsupp
```

Note:

Specification for G711 Pass-through Fax:

Use the below command in voice service voip

fax protocol pass-through g711ulaw

Specification for T.38 Fax:

Use the below command in **voice service voip**

```
fax protocol t38 version 0 ls-redundancy 0 hs-redundancy 0 fallback none
```

T.38 Fax with G3 Speed- Set the t38 version to 0

T.38 Fax with Super G3 Speed- Set the t38 version to 3

4.4.2 Codecs

voice class codec 1 codec preference 1 g711ulaw

4.4.3 Dial Peer

Inbound Dial Peer for Right Fax

```
dial-peer voice 100 voip
description *** Inbound Dial-Peer- from RightFax to CUBE ***
session protocol sipv2
session transport udp
incoming uri via RightFax
voice-class codec 1
voice-class sip bind control source-interface GigabitEthernet0/0/1
voice-class sip bind media source-interface GigabitEthernet0/0/1
dtmf-relay rtp-nte
no vad
```

Inbound Dial Peer for Amazon Chime Voice Connector

dial-peer voice 200 voip description *** Inbound Dial-Peer- from Amazon to CUBE *** translation-profile incoming Amazon-In session protocol sipv2 session transport udp incoming called e164-pattern-map 890 voice-class codec 1 voice-class sip bind control source-interface GigabitEthernet0/0/0 voice-class sip bind media source-interface GigabitEthernet0/0/0 dtmf-relay rtp-nte no vad

Outbound Dial Peer to Right Fax

dial-peer voice 101 voip description *** Outbound Dial-Peer from CUBE to RightFax**** destination-pattern 919..... session protocol sipv2 session target ipv4:192.168.55.200:5060 session transport udp voice-class codec 1 voice-class sip bind control source-interface GigabitEthernet0/0/1 voice-class sip bind media source-interface GigabitEthernet0/0/1 dtmf-relay rtp-nte no vad

Outbound Dial Peer to Amazon Chime Voice Connector

dial-peer voice 201 voip description *** Outbound Dial-Peer to Amazon**** translation-profile outgoing Amazon-Out destination-pattern [0-9]T session protocol sipv2

```
session target sip-server
session transport udp
voice-class codec 1
voice-class sip localhost dns:cr7c1xxxxxx.voiceconnector.chime.aws
voice-class sip options-keepalive
voice-class sip bind control source-interface GigabitEthernet0/0/0
voice-class sip bind media source-interface GigabitEthernet0/0/0
dtmf-relay rtp-nte
no vad
```

4.4.4 Cisco UBE Running Configuration

```
AWS_RIGHTFAX#show running-config
Building configuration...
Current configuration : 9850 bytes
L
! Last configuration change at 09:34:17 UTC Mon Oct 12 2020
L
version 16.12
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
service call-home
platform qfp utilization monitor load 80
no platform punt-keepalive disable-kernel-core
!
hostname AWS_RIGHTFAX
!
boot-start-marker
boot system bootflash:isr4300-universalk9.16.12.04.SPA.bin
boot-end-marker
!
!
```

```
vrf definition Mgmt-intf
 L
address-family ipv4
exit-address-family
 L
address-family ipv6
exit-address-family
ļ
logging queue-limit 100000000
logging buffered 1000000
logging rate-limit 10000
enable secret 9
$14$2D3z$4/jw9DPS6eo5OU$SuOiLU/LmqujqhxhgyTLMHNtTe96hKbQIAiMIfzYDK2
!
no aaa new-model
call-home
 ! If contact email address in call-home is configured as sch-smart-
licensing@cisco.com
 ! the email address configured in Cisco Smart License Portal will be
used as contact email address to send SCH notifications.
 contact-email-addr sch-smart-licensing@cisco.com
 profile "CiscoTAC-1"
 active
 destination transport-method http
 no destination transport-method email
ļ
Ţ
login on-success log
!
ļ
subscriber templating
!
Ţ
multilink bundle-name authenticated
```

```
!
L
crypto pki trustpoint TP-self-signed-1017057749
 enrollment selfsigned
 subject-name cn=IOS-Self-Signed-Certificate-1017057749
 revocation-check none
 rsakeypair TP-self-signed-1017057749
ļ
crypto pki trustpoint SLA-TrustPoint
 enrollment terminal
 revocation-check crl
ļ
Ţ
crypto pki certificate chain TP-self-signed-1017057749
 certificate self-signed 01
  30820330 30820218 A0030201 02020101 300D0609 2A864886 F70D0101
05050030
  31312F30 2D060355 04031326 494F532D 53656C66 2D536967 6E65642D
43657274
  69666963 6174652D 31303137 30353737 3439301E 170D3139 31303239
30303130
  33385A17 0D333030 31303130 30303030 305A3031 312F302D 06035504
03132649
  4F532D53 656C662D 5369676E 65642D43 65727469 66696361 74652D31
30313730
  35373734 39308201 22300D06 092A8648 86F70D01 01010500 0382010F
00308201
  0A028201 01008A33 0A14F06C C4FBE222 E0FA4BF9 05B9490E 61BDF871
E2729010
  4F15309F 2EE49186 0FF685E4 15FCBA97 6DFB80E7 A9D71B28 1B252894
293D0F90
  31EB6B26 47A870A5 5F095BF6 9917AE33 05DB4D9B 5621043A 42505BA9
13E25A55
  8B3C86C2 8AB1D0A8 F0580364 657A7E91 457B1C16 1509B399 29473626
1B8BFF08
  0EEE8FE1 221696F2 7BED284F CB924FD2 FCE5B190 5F66A61D 7C2F6C75
91D8B611
```

0E6D4129 7E1A9D65 29E38AC3 7E47F3A0 53422BEC A2FC7610 6749ED73 F76EE8F3 9B39670B 4AF59B9C 9022B900 BEAB78C3 79683875 10BE3812 034009B8 19E85171 1D3C610E B0AD12E2 09E793CC 08073C13 0ED6BFB5 385DB179 A248309E 16A48A51 D4E8A5C1 FB1D0203 010001A3 53305130 0F060355 1D130101 FF040530 030101FF 301F0603 551D2304 18301680 14348C0F 0703266C 22EE5BC3 0D8391E9 8D5479F8 48301D06 03551D0E 04160414 348C0F07 03266C22 EE5BC30D 8391E98D 5479F848 300D0609 2A864886 F70D0101 05050003 82010100 743B2CCD F5DBAFDF 60AA76E6 66C1A7FA A80C3D5D C6671966 9AB819EE 428A14DF 4A998C89 FE0F60D6 A45F8746 749B33E9 9FBA3383 8FDFDBE9 41EF4A33 D8035D48 F1D743C8 F4A140A4 E5EC96BD 9AE6B6EF 858A0C2D B3C306C8 C7CDB2DD DF3BFA93 E4D7322A 3A2DE061 8823F972 E2AB36B7 E6C7FDA2 39DC1AFA A57DCEA8 600C6A12 8D1E5BF9 D40D1BC5 048631C7 3C029EB6 D80AC828 4A7017E6 67EC2BAC 2D0B0F9B B8F8E977 AE1E77C2 A39907CA B69F15A1 3EE7699F CA71C5AB 2C434A14 A45DB8DF 8F5E5F4E 63FCE1A3 2D38D432 6793DBE7 DD3DA43C 74D86AA9 418ADCF8 5EFC2ECA 1FE5A9F7 64CB2F39 567395C9 731B906F 240B79B2 53D253D8 B9D0B278 D5DD9721 auit crypto pki certificate chain SLA-TrustPoint certificate ca 01 30820321 30820209 A0030201 02020101 300D0609 2A864886 F70D0101 0B050030 32310E30 0C060355 040A1305 43697363 6F312030 1E060355 04031317 43697363 6F204C69 63656E73 696E6720 526F6F74 20434130 1E170D31 33303533 30313934 3834375A 170D3338 30353330 31393438 34375A30 32310E30 0C060355 040A1305

43697363 6F312030 1E060355 04031317 43697363 6F204C69 63656E73 696E6720 526F6F74 20434130 82012230 0D06092A 864886F7 0D010101 05000382 010F0030 82010A02 82010100 A6BCBD96 131E05F7 145EA72C 2CD686E6 17222EA1 F1EFF64D CBB4C798 212AA147 C655D8D7 9471380D 8711441E 1AAF071A 9CAE6388 8A38E520 1C394D78 462EF239 C659F715 B98C0A59 5BBB5CBD 0CFEBEA3 700A8BF7 D8F256EE 4AA4E80D DB6FD1C9 60B1FD18 FFC69C96 6FA68957 A2617DE7 104FDC5F EA2956AC 7390A3EB 2B5436AD C847A2C5 DAB553EB 69A9A535 58E9F3E3 C0BD23CF 58BD7188 68E69491 20F320E7 948E71D7 AE3BCC84 F10684C7 4BC8E00F 539BA42B 42C68BB7 C7479096 B4CB2D62 EA2F505D C7B062A4 6811D95B E8250FC4 5D5D5FB8 8F27D191 C55F0D76 61F9A4CD 3D992327 A8BB03BD 4E6D7069 7CBADF8B DF5F4368 95135E44 DFC7C6CF 04DD7FD1 02030100 01A34230 40300E06 03551D0F 0101FF04 04030201 06300F06 03551D13 0101FF04 05300301 01FF301D 0603551D 0E041604 1449DC85 4B3D31E5 1B3E6A17 606AF333 3D3B4C73 E8300D06 092A8648 86F70D01 010в0500 03820101 00507F24 D3932A66 86025D9F E838AE5C 6D4DF6B0 49631C78 240DA905 604EDCDE FF4FED2B 77FC460E CD636FDB DD44681E 3A5673AB 9093D3B1 6C9E3D8B D98987BF E40CBD9E 1AECA0C2 2189BB5C 8FA85686 CD98B646 5575B146 8DFC66A8 467A3DF4 4D565700 6ADF0F0D CF835015 3C04FF7C 21E878AC 11BA9CD2 55A9232C 7CA7B7E6 C1AF74F6 152E99B7 B1FCF9BB E973DE7F 5BDDEB86 C71E3B49 1765308B 5FB0DA06 B92AFE7F 494E8A9E 07B85737 F3A58BE1 1A48A229 C37C1E69 39F08678 80DDCD16 D6BACECA EEBC7CF9 8428787B 35202CDC 60E4616A B623CDBD 230E3AFB

```
418616A9 4093E049 4D10AB75 27E86F73 932E35B5 8862FDAE 0275156F
719BB2F0
 D697DF7F 28
        quit
ļ
voice service voip
ip address trusted list
  ipv4 192.168.55.200
 ipv4 3.80.xx.xx 255.255.xx.xx
 ipv4 52.55.xx.xx 255.255.xx.xx
 ipv4 52.55.xx.xx 255.255.xx.xx
 ipv4 34.212.xx.xx 255.255.xx.xx
 ipv4 34.223.xx.xx 255.255.xx.xx
 address-hiding
mode border-element license capacity 20
allow-connections sip to sip
no supplementary-service sip handle-replaces
 fax protocol t38 version 0 ls-redundancy 0 hs-redundancy 0 fallback
none
sip
 session refresh
 asserted-id pai
 early-offer forced
 midcall-signaling passthru
 privacy-policy passthru
 g729 annexb-all
 pass-thru headers unsupp
ļ
ļ
voice class uri RightFax sip
host 192.168.55.200
voice class codec 1
codec preference 1 g711ulaw
```

```
!
voice class e164-pattern-map 890
 e164 +191....$
I
L
voice translation-rule 10
rule 1 /\(^{1}/+1\1/
!
voice translation-rule 11
rule 1 /\(^{1}/+1\1/
!
voice translation-rule 20
rule 1 /^\+1\(.*\)/ /\1/
!
L
voice translation-profile Amazon-In
translate called 20
!
voice translation-profile Amazon-Out
translate calling 11
translate called 10
!
license feature hseck9
license udi pid ISR4321/K9 sn FD019220MQ9
memory free low-watermark processor 67123
!
diagnostic bootup level minimal
!
spanning-tree extend system-id
!
username cisco privilege 15 password 7 13061E010803
!
redundancy
```

```
mode none
Ţ
ļ
interface GigabitEthernet0/0/0
description CUBE WAN
ip address 192.65.XX.XX 255.255.XX.XX
negotiation auto
!
interface GigabitEthernet0/0/1
description CUBE LAN
ip address 10.80.11.9 255.255.255.0
media-type rj45
negotiation auto
L
interface GigabitEthernet0
vrf forwarding Mgmt-intf
no ip address
negotiation auto
!
ip forward-protocol nd
ip http server
ip http authentication local
ip http secure-server
ip http client source-interface GigabitEthernet0/0/0
ip tftp source-interface GigabitEthernet0/0/0
ip dns server
ip route 0.0.0.0 0.0.0.0 192.65.XX.XX
ip route 172.16.24.0 255.255.248.0 10.80.11.1
ip route 172.17.0.0 255.255.0.0 10.80.11.1
ip route 192.168.55.0 255.255.255.0 10.80.11.1
!
control-plane
!
```

```
!
mgcp behavior rsip-range tgcp-only
mgcp behavior comedia-role none
mgcp behavior comedia-check-media-src disable
mgcp behavior comedia-sdp-force disable
!
mgcp profile default
!
L
dial-peer voice 100 voip
description *** Inbound Dial-Peer- from RightFax to CUBE ***
session protocol sipv2
session transport udp
incoming uri via RightFax
voice-class codec 1
voice-class sip bind control source-interface GigabitEthernet0/0/1
voice-class sip bind media source-interface GigabitEthernet0/0/1
dtmf-relay rtp-nte
no vad
I
dial-peer voice 101 voip
description *** Outbound Dial-Peer from CUBE to RightFax****
destination-pattern 919.....
session protocol sipv2
 session target ipv4:192.168.55.200:5060
session transport udp
voice-class codec 1
voice-class sip bind control source-interface GigabitEthernet0/0/1
voice-class sip bind media source-interface GigabitEthernet0/0/1
dtmf-relay rtp-nte
no vad
L
dial-peer voice 200 voip
```

```
description *** Inbound Dial-Peer- from Amazon to CUBE ***
 translation-profile incoming Amazon-In
 session protocol sipv2
 session transport udp
incoming called e164-pattern-map 890
voice-class codec 1
voice-class sip bind control source-interface GigabitEthernet0/0/0
voice-class sip bind media source-interface GigabitEthernet0/0/0
dtmf-relay rtp-nte
no vad
Ţ
dial-peer voice 201 voip
description *** Outbound Dial-Peer to Amazon****
translation-profile outgoing Amazon-Out
destination-pattern [0-9]T
 session protocol sipv2
 session target sip-server
session transport udp
voice-class codec 1
voice-class sip localhost dns:cr7c1XXXXXX.voiceconnector.chime.aws
voice-class sip options-keepalive
voice-class sip bind control source-interface GigabitEthernet0/0/0
voice-class sip bind media source-interface GigabitEthernet0/0/0
dtmf-relay rtp-nte
no vad
ļ
!
gateway
timer receive-rtp 1200
!
sip-ua
 sip-server dns:cr7c1xxxxxx.voiceconnector.chime.aws:5060
xfer target dial-peer
```

```
!
!
line con 0
 exec-timeout 0 0
stopbits 1
line aux O
 stopbits 1
line vty 0 4
exec-timeout 122 0
password 7 00071A150754
login
transport input telnet ssh
!
network-clock synchronization automatic
!
end
```