Amazon Chime SDK Voice Connector

Fax Configuration Guide:

XMedius Fax (XM Fax) and Cisco Unified Border Element (CUBE)

November 2022

Document History

Rev. No.	Date	Description
1.0	Sept-29-2020	Initial Draft Fax Configuration Guide
1.1	Oct-15-2020	Minor edits based on feedback
1.2	Oct-20-2020	Minor edits based on feedback
1.3	Nov-19-2020	Minor edits based on feedback
1.4	Feb-03-2021	Minor edits based on feedback
1.5	Dec-2-2022	Retest for new versions of XM Fax and Cisco UBE
1.6	Dec-15-2022	Minor edits based on feedback

Table of Contents

Table of Figures

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 **XMedius Fax (XM Fax)** and **Cisco Unified Border Element (CUBE)** to connect to **Amazon Chime SDK Voice Connector** for inbound and/or outbound fax capabilities.

The information in this document is for informational purposes only. AWS does not guarantee the accuracy of this document and AWS has no responsibility or liability for errors or omissions related to this document. The document is subject to change without notice, and should not be construed as a commitment by AWS.

1.1 Amazon Chime SDK Voice Connector

Amazon Chime SDK 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 SDK Voice Connector uses the industry-standard Session Initiation Protocol (SIP). Amazon Chime SDK 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 SDK Voice Connector offers cost-effective rates for inbound and outbound calls. Calls into Amazon Chime meetings, as well as calls to other Amazon Chime SDK Voice Connector customers are at no additional cost. With Amazon Chime SDK 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 XM Fax with CUBE configuration.

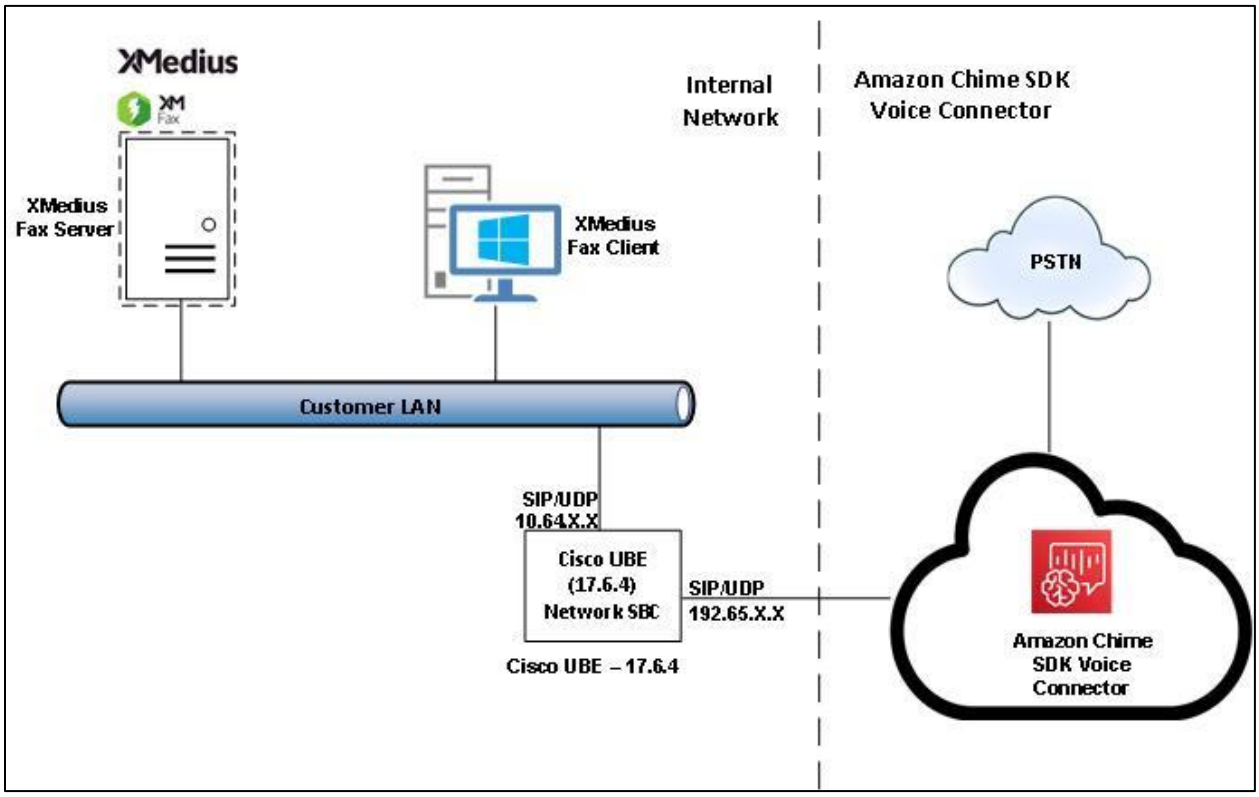

Figure 1 Network Topology

2.1 Hardware Components

- UCS-C240 VMWare server running ESXi 5.5 or later used for the following virtual machines
    - XMedius Fax Server (XM Fax)
- Cisco UBE (CUBE) on Cisco ISR 4331 router

2.2 Software Requirements

- XMedius Fax – 22.2
- Cisco UBE: 17.6.4 running on IOS-XE 16.12.2r(isr4300-universalk9.17.06.04.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

- In T.38 fax call with SG3 speeds, T.38 version was changed from 3 to 0 when 200 OK response was received from Amazon Chime SDK Voice Connector so the fax transmission was on G3 Speeds.

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 **XM Fax** and **CUBE** for sending Fax using **Amazon Chime SDK Voice Connector.**

Table 1 – PBX Configuration Steps

Steps	Description	Reference
Step 1	XMedius Fax Configuration	Section 4.2
Step 2	CUBE Configuration	Section 4.3

4.2 XMedius (XM Fax) Fax Server Configuration

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

4.2.1 XM Fax Login and Version

Open the application XM Fax and log in using an appropriate **user ID** and **password**.

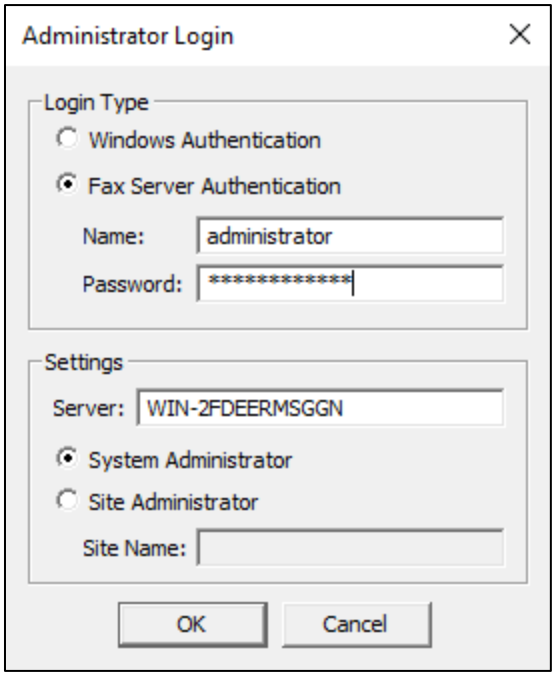

Figure 2: XM Fax Login

To verify the system version being tested browse to **Help** and select **About XM Fax** to find the version of XM Fax

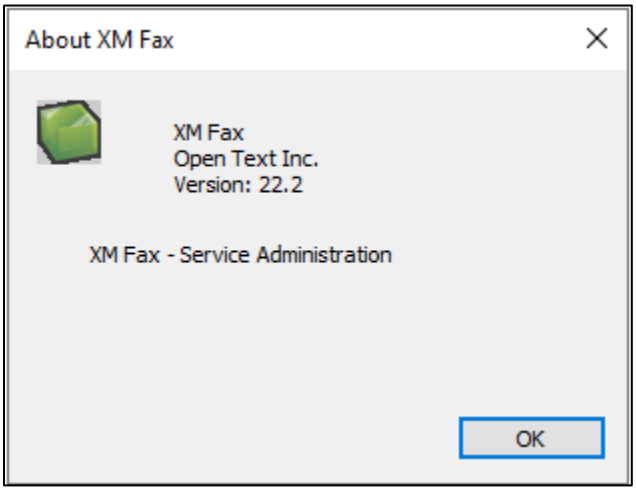

Figure 3: XM Fax Version

4.2.2 Profile Configuration

1. Navigate to **Sites > My Organization > Configuration > Profile.**
2. Right Click on **Profile** and Click on **Add**
3. The following are the values that are configured in the Profile
4. In the **Profile** tab enter a **name** for the profile

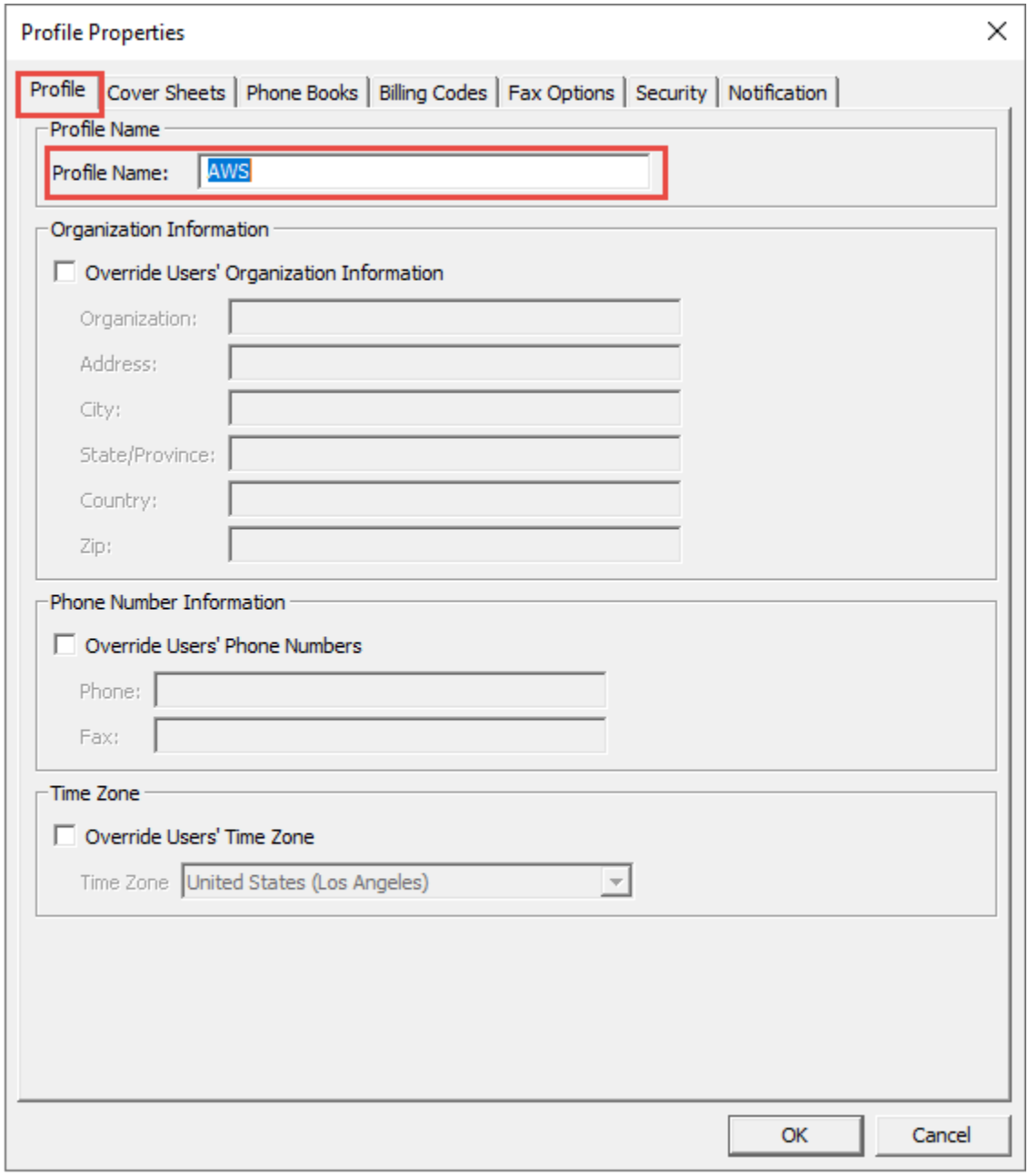

Figure 4 Profile

5. Choose the **Cover sheet** for the profile

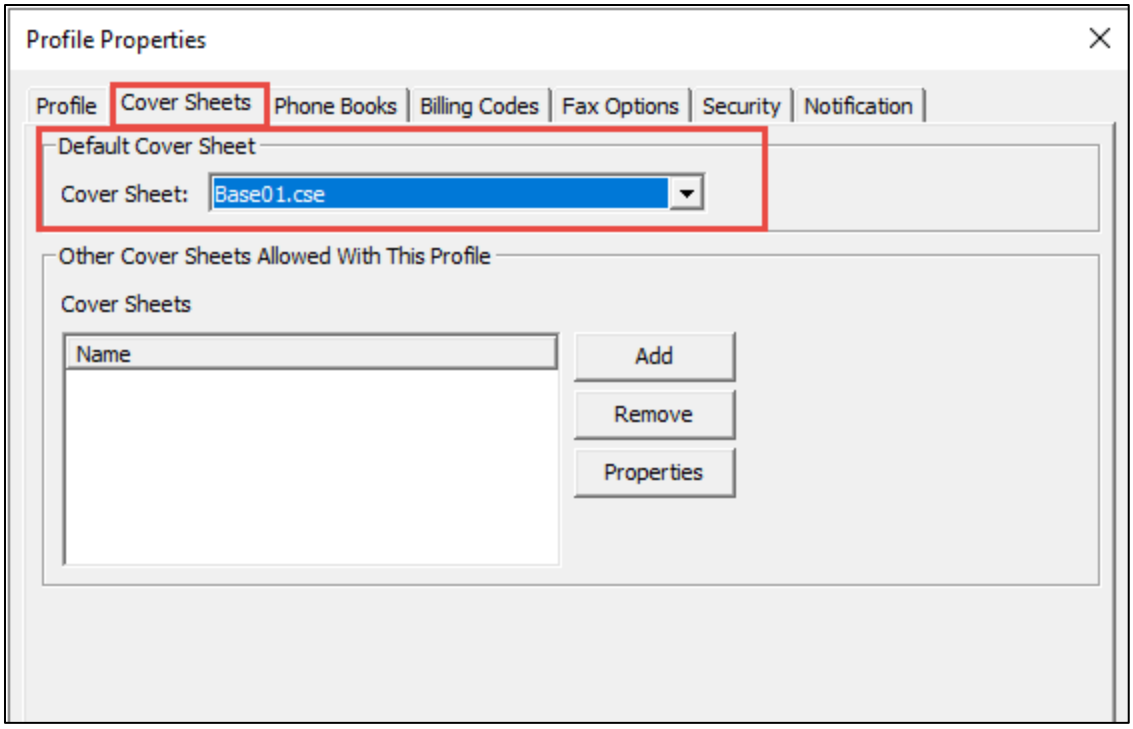

Figure 5 Profile Contd.,

6. Choose the **Fax Options** for the profile and values can be adjusted as per the requirement. In this example in section **Retries – Default** is set to **1, Maximum** is set to **1** and **Delay between Retries (Min)** is set to **5**

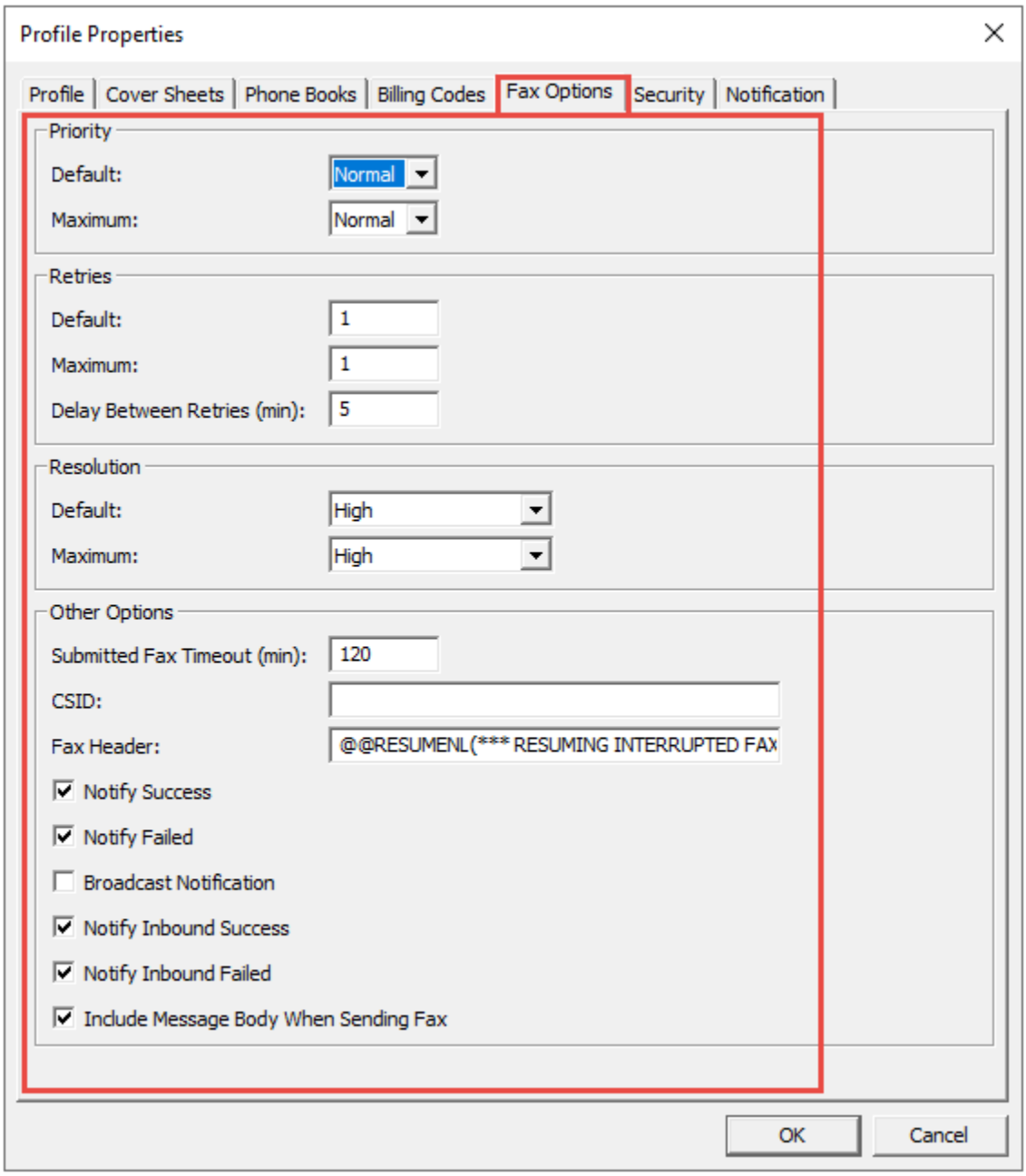

Figure 6 Profile Contd.,

7. In the **Security** tab, in **Authentication Options** section **Send Fax through XML Gateway requires Authentication** and **XML file requires Authentication** are unchecked and other fields are set to default.

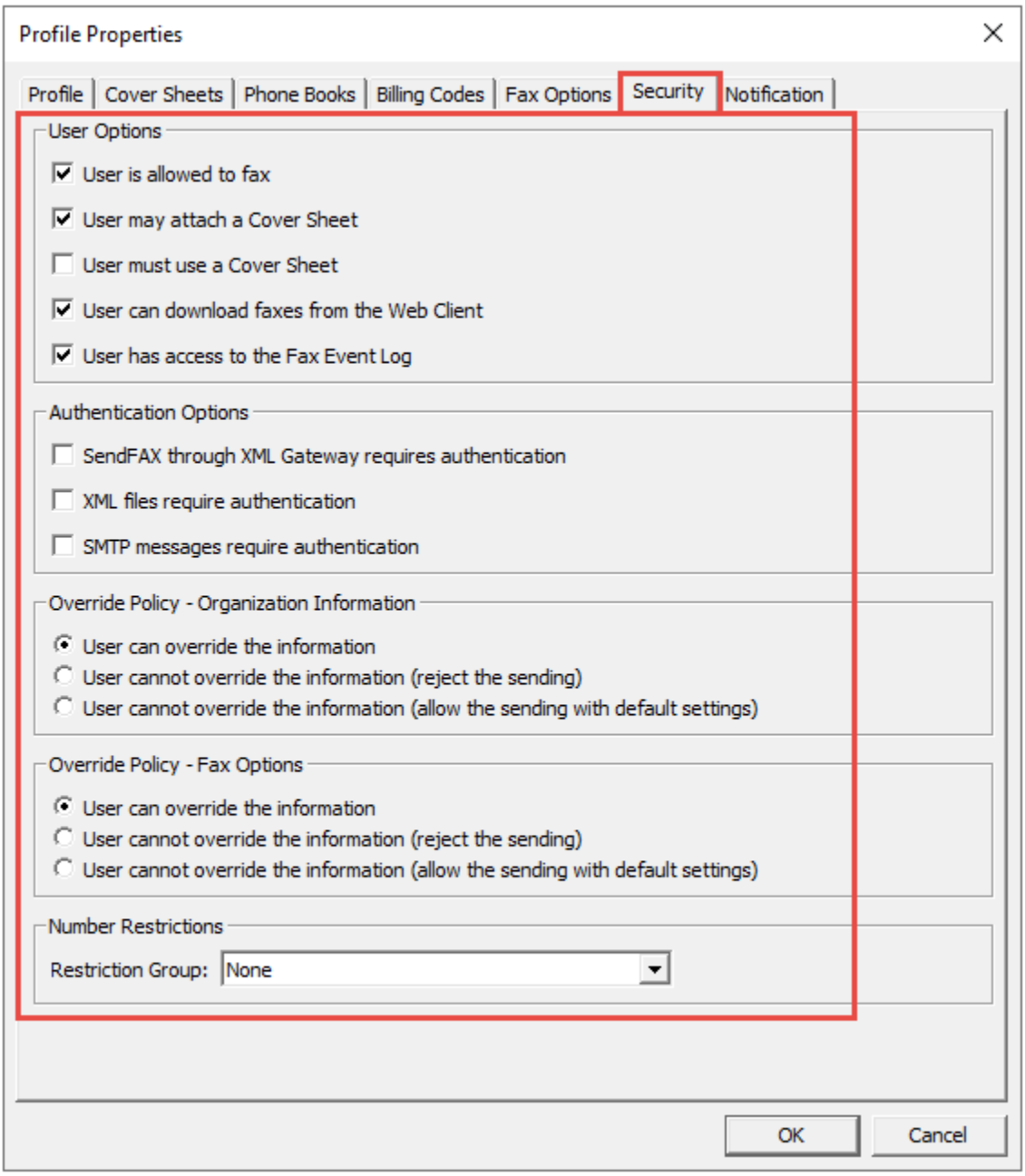

Figure 7 Profile Contd.,

4.2.1 Internal User Configuration

1. Navigate to **Sites > My Organization > Configuration > Internal Users**
2. Right Click on **Internal Users** and Click on **Add**
3. The following are the values that are configured in the **Internal User** in **User** Tab, Assign the **SMTP Address** and **Profile** created to the user

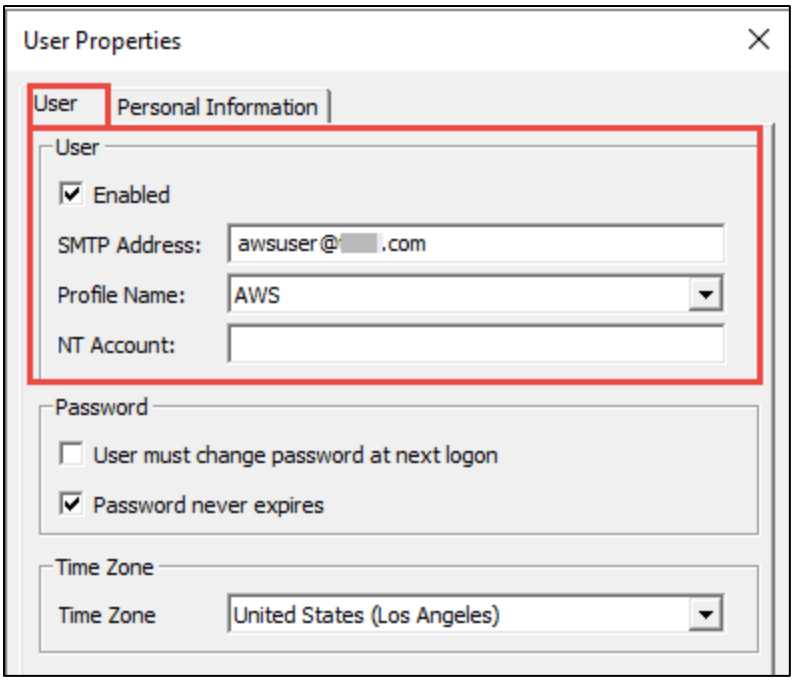

Figure 8 Internal User,

4. The following are the values that are configured in the **Internal User** in **Personal Information** Tab, Enter the **First Name, Last Name, Organization, Phone** and **Fax Number**

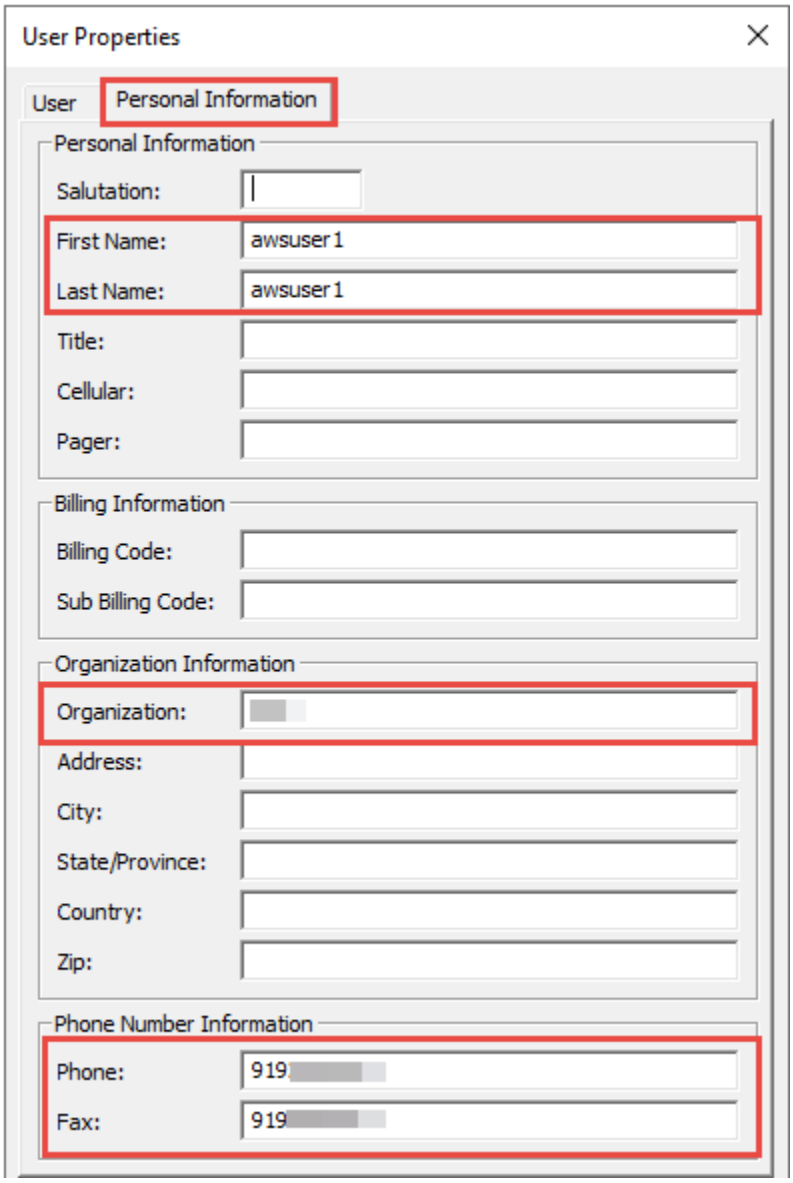

Figure 9 Internal User Contd.,

4.2.2 Driver Configuration

1. Navigate to **System Configuration > Hosts > Fax Server Name > Driver >** Right Click and Choose **Properties**
2. In the **SIP** tab set the Port numbers and leave the values to default as shown below,

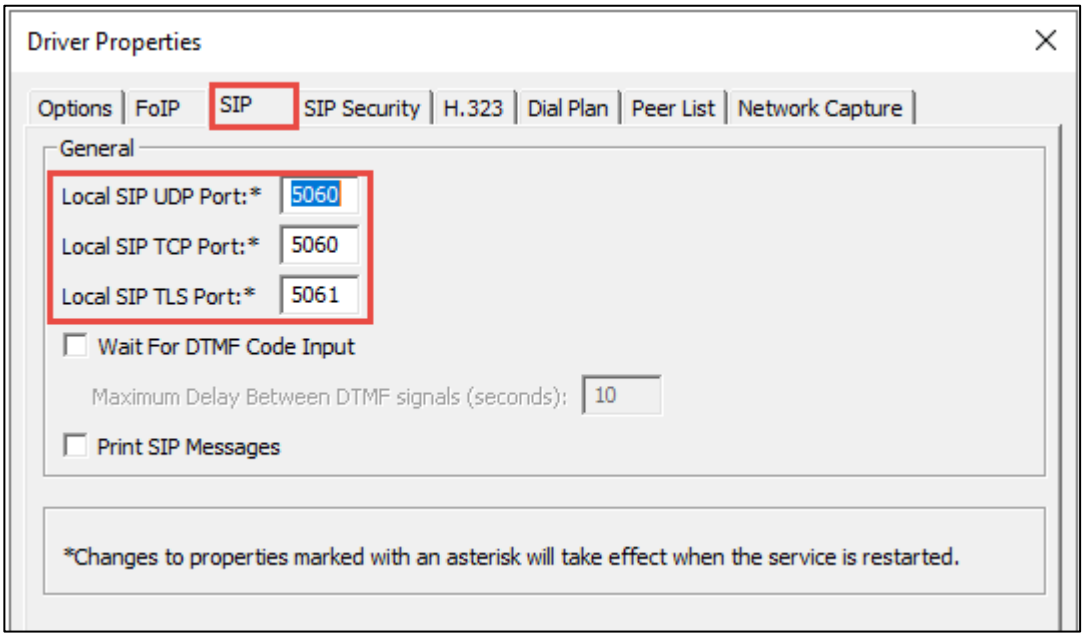

Figure 10 Driver Configuration-SIP

3. In the **Peer List** tab click on **Add SIP Peer**,

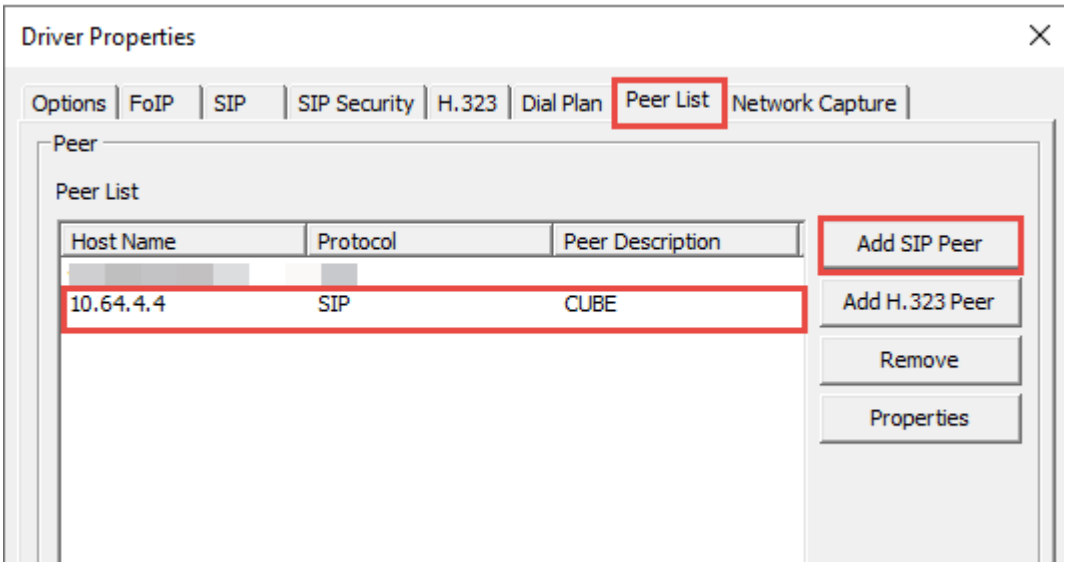

Figure 11 Driver Configuration-Peer List

In the **General** tab set the values for **Host Name-** CUBE LAN IP address**,**

Transport- UDP as shown below,

Note:

Media Type is set to **G711 Passthrough** for G711 Passthrough fax call scenarios.
Media Type is set to **T.38 Fax Relay** for T.38 fax call scenarios.

V.34 Enabled is checked for SG3 Speeds
V.17 Enabled is checked for G3 Speeds

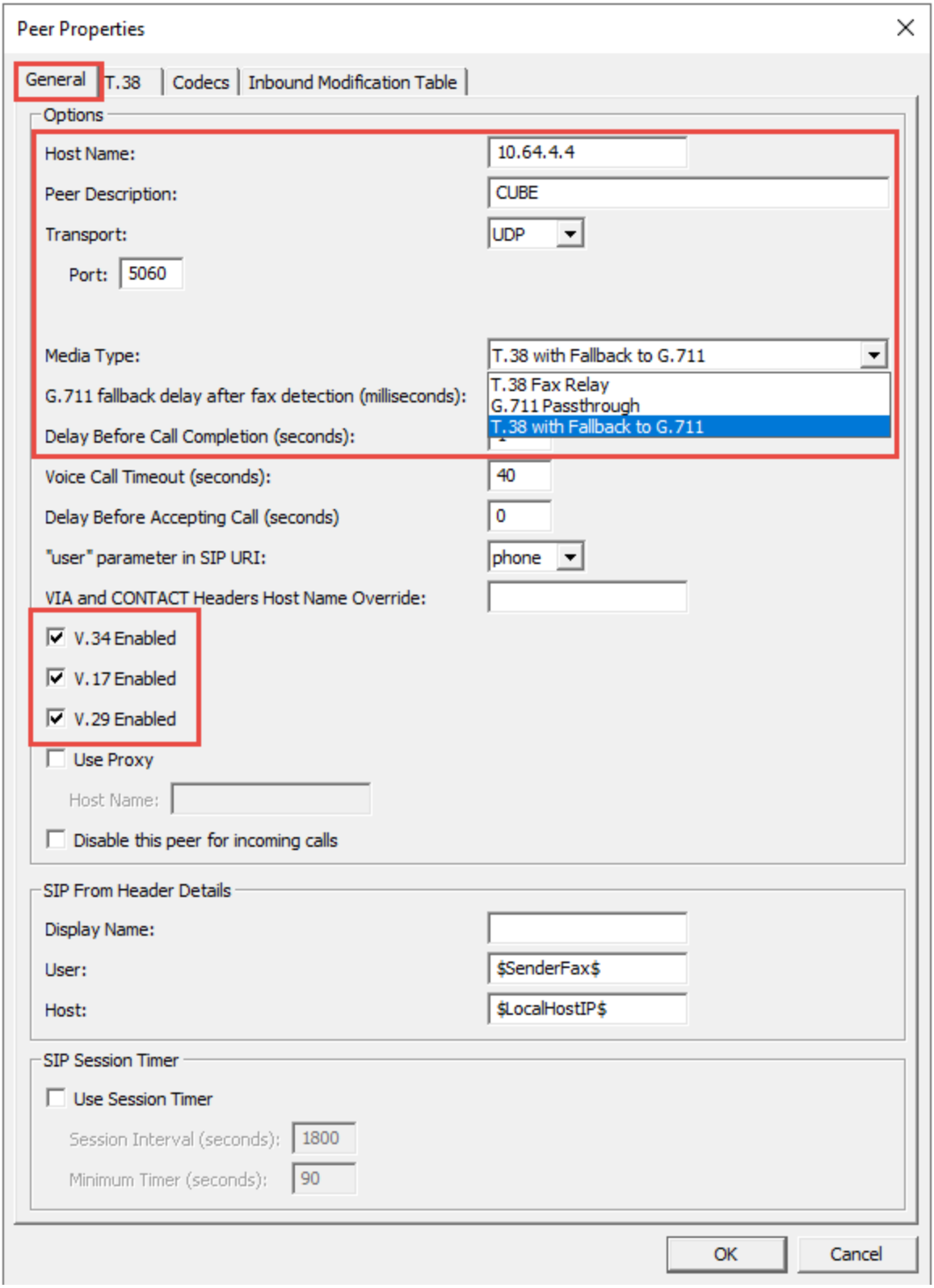

Figure 12 Peer List Configuration

In the **T.38** tab, check the option **Send T.38 Re-Invite (Sending Side)** if XM Fax is to send T.38 Re-Invite and leave the reset to default values

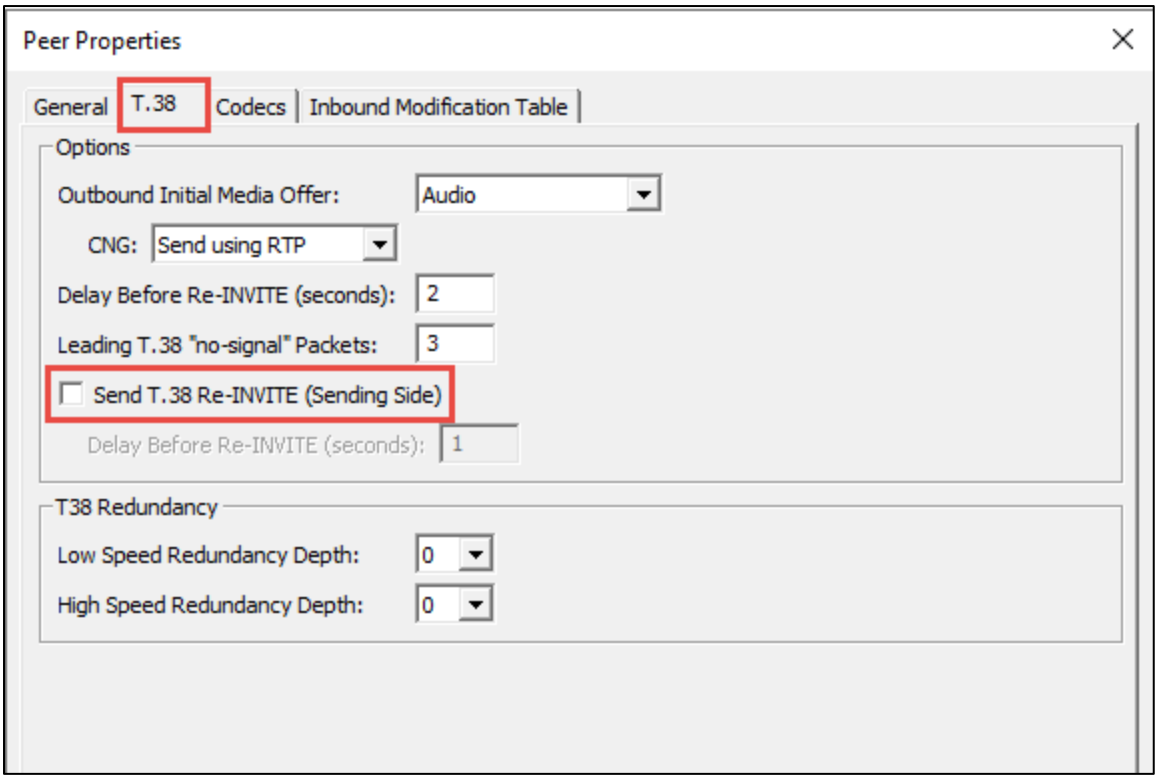

Figure 13 Peer List Configuration Contd.,

In the **Codecs** tab choose the desired codecs as shown below,

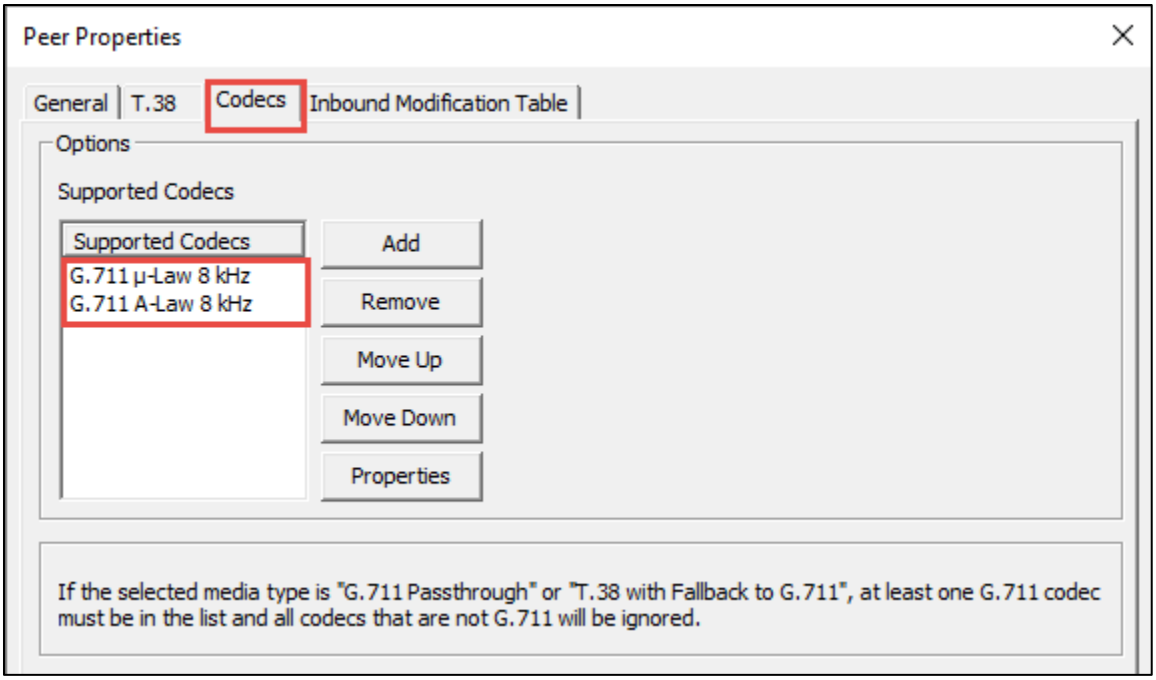

Figure 14 Peer List Configuration Contd.,

4. In the **Dial Plan** tab click on **Add** and set the values as shown below, This will be the dial plan that is used when making an outbound fax from XM Fax

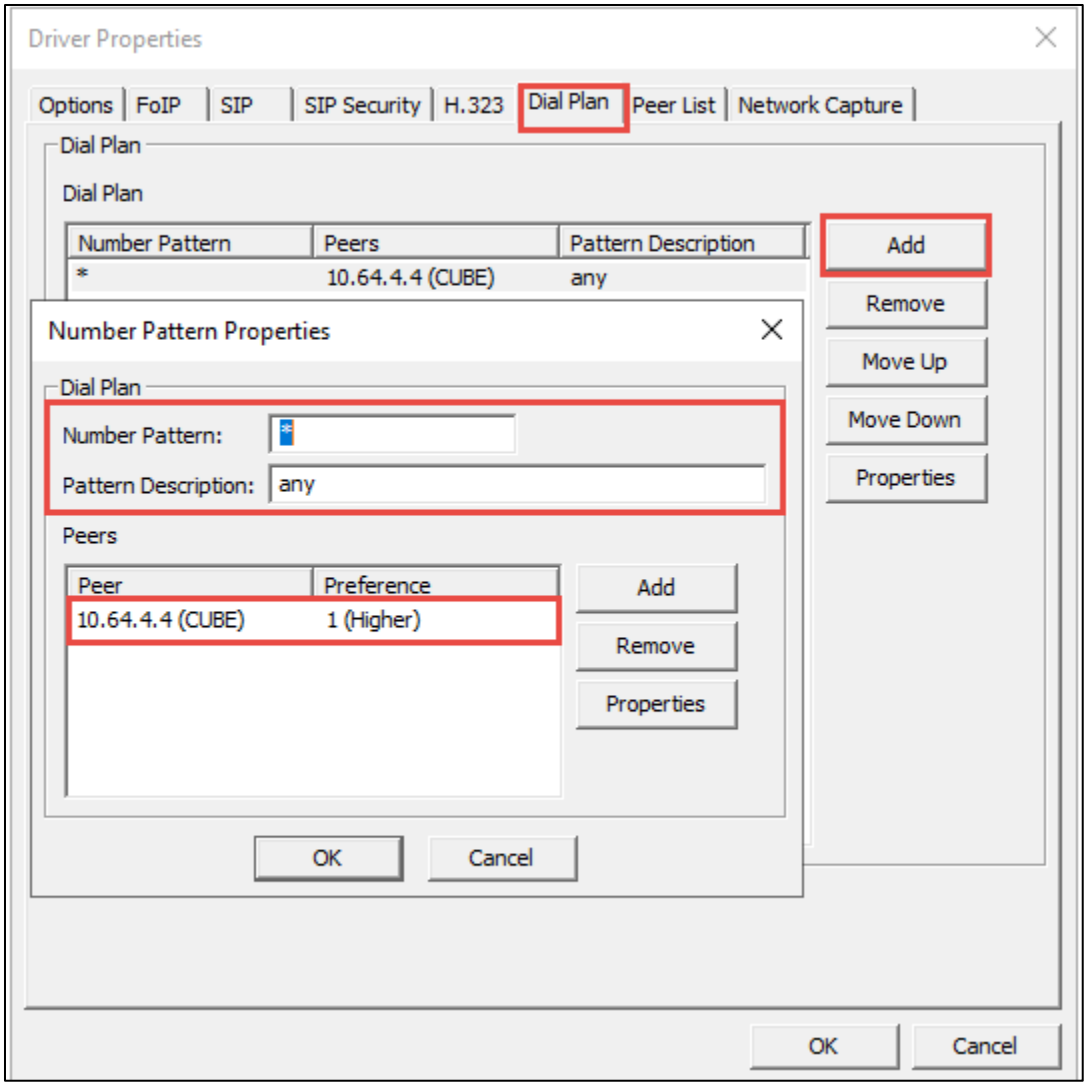

Figure 15 Driver Configuration-Dial Plan

4.2.3 Incoming Routing Table

1. Navigate to **Sites > My Organization > Configuration > Internal Routing Table,** This is used to route the Inbound Fax call to the Users
2. Right Click and choose **Add Direct Rule** and map the DID to the User to route the Incoming Fax call as shown below,

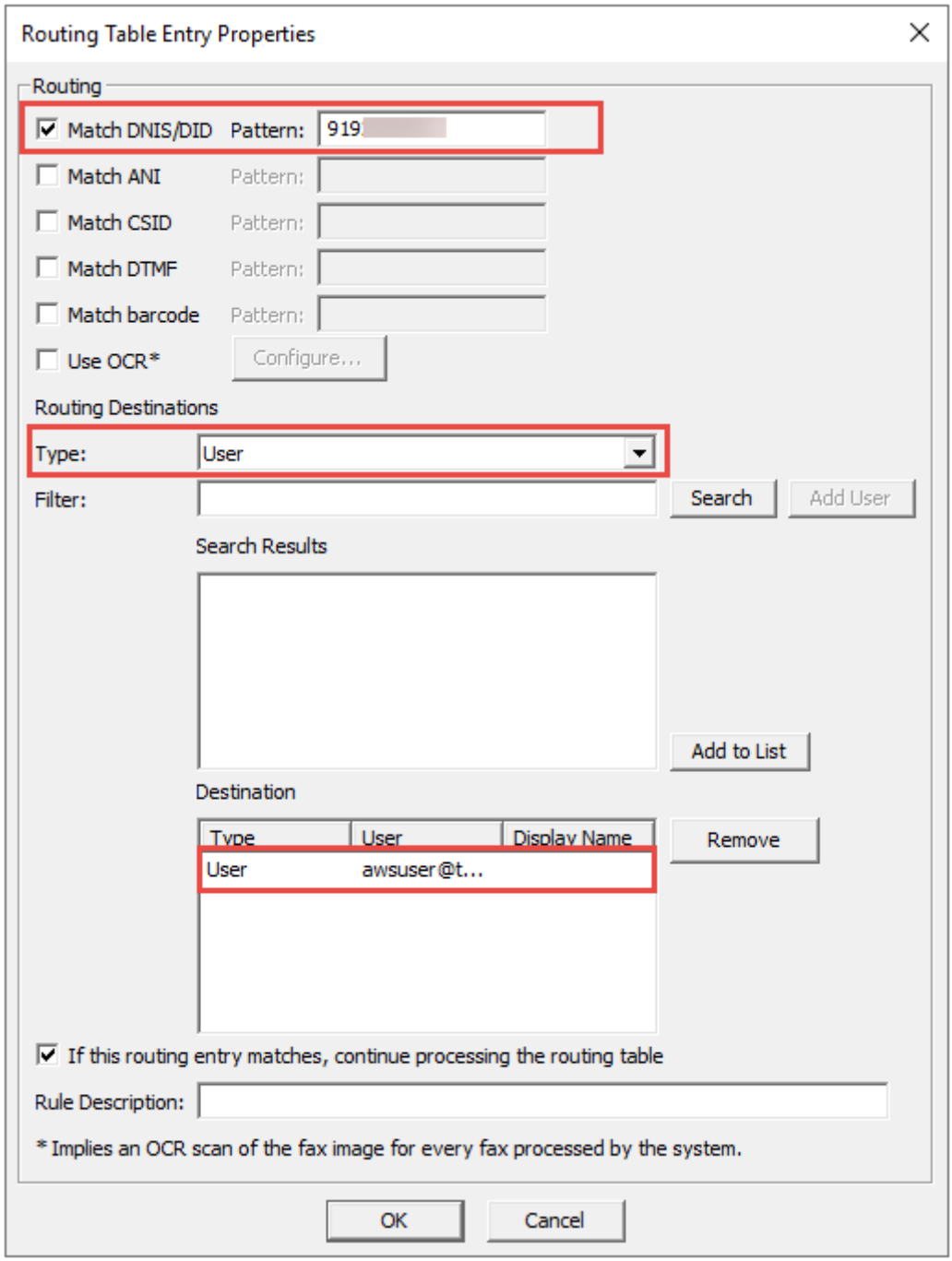

Figure 16 Incoming Routing Table

4.3 Cisco UBE Configuration

4.3.1 Global Cisco UBE settings

```
voice service voip
 ip address trusted list
  ipv4 3.80.XX.XX 255.255.255.0
  ipv4 10.64.4.80 255.255.255.255
 address-hiding
 mode border-element
 allow-connections sip to sip
 no supplementary-service sip refer
 supplementary-service media-renegotiate
 fax protocol pass-through g711ulaw
 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 SG3 Speed- Set the t38 version to 3

4.3.2 Codecs

```
voice class codec 1
 codec preference 1 g711ulaw
```

4.3.3 Dial Peer

Inbound Dial Peer for XMedius Fax

```
dial-peer voice 100 voip
 description *** Inbound Dial-Peer- from Xmedius to CUBE ***
 session protocol sipv2
 session transport udp
 incoming uri via Xmedius
 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 VC

```
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 GigabitEthernet0/0/2
 voice-class sip bind media source-interface GigabitEthernet0/0/2
 dtmf-relay rtp-nte
 no vad
```

Outbound Dial Peer to XMedius Fax

```
dial-peer voice 101 voip
 description *** Outbound Dial-Peer to Xmedius****
 destination-pattern 919.......
 session protocol sipv2
 session target ipv4:10.64.4.80:5060
 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 VC

```
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:hydpgll6qdjye6XXXXXXXX.voiceconnector.chime.aws
 voice-class sip options-keepalive
 voice-class sip bind control source-interface GigabitEthernet0/0/2
 voice-class sip bind media source-interface GigabitEthernet0/0/2
 dtmf-relay rtp-nte
 no vad
```

4.3.4 Cisco UBE Running Configuration

```
AWS#sh running-config
Building configuration...

Current configuration : 11183 bytes
!
! Last configuration change at 09:33:57 UTC Mon Nov 28 2022
! NVRAM config last updated at 09:07:44 UTC Mon Nov 28 2022
!
version 17.6
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
service call-home
platform qfp utilization monitor load 80
platform punt-keepalive disable-kernel-core
!
hostname AWS
!
boot-start-marker
boot system flash:isr4300-universalk9.17.06.04.SPA.bin
```

```
boot-end-marker
!
!
vrf definition Mgmt-intf
 !
 address-family ipv4
 exit-address-family
 !
 address-family ipv6
 exit-address-family
!
card type t1 0 1
card type t1 0 2
logging queue-limit 2147483647
logging buffered 6889472
enable secret 9
$9$KchyqdwrQaiMxE$8.8GueSrU4G24dzocakf6FafiLWRLYcXjlJWPUyA.8Q
!
no aaa new-model
!
!
!
!
!
!
!
ip name-server 8.8.8.8
ip domain name tekvizionlabs.com
!
!
!
login on-success log
!
```

```
!
!
!
!
!
!
subscriber templating
!
!
!
!
!
!
multilink bundle-name authenticated
!
!
!
!
!
!
!
isdn switch-type primary-ni
isdn logging
!
!
trunk group Lumen1
 hunt-scheme round-robin both up
!
!
crypto pki trustpoint TP-self-signed-2930804041
 enrollment selfsigned
 subject-name cn=IOS-Self-Signed-Certificate-2930804041
 revocation-check none
```

```
 rsakeypair TP-self-signed-2930804041
!
crypto pki trustpoint SLA-TrustPoint
 enrollment pkcs12
 revocation-check crl
!
!
crypto pki certificate chain TP-self-signed-2930804041
 certificate self-signed 01
  30820330 30820218 A0030201 02020101 300D0609 2A864886 F70D0101
05050030
  31312F30 2D060355 04031326 494F532D 53656C66 2D536967 6E65642D
43657274
  69666963 6174652D 32393330 38303430 3431301E 170D3231 30383235
31373434
  32335A17 0D333130 38323531 37343432 335A3031 312F302D 06035504
03132649
  4F532D53 656C662D 5369676E 65642D43 65727469 66696361 74652D32
39333038
  30343034 31308201 22300D06 092A8648 86F70D01 01010500 0382010F
00308201
  0A028201 0100B05D 6404776B 743D882D FA0514D1 B28392BC 5279F3A7
EE856A86
  A16EA023 E8519284 84BE4C53 20D12592 CD6CD6A4 2418E7D4 3E7945EA
35331308
  3A291C93 03A1B3BD 815B4881 CE12DF15 5B492BFC AEE637A5 C8718365
A723E3E5
  6814D270 E99D05E9 EF0A01AC 87543061 D7B1B45B B85CB576 312526A9
9B3FD2F0
  E869CC4B 31AC96CA DA6418E2 E23CE22A B34E98CE 0E32AD07 D9545EF7
3C76A7BA
  097D499A 2D685370 87AEA804 757E9EEC F11E93D9 69317B04 09FB7681
92903E6D
  2446F174 A8B50A8F 3DA47D2B 7BE0223D 43949C5E 1367C6EC AB0782A5
0C53F3AA
  E8948819 6032AC4A E7EDB9EE 5918760D 2F77E05A 3B731C75 90ABE1E8
E70CF701
  0453E70A 9BD70203 010001A3 53305130 0F060355 1D130101 FF040530
030101FF
```

```
  301F0603 551D2304 18301680 146A2B1A 396299A5 D5C48E66 C168A8EB
1C918AAD

  1F301D06 03551D0E 04160414 6A2B1A39 6299A5D5 C48E66C1 68A8EB1C
918AAD1F

  300D0609 2A864886 F70D0101 05050003 82010100 50CE007B ED2C971F
11BFD5AD

  C8209572 71329248 39228164 7671DB39 8B0CA99C 4494A052 6BA9D111
6557AE9E

  D5A1B08D EDD2A603 6062E13D E957E3C0 932E13D4 8AF6B1E7 B8ED3F12
276A068D

  A57A1D90 4C268FD0 395BA4ED 8795AB00 184D9C45 81FB0490 EF0DDF37
67361050

  AD1A1019 3910AAD4 7F308B5F 572E70D8 13B8F3A2 547FA4DD 64049940
5E62AED2

  B1D2CAD3 110202BD DC29AD8F 8DBF6C63 24C94B38 3F2B7FBB 7940F46D
1AB1C6F1

  DE2B5808 76839852 C65AA788 F935764E 6F23855A 2BC3D3F7 4AAD12F3
48C6D653

  08BC6A87 F855D660 DCCA1558 24210AEF 35019381 F14C42EE DE9EE209
843DF419

  8BB84432 66CB0D65 0E3C9695 4BE0A520 30C4E762

        quit

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
010B0500

  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

!

crypto pki certificate pool

 ! ('certificate ca' cmd has been deprecated. Downloaded
```

```
 !  Trustpool certificates should be re-downloaded
 !  using 'crypro pki trustpool import url <url>')
!
!
!
voice call send-alert
voice rtp send-recv
!
voice service voip
 ip address trusted list
  ipv4 3.80.16.0 255.255.255.0
  ipv4 10.64.4.80 255.255.255.255
 address-hiding
 mode border-element
 allow-connections sip to sip
 no supplementary-service sip refer
 supplementary-service media-renegotiate
 fax protocol t38 version 3 ls-redundancy 0 hs-redundancy 0 fallback
none
 trace
 sip
  session refresh
  asserted-id pai
  early-offer forced
  midcall-signaling passthru
  privacy-policy passthru
  g729 annexb-all
!
!
voice class uri Xmedius sip
 host 10.64.4.80
voice class codec 1
 codec preference 1 g711ulaw
```

```
!
!
!
!
voice class e164-pattern-map 890
  e164 +191........$
 !
!
!
!
!
voice translation-rule 10
 rule 1 /\(^..........$\)/ /+1\1/
!
voice translation-rule 11
 rule 1 /\(^..........$\)/ /+1\1/
!
voice translation-rule 20
 rule 1 /^\+1\(.*\)/ /\1/
!
!
voice translation-profile Amazon-In
 translate called 20
!
voice translation-profile Amazon-Out
 translate calling 11
 translate called 10
!
!
!
!
!
!
```

```
voice-card 0/1
 dsp services dspfarm
 no watchdog
!
voice-card 0/2
 no watchdog
!
voice-card 0/4
 no watchdog
!
no license feature hseck9
license udi pid ISR4331/K9 sn FDO21381F17
license accept end user agreement
license boot level appxk9
license boot level uck9
license boot level securityk9
memory free low-watermark processor 69085
!
diagnostic bootup level minimal
!
spanning-tree extend system-id
!
!
redundancy
 mode none
!
!
!
!
!
controller T1 0/1/0
 framing esf
 clock source network
```

```
 linecode b8zs
 cablelength long 0db
 pri-group timeslots 1-4,24 voice-dsp
 description T1 CAS 1 to Customer PBX
!
controller T1 0/2/0
 framing esf
 clock source line primary
 linecode b8zs
 cablelength long 0db
 ds0-group 1 timeslots 1-24 type e&m-wink-start
 cas-custom 1
  trunk-group Lumen1
 description T1 CAS 2 to Customer PBX
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
```

```
!
!
!
interface GigabitEthernet0/0/0
 description Access01 G4/0/1
 shutdown
 ip address 192.65.XX.XX 255.255.255.224
 negotiation auto
!
interface GigabitEthernet0/0/1
 description Access 01 G4/0/13
 ip address 10.64.4.4 255.255.0.0
 media-type rj45
 negotiation auto
!
interface GigabitEthernet0/0/2
 description Access01 G4/0/7
 ip address 192.65.XX.XX 255.255.255.128
 media-type sfp
 negotiation auto
!
interface Service-Engine0/1/0
!
interface Serial0/1/0:23
 no ip address
 encapsulation hdlc
 no cdp enable
 isdn switch-type primary-ni
 isdn incoming-voice voice
!
interface Service-Engine0/2/0
!
interface Service-Engine0/4/0
```

```
!
interface GigabitEthernet0
 vrf forwarding Mgmt-intf
 no ip address
 negotiation auto
!
ip http server
ip http authentication local
ip http secure-server
ip http client source-interface GigabitEthernet0/0/2
ip forward-protocol nd
ip ftp username admin
ip ftp password 7 011202095205
ip route 0.0.0.0 0.0.0.0 192.65.XX.XX
ip route 10.64.0.0 255.255.0.0 10.64.1.1
ip route 172.0.0.0 255.0.0.0 10.64.1.1
!
!
!
!
!
!
!
control-plane
!
!
voice-port 0/2/0:1
!
voice-port 0/1/0:23
 bearer-cap Speech
!
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
!
!
!
!
dial-peer voice 100 voip
 description *** Inbound Dial-Peer- from Xmedius to CUBE ***
 session protocol sipv2
 session transport udp
 incoming uri via Xmedius
 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
!
dial-peer voice 101 voip
 description *** Outbound Dial-Peer to Xmedius****
 destination-pattern 919.......
 session protocol sipv2
 session target ipv4:10.64.4.80:5060
 session transport udp
 voice-class codec 1
 voice-class sip options-keepalive
 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
!
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 GigabitEthernet0/0/2
 voice-class sip bind media source-interface GigabitEthernet0/0/2
 dtmf-relay rtp-nte
 no vad
!
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:hydpgll6qdjye6XXXXXXXX.voiceconnector.chime.aws
 voice-class sip options-keepalive
 voice-class sip bind control source-interface GigabitEthernet0/0/2
 voice-class sip bind media source-interface GigabitEthernet0/0/2
 dtmf-relay rtp-nte
 no vad
!
!
gateway
 timer receive-rtp 1200
!
sip-ua
 no remote-party-id
```

```
 sip-server dns:hydpgll6qdjye6XXXXXXXX.voiceconnector.chime.aws:5060
!
!
line con 0
 exec-timeout 5 0
 password 7 0822455D0A16
 logging synchronous
 login
 stopbits 1
line aux 0
line vty 0 4
 exec-timeout 30 0
 password 7 104D000A0618
 logging synchronous
 login
 transport input telnet
line vty 5 14
 login
 transport input ssh
!
network-clock synchronization automatic
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
ntp server 10.10.10.5
!
end
```