

Configurez la caractéristique de sécurité voix avec le CUBE et le CUCM

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Introduction

Ce document décrit comment configurer la Sécurité entre le Logiciel Cisco Unified Border Element (CUBE) et le Cisco Unified Communications Manager (CUCM).

Conditions préalables

Conditions requises

Cisco vous recommande de prendre connaissance des rubriques suivantes :

- Cisco Unified Communications Manager (CUCM)
- Logiciel Cisco Unified Border Element (CUBE)
- Transport Layer Security (TLS)
- Real-Time Transport Protocol sécurisé (SRTP)
- Protocole RTP (Real-Time Transport Protocol)
- Protocole SIP (Session Initiation Protocol)
- Protocole UDP (User Datagram Protocol)
- Fournisseur de service téléphonique Internet (ITSP)

[Composants utilisés](#)

Ce document n'est pas limité à des versions de matériel et de logiciel spécifiques.

Les informations contenues dans ce document ont été créées à partir des périphériques d'un environnement de laboratoire spécifique. Tous les périphériques utilisés dans ce document ont démarré avec une configuration effacée (par défaut). Si votre réseau est vivant, assurez-vous que vous comprenez l'impact potentiel de n'importe quelle commande.

[Informations générales](#)

Comment configurer le TLS et le SRTP au RTP sur le CUBE avec CUCM

Avant cette configuration, le CUCM doit être accordé dans le mode de mélange avec l'enable de Sécurité.

Le CUBE agit en tant qu'Autorité de certification (CA) du système d'exploitation d'interconnexion de réseaux (IOS), les Certificats CUCM sont individu signé.

Écoulement d'appel de laboratoire

Téléphone CP-8945 > CUCM- (SIP/TLS) - CUBE > (SIP/UDP) - le reste du monde simulent ITSP (RTP) > téléphone

SRTP est entre le téléphone CP-8945 et le CUBE

CP-8945 le numéro de téléphone 2088, la commande show est basé sur l'appel d'ITSP vers 2088.

Configurez

Étape 1. Afin de configurer l'horloge, exécutez la commande de clock set ou configurez le ntp.

```
Set clock 8:00:00 01 JAN 2012
```

Or

```
Ntp server x.x.x.x
```

```
ntp source FastEthernet0/0
```

```
clock timezone AEST +10
```

```
Configure gateway to act as http server: "ip http server"
```

Étape 2. Configurez le serveur de PKI IOS et les points de confiance (le routeur local comme CA)

```
crypto pki server iosca
  database level complete
  database url nvram:
  grant auto
  lifetime certificate 1800
```

```
crypto pki trustpoint iosca
  enrollment url http://10.66.75.246:80 (local Giga Ethernet ip address)
  revocation-check none
  rsakeypair iosca
```

Wait 30 seconds before issuing "no shutdown" on iosca server

```
crypto pki server iosca
  no shutdown
```

```
#####
```

```
MS-3945(cs-server)#no shut
```

```
%Some server settings cannot be changed after CA certificate generation.
```

```
% Please enter a passphrase to protect the private key
```

```
% or type Return to exit
```

```
Password:Ciscotac123
```

```
Re-enter password:Ciscotac123
```

```
% Generating 1024 bit RSA keys, keys will be non-exportable...
```

```
[OK] (elapsed time was 3 seconds)
```

```
Jan 7 06:30:15.825: %SSH-5-ENABLED: SSH 1.99 has been enabled% Exporting Certificate Server signing certificate and keys...
```

```
% Certificate Server enabled.
Jan  7 06:30:25.384: %PKI-6-CS_ENABLED: Certificate server now enabled.
MS-3945(cs-server)#
#####
```

Étape 3. Configurez les points de confiance (pour le SIP et sécurisez le transcodeur)

Remarque: Sécurisez le transcodeur enregistré sur le CUBE est exigé pour l'interréseau SRTP et le RTP.

Remarque: Sécurisez le transcodeur n'est pas exigé pour la plate-forme du routeur de services d'Agregation (ASR), seulement pour les Integrated Services Router (ISR) G1,G2.

```
crypto pki trustpoint cube3945
  enrollment url http://10.66.75.246:80 (local Giga Ethernet 0/1)
serial-number none
fqdn none
subject-name CN=MS-3945.eim.com (needs to match the X.509 subject name in CUCM's secure SIP
trunk profile)
ip-address none
revocation-check none
```

```
crypto pki authenticate cube3945
```

```
#####
MS-3945(config)#crypto pki authenticate cube3945
Certificate has the following attributes:
  Fingerprint MD5: 2F2D61A4 EACCC730 141B2966 7370A9AA
  Fingerprint SHA1: E6B86D4F C84B5453 8F63F019 773E1E0C 0DE5B883
```

```
% Do you accept this certificate? [yes/no]: yes
Trustpoint CA certificate accepted.
```

```
MS-3945(config)#
#####
```

```
crypto pki enroll cube3945
```

```
#####
MS-3945(config)#crypto pki enr cube3945
%
% Start certificate enrollment ..
% Create a challenge password. You will need to verbally provide this
password to the CA Administrator in order to revoke your certificate.
For security reasons your password will not be saved in the configuration.
Please make a note of it.
```

```
Password:Ciscotac123
```

```
Jan  7 06:31:06.884: %CRYPTO-6-AUTOGEN: Generated new 512 bit key pair
Re-enter password:Ciscotac123
```

```
% The fully-qualified domain name will not be included in the certificate
Request certificate from CA? [yes/no]: yes
% Certificate request sent to Certificate Authority
% The 'show crypto pki certificate verbose cube3945' command will show the fingerprint.
Jan  7 06:31:24.088: CRYPTO_PKI: Certificate Request Fingerprint MD5: 9A128490 01A60E1D
9F3C3253 48706E5F
Jan  7 06:31:24.088: CRYPTO_PKI: Certificate Request Fingerprint SHA1: 733EE8B1 DBB0F25C
595D48E3 0830047C 50DEFB16
MS-3945(config)#
Jan  7 06:31:29.156: %PKI-6-CERTRET: Certificate received from Certificate Authority
#####
```

```
crypto pki trustpoint secdsp
  enrollment url http://10.66.75.246:80
  serial-number
  revocation-check none
  rsakeypair iosca

crypto pki authenticate secdsp (same procedure as other trustpoints)
crypto pki enroll secdsp (same procedure as other trustpoints)
```

```
sccp local GigabitEthernet0/1
sccp ccm 10.66.75.246 identifier 10 version 7.0
sccp
!

!
sccp ccm group 20
  associate ccm 10 priority 1
  associate profile 20 register XCODER_IOS

!
dspfarm profile 20 transcode universal security
  trustpoint secdsp
  codec g711ulaw
  codec g711alaw
  codec g729ar8
  codec g729abr8
  maximum sessions 10
  associate application SCCP
!
telephony-service
  secure-signaling trustpoint secdsp
  tftp-server-credentials trustpoint scme
  sdspfarm units 10
  sdspfarm transcode sessions 128
  sdspfarm tag 1 XCODER_IOS
  max-ephones 50
  max-dn 300
  ip source-address 10.66.75.246 port 2000
```

The Secure transcoder must be showing up and action by following command,

```
MS-3945#sh sccp
SCCP Admin State: UP
Gateway Local Interface: GigabitEthernet0/1
  IPv4 Address: 10.66.75.246
  Port Number: 2000
IP Precedence: 5
User Masked Codec list: None
Call Manager: 10.66.75.246, Port Number: 2000
  Priority: N/A, Version: 7.0, Identifier: 10
  Trustpoint: N/A

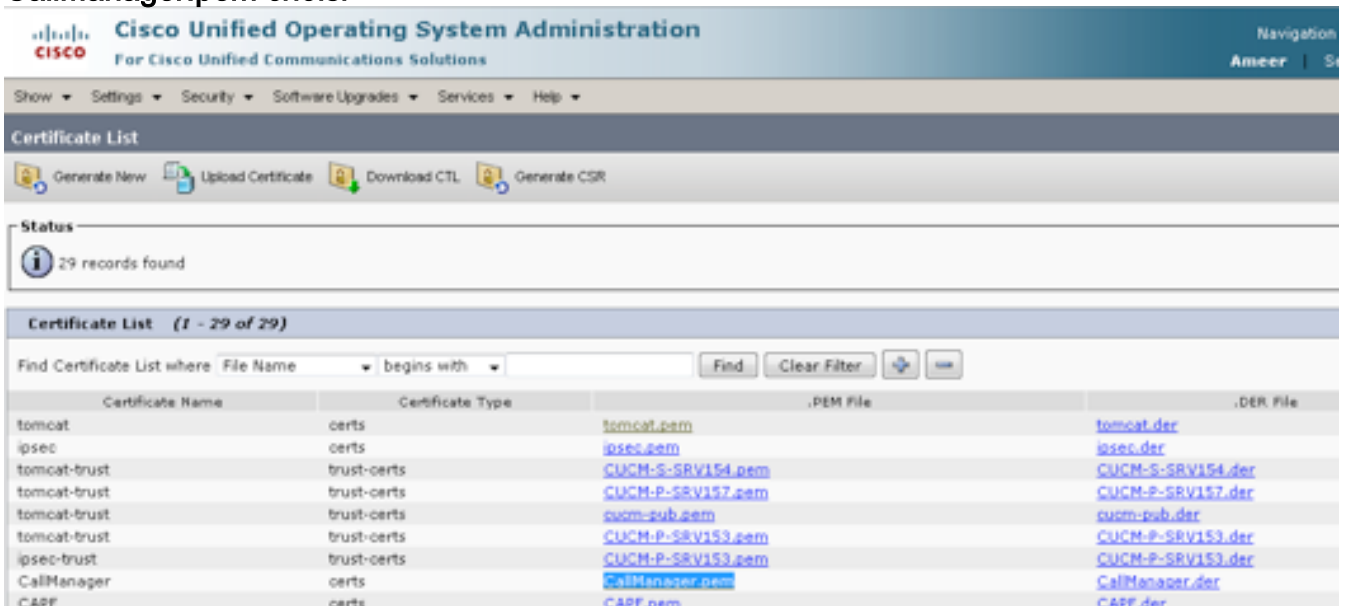
Transcoding Oper State: ACTIVE - Cause Code: NONE
Active Call Manager: 10.66.75.246, Port Number: 2443
TCP Link Status: CONNECTED, Profile Identifier: 20
Security
  Signaling Security: ENCRYPTED TLS
Media Security: SRTP
Supported crypto suites :AES_CM_128_HMAC_SHA1_32
Reported Max Streams: 20, Reported Max OOS Streams: 0
```

Supported Codec: g711ulaw, Maximum Packetization Period: 30
 Supported Codec: g711alaw, Maximum Packetization Period: 30
 Supported Codec: g729ar8, Maximum Packetization Period: 60
 Supported Codec: g729abr8, Maximum Packetization Period: 60
 Supported Codec: rfc2833 dtmf, Maximum Packetization Period: 30
 Supported Codec: rfc2833 pass-thru, Maximum Packetization Period: 30
 Supported Codec: inband-dtmf to rfc2833 conversion, Maximum Packetization Period: 30
 TLS : ENABLED

Étape 4. Configurez le point de confiance pour CUCM et inscrivez-vous le certificat CUCM sur le CUBE.

```
MS-3945(config)#crypto pki trustpoint cucm50
MS-3945(ca-trustpoint)# enrollment terminal
MS-3945(ca-trustpoint)# revocation-check none
```

- Ouvrez une session maintenant à la page de gestion de SYSTÈME D'EXPLOITATION CUCM (système d'exploitation) :
- **Sécurité > Gestion > découverte de certificat**
- **CallManager.pem** choisi



- Sélectionnez le téléchargement le certificat et l'enregistrez comme fichier .pem
- Ouvrez le fichier .pem en Notepad
- Copie de « -----COMMENCEZ LE CERTIFICAT-----» jusqu'à « -----CERTIFICAT D'EXTRÉMITÉ-----»
- Copiez le certificat dans cube3945 comme exemple

```
crypto pki authenticate cucm50
```

After entering the command paste the certificate and press two times enter after END CERTIFICATE.

```
#####
MS-3945(config)#crypto pki authenticate cucm-pub
```

Enter the base 64 encoded CA certificate.
 End with a blank line or the word "quit" on a line by itself

```
-----BEGIN CERTIFICATE-----
MIICszCCAhygAwIBAgIIFOPHFlcCUbcwDQYJKoZIhvcNAQEFBQAwXzEWMBQGA1UE
AwNQN1VDTs1QLVNSVjE1MzEMMAoGALUECwwDVEFDMQ4wDAYDVQQKDAVDSVNDTzEM
MAoGALUEBwwDQkFOMQwwCgYDVQQIDANLQVlxczAjB9NVBAYTAk1OMB4XDTEyMTEx
-----
```

```
NjEyMDUwMloXDTE2MTEExNjEyMDUwMlowXzEWMBQGA1UEAwNQ1VDTs1QLVNSVjE1
MzEMMAoGA1UECwwDVFEFDMQ4wDAYDVQQKDAVDSVNDTzEMMAoGA1UEBwwDQkFOMQww
CgYDVQQIDANLQVIxZCzAJBgNVBAYTAklOMIGfMA0GCSqGSIb3DQEBAQUAA4GNADCB
iQKBgQCRT2YXfOMgQueval6tyMCwQw0fKCDw3bqq/63atNUhSqFpswk+04GhPqxh
Pesx6tMW3E22AGWoTjsrqYTRY7TA/p2u03yPcg00PMoxNk6VN88/FLW6YNd3rOK
TmABim1UEMVMYDFQoGhtzUxya7ZFe3vpqBnDlUrgy0q01zQzJwIDAQABo3gwdjAL
BgNVHQ8EBAMCarwwJwYDVR01BCAwHgYIKwYBBQUHAWEGCCsGAQUFBwMCBggrBgEF
BQcDBTAfBgNVHREEGDAWhhRodHRwOi8vQ1VDTs1QLVNSVjE1MzAdBgNVHQ4EFgQU
ZIIiGxzZQV0phnLrsY8Bby3jM9S0wDQYJKoZIhvcNAQEFBQADgYEAQzIvbQm8EOSU
v+bm9oykvHLMrQXjvSgSyl08mC5koUurYa/a0yf0AjMwDMc8F/NARtktsDyjdmmw
Oq0GLYMuMhloyPeb41/bbc+AJxI/d/xprOJSt1qwFI3CJjCvsWm3azC4wfl1ItZNo
4gaCwzzY2UoedUA/rHrWcYod6Vl6Adw=
-----END CERTIFICATE-----
```

Certificate has the following attributes:
Fingerprint MD5: 05813269 C50FD13F 20D65A7C 0C4CD73E
Fingerprint SHA1: 8BE549A5 FB3A856F A6B3CC8B 7C30F0DF C9280288

% Do you accept this certificate? [yes/no]: yes
Trustpoint CA certificate accepted.
% Certificate successfully imported

MS-3945(config)#

#####

- Si vous avez plus d'un CallManager dans CCM le groupe, configurez le point de confiance pour tous les Noeuds et importez les Certificats du CallManager car les étapes précédentes, autrement, Basculement ne se produit pas.

Étape 5. Certificat IOS d'exportation afin d'installer sur le CallManager de gestionnaire d'appel

#####

MS-3945(config)#crypto pki export cube3945 pem terminal

```
% CA certificate:
-----BEGIN CERTIFICATE-----
MIIB+TCCAwwGAWIBAgIBATANBgkqhkiG9w0BAQQFADAQM4wDAYDVQQDEwVpb3Ny
YTAeFw0xMjAxMDcwNjMwMTVaFw0xNTAxMDYwNjMwMTVaMBAxDjAMBGNVBAMTBWlv
c3JhMIGfMA0GCSqGSIb3DQEBAQUAA4GNADCBiQKBgQDDrZwLgx7LSPwS0iAgv6Zq
lAMzikR36zGH7Cai0/Mf0nZ9nmNRVskpSBhdgbjvj43/TzqcJLSricIkBnSHSVme
SXxo+gz2sGhgzbABVjtJ86/kaVOSD9/rFJjPNdrxgA5Jdc64qUC2SKUHYGTs0Xx
a1TQid2ylUOnAwpJKx8LTQIDAQABO2MwYTAPBgNVHRMBAf8EBTADAQH/MA4GA1Ud
DwEB/wQEAwIBhjafBgNVHSMEGDAWgBQf+4wpeDVM3rkjL5LoZkjr4n4j+DadBgNV
HQ4EFgQUH/uMKXglTN65Iy+S6GZI6+J+I/gwDQYJKoZIhvcNAQEEBQADgYEAChvx
2hhf/eD2/mCgmcDWrh86OU5VV+0I3Eiphto6I8s+y2UhpMshF3sJ+OhDsT6T+C7U
xi0g96lTxvdJDBsu7gDERioW3LuJuOKj7MNYDIbCmaoBlxCLtHsZvcnsVGrar3Jt
dVh2dnKi/06VEzCGrjBkn6RPPXXOB9aEeQ6ts2M=
-----END CERTIFICATE-----
```

% General Purpose Certificate:

```
-----BEGIN CERTIFICATE-----
MIIBrTCCARagAWIBAgIBAJANBgkqhkiG9w0BAQQFADAQM4wDAYDVQQDEwVpb3Ny
YTAeFw0xMjAxMDcwNjMwMTVaFw0xNTAxMDYwNjMwMTVaMBAwGjAYBgNVBAMTETAw
OjI0OjE0OkJCOjVCOkRGMFwwDQYJKoZIhvcNAQEEBQADSwAwSAJBALixjJSbcgK3
6c4EnOs/FDrqKtWqHXhwncah2N3k4LghdwAdsQFXGtHjeFJWA6TBm/fLibLD4fW8
eoacG7FpJJKCAwEAAANPME0wCwYDVR0PBAQDAGwGMB8GA1UdIwQYMBaAFB/7jC14
NUzeuSMvkuhmsOvifiP4MB0GA1UdDgQWBBSW11Md2rFbqZf0IuicijOJ15PnPDAN
BgkqhkiG9w0BAQQFAAOBgQCZeTK4TeNrtoQ3/3eaCD7sL/RNlc8aRbNOn2KcCxyO
WmtH8xRs4Hm9lW4K4o93D3mgAP6JLAB6RN4LdzFm5S800YXTDYoeQ/k09i9RrTFq
ARbdZRuULb02tgrBjYHngQ5dV7C7hqwr4CfjJeQI1UQWSibiyKT0mN8o5n/1B37G
GQ==
-----END CERTIFICATE-----
```

MS-3945(config)#

#####

- Copiez le certificat et l'enregistrez en Notepad comme fichier cube3945g.pem.

Remarque: Seulement le certificat d'usage universel requis

- Téléchargez le certificat de CA IOS comme CallManager-confiance.
- Naviguez vers la page de gestion de SYSTÈME D'EXPLOITATION CUCM
- **Gestion de Sécurité > de certificat > certificat de téléchargement**

Étape 6. Configurez Cube3945 et CUCM pour le téléphone CP-8945 Secure

Sur le CUBE

```
#####
MS-3945(config)#crypto pki export cube3945 pem terminal
% CA certificate:
-----BEGIN CERTIFICATE-----
MIIB+TCCAwwAwIBAgIBATANBgkqhkiG9w0BAQQFADAQMw4wDAYDVQQDEwVpb3Ny
YTAeFw0xMjAxMDcwNjMwMTVaFw0xNTAxMDYwNjMwMTVaMBAxDjAMBgNVBAMTBWlv
c3JhMIGfMA0GCSqGSIb3DQEBAQUAA4GNADCBiQKBgQDDrZwLgX7LSPwS0iAgv6Zq
1AMzikR36zGH7Cai0/Mf0nZ9nmNRVskpSBhDgbjvj43/TzqcJLSricIkBnSHSVme
SXxo+gz2sGhgZBABVjtJ86/kaVOSD9/rFJjPNdrxgA5Jdc64qUC2SKUHYGTs0Xx
a1TQid2ylUOnAwpJKx8LTQIDAQABo2MwYTAPBgNVHRMBAf8EBTADAQH/MA4GA1Ud
DwEB/wQEAwIBhjAfBgNVHSMEGDAwBQf+4wpeDVM3rkjL5LoZkjr4n4j+DAGBgNV
HQ4EFgQUH/uMKXglTN65Iy+S6GZI6+J+I/gwDQYJKoZIhvcNAQEEBQADgYEAcHvx
2hhF/eD2/mCgmcDWrh86OU5VV+0I3Eiphto6I8s+y2UhPMshF3sJ+OhDsT6T+C7U
xi0g961TxvdJDBsu7gDERioW3LuJuOKj7MNYDIbCmaoBlxCLtHsZvcnsVGrar3Jt
dVh2dnKi/O6VEzCGrjBkn6RPPXXOB9aEeQ6ts2M=
-----END CERTIFICATE-----

% General Purpose Certificate:
-----BEGIN CERTIFICATE-----
MIIBrTCCARagAwIBAgIBAJANBgkqhkiG9w0BAQQFADAQMw4wDAYDVQQDEwVpb3Ny
YTAeFw0xMjAxMDcwNjMwMTVaFw0xNTAxMDYwNjMwMTVaMBAwGjAYBgNVBAMTETAw
OjI00je00kJKCOjvCOKRGMFwwDQYJKoZIhvcNAQEEBQADSwAwSAJBALixjJSbcgK3
6c4EnOs/FDrqKtwHXqhwncAh2N3k4LghdwAdsQFXGtHjeFJWA6TBm/fLibLD4fW8
eoacG7fpJJKCAwEAAANPME0wCwYDVR0PBAQDAgWgMB8GA1UdIwQYMBaAFB/7jC14
NUzeuSMvkuhmSOvifiP4MB0GA1UdDgQWBBSW11Md2rFbqZf0IuicijOJ15PnPDAN
BgkqhkiG9w0BAQQFAA0BgQCZetK4TeNrtoQ3/3eaCD7sL/RNlc8aRbNOn2KcCxyO
WmtH8xRs4Hm9lw4K4o93D3mgAP6JLAB6RN4LdzFm5S800YXTDY0eQ/k09i9RrTFq
ARbdZRuULb02tgRbJyHngQ5dV7C7hqwr4CfjJeQI1UQWSibiyKT0mN8o5n/1B37G
GQ==
-----END CERTIFICATE-----
```

MS-3945(config)#

#####


Sur CUCM

- Registre CP-8945 dans CUCM en mode sécurisé.
- Créez un profil sécurisé de SCCP pour CP-8945
- Sélectionnez le profil sécurisé sous la configuration dans CP-8945.

Phone Security Profile Configuration

 Save  Delete  Copy  Reset  Apply Config  Add New

- Status

 Status: Ready

- Phone Security Profile Information

Product Type: Cisco 8945

Device Protocol: SCCP

Name*

Description

Device Security Mode

TFTP Encrypted Config

- Phone Security Profile CAPF Information

Authentication Mode*

Key Size (Bits)*

Note: These fields are related to the CAPF Information settings on the Phone Configuration page.

Protocol Specific Information

Packet Capture Mode*

Packet Capture Duration

Presence Group*

Device Security Profile*

SUBSCRIBE Calling Search Space

Unattended Port

Require DTMF Reception

RFC2833 Disabled

- **Sauvegardez et remettez à l'état initial la configuration CP-8945**, l'assurez qu'elle s'enregistre correct
- **Appliquez le profil sécurisé de SIP** sur le joncteur réseau de SIP vers le CUBE

SIP Trunk Security Profile Configuration

Save
 Delete
 Copy
 Reset
 Apply Config
 Add New

- Status

Status: Ready

- SIP Trunk Security Profile Information

Name*

Description

Device Security Mode

Incoming Transport Type*

Outgoing Transport Type

Enable Digest Authentication

Nonce Validity Time (mins)*

X.509 Subject Name

Incoming Port*

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*

- La configuration de joncteur réseau de SIP

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*
 Route Class Signaling Enabled*
 Use Trusted Relay Point*
 PSTN Access
 Run On All Active Unified CM Nodes

-SIP Information

Destination

Destination Address is an SRV

Destination Address	Destination Address IPv6	Destination Port
1* 10.66.75.246		5061

MTP Preferred Originating Codec* G729/G729a

Presence Group* Standard Presence group

SIP Trunk Security Profile* Secure SIP Trunk Profile

Rerouting Calling Search Space <None >

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

SUBSCRIBE Calling Search Space <None >

SIP Profile* TEST_SIP_Profile

DTMF Signaling Method* No Preference

- Avec un appel d'essai, vous pouvez employer la commande show afin de vérifier l'appel est dans SRTP au RTP sur le CUBE, et l'image de casier sur l'écran CP-8945 confirme, il y a de SRTP entre le téléphone et le CUBE

MS-3945#sh sccp conn

sess_id	conn_id	stype	mode	codec	sport	rport	ripaddr	conn_id_tx
458757	20	s-xcode	sendrecv	g711u	16770	2000	10.66.75.246	
458757	24	xcode	sendrecv	g711u	16768	2000	10.66.75.246	

Total number of active session(s) 1, and connection(s) 2

MS-3945#sh call active voice brief

<ID>: <CallID> <start>ms.<index> (<start>) +<connect> pid:<peer_id> <dir> <addr> <state>
dur hh:mm:ss tx:<packets>/<bytes> rx:<packets>/<bytes> dscp:<packets violation> media:<packets
violation> audio tos:<audio tos value> video tos:<video tos value>
IP <ip>:<udp> rtt:<time>ms pl:<play>/<gap>ms lost:<lost>/<early>/<late>
delay:<last>/<min>/<max>ms <codec> <textrelay> <transcoded>

media inactive detected:<y/n> media cntrl rcvd:<y/n> timestamp:<time>

long duration call detected:<y/n> long duration call duration :<sec> timestamp:<time>
MODEMPASS <method> buf:<fills>/<drains> loss <overall%> <multipkt>/<corrected>
last <buf event time>s dur:<Min>/<Max>s

FR <protocol> [int dlci cid] vad:<y/n> dtmf:<y/n> seq:<y/n>
<codec> (payload size)

ATM <protocol> [int vpi/vci cid] vad:<y/n> dtmf:<y/n> seq:<y/n>
<codec> (payload size)

Tele <int> (callID) [channel_id] tx:<tot>/<v>/<fax>ms <codec> noise:<l> acom:<l> i/o:<l>/<l>
dBm

MODEMRELAY info:<rcvd>/<sent>/<resent> xid:<rcvd>/<sent> total:<rcvd>/<sent>/<drops>
speeds(bps): local <rx>/<tx> remote <rx>/<tx>

Proxy <ip>:<audio udp>,<video udp>,<tcp0>,<tcp1>,<tcp2>,<tcp3> endpt: <type>/<manf>
bw: <req>/<act> codec: <audio>/<video>
tx: <audio pkts>/<audio bytes>,<video pkts>/<video bytes>,<t120 pkts>/<t120 bytes>
rx: <audio pkts>/<audio bytes>,<video pkts>/<video bytes>,<t120 pkts>/<t120 bytes>

Telephony call-legs: 0

SIP call-legs: 2

H323 call-legs: 0

Call agent controlled call-legs: 0

SCCP call-legs: 2

Multicast call-legs: 0

Total call-legs: 4

0 : 32138 423566780ms.1 (02:08:15.881 UTC Tue Feb 5 2013) +2270 pid:2088 Answer 1005 active
dur 00:00:35 tx:1761/281760 rx:1753/280480 dscp:0 media:0 audio tos:0xB8 video tos:0x0
IP 10.66.75.178:24714 SRTP: off rtt:0ms pl:0/0ms lost:0/0/0 delay:0/0/0ms g711ulaw TextRelay:
off Transcoded: Yes
media inactive detected:n media contrl rcvd:n/a timestamp:n/a
long duration call detected:n long duration call duration:n/a timestamp:n/a

0 : 32139 423566790ms.1 (02:08:15.891 UTC Tue Feb 5 2013) +2250 pid:1006 Originate 2088
active
dur 00:00:35 tx:1753/287492 rx:1761/288804 dscp:0 media:0 audio tos:0xB8 video tos:0x0
IP 10.66.75.76:22512 SRTP: on rtt:0ms pl:0/0ms lost:0/0/0 delay:0/0/0ms g711ulaw TextRelay: off
Transcoded: Yes
media inactive detected:n media contrl rcvd:n/a timestamp:n/a
long duration call detected:n long duration call duration:n/a timestamp:n/a

0 : 32142 423569050ms.1 (02:08:18.151 UTC Tue Feb 5 2013) +0 pid:0 Originate connecting
dur 00:00:35 tx:1761/281760 rx:1753/280480 dscp:0 media:0 audio tos:0x0 video tos:0x0
IP 10.66.75.246:2000 SRTP: off rtt:0ms pl:0/0ms lost:0/0/0 delay:0/0/0ms g711ulaw TextRelay:
off Transcoded: No
media inactive detected:n media contrl rcvd:n/a timestamp:n/a
long duration call detected:n long duration call duration:n/a timestamp:n/a

0 : 32144 423569050ms.2 (02:08:18.151 UTC Tue Feb 5 2013) +0 pid:0 Originate connecting
dur 00:00:35 tx:1753/287492 rx:1761/288804 dscp:0 media:0 audio tos:0x0 video tos:0x0
IP 10.66.75.246:2000 SRTP: on rtt:0ms pl:0/0ms lost:0/0/0 delay:0/0/0ms g711ulaw TextRelay: off
Transcoded: No
media inactive detected:n media contrl rcvd:n/a timestamp:n/a
long duration call detected:n long duration call duration:n/a timestamp:n/a

Telephony call-legs: 0
SIP call-legs: 2
H323 call-legs: 0
Call agent controlled call-legs: 0
SCCP call-legs: 2
Multicast call-legs: 0
Total call-legs: 4

[Informations connexes](#)

- [Guide de Sécurité CUCM](#)
- [Guide de configuration de CUBE](#)