

启用CMS和CUCM之间的安全通信

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简介

本文档介绍如何启用思科Meeting Server (CMS)和思科统一通信管理器(CUCM)之间的通信。

先决条件

要求

Cisco 建议您了解以下主题：

- CMS版本3.8及更高版本
- CUCM和IM&P
- Jabber

使用的组件

本文档中的信息基于以下软件和硬件版本：

- CMS版本3.8
- CUCM和IM&P 14 SU (3)

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您的网络处于活动状态，请确保您了解所有命令的潜在影响。

背景信息

本文档概述了在CMS和CUCM之间建立安全通信的流程，以实现Jabber/Web应用在线状态共享。其中介绍了在CMS上的Web应用会议期间配置和排除Jabber用户更新状态的详细步骤。可对会议服务器进行配置，以更新Jabber用户参与思科会议服务器Web应用会议时的在线状态。

配置

启用CMS和CUCM/IMP服务器之间的安全通信

在操作系统管理页面登录CUCM，导航至Security > Certificate Management(或者点击ASA)，然后下载TOMCAT证书。

Usage	Common Name/Common Name_SerialNumber	Usage	Type	Key Type	Distribution	Issued By	Expiration	Description
CAPF-trust	High_Assurance_SUDI_CA_0a6475524cd9617c62	Trust	CA-signed	RSA	High_Assurance_SUDI_CA	Cisco_Root_CA_2099	08/10/2099	This certificate was used to sign the MIC installed on Cisco eni Presence of this certificate allows the end point to communica securely with UCM using the MIC when associated with a secu
CAPF-trust	Cisco_Basic_Assurance_Root_CA_2099_01a65af15ee994eb41	Trust	Self-signed	RSA	Cisco_Basic_Assurance_Root_CA_2099	Cisco_Basic_Assurance_Root_CA_2099	05/27/2099	This certificate was used to sign the MIC installed on Cisco eni Presence of this certificate allows the end point to communica securely with UCM using the MIC when associated with a secu
CAPF-trust	CAPF-4c15e524	Trust	Self-signed	RSA	CAPF-4c15e524	CAPF-4c15e524	05/07/2028	
CAPF-trust	Cisco_Root_CA_M2_01	Trust	Self-signed	RSA	Cisco_Root_CA_M2	Cisco_Root_CA_M2	11/12/2037	This certificate was used to sign the MIC installed on Cisco eni Presence of this certificate allows the end point to communica securely with UCM using the MIC when associated with a secu
CAPF-trust	Cisco_Root_CA_2099_019a335878ce16c1c1	Trust	Self-signed	RSA	Cisco_Root_CA_2099	Cisco_Root_CA_2099	08/10/2099	This certificate was used to sign the MIC installed on Cisco eni Presence of this certificate allows the end point to communica securely with UCM using the MIC when associated with a secu
CAPF-trust	Cisco_Manufacturing_CA_SHA2_02	Trust	CA-signed	RSA	Cisco_Manufacturing_CA_SHA2	Cisco_Root_CA_M2	11/12/2037	This certificate was used to sign the MIC installed on Cisco eni Presence of this certificate allows the end point to communica securely with UCM using the MIC when associated with a secu
ipsec	cucm14test.test.com_6dffacbf16e53663f3d9a4a66f355758	Identity	Self-signed	RSA	cucm14test.test.com	cucm14test.test.com	09/30/2028	Self-signed certificate generated by system
ITLRecovery	ITLRECOVERY_cucm14test_77c9a7891d588e201eff4ae038db166	Identity	Self-signed	RSA	cucm14test.test.com	ITLRECOVERY_cucm14test	05/01/2028	Self-signed certificate generated by system
tomcat	cucm14test.test.com_36a7986900000000004	Identity	CA-signed	RSA	cucm14test.test.com	S-WIN2008R2-CA	10/04/2025	Certificate Signed by S-WIN2008R2-CA
tomcat-ECDSA	cucm14test-EC.test.com_486beedc456be0b40ff7716b999d2a4	Identity	Self-	EC	cucm14test.test.com		09/30/2028	Self-signed certificate generated by system

CUCM Tomcat证书

登录操作系统管理页面上的Cisco Unified Presence Server (CUPS)，导航至Security > Certificate Management，然后下载CUPS证书。

Certificate	Common Name	Usage	Type	Key Type	Distribution	Issued By	Expiration	Description
cup	impnew.test.com	Identity	CA-signed	RSA	impnew.test.com	S-WIN2008R2-CA	10/04/2025	Certificate Signed by S-WIN2008R2-CA
cup-ECDSA	impnew-EC.test.com	Identity	Self-signed	EC	impnew.test.com	impnew-EC.test.com	09/30/2028	Self-signed certificate generated by system
cup-trust	impnew-EC	Trust	Self-signed	EC	impnew	impnew-EC	09/30/2028	Trusted local cluster own-certificate
cup-trust	impnew-EC.test.com	Trust	Self-signed	EC	impnew.test.com	impnew-EC.test.com	09/30/2028	Trusted local cluster own-certificate

Presence CUPS证书

下载签署Tomcat和Cup证书的根CA证书。

Certificate	Common Name/Common Name_SerialNumber	Usage	Type	Key Type	Distribution	Issued By	Expiration	Description
tomcat-trust	cucm14test-EC.test.com_486beedc456be0b40ff7716b999d2a4	Trust	Self-signed	EC	cucm14test.test.com	cucm14test.test.com	09/30/2028	Trust Certificate
tomcat-trust	S-WIN2008R2-CA_04738d12017db7f49a3a7381b3d388e	Trust	Self-signed	RSA	S-WIN2008R2-CA	S-WIN2008R2-CA	09/29/2028	Signed Certificate
tomcat-trust	impnew.test.com_36a7986900000000004	Trust	Self-signed	RSA	impnew.test.com	impnew.test.com	09/30/2028	Trust Certificate
tomcat-trust	cucm14test.test.com_36a7986900000000004	Trust	CA-signed	RSA	cucm14test.test.com	S-WIN2008R2-CA	10/04/2025	Trust Certificate
tomcat-trust	impnew-EC.test.com_773a3d72a36e922487383a1071417e	Trust	Self-signed	EC	impnew.test.com	impnew-EC.test.com	09/30/2028	Trust Certificate

Tomcat的根证书

Cisco Unified IM and Presence Operating System Administration

Navigation Cisco Unified IM and Presence OS Administration

Show Settings Security Software Upgrades Services Help

Certificate List

Generate Self-signed Upload Certificate/Certificate chain Generate CSR Reuse Certificate

Status

4 records found

Certificate List (1 - 4 of 4) Rows per Page 50

Find Certificate List where Certificate begins with cup-trust Find Clear Filter

Select item or enter search text

Certificate	Common Name	Usage	Type	Key Type	Distribution	Issued By	Expiration	Description
cup-trust	impnew-EC	Trust	Self-signed	EC	impnew	impnew-EC	09/30/2028	Trusted local cluster own-certificate
cup-trust	impnew-EC.test.com	Trust	Self-signed	EC	impnew.test.com	impnew-EC.test.com	09/30/2028	Trusted local cluster own-certificate
cup-trust	S-WIN2008R2-CA	Trust	Self-signed	RSA	S-WIN2008R2-CA	S-WIN2008R2-CA	09/29/2028	Signed Certificate
cup-trust	impnew	Trust	Self-signed	RSA	impnew	impnew	09/30/2028	Trusted local cluster own-certificate

Generate Self-signed Upload Certificate/Certificate chain Generate CSR Reuse Certificate

CUPS的根证书

创建CUCM证书的证书捆绑包。捆绑证书是指将服务器证书放在顶部，中间证书（任意）和根证书放在底部，然后-(1)回车符。

以下是捆绑包证书的示例：

```
1 -----BEGIN CERTIFICATE-----
2 MIIFqgCCBjOgAwIBAgIKNqYeYAAAAAABDANBqkqhkiG9w0BAQsFADBBMRMwEQYK
3 CZImiZPyLQGBGRYDY29tMREwDwYKCC2ImiZPyLQGBGRYBUzEXMBUGA1UEAxMOUy1X
4 SU4yMDA4UjItQ0EwHhcNMjMxMDA0MTMyNzE2WncNMjUxMDA0MTMzNzE2WjBXMQsw
5 CQYDVQQGEwJlZEMMAQGA1UECMBDQ2FyMzQwYyYDVQVQHEwNpbmQxZjAMBGNVBAOT
6 BWNpc2NvMRswGgYDVQQDEkxjZWNtMTR0ZXN0LnRlc3QuY29tMIIBIjANBgkqhkiG
7 9w0BAQEFAAOCAQ8AMIIBCgKCAQEAAoYE9an27hv05JUwAEwutEY5RA4WwaxIvkqEI
8 ah0fDpRI2GgY+mrH9q70hAvG3uDYBtBHKYJpkYepeULNjZkh07a39IeeJMG8/q28
9 SckZ+j1VIyw8gt+CnG6E6ibCD+HNdtKfwL0ipSdlTnlieX6DsF05Z1K4Alm4yrsN
10 +b0/wSikfV0+ValyC90nbTCUkIKgvqvqGadiyndb6TRfhi+w4RD+0NgOBjWHqcXX
11 WXgp9JWYQdy7YeX8Y2kljBAyRhSPfa35hojy470hE91N8axmHRm2m5htqEe0kSOy
12 2o09pj7f7Aq1waVAFVpQCxnl2sXtZARHpGdswpm4M8r5MoXPtWIDAQABo4ICjTCC
13 AokwDgYDVR0PAQH/BAQDAgWgMB0GA1UdJQQWMBQGCCsGAQUFBwMBBggrBgEFBQcD
14 AjAoBgNVHREEITAfghh0ZXN0LmNvbYITy3VjbTE0dGVudC50ZXN0LmNvbTAdBgNV
15 HQ4EFgQUTMtpsuTu05EBH2wgGFb6qii7M38wHwYDVR0jBBgwFoAUA6L6fIQ4Vp+QI
16 UDz/X6MwFAVhJ4IwgcgGA1UdHwSBwDCBwTCBuqCBt6CBtIaBsWakYXA6Ly8vQ049
17 Uy1XSU4yMDA4UjItQ0EwS049V010MjAwOFIyLENOPUNEUCxDTj1lQdWJsaWMM1MjBL
18 ZXk1MjBTZXJ2aWNLcXkxDTj1lTXJ2aWNLcXkxDTj1lDb25maWdlcmF0aW9uLERDPVMS
19 REM9Y29tP2N1cnRpZmljYXRlUmV2b2b2NhdGlvbkxpc3Q/YmFzZT9vYmplY3RDdbGFs
20 csljUkxEXN0cmliidXRpb25Qb2ludDCBugYIKwYBBQUHAQEEdGaoWgaowgacGCCsG
21 AOUFBsAChOGabGRhcDovLy9DTj1lTLVdJTj1lMDhSM1lDQ3xDTj1lBSUESQ049UHVl
22 bGljJTlW2V5JTlW2V5dmljZXMxQ049U2V5dmljZXMxQ049Q29uZmlndXJhdGlv
23 bixEQslTLERDPWNvbT9jQUN1cnRpZmljYXRlP2Jhc2U/b2JqZWN0Q2xhc3M5Y2V5
24 dG1maWNLdGlvbkFidGhvcml0eTA9BgkzBgEEAYI3FQcEMDAuBiYrBgEEAYI3FQcE
25 YrsWhcnoHIXEjS6B5uhFhsusPgeGpusehts3XAIBZAIbAjAnBgkzBgEEAYI3FQcE
26 GjAYMAoGCCsGAQUFBwMBMAoGCCsGAQUFBwMCMAoGCCsG8Ib3DQEBcUAA4IBAQCQ
27 hREe6ZJHVx1N7JNgY0RE4V9S3FiyQPIVYFVEdaKAL+AfvlS214D7ohFIjL5rSA
28 ThWiFFS1w1eA5Cjlg9gi2leHI2uDuor6XEXKB/bkC9BXoDkRMFV7bh9CoosFmXk8
29 r6xeN7H9cAHAs3wFILUnAip1KF/7odBkNUSgT39NJAL1UgVFPt81r6lk8OR5TAYI
30 9vs4dw5oCqs7Z0Av8ZDKNFDTsWoOGtU2dCMIXasJ05ALmMBtagqYBNj16URkR8i
31 f2sOkb+NdPZD4XAE00tW8rji124ukr7JBgeWYsjsD2tsZsJgslMprNaVuMDh280Q
32 JQFAiCOp3GgYjkJB2cH2
33 -----END CERTIFICATE-----
34 -----BEGIN CERTIFICATE-----
35 MIIDXTCCAkWgAwIBAgIQDXWNEgF8t79Jqac4Gz04jjANBgkqhkiG9w0BAQsFADBB
36 MRMwEQYKCC2ImiZPyLQGBGRYDY29tMREwDwYKCC2ImiZPyLQGBGRYBUzEXMBUGA1UE
37 AxMOUy1XSU4yMDA4UjItQ0EwHhcNMjMxMDA0MTMyNzE2WncNMjUxMDA0MTMzNzE2WjBXMQsw
38 WjBEMRMwEQYKCC2ImiZPyLQGBGRYDY29tMREwDwYKCC2ImiZPyLQGBGRYBUzEXMBUG
39 A1UEAxMOUy1XSU4yMDA4UjItQ0EwEwgEiMA0GC8qSg8Ib3DQEBAAUAA4IBDwAwggEK
40 AoIBAQCXA6tjSyoUyn6GkoSbe98SasKRUNGbCORKnI41tWEiX0vPITEsqZUPRJq4
41 7C8useeDiJFUBWAY9e8F4nm+VhGSEKqkwekrlJAF1mV4hkypkR0Wz64b4y04Ln8e
42 3E/F6/SXA6HOHQHdy1qlQMWSA/PXb441GKbSnfA4pjTB8nMP5WL+iBruYH9tX6EJ
43 IJq5Fe+RZYNH/mLuB+0Qf1OCn4sqsxZGf8DxhJNHU+2m3q7h319exxi0DcwiVwZO
44 xqUKrvBs6jBtOg4Kvs3sa4AHyP91SAA2vp42MwtBdis8O3wx+vm/HoVr0fHum/W1
45 Z92iwR9JxA4tKoJHVpBwMvnrK7TrAgMBAAGjUTBPMAsGA1UdDwQEAwIBhJAPEgNV
46 HRMBAf8EBTADAQH/MB0GA1UdDgQWBBERovp8hDhWn5AhQ0s9fosAUBWEngjAQBgkr
47 BgEEAYI3FQEEAwIBADANBgkqhkiG9w0BAQsFAAOCAQEA5nsa91K4BISCAuBgMMe
48 YSPEXl5kEXPQcFtJt1FjnC5uTC4IOMQQFfuralBQfr4DokDXK5892npt5DAForS5
49 k60GpH1bRPBaoxJhR0Ta3imL6yAZ0f2o380nrVRDZKlug/1VeXF/2hlTeZc73utt
50 k5sqewqTQ04NHrBp0Udybmpf2L5BjhlctoH490PI0HEbmVDE0WALKXliqsuEzrmm
51 mrl0MRRlS2ZBpX2W3qw90IrmPW13fde2kE2S1DvuaNcc7B8W0hgWT3HnyuMTyZi
52 b6Yf7hb5F3Z3OpHFU1b222tqk4qouEigyoaUZaLcVhV5UdBCCvwyU19yU6+EscnM
53 Ww==
54 -----END CERTIFICATE-----
55
```

Server Certificate on TOP

CUCM TOMCAT CERT

Root certificate at bottom



just 1 carriage return

Tomcat证书捆绑包

创建CUPS证书的证书捆绑包。捆绑证书是指将服务器证书放在顶部，中间证书（任意）和根证书放在底部，然后一(1)回车符。

```
1 -----BEGIN CERTIFICATE-----
2 MIIFqTCCBjGgAwIBAgIKNrMm8gAAAAAABTANBgkqhkiG9w0BAQsFADEBMMRMwEQYK
3 C2ImiZPyLgQBGRYDY29tMREwDwYKcZImiZPyLgQBGRYBUeEXMBUGA1UEAxMOUy1X
4 SU4yMDA4UjItQ0EwHhcNMjM5MDA0MTMzOTU0WhcNMjUzMDA0MTMzOTU0WjBjMQsw
5 CQYDVQQGEwJlEOMAwGA1UECBMFA2FybmExDDAKBgNVBACTA2JnbDEOMAwGA1UE
6 CmFY21sY28xDDAKBgNVBAwTA2t0c3EYMBYGA1UEAxMPaW1wbmV3LnRlc3QuY29t
7 MIIIBjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAKHb9jsWYhi6i4IkSx8hC
8 Z1USLZHBQ28RDQw1vT3CFGZut+dayK9KshYtsOAhRFwLFPWgGtABJWMr98f+DM0RG
9 FsmCtNo1ZsEOq3QCR6b/kbQuC+6LhhgIM8I448tLaAF4neZ/5dmCUSzJNCpnbpH
10 EbqbXKkH8V42BZLeLP0T2savk5V+vriGuMjV299vGrEu49kB0EN2M+mnfcnf20xT5
11 wtFqCY9jijKSKC40cu6iJ88A7Hi/yJQJ1NeUmnLpGpF/HKUrclu5pBdfiV1EXBkS
12 LX2bm49PFGRS0guxJZVC457vmAgACgKvwE5s3HvW1t3Tp1WE4AZtSn3s9tsYSOC7
13 bwIDAQABo4ICfsCCAnsWHDYDVR01BBYwFAYIKwYBBQUHAWEGCCsGAQUFBwMCMA4G
14 A1UdDwEw/wQEAwIFoDAAEgNVHREEEzARgg9pbXBu2XcudGVsdC5jb20wHQYDVR0O
15 BBEYFOxvmV/jdcIDMEVOjzWR/yRAo9ktMB8GA1UdIwYQYBaAFGi+nyEOfafkCFA7
16 Pl+jMBQFYSeCMIHIBgNVHR8EgcAwgb0wgbqggbbeggb3GgbFsZGFwOi8vL0NOFVMe
17 V01OMjAwOFIyLUNBLENOFVdJTjIwMDhSMixDTj1DRFAzQ049UHVibGljJTJwS2V5
18 JTIwU2VydmljZXMsQ049U2VydmljZXMsQ049Q29uZmlndXJhdGlvbixEQs1TLERD
19 FWNvbT9jZkxJ0aWZpY2F0ZVJldm9jYXRpb25MaXN0P2Jhc2U/b2JqZWN0Q2xhc3M9
20 Y1JMRGlzdHJpYnV0aW9uUG9pbmQwGwGCCsGAQUFBwEBB1IGtMIGqMIGnBggrBgEF
21 BQcwAoaBmmxkYXA6Ly8vQ049Uy1XSU4yMDA4UjItQ0EzQ049QU1BLENOFVBlYmcp
22 YyUyMEtleSUyMFN1cnZpY2VsLENOPVN1cnZpY2VsLENOPUNvbmZpZ3V5YXRpb24s
23 REM9UyxEQs1jb20/Y0FDZkxJ0aWZpY2F0ZT9iYXN1P29iamVjdENsYXNsPWN1cnRp
24 ZmljYXRpb25EYXRob3JpdHkxPQYJKwYBBAGCNxUHBDAwLgYmKwYBBAGCNxUIhcq7
25 FoXJ6ByFwY0ugeboRYbLs4HhqbRbHobc91wCAWQCAQIwJwYJKwYBBAGCNxUKBBow
26 GDAKBggrBgEFBQcDATAKBggrBgEFBQcDAjANBgkqhkiG9w0BAQsFAAOCAQEAUJdy
27 3mM0FwGwLW4hiShn/XCPChLMPG54IE+EINTBqsoqxs12XLldo0JjNAI7Xd+FoAGQ
28 UXRjRN3q236yiY5C2itLe/vAplC5yN6krL/8PEBnmopubQVdqRUCbn4r21iNV
29 sNcBrUeOY0Vr2/EVeBObVh1DGowfrxMj59v40k15wYc88h0bopL1I/Sc2mpw5m2Z
30 R5nyyx3XfjkmZSvWmO+Suz7dbJu2sfI6sw0EhF12tRRQHCsq9n9uQDSUXCjQFdq
31 Y3A+LJGawlAuPt4+sqOxjYKYNP8m8+WIBIUEv+oXAOVbs8ffQFoPKYf/ZmWxBJRP
32 2v/At0ns31UdcKFUPw==
33 -----END CERTIFICATE-----
34 -----BEGIN CERTIFICATE-----
35 MIIDXTCCAkWgAwIBAgIQDXWNEgF8t79Jqac4Gz04jjANBgkqhkiG9w0BAQsFADEB
36 MRMwEQYKcZImiZPyLgQBGRYDY29tMREwDwYKcZImiZPyLgQBGRYBUeEXMBUGA1UE
37 AxMOUy1XSU4yMDA4UjItQ0EwHhcNMjM5MDA0MTMzOTU0WhcNMjUzMDA0MTMzOTU0
38 WjBjMQswCQYDVQQGEwJlEOMAwGA1UECBMFA2FybmExDDAKBgNVBACTA2JnbDEOMAw
39 GA1UEAxMOUy1XSU4yMDA4UjItQ0EwHhcNMjM5MDA0MTMzOTU0WhcNMjUzMDA0MTMz
40 OTU0WjBjMQswCQYDVQQGEwJlEOMAwGA1UECBMFA2FybmExDDAKBgNVBACTA2JnbDE
41 OMAwGA1UEAxMOUy1XSU4yMDA4UjItQ0EwHhcNMjM5MDA0MTMzOTU0WhcNMjUzMDA0
42 MTMzOTU0WjBjMQswCQYDVQQGEwJlEOMAwGA1UECBMFA2FybmExDDAKBgNVBACTA2
43 JnbDEOMAwGA1UEAxMOUy1XSU4yMDA4UjItQ0EwHhcNMjM5MDA0MTMzOTU0WhcNMj
44 U3MDA0MTMzOTU0WjBjMQswCQYDVQQGEwJlEOMAwGA1UECBMFA2FybmExDDAKBgNV
45 BACTA2JnbDEOMAwGA1UEAxMOUy1XSU4yMDA4UjItQ0EwHhcNMjM5MDA0MTMzOTU0
46 WhcNMjU3MDA0MTMzOTU0WjBjMQswCQYDVQQGEwJlEOMAwGA1UECBMFA2FybmExDD
47 AKBgNVBACTA2JnbDEOMAwGA1UEAxMOUy1XSU4yMDA4UjItQ0EwHhcNMjM5MDA0MT
48 MzOTU0WhcNMjU3MDA0MTMzOTU0WjBjMQswCQYDVQQGEwJlEOMAwGA1UECBMFA2Fy
49 bmExDDAKBgNVBACTA2JnbDEOMAwGA1UEAxMOUy1XSU4yMDA4UjItQ0EwHhcNMjM5
50 MDA0MTMzOTU0WhcNMjU3MDA0MTMzOTU0WjBjMQswCQYDVQQGEwJlEOMAwGA1UEC
51 BMFA2FybmExDDAKBgNVBACTA2JnbDEOMAwGA1UEAxMOUy1XSU4yMDA4UjItQ0Ew
52 HhcNMjM5MDA0MTMzOTU0WhcNMjU3MDA0MTMzOTU0WjBjMQswCQYDVQQGEwJlEOM
53 AwGA1UECBMFA2FybmExDDAKBgNVBACTA2JnbDEOMAwGA1UEAxMOUy1XSU4yMDA4U
54 jItQ0EwHhcNMjM5MDA0MTMzOTU0WhcNMjU3MDA0MTMzOTU0WjBjMQswCQYDVQQG
55 EwJlEOMAwGA1UECBMFA2FybmExDDAKBgNVBACTA2JnbDEOMAwGA1UEAxMOUy1XSU4y
```

CUPS Certificate

Root Certificate



carriage return

CUPS证书捆绑包

通过WinSCP将之前创建的捆绑证书推送到CMS服务器。

Name	Size	Type	Name	Size	Changed	Rights	Owner
..		Parent director	c2wip.key	198 KB	5/16/2020 3:44:38 PM	r--r--r--	admin
cupbun.cer	4 KB	Security Certifi	CA.cer	198 KB	8/17/2021 9:36:00 PM	r--r--r--	admin
cucmbun.cer	4 KB	Security Certifi	CA222.cer	198 KB	8/17/2021 10:53:32 PM	r--r--r--	admin
			CA2222.cer	198 KB	8/24/2023 9:35:26 AM	r--r--r--	admin
			CB1.csr	198 KB	8/24/2023 2:58:43 PM	r--r--r--	admin
			CB1.key	198 KB	8/24/2023 2:58:43 PM	r--r--r--	admin
			CB222.cer	198 KB	8/17/2021 11:07:26 PM	r--r--r--	admin
			CB222.csr	198 KB	8/18/2021 4:21:01 AM	r--r--r--	admin
			CB222.key	198 KB	8/18/2021 4:21:01 AM	r--r--r--	admin
			CB2222.cer	198 KB	8/24/2023 9:35:26 AM	r--r--r--	admin
			cmm.csr	198 KB	4/20/2022 11:12:14 PM	r--r--r--	admin
			cmm.key	198 KB	4/20/2022 11:12:14 PM	r--r--r--	admin
			cms.cer	198 KB	9/21/2021 12:18:15 PM	r--r--r--	admin
			cms.lic	198 KB	10/26/2023 5:54:51 PM	r--r--r--	admin
			cucmbun.cer	198 KB	10/4/2023 7:18:03 PM	r--r--r--	admin
			cup.cer	198 KB	10/4/2023 3:51:03 PM	r--r--r--	admin
			cupbun.cer	198 KB	10/4/2023 7:22:10 PM	r--r--r--	admin
			Feb_09_2023_14_14.bak	518 KB	2/9/2023 2:13:12 PM	r--r--r--	admin
			Feb_10_2023_13_27.bak	518 KB	2/10/2023 1:25:05 PM	r--r--r--	admin

将证书捆绑包复制到CMS

使用callbridge ucm certs <cert-bundle>在Callbridge上分配TOMCAT捆绑证书。

```
wb3>
wb3> callbridge ucm certs cucmbun.cer
wb3>
```

Callbridge证书信任

使用callbridge imp certs <cert-bundle>在Callbridge上分配CUP服务器捆绑证书。

```
wb3>
wb3> callbridge imp certs cupbun.cer
wb3>
```

运行callbridge命令以检查是否已分配证书捆绑包。

```
wb3> callbridge
Listening interfaces      : a
Preferred interface      : none
Key file                  : wb2sept2.key
Certificate file         : wb3sept2.cer
Address                   : none
CA Bundle file           : bunsept22.cer
C2W trusted certs        : WMBUN.cer
Callbridge cluster trusted certs : none
Callbridge trust branding certs : none
UCM trusted certs       : cucmbun.cer
UCM verification mode    : enabled
IMPS trusted certs      : cupbun.cer
IMPS verification mode   : enabled
WC3 JWT Expiry in hours : 24
wb3>
```

Callbridge信任证书检查

以CM管理员身份登录CUCM，导航至User Management > User Settings > Access Control Group，点击Add New并创建访问控制组CUCM_AXL_Group。

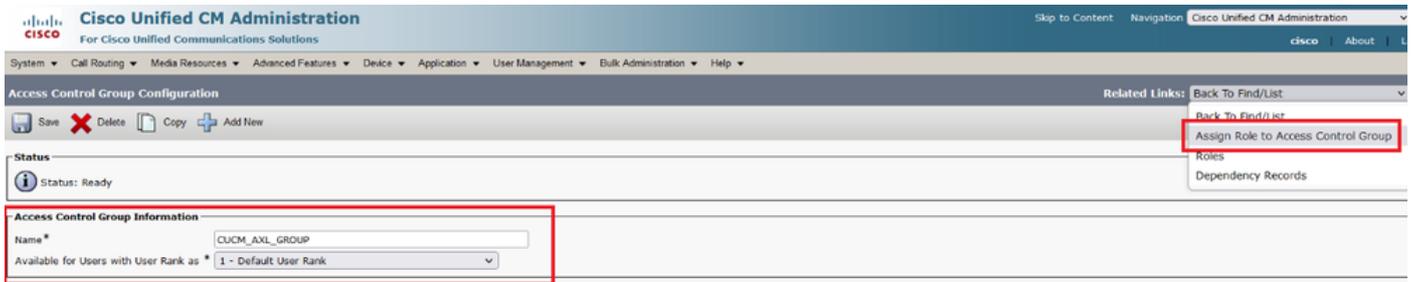
The screenshot shows the Cisco Unified CM Administration web interface. The breadcrumb navigation is User Management > User Settings > Access Control Group. The page title is "Access Control Group Configuration". There is a "Save" button at the top left. The "Status" section shows "Status: Ready". The "Access Control Group Information" section is highlighted with a red box and contains the following fields:

- Name*: CUCM_AXL_GROUP
- Available for Users with User Rank as*: 1 - Default User Rank

There is another "Save" button at the bottom left. A note at the bottom indicates that an asterisk (*) indicates a required item.

创建AXL组

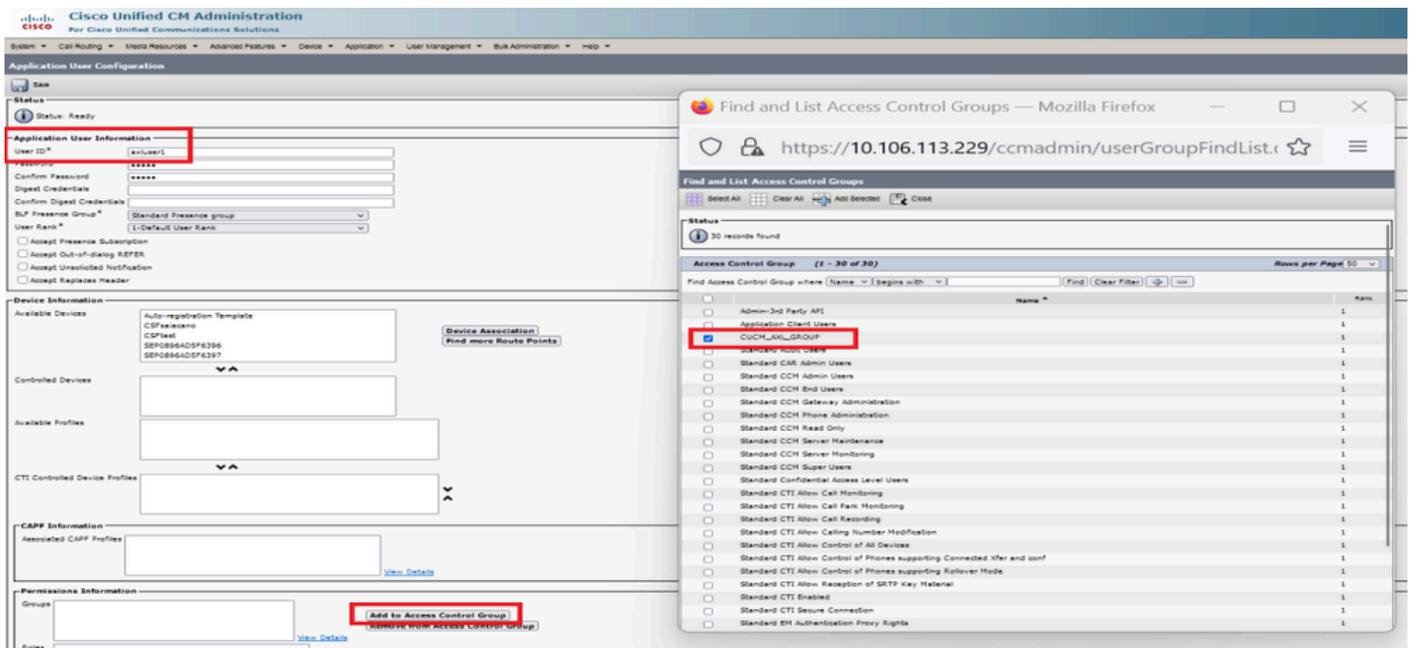
将角色Standard AXL API Access分配到之前创建的访问控制组。



为AXL组分配API访问权限

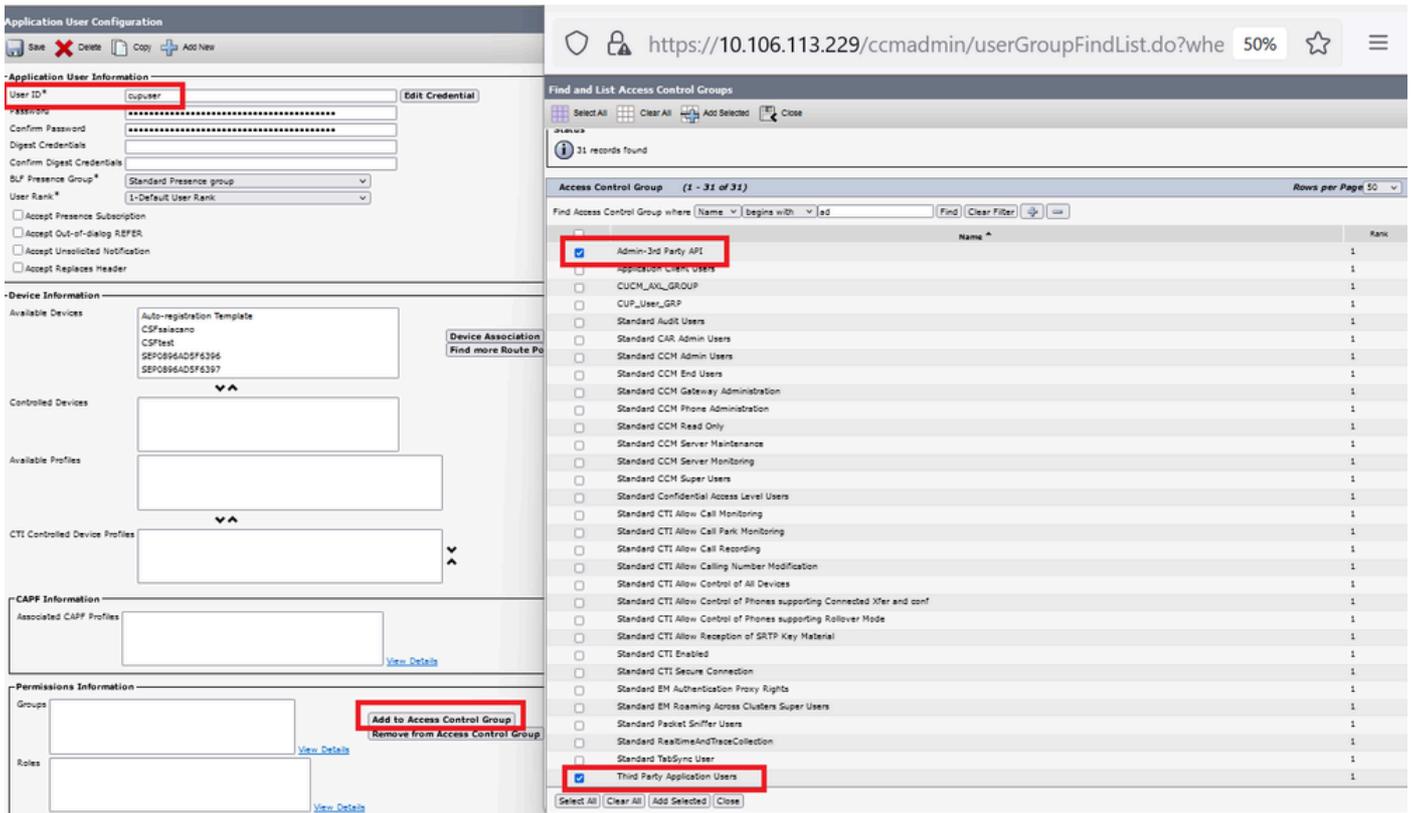


导航到User Management > Application User，点击Add New，然后创建应用程序用户AXLuser。然后，分配之前创建的访问控制组。



创建用户并分配AXL组

创建一个CUP用户并分配以下两个角色：Third Party Application Users和Admin-3rd Party API。



创建CUP用户

使用以下方法在CMS上启用CUCM和思科统一通信管理器IM和在线状态服务(IMPS)证书的证书验证：

callbridge ucm verify <enable/disable>

callbridge impv verify <enable/disable>

```

wb3>
wb3> callbridge ucm verify enable
wb3>
wb3>
wb3> callbridge impv verify enable
wb3>
  
```

Callbridge验证CUCM和CUPS证书

通过运行callbridge命令进行验证。

```

wb3>
wb3> callbridge
Listening interfaces      : a
Preferred interface     : none
Key file                 : wb2sept2.key
Certificate file        : wb3sept2.cer
Address                  : none
CA Bundle file          : bunsept22.cer
C2W trusted certs       : WMBUN.cer
Callbridge cluster trusted certs : none
Callbridge trust branding certs : none
UCM trusted certs      : cucmbun.cer
UCM verification mode  : enabled
IMPS trusted certs     : cupbun.cer
IMPS verification mode : enabled
WC3 JWT Expiry in hours : 24
wb3>

```

Callbridge命令检查

现在使用callbridge ucm add <hostname/IP> <axl_user> <presence_user>在CMS上添加CUCM完全限定域名(FQDN)和之前创建的用户AXL和CUPS。

axl_user = CUCM上的AXL用户

presence_user =之前创建的CUP用户

```

wb3>
wb3> callbridge ucm add <hostname/IP> <axl_user> <presence_user>
Only 1 UCM node is allowed. Delete existing UCM node to add a new UCM node.
wb3> callbridge ucm add cucm14test.test.com axluser cupuser
Enter axl user password:
Enter presence user password:
UCM node updated successfully. Restart the callbridge for changes to take effect.
wb3>
wb3>

```

将CUCM添加到Callbridge

现在，借助以下工具，验证CMS是否信任CUCM服务：

callbridge ucm <hostname/IP> axl_service status

callbridge ucm cucm14test.test.com axl_service status

```

wb3> callbridge ucm cucm14test.test.com axl_service status
Axl service available.
wb3>

```

Callbridge AXL状态

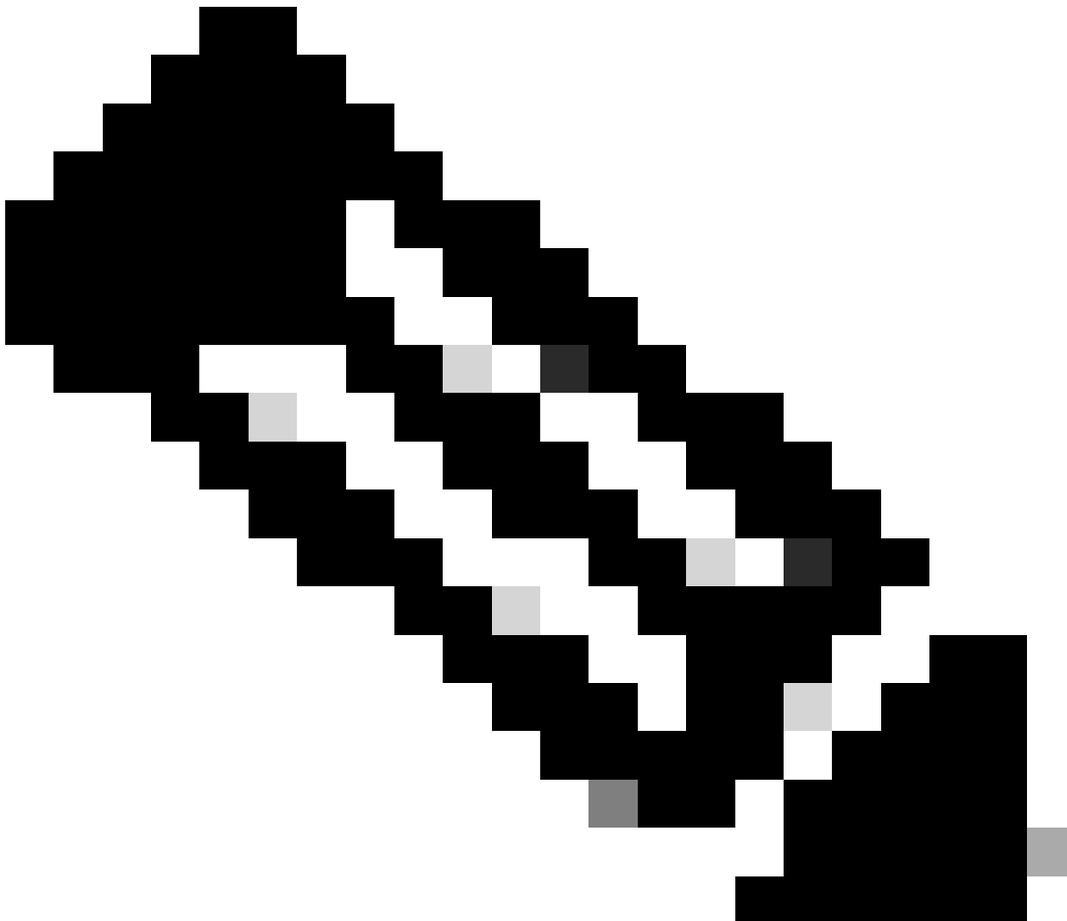
callbridge imps <hostname/IP> <presence_user> presence_service status

wb3> callbridge imps impnew.test.com cisco presence_service status

```
wb3>  
wb3>  
wb3> callbridge imps impnew.test.com cupuser presence_service status  
Enter presence user password:  
Presence service available.  
wb3>
```

Callbridge在线状态

可用的服务意味着CUCM和CMS在AXL和在线状态服务方面相互信任。



注意：

CUCM在CUPS上同步并更新了轻量级目录访问协议(LDAP)用户。用户必须具有相同的Web应用用户ID和Jabber JID，并且必须使用相同的用户ID登录Web应用，才能在Jabber上更新在线状态。

Webapp和Jabber客户端之间在线状态共享的CUCM特定配置

CUCM必须已配置LDAP。

LDAP 系统:

LDAP System Configuration

Status

-  Please Delete All LDAP Directories Before Making Changes on This Page
-  Please Disable LDAP Authentication Before Making Changes on This Page

LDAP System Information

- Enable Synchronizing from LDAP Server
- LDAP Server Type:
- LDAP Attribute for User ID:

CUCM LDAP配置1

LDAP 目录:

LDAP Directory Related Links: [Back to](#)

Save Delete Copy Perform Full Sync Now Add New

LDAP Directory Information

LDAP Configuration Name* ADDOT240

LDAP Manager Distinguished Name* administrator@test.com

LDAP Password*

Confirm Password*

LDAP User Search Base* OU=Acano,DC=test,DC=com

LDAP Custom Filter for Users < None >

Synchronize* Users Only Users and Groups

LDAP Custom Filter for Groups < None >

LDAP Directory Synchronization Schedule

Perform Sync Just Once

Perform a Re-sync Every* 7 DAY

Next Re-sync Time (YYYY-MM-DD hh:mm)* 2023-10-31 00:00

Standard User Fields To Be Synchronized

Cisco Unified Communications Manager User Fields	LDAP Attribute	Cisco Unified Communications Manager User Fields	LDAP Attribute
User ID	sAMAccountName	First Name	givenName
Middle Name	middleName	Last Name	sn
Manager ID	manager	Department	department
Phone Number	telephoneNumber	Mail ID	mail
Title	title	Home Number	homephone
Mobile Number	mobile	Pager Number	pager
Directory URI	mail	Display Name	displayName

CUCM LDAP配置2

LDAP 验证:

CUCM LDAP配置1 CUCM LDAP配置1 CUCM LDAP配置1

LDAP Authentication

Save

Status

Status: Ready

LDAP Authentication for End Users

Use LDAP Authentication for End Users

LDAP Manager Distinguished Name* administrator@test.com

LDAP Password*

Confirm Password*

LDAP User Search Base* OU=Acano,DC=test,DC=com

LDAP Server Information

Host Name or IP Address for Server* LDAP Port* 389 Use TLS

Add Another Redundant LDAP Server

CUCM LDAP配置3

从LDAP提取到配置了邮件ID的CUCM的用户 :

End User Configuration

Save Delete Add New Revoke Refresh Token

Status

Status: Ready

User Information

User Status: Active Enabled LDAP Synchronized User

User ID*: test

Self-Service User ID:

PIN: [Edit Credential](#)

Confirm PIN:

Last name*: test

Middle name:

First name: test

Display name: test test

Title:

Directory URI: test@test.com

Telephone Number:

Home Number:

Mobile Number:

Pager Number:

Mail ID: test@test.com

Manager User ID:

CUCM中的用户

在CUPS服务器上更新的CUCM用户：

The screenshot shows the 'Node User Assignment (impnew.test.com)' page. The left sidebar shows a tree view with 'impnew.test.com' selected and containing '(2) users'. The main content area shows a table of user assignments. The table has columns for User ID, First Name, Last Name, IM Address, Directory URI, Failed Over, Node, and Presence Redundancy Group. Two rows are visible, both highlighted with a red box: one for 'test' and one for 'test2'.

User ID	First Name	Last Name	IM Address	Directory URI	Failed Over	Node	Presence Redundancy Group
test	test	test	test@test.com	test@test.com		impnew.test.com	DefaultCUPSsubcluster
test2	test2	2	test2@test.com	test2@test.com		impnew.test.com	DefaultCUPSsubcluster

CUPS用户

CMS上也配置了同一LDAP目录。在CMS上提取并同步用户数据库。

Users

Filter

Name	Email	
Gogi	gogi@s.com	gogi@s.com
Saiacano	saiacano@s.com	Saiacano@s.com
cms user	cmsuser1@saml.com	cmsuser1@saml.com
go go	gogo@federation.com	gogo@federation.com
ivrman	ivrman@s.com	ivrman@s.com
joey	joey@s.com	joey@s.com
popo1 1	popo11@saml.com	popo11@saml.com
prashant	prkapur@s.com	prkapur@s.com
replication user	replicationuser@saml.com	replicationuser@saml.com
sai 1	sai1@saml.com	sai@saml.com
sai1 acano	sai1acano@federation.com	sai1acano@federation.com
saml superuser	ssosuperuser@saml.com	ssosuperuser@saml.com
sankar v		sankar@s.com
shakur 2pac	2pac@s.com	2pac@s.com
test test	test@test.com	test@test.com
testz	testz@test.com	testz@test.com
user 1	user1@saml.com	user1@saml.com

CMS用户

现在，由于您已验证CMS可以信任CUCM，因此您可以继续测试在线状态。

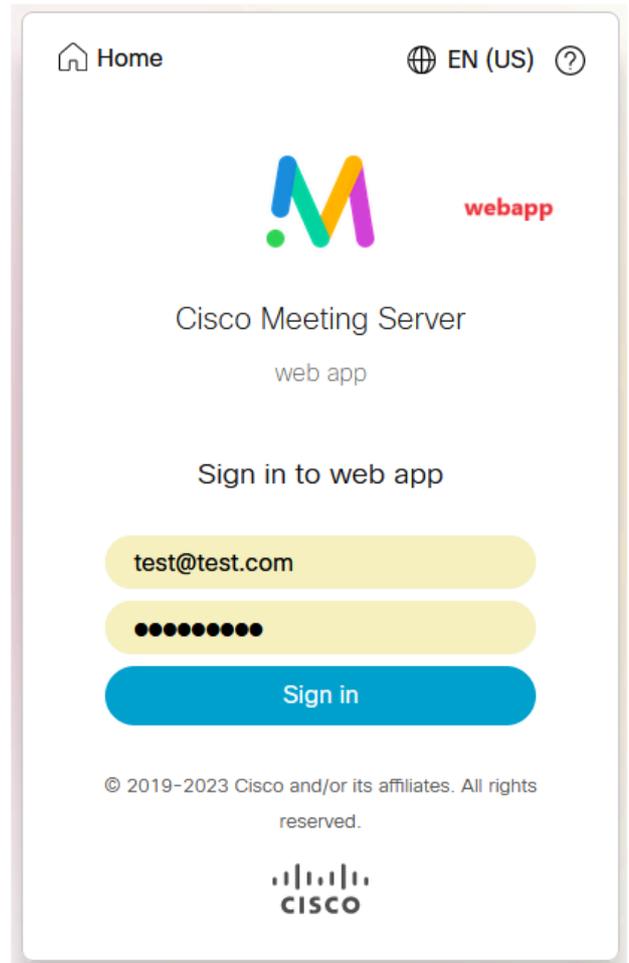
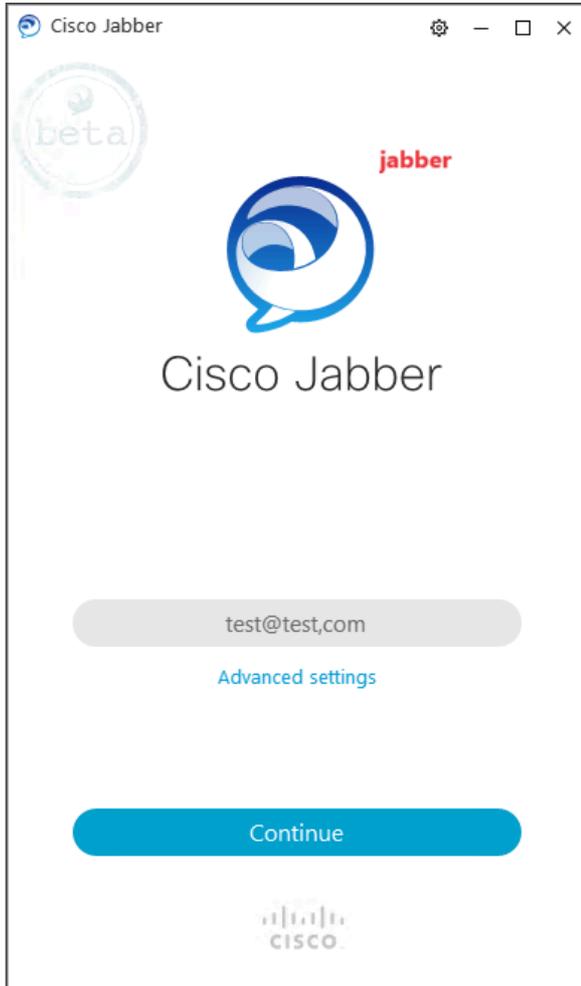
```

wb3>
wb3> callbridge ucm add <hostname/IP> <axl_user> <presence user>
Only 1 UCM node is allowed. Delete existing UCM node to add a new UCM node.
wb3> callbridge ucm add cucml4test.test.com axluser cupuser
Enter axl user password:
Enter presence user password:
UCM node updated successfully. Restart the callbridge for changes to take effect.
wb3>
wb3> █
  
```

将CUPS和CUCM添加到CMS

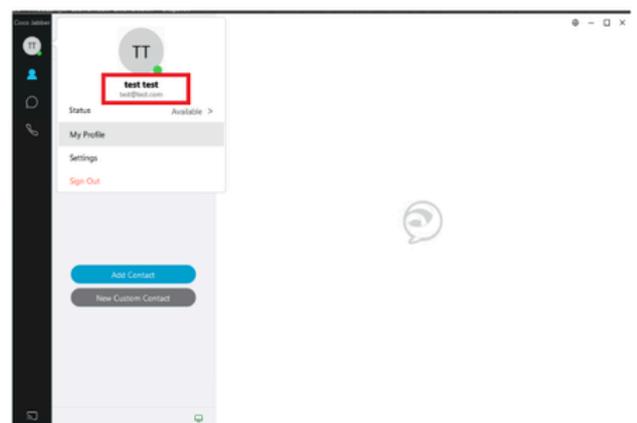
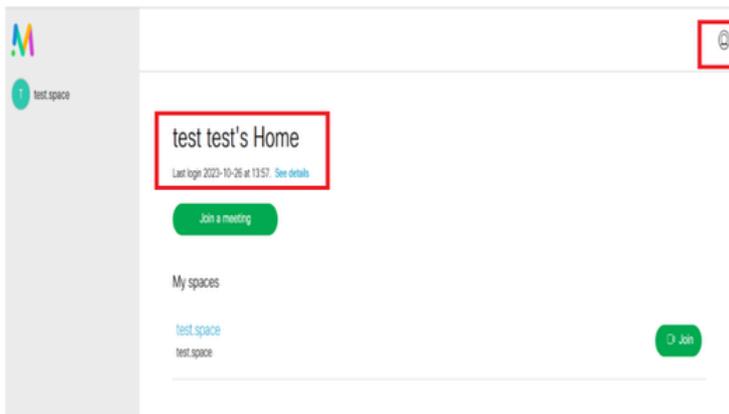
验证

使用同一用户（从同一LDAP同步）在两个客户端上签名：

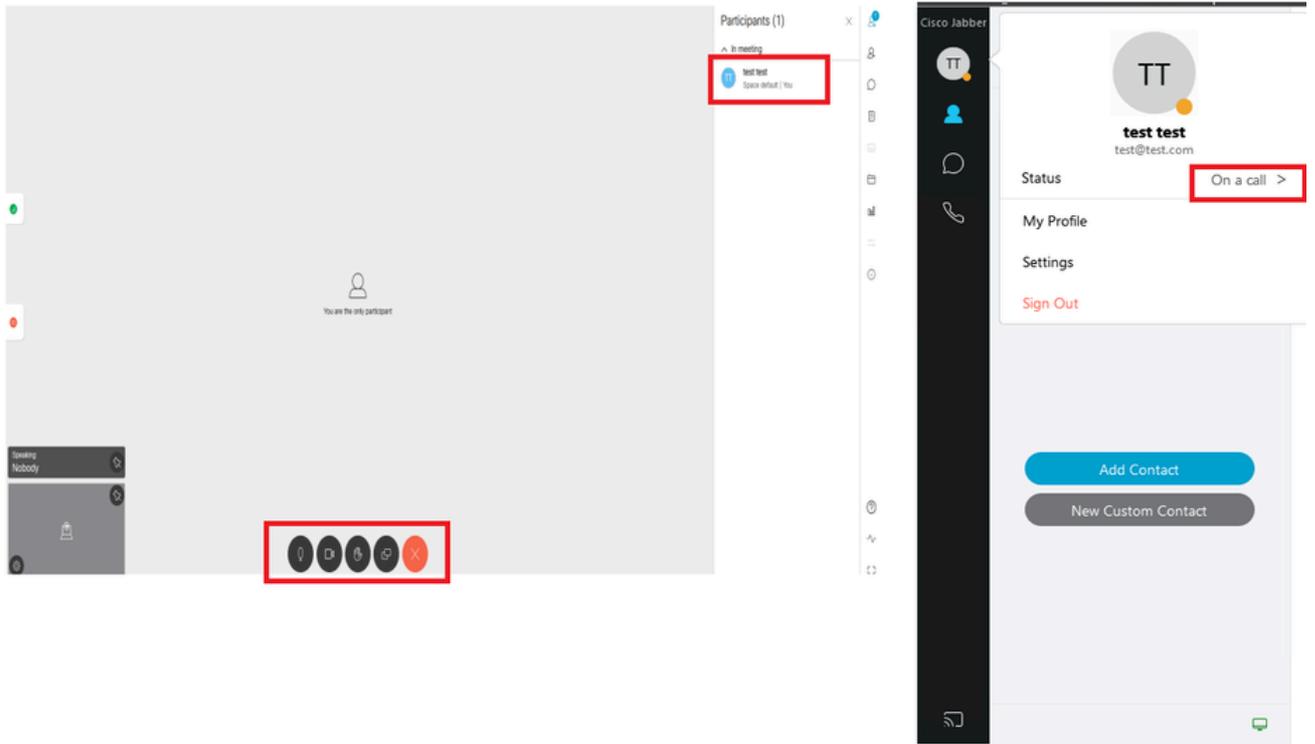


用户在Jabber和WebApp中登录

两个客户端都登录到同一用户 test@test.com。



呼叫前在Jabber和Webapp中的在线状态



从WebApp加入呼叫时在线状态更改

当Jabber用户登录Web应用并加入会议时，会议服务器会将Jabber状态更新为“在会议中，在呼叫中”，并在用户结束会议后恢复至其先前状态。例如，如果Jabber上的用户状态显示“可用”，则在Web应用会议中将其更新为“在会议中，在呼叫中”。用户离开会议后，Jabber状态再次设置为“可用”。如果Jabber用户在加入Web应用会议时正在另一个会议/呼叫中，则会议服务器不会更新Jabber状态。如果Jabber用户在加入Web应用会议之前将其状态设置为“免打扰”，则会议服务器不会更新Jabber状态。如果用户在Web应用会议期间随时手动更新Jabber状态，会议服务器不会覆盖手动更新的用户状态。

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