

CISCO *Live!*

ALL IN

#CiscoLive

# Cisco Webex App

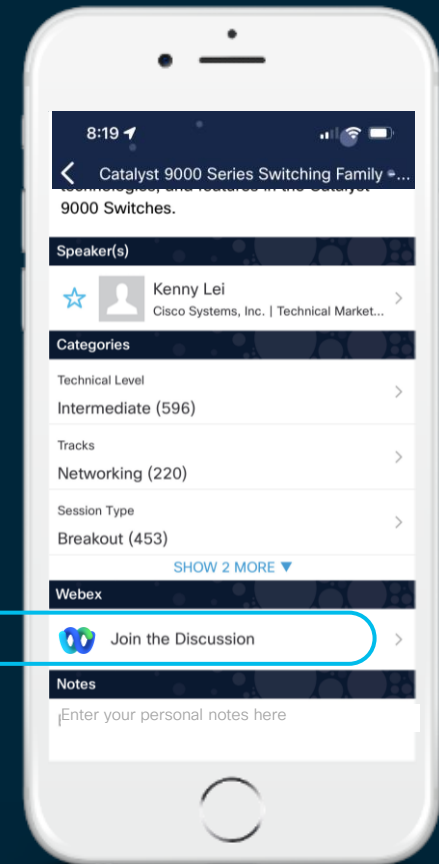
## Questions?

Use Cisco Webex App to chat with the speaker after the session

## How

- 1 Find this session in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until June 17, 2022.



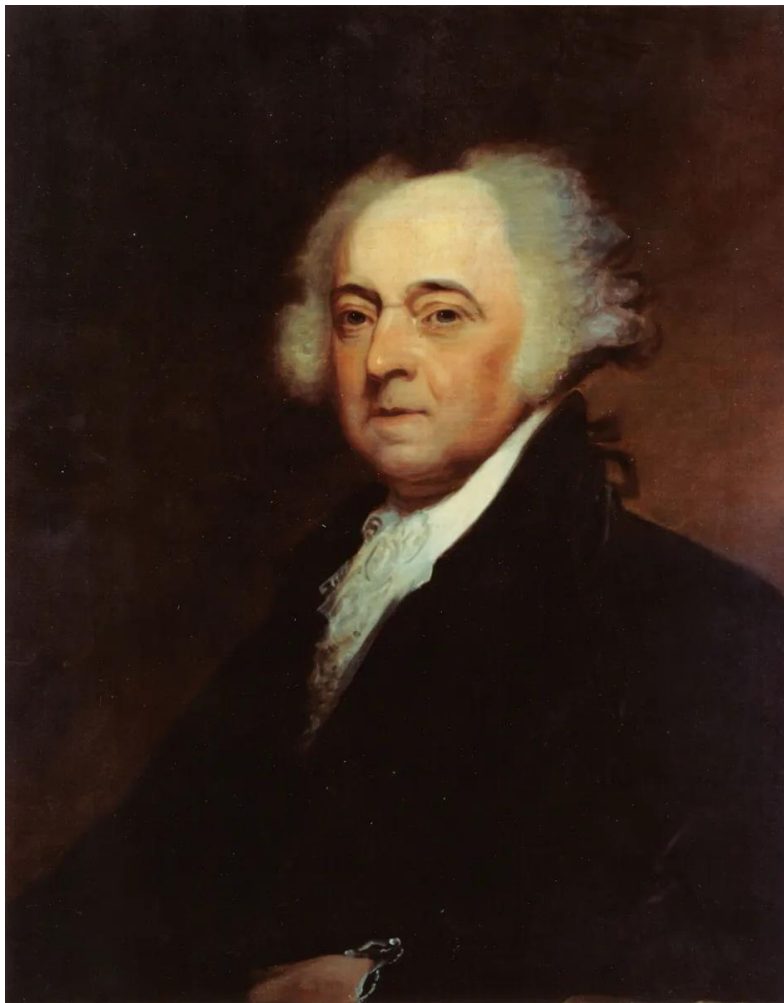
<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKCOL-3009>



The bridge to possible

# Troubleshooting On-Prem Calling in Webex App Like a TAC Engineer

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BRKCOL-3009



“The only thing most people do better than anyone else is read their own handwriting.”

– John Adams, 2<sup>nd</sup> President of the United States



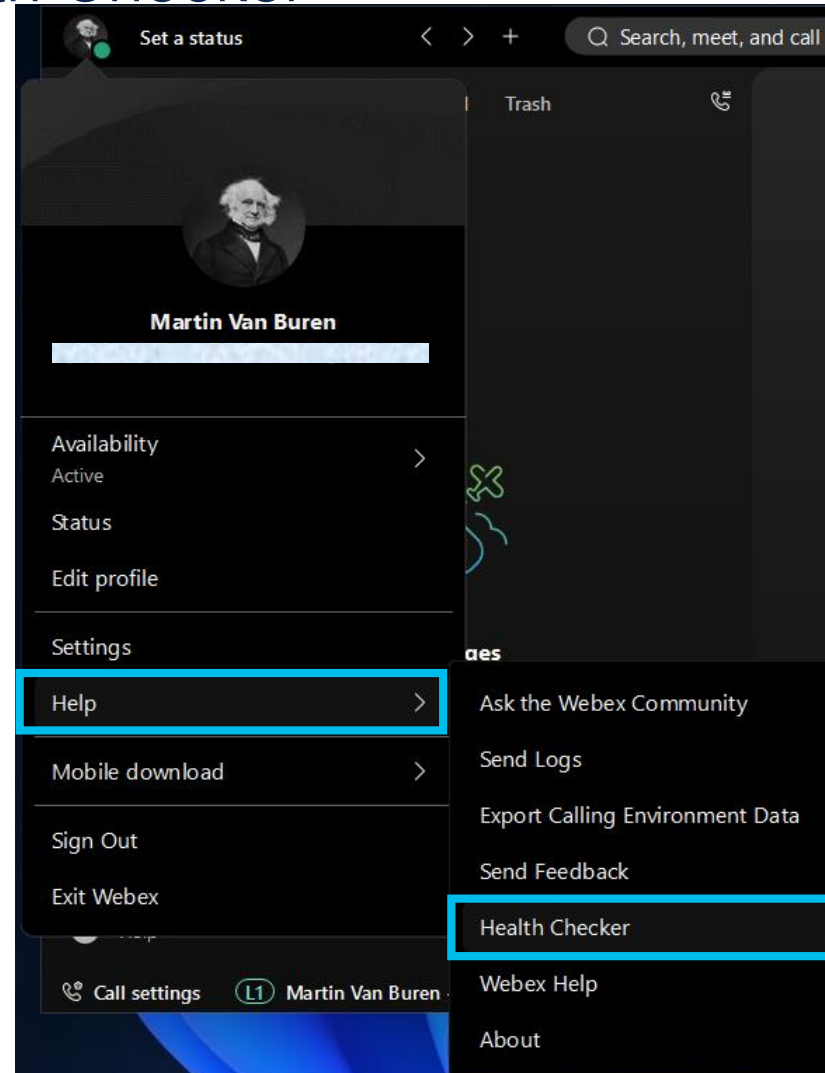
# Agenda

- Introduction
- Webex App Problem Reporting
- Service Discovery
- Softphone Registration
- Conclusion

# Webex App Problem Reporting

# Webex Problem Reporting

Webex -> Help -> Health Checker



# Webex Problem Reporting

Health Checker -> Diagnostics

The image shows a screenshot of the Webex Health Checker interface. It has a dark theme with green accents. The interface is divided into two main sections, each with a green header bar. The top section is for 'Cloud' services, showing a cloud icon, a green checkmark, and the status 'Operational'. Below the icon is a 'Refresh' button. The bottom section is for 'Phone services', showing a phone icon, a green checkmark, and the status 'Desk phone connected'. Below the icon is a 'Test' button. To the right of the 'Phone services' status, there is a scrollable list of server information: 'Server: CUCMSub.ciscoliveus.net', 'Protocol: CTI', 'Device: SEPB000B4BAF2C0', and 'Line: 1008'. Below this, a green checkmark is followed by 'Voicemail server', 'Status: Connected', 'Server: cuc.ciscoliveus.net', 'Port: 443', and 'Protocol: VMREST(HTTPS)'. At the bottom of the interface, there is a 'Database status: Healthy' label, a 'Reset' button, a 'Close' button, and a button labeled 'See more details in Diagnostics' which is highlighted with a red border.

Service	Status	Details
Cloud	Operational	Information taken from <a href="https://status.webex.com">status.webex.com</a>
Phone services	Desk phone connected	Server: CUCMSub.ciscoliveus.net Protocol: CTI Device: SEPB000B4BAF2C0 Line: 1008 ✓ Voicemail server Status: Connected Server: cuc.ciscoliveus.net Port: 443 Protocol: VMREST(HTTPS)

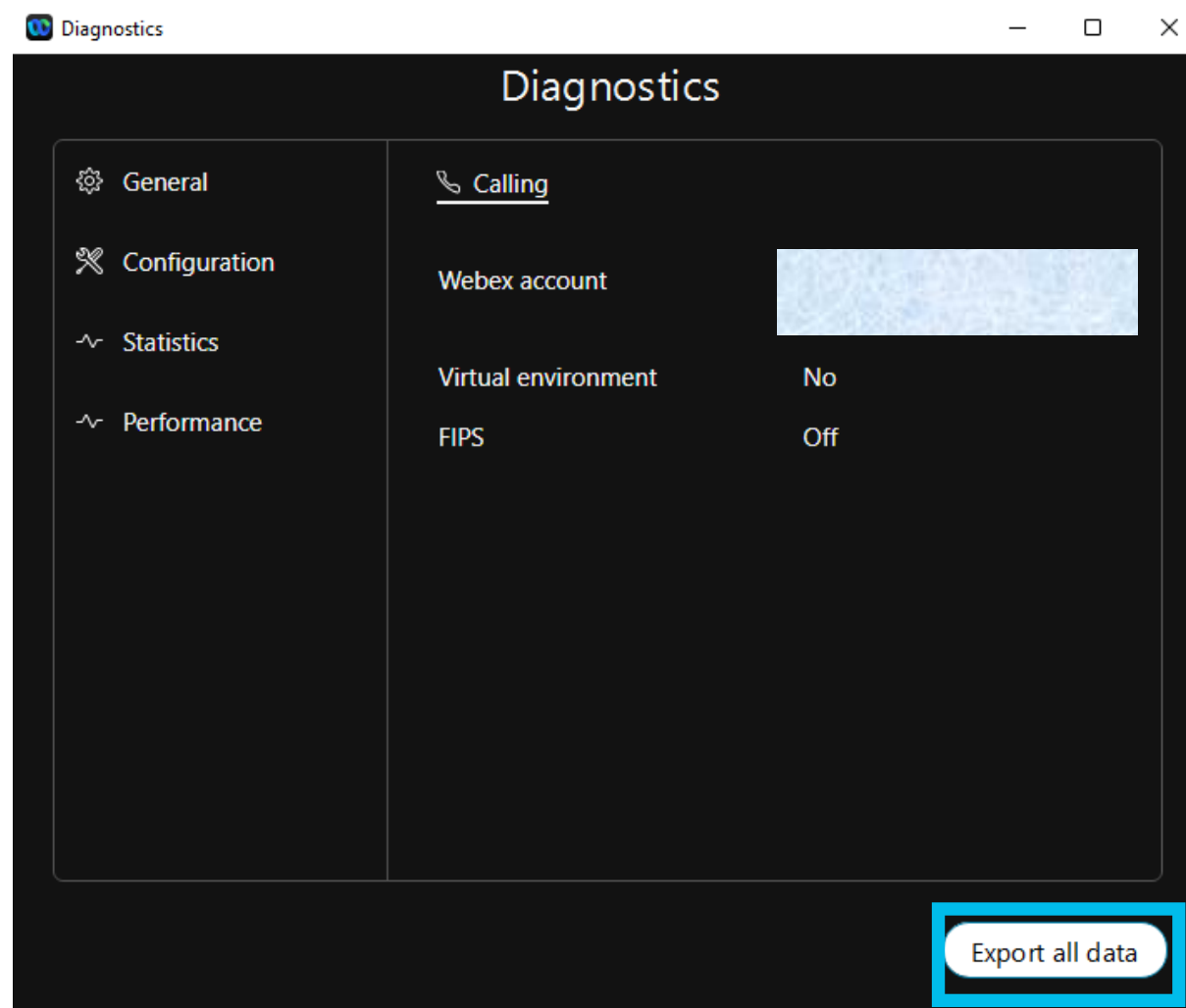
Database status: Healthy

[Reset](#) [Close](#) [See more details in Diagnostics](#)



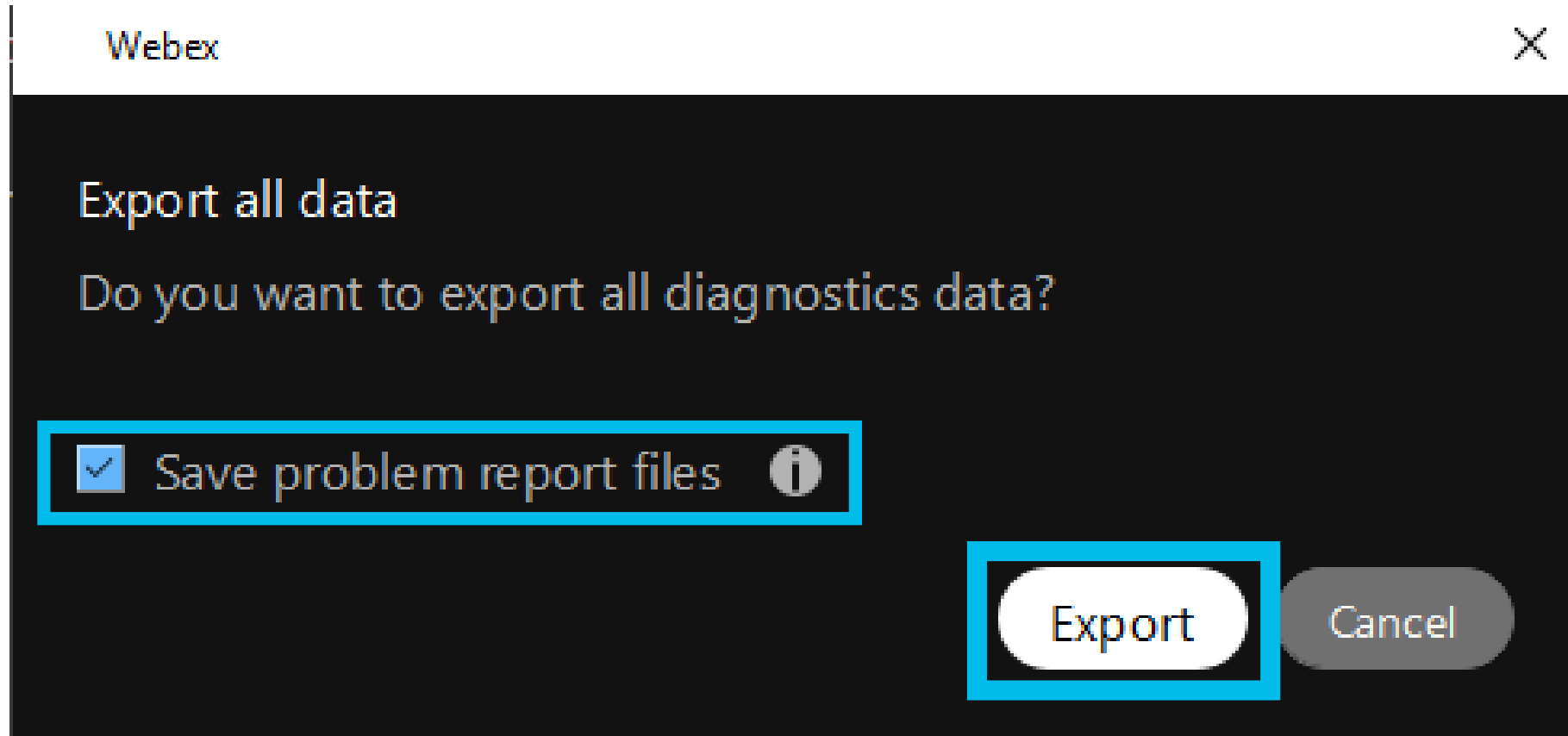
# Webex Problem Reporting

Diagnostics -> Export all data






# Webex Problem Reporting

## Data Export








# Webex Problem Reporting

Webex Problem Report contents

Name	Type	Compressed size
 7fd97ad2-ab59-4939-a1ec-b8b2d61b17f2_FB	Compressed (zipped) Fol...	1,054 KB
 ced.dat	DAT File	30 KB
 WebexDiagnosticInfo-05-05-2022 21-15-29	Firefox HTML Document	16 KB


# Webex Problem Reporting

current\_log and last\_run\_current\_log – Webex events

<< Temp1_WebexDiagnosticLogs - 05-05-... > 7fd97ad2-ab59-4939-a1ec-b8b2d61b17f2_FB	
Name	Type
 media	File folder
 meetings	File folder
 uclogin	File folder
 current_log	Text Document
 last_run_current_log	Text Document


# Webex Problem Reporting

uclogin – UCM Calling events

<< 7fd97ad2-ab59-4939-a1ec-b8b2d61b17f2_FB >		uclogin
Name		Type
 uclogin	Text Document	

# Service Discovery

# Service Discovery Process – Webex User Settings

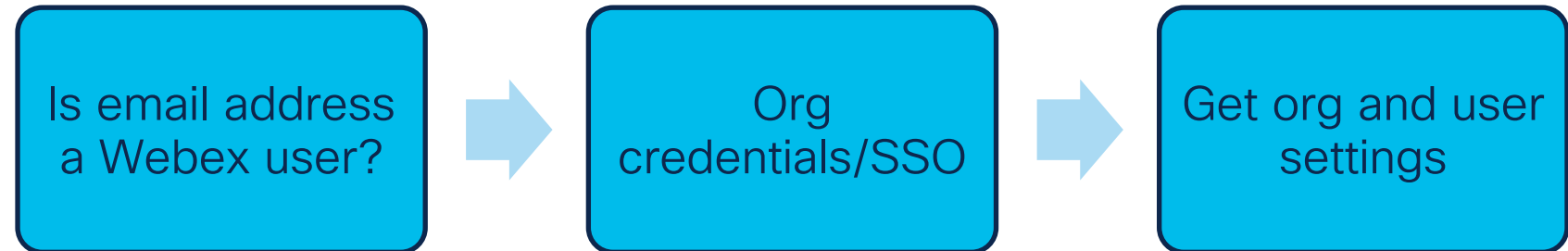


**Sign in**

Start by entering your email address


vanburen@ciscoliveus.net | ✕

Next



# Service Discovery – Calling Setting – User Level


User -> Profile -> Licenses

 **Martin Van Buren**


Profile General Meetings >>

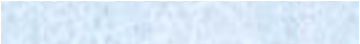
Action ▾


Licenses

 Messaging

Basic Messaging  
Advanced Messaging

 Meeting

Basic Space Meetings  
Advanced Space Meetings  
Webex Meetings Suite  
 Host Account

 Calling

Call on Webex (1:1 call, non-PSTN) Register to  
Unified Communications Manager (UCM)




Edit Licenses



# Service Discovery – Calling Setting – User Level

User -> Profile -> Licenses

## Services enabled for Martin Van Buren

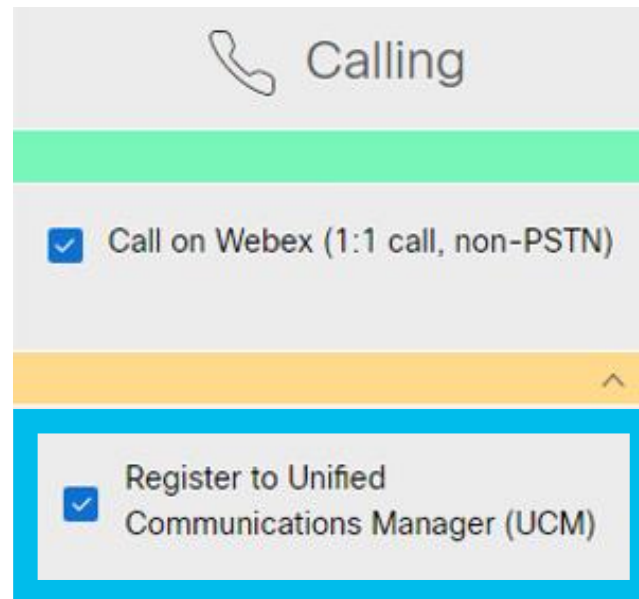
 Messaging	 Meeting	 Calling
Free Public Collaboration Services		
<input checked="" type="checkbox"/> Basic Messaging	<input checked="" type="checkbox"/> Basic Space Meetings ⓘ	<input checked="" type="checkbox"/> Call on Webex (1:1 call, non-PSTN)
Non-subscription Licenses		
		<input checked="" type="checkbox"/> Register to Unified Communications Manager (UCM)

# Service Discovery – Calling Setting – User Level

User -> Profile -> Licenses

Log file – current\_log.txt or last\_run\_current\_log.txt

network::WdmlImpl::parseDeviceJson:Adding policy <<  
**callingBehavior** with value: **NATIVE\_SIP\_CALL\_TO\_UCM**



# Service Discovery – Calling Setting – Org Level

Services -> Calling -> Client Settings -> Calling Behavior

## Calling

Numbers

Service Settings

Client Settings

### Calling Behavior

If you and your organization are happy with Webex Calling, then changes aren't necessary. If you're looking for more advanced calling features that aren't available in Webex yet, then choose here.

#### Unified CM Users

☐ Use my user's email domain

☒ Use UC Manager Profile for calling

Cisco Live



☐ Open Cisco Jabber from the Webex app

Unified CM users can make calls directly in Cisco Jabber or through Webex. Making a call through Webex will open Jabber.

#### Users without Paid Calling Services from Cisco

☐ Open third-party app from Webex

Allow users to make calls through a third-party app, even if they haven't enabled calling in Webex.

# Service Discovery – Calling Setting – Org Level

Services -> Calling -> Client Settings -> Unified CM Settings

## Unified CM Settings

Allow Unified CM registration without trusted certificate

When enabled, the security of the Unified CM connection is not authenticated. We recommend that you only use this setting in a lab environment.



- Enabled (Toggle On) – Register without trusted CUCM Tomcat certificate
- Disabled (Toggle Off – pictured) – Ensure CUCM Tomcat certificate is trusted before registration

# Service Discovery – Calling Setting – Org Level

Services -> Calling -> Client Settings -> Unified CM Settings

Log file – current\_log.txt or last\_run\_current\_log.txt

Allow Unified CM registration without trusted certificate

When enabled, the security of the Unified CM connection is not authenticated. We recommend that you only use this setting in a lab environment.



CUCMLLoginAdapter::CreateCUCMLLoginManager:  
Setting accepting invalid certs to : 0

# Service Discovery – Calling Setting – Org Level

Management -> Organization Settings -> UC Manager Profiles

## UC Manager Profiles

Your UC Manager Profile defaults to your organization's domain.

You can add UC manager Profiles for "Jabber in Webex Messaging" or "Calling using UCM" deployment.

## UC Manager Profiles

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...

Add Profile

# Service Discovery – Calling Setting – Org Level

Management -> Organization Settings -> UC Manager Profiles -> UC Manager Profile

UC Manager Profile

Enter a Voice Services Domain if you have SRV records, but the login email domain isn't used for the service discovery. It's also required for Mobile Remote Access (MRA). Enter a UDS server if the Webex account user ID doesn't match with the Unified CM user ID or Intercluster Lookup Service (ILS) isn't enabled in a multiple Unified CM cluster deployment. Enter both values so the Webex app uses UDS starting with the premises and then Voice Services for MRA.

Profile Name

Cisco Live

☒ Voice Services Domain

Domain Name

ciscoliveus.net

Domain used for \_cisco-uds or collab-edge DNS SRV

☐ UDS Server

Specify an individual CUCM server for discovery

☐ Allow users to edit server address  
This option is only supported for Jabber.

Cancel

Save

# Service Discovery – Calling Setting – User Level

User -> Profile -> Licenses

Log file – current\_log.txt or last\_run\_current\_log.txt

CUCMLLoginAdapter::setManualUCDomain: **setManualUCDomain: ciscoliveus.net**

Profile Name

Cisco Live

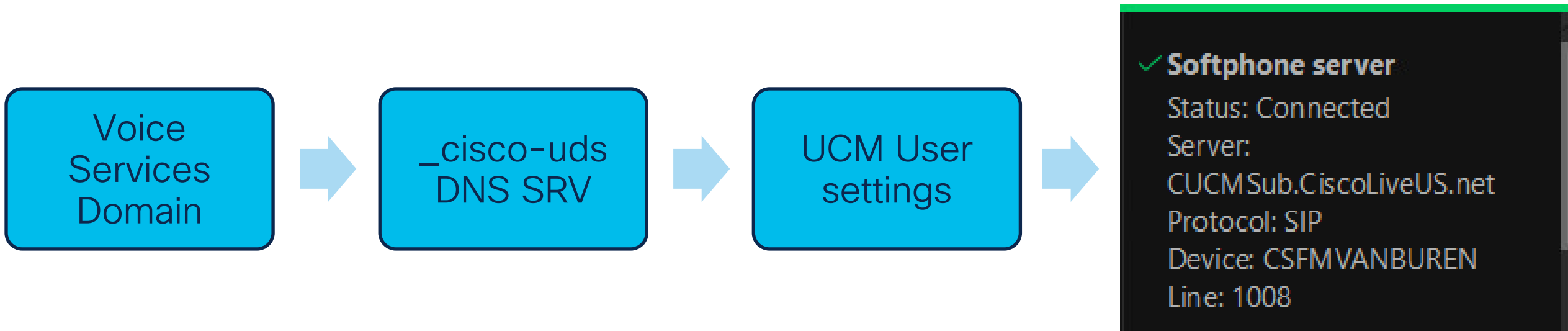
☒ Voice Services Domain

Domain Name

ciscoliveus.net



# Service Discovery Process – UCM Calling Settings



# Service Discovery – UCM Calling Settings

SRV Discovery (Redacted)

Log file – uclogin.log and ced.dat

```
[service-discovery]
```

```
[CSFUnified::DiscoveryConfigurationInterfaceImpl::getCon  
figValue] – VoiceServicesDomain key retrieved value:
```

```
{!82e61ce2c57af49a!}
```

```
"82e61ce2c57af49a": "ciscoliveus.net" <- from ced.dat  
file
```

# Service Discovery – UCM Calling Settings

SRV Discovery (Unredacted)

Log file – uclogin.log and ced.dat

[service-discovery]

[CSFUnified::DiscoveryConfigurationInterfaceImpl::getConfigValue] – VoiceServicesDomain key retrieved value:  
**ciscoliveus.net**

# Service Discovery – UCM Calling Settings

SRV Discovery (Unredacted)

Log file – uclogin.log and ced.dat

```
[src\dnsutils\win32\win32DnsUtils.cpp(52)] [csf.dns]
```

```
[csf::dns::mapFromWindowsDNSResult] - *-----*
```

DNS query **\_collab-edge.\_tls.ciscoliveus.net. has failed:**  
**DNS name does not exist.**

# Service Discovery – UCM Calling Settings

SRV Discovery (Unredacted)

Log file – uclogin.log and ced.dat

```
[src\dnsutils\win32\win32DnsUtils.cpp(47)] [csf.dns]
```

```
[csf::dns::mapFromWindowsDNSResult] - *-----*
```

DNS query **\_cisco-uds.\_tcp.ciscoliveus.net** has  
succeeded.

# Service Discovery – UCM Calling Settings

SRV Discovery (Unredacted)

Log file – uclogin.log and ced.dat

```
*-----*
| ucm-config Library DNS Information
|   Highest Priority Domain: ciscoliveus.net
|   DNS Record: cucmpub.ciscoliveus.net:8443 [weight: 0,
priority: 0]
|   Domain Source: ciscoliveus.net : LOCATOR_UDS_DOMAIN
|   Domain Source: ciscoliveus.net :
SERVICE_DISCOVERY_DOMAIN
*-----*
```

# Service Discovery – UCM Calling Settings

UDS Discovery (Unredacted)

Log file – uclogin.log and ced.dat

```
[csf.httpclient]
```

```
[csf::http::CurlHttpUtils::configureEasyRequest] - *-----*
```

```
Configuring request #0 GET
```

```
https://cucmpub.ciscoliveus.net:8443/cucm-uds/version
```

# Service Discovery – UCM Calling Settings

SSO Discovery (Unredacted)

Log file – uclogin.log and ced.dat

[csf::ucm90::UdsProvider::makeSSOEnabledRequest] –  
The home uds cluster's Cucm version '12.5.1' supports  
SSO.

Checking if SSO is enabled



# Service Discovery – UCM Calling Settings

SSO Discovery (Unredacted)

Log file – uclogin.log and ced.dat

[csf::ucm90::SSOEnabledQueryResponseParser::parseSSOResponse] – Parse was successful :

Values parsed are 'SSO enabled 1',  
'tokenReuse: 1',

...

# Service Discovery – UCM Calling Settings

UCM Device Discovery(Unredacted)

Log file – uclogin.log and ced.dat

[csf::ucm90::HomeUds100DeviceSelector::selectDefaultDevice] – **Running on platform: Windows**

[csf::ucm90::HomeUds100DeviceSelector::selectDefaultDevice] – **Found CSF device: CSFMVANBUREN**

# Service Discovery – UCM Calling Settings

SSO Discovery (Unredacted)

Log file – uclogin.log and ced.dat

```
[csf.httpclient]
```

```
[csf::http::CurlHttpUtils::configureEasyRequest] - *-----*
```

```
Configuring request #8 GET
```

```
https://CUCMPub.CiscoLiveUS.net:6972/CSFMVANBUREN.
```

```
cnf.xml  
[csf.httpclient] [csf::http::performRequest] - *-----*
```

```
HTTP response code 200 connect code 0 for request #8 to
```

```
https://CUCMPub.CiscoLiveUS.net:6972/CSFMVANBUREN.
```

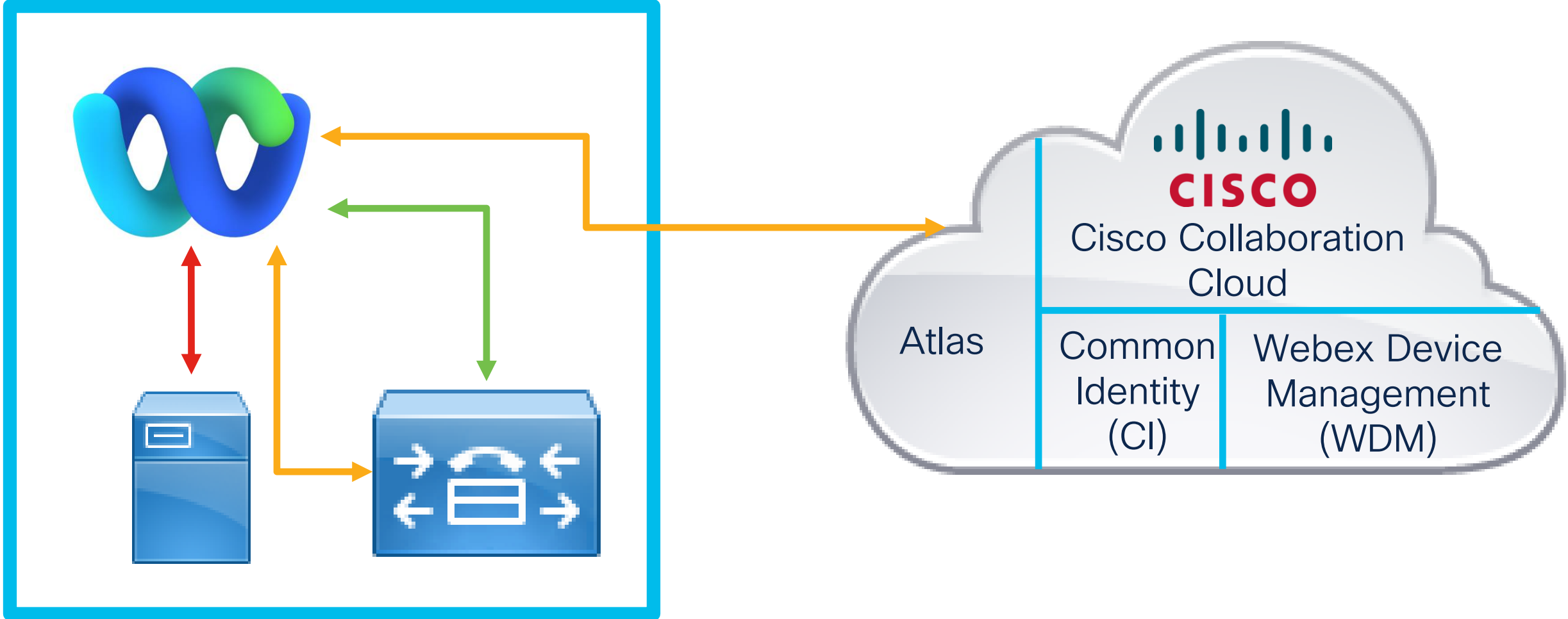
```
cnf.xml
```

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# Softphone Registration

# UCM Calling Registration Architecture (Internal)

SIP —  
DNS —  
HTTPS —



# Softphone Registration

Internal SIP registration

Log file – uclogin.log and ced.dat

```
sipio-sent---> REGISTER sip:CUCMSub.CiscoLiveUS.net SIP/2.0
Via: SIP/2.0/TCP <PC IP Address>:59259;branch=z9hG4bK0000417e
From: <sip:1008@CUCMSub.CiscoLiveUS.net>;tag=8b32cd98263a00020000215c-00002eb5
To: <sip:1008@CUCMSub.CiscoLiveUS.net>
Call-ID: 8b32cd98-263a0003-0000452a-00000ca2@<PC IP Address>
Max-Forwards: 70
Date: Fri, 06 May 2022 01:13:01 GMT
CSeq: 101 REGISTER
User-Agent: Cisco-CSF
Contact: <sip:3641711b-ff6a-abd4-7d4e-28f2943cbb04@<PC IP
Address>:59259;transport=tcp>;+sip.instance="<urn:uuid:563f5c0a-725a-43cc-b8d3-
38e0de09ba82>";+u.sip!devicename.ccm.cisco.com="CSFMVANBUREN";+u.sip!model.ccm.cis
co.com="503";video
```

# Softphone Registration

Internal SIP registration

Log file – uclogin.log and ced.dat

sipio-recv<--- SIP/2.0 200 OK

Via: SIP/2.0/TCP <PC IP Address>:59259;branch=z9hG4bK0000417e

From: <sip:1008@CUCMSub.CiscoLiveUS.net>;tag=8b32cd98263a00020000215c-00002eb5

To: <sip:1008@CUCMSub.CiscoLiveUS.net>;tag=1835782284

Date: Fri, 06 May 2022 01:13:01 GMT

Call-ID: 8b32cd98-263a0003-0000452a-00000ca2@<PC IP Address>

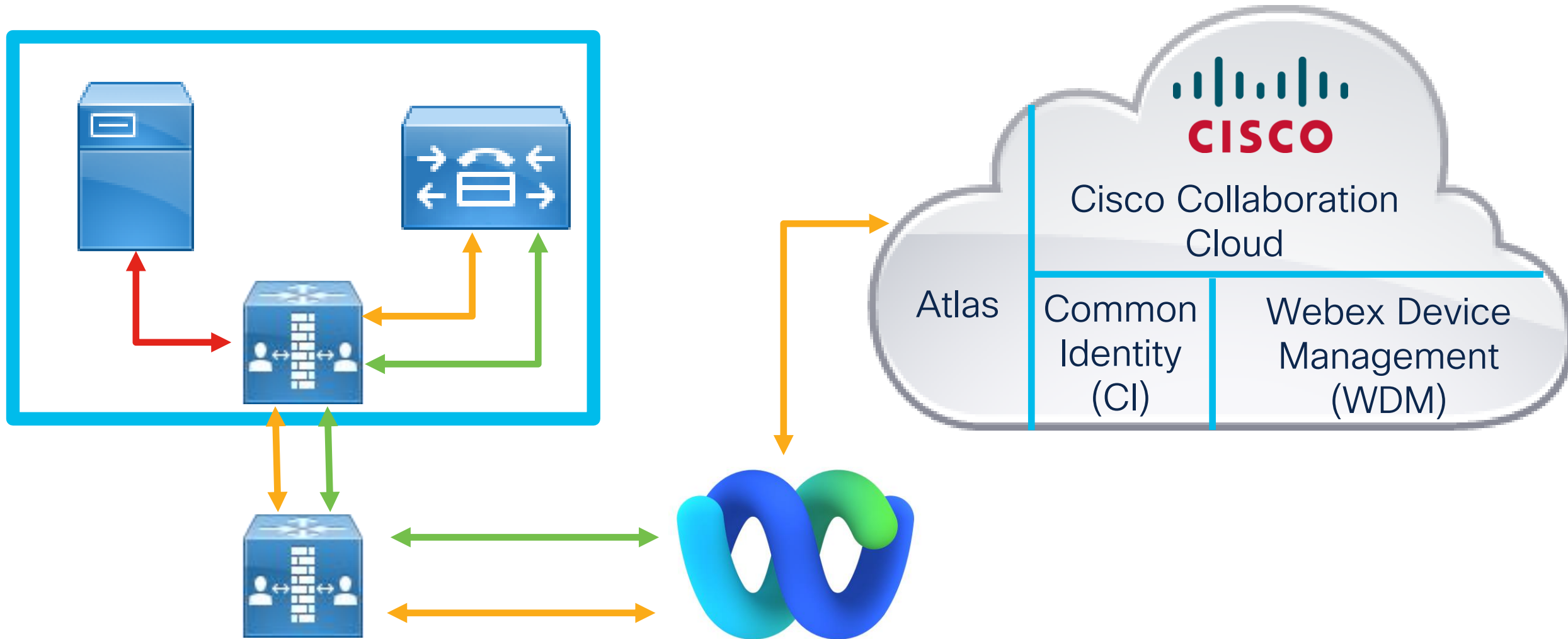
Server: Cisco-CUCM12.5

CSeq: 101 REGISTER

Expires: 120

# UCM Calling Registration Architecture (External)

SIP —  
DNS —  
HTTPS —





# Softphone Registration

External SIP registration

Log file – uclogin.log and ced.dat

```

sipio-sent---> REGISTER sip:CUCMSub.CiscoLiveUS.net SIP/2.0 Via: SIP/2.0/TLS <PC IP
Address>:55401;branch=z9hG4bK00006f10
From: <sip:1008@CUCMSub.CiscoLiveUS.net>;tag=7eddabd52b240008000029b0-00004e22
To: <sip:1008@CUCMSub.CiscoLiveUS.net>
Call-ID: 7eddabd5-2b240005-0000426b-000016bd@<PC IP Address>
Max-Forwards: 70
Date: Wed, 11 May 2022 16:39:12 GMT
CSeq: 105 REGISTER
User-Agent: Cisco-CSF
Contact: <sip:3641711b-ff6a-abd4-7d4e-28f2943cbb04@<PC IP
Address>:55401;transport=tls>;+sip.instance="<urn:uuid:ff40def7-2fa7-4236-bf3b-
49e914b60a02>";+u.sip!devicename.ccm.cisco.com="CSFMVANBUREN";+u.sip!model.ccm.cis
co.com="503";video;bfcpx-cisco-mra-ha=AR_SK;x-cisco-reg-id=1

```

# Softphone Registration

External SIP registration

Log file – uclogin.log and ced.dat

...

Route: <sip:Expw-E.ciscoliveus.net;transport=tls;lr>,<sip:<Expressway-C IP

Address>:5061;transport=tls;zone-

id=1;directed;lr>,<sip:CUCMSub.CiscoLiveUS.net;transport=tcp;lr>

Expires: 3600

**Proxy-Authorization:** Digest username="mvanburen",realm="Expw-E.ciscoliveus.net",uri="sip:CUCMSub.CiscoLiveUS.net",response="...",nonce="..",opaque="...",cnonce="...",qop=auth,nc=00000003,algorithm=MD5

Content-Length: 0

# Softphone Registration

External SIP registration

Log file – uclogin.log and ced.dat

```
sipio-recv<--- SIP/2.0 407 Proxy Authentication Required Via: SIP/2.0/TLS
14.48.59.225:55402;branch=z9hG4bK00004986;received=14.48.59.225
Call-ID: 7eddabd5-2b240004-0000057d-00007606@14.48.59.225
CSeq: 103 REGISTER
From: <sip:1008@CUCMPub.CiscoLiveUS.net>;tag=7eddabd52b24000600005c98-
00007432
To: <sip:1008@CUCMPub.CiscoLiveUS.net>;tag=b7c289c0127a73bf
Server: TANDBERG/4144 (X14.0)
proxy-Authenticate: Digest realm="Expw-E.ciscoliveus.net", nonce="...", opaque="...",
stale=FALSE, algorithm=MD5, qop="auth"
proxy-Authenticate: Bearer realm="Expw-E.ciscoliveus.net"
Content-Length: 0
```

# Softphone Registration

External SIP registration

Log file – uclogin.log and ced.dat

**sipio-sent---** **REGISTER** sip:CUCMPub.CiscoLiveUS.net SIP/2.0 Via: SIP/2.0/TLS  
<PC IP Address>:55402;branch=z9hG4bK000050ce  
From: <sip:1008@CUCMPub.CiscoLiveUS.net>;tag=7eddabd52b24000600005c98-  
00007432  
To: <sip:1008@CUCMPub.CiscoLiveUS.net>  
Call-ID: 7eddabd5-2b240004-0000057d-00007606@<PC IP Address>  
Max-Forwards: 70  
Date: Wed, 11 May 2022 16:39:12 GMT  
CSeq: 104 REGISTER  
User-Agent: Cisco-CSF

# Softphone Registration

External SIP registration

Log file – uclogin.log and ced.dat

**sipio-recv<---** SIP/2.0 200 OK

Via: SIP/2.0/TLS 14.48.59.225:55401;branch=z9hG4bK000005ab;received=<PC IP Address>;**ingress-zone=CollaborationEdgeZone**

Call-ID: 7eddabd5-2b240005-0000426b-000016bd@<PC IP Address>

CSeq: 104 REGISTER

Contact: <sip:3641711b-ff6a-abd4-7d4e-28f2943cbb04@<EXPW-C IP

Address>:5060;transport=tcp;orig-hostport=<PC IP Address>:55401>;+sip.instance="<urn:uuid:ff40def7-2fa7-4236-bf3b-

49e914b60a02>";+u.sip!devicename.ccm.cisco.com="CSFMVANBUREN";+u.sip!model.ccm.cisco.com="503";video;x-cisco-mra-ha=AR\_SK;x-cisco-reg-id=1;+u.sip!userid.ccm.cisco.com="mvanburen";x-cisco-newreg

From: <sip:1008@CUCMSub.CiscoLiveUS.net>;tag=7eddabd52b24000500001d66-000043bd

To: <sip:1008@CUCMSub.CiscoLiveUS.net>;tag=1386157200

Server: Cisco-CUCM12.5

**Expires: 120**

Date: Wed, 11 May 2022 16:39:12 GMT

# Softphone Registration

External SIP registration

Verify UCM device registration

## Phone Type

**Product Type:** Cisco Unified Client Services Framework

**Device Protocol:** SIP

## Real-time Device Status

**Registration:** Registered with Cisco Unified Communications Manager CUCMSub.CiscoLiveUS.net

**IPv4 Address:** [REDACTED] <- Expressway Core IP Address

**Active Load ID:** Webex\_for\_Windows-42.5.0.22221

**Download Status:** None

## Device Information

☒ Device is Active

☒ Device is trusted

**Device Name \***

CSFMVANBUREN

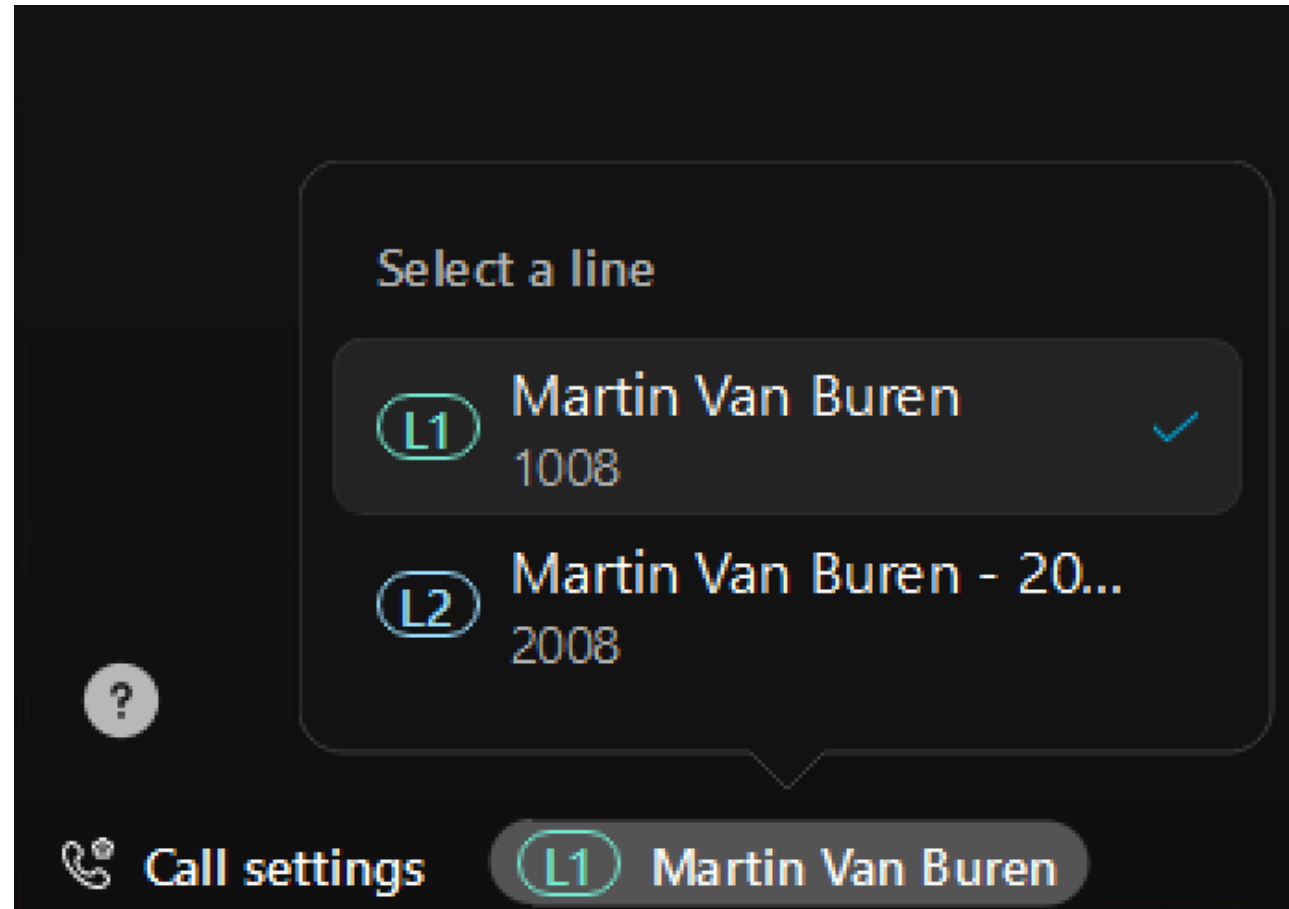
**Description**

Martin Van Buren Softphone

# Softphone Registration

External SIP registration

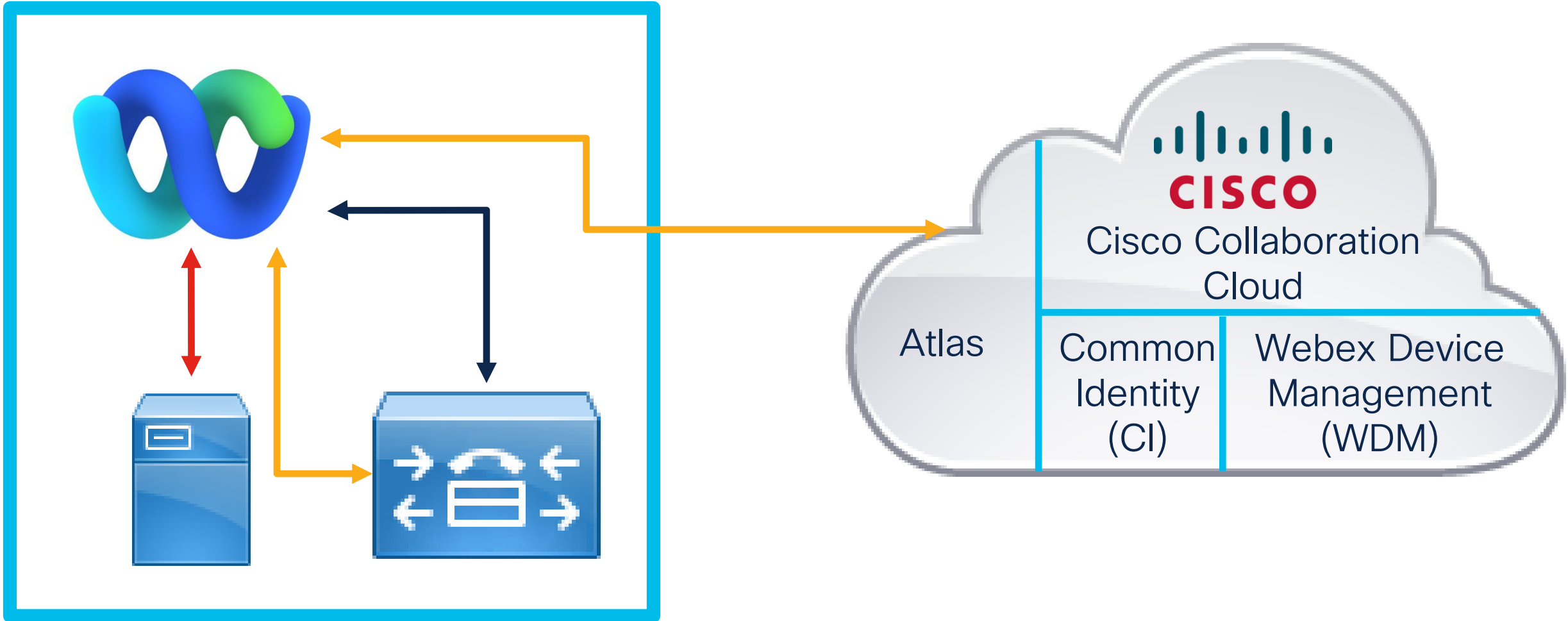
User Interface



# Deskphone Control

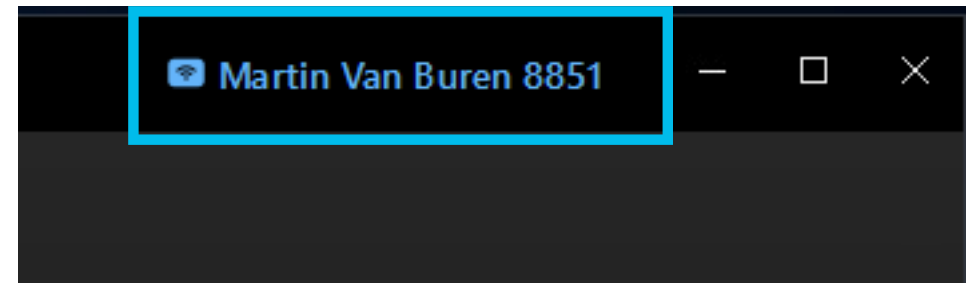
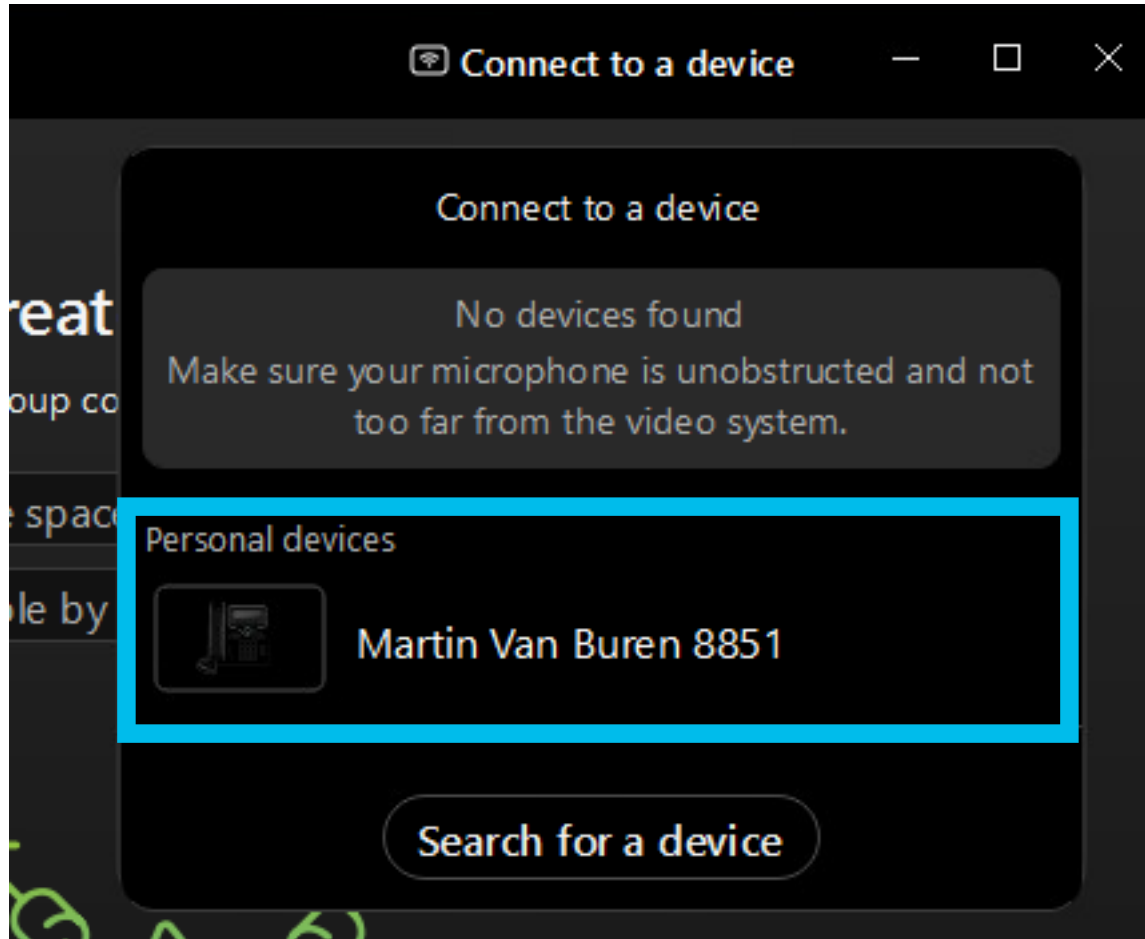


# UCM Calling Deskphone Control Architecture



# Deskphone Control

## User Interface



# Deskphone Control

UCM registered deskphone control

Log file – uclogin.log and ced.dat

```
[EVT:-->MOD.CS.CL.CTI.DPPProvider:1][CALL CMD:  
ProviderInitRequest]# [id=1] QBE version >=  
QBE_VERSION_TEXOMA. Sending ProviderInitRequest.
```

```
[MOD.CS.CL.CTI.DPPProvider:1][EVT:-->MOD.CS.CUCM:1][,  
msg.sequenceNumber=2,  
pdunames{msg.msgID}=PROVIDER_OPEN_REQUEST]#  
[id=1]
```

# Deskphone Control

UCM registered deskphone control

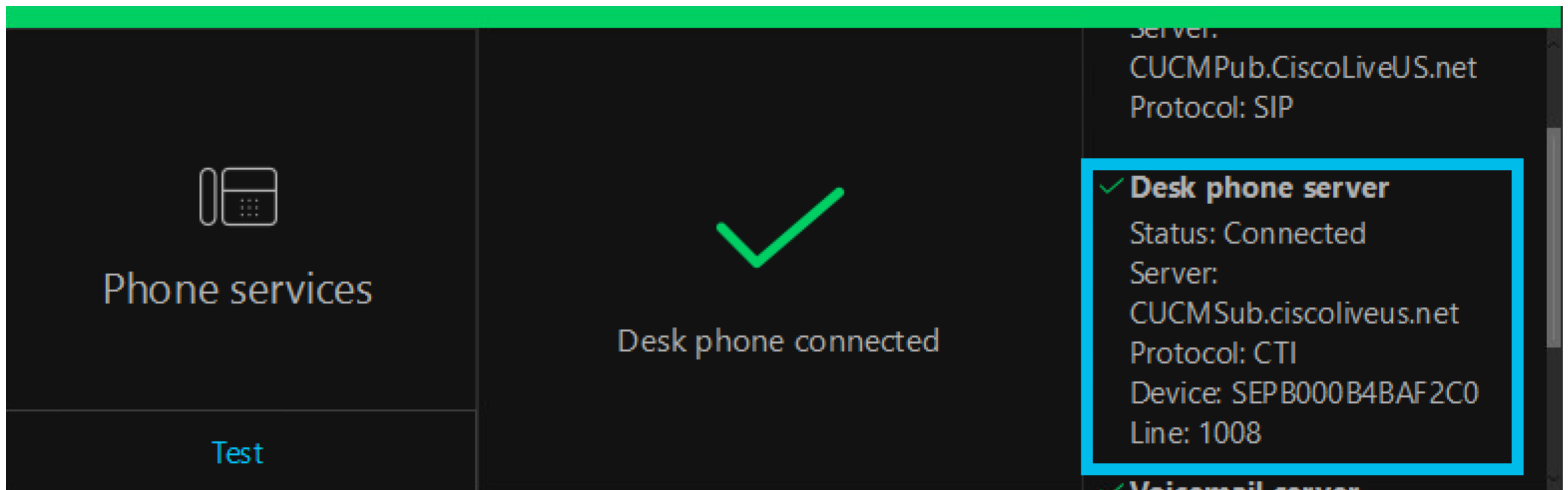
Log file – uclogin.log and ced.dat

```
[CDPPProvider::HandleEvent_ProviderDeviceLineInfo] - ctio : recv <-  
-- PROVIDER_GET_ALL_DEVICES_AND_LINES_RESPONSE  
requestID: 3  
deviceName: SEPB000B4BAF2C0  
deviceRegistrationStatus: 1  
controlModeBitMap: 1  
eventContent: 15  
eventStatusCode: 0  
deviceInfoStatic.deviceType: 684  
deviceInfoStatic.deviceTypeName: Cisco 8851
```

# Deskphone Control

UCM registered deskphone control

Log file – uclogin.log and ced.dat



# Conclusion

# Technical Session Surveys

- Attendees who fill out a minimum of four session surveys and the overall event survey will get Cisco Live branded socks!
- Attendees will also earn 100 points in the Cisco Live Game for every survey completed.
- These points help you get on the leaderboard and increase your chances of winning daily and grand prizes.



# Cisco Learning and Certifications

From technology training and team development to Cisco certifications and learning plans, let us help you empower your business and career. [www.cisco.com/go/certs](http://www.cisco.com/go/certs)

## Pay for Learning with Cisco Learning Credits

(CLCs) are prepaid training vouchers redeemed directly with Cisco.



## Learn



### Cisco U.

IT learning hub that guides teams and learners toward their goals

### Cisco Digital Learning

Subscription-based product, technology, and certification training

### Cisco Modeling Labs

Network simulation platform for design, testing, and troubleshooting

### Cisco Learning Network

Resource community portal for certifications and learning



## Train



### Cisco Training Bootcamps

Intensive team & individual automation and technology training programs

### Cisco Learning Partner Program

Authorized training partners supporting Cisco technology and career certifications

### Cisco Instructor-led and Virtual Instructor-led training

Accelerated curriculum of product, technology, and certification courses



## Certify



### Cisco Certifications and Specialist Certifications

Award-winning certification program empowers students and IT Professionals to advance their technical careers

### Cisco Guided Study Groups

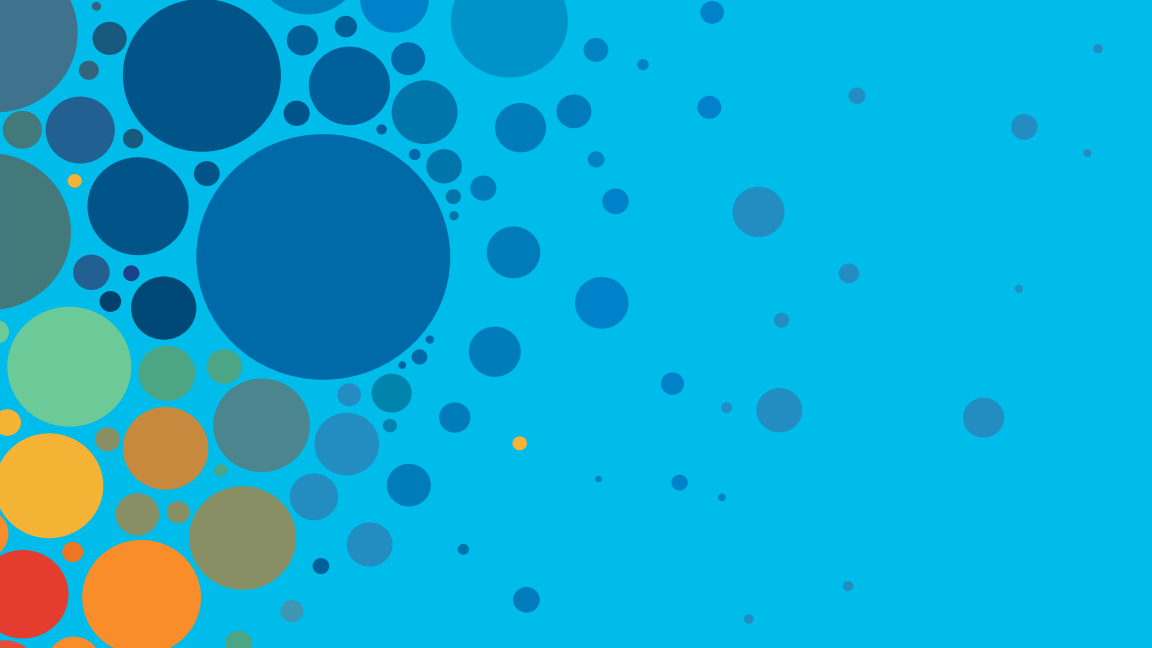
180-day certification prep program with learning and support

### Cisco Continuing Education Program

Recertification training options for Cisco certified individuals

Here at the event? Visit us at **The Learning and Certifications lounge at the World of Solutions**





# Continue your education

- Visit the Cisco Showcase for related demos
- Book your one-on-one Meet the Engineer meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at [www.CiscoLive.com/on-demand](https://www.CiscoLive.com/on-demand)



“Nothing in life is more important than the ability to communicate effectively.”

– Gerald Rudolph Ford Jr., 38<sup>th</sup> President of the United States



The bridge to possible

# Thank you

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