

CMS와 CUCM 간의 보안 통신 활성화

목차

[소개](#)

[사전 요구 사항](#)

[요구 사항](#)

[사용되는 구성 요소](#)

[배경 정보](#)

[구성](#)

[CMS와 CUCM/IMP 서버 간의 보안 통신 활성화](#)

[Webapp과 Jabber 클라이언트 간의 프레즌스 공유를 위한 CUCM 전용 컨피그레이션](#)

[다음을 확인합니다.](#)

소개

이 문서에서는 Cisco Meeting Server(CMS)와 Cisco Unified Communications Manager(CUCM) 간의 통신을 활성화하는 방법에 대해 설명합니다.

사전 요구 사항

요구 사항

다음 주제에 대한 지식을 보유하고 있으면 유용합니다.

- CMS 버전 3.8 이상
- CUCM 및 IM&P
- Jabber

사용되는 구성 요소

이 문서의 정보는 다음 소프트웨어 및 하드웨어 버전을 기반으로 합니다.

- CMS 버전 3.8
- CUCM 및 IM&P 14 SU (3)

이 문서의 정보는 특정 랩 환경의 디바이스를 토대로 작성되었습니다. 이 문서에 사용된 모든 디바이스는 초기화된(기본) 컨피그레이션으로 시작되었습니다. 현재 네트워크가 작동 중인 경우 모든 명령의 잠재적인 영향을 미리 숙지하시기 바랍니다.

배경 정보

이 문서에서는 Jabber/Web 앱 프레즌스 공유를 위해 CMS와 CUCM 간의 보안 통신을 설정하는 프

로세스에 대해 간략하게 설명합니다. CMS에서 웹 앱 미팅을 진행하는 동안 Jabber 사용자의 업데이트 상태를 구성하고 트러블슈팅하는 자세한 단계를 설명합니다. Jabber 사용자가 Cisco Meeting Server 웹 앱 미팅에 참여하는 동안 프레즌스 상태를 업데이트하기 위해 Meeting Server를 구성할 수 있습니다.

구성

CMS와 CUCM/IMP 서버 간의 보안 통신 활성화

OS 관리 페이지에서 CUCM에 로그인하고 TOMCAT 인증서로 이동하여 Security > Certificate Management 다운로드합니다.

Usage	Common Name	Usage	Type	Key Type	Distribution	Issued By	Expiration	Description
CAPF-trust	High_Assurance_SUDI_CA_0a6475524c08617c62	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_01a65af15ee9944e8e1	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_6dffac16e53663f3d9af4a66f355758	Identity	Self-signed	RSA	cucm14test.test.com	cucm14test.test.com	09/30/2028	Self-signed certificate generated by system
ITLRecovery	ITLRECOVERY_cucm14test_77c9a7891d688e201eff4e1e038db166	Identity	Self-signed	RSA	cucm14test.test.com	ITLRECOVERY_cucm14test	05/01/2028	Self-signed certificate generated by system
tomcat	cucm14test.test.com_36a79869000000000004	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_486beedc450be0fb40ff7716b999d3ad	Identity	Self-signed	EC	cucm14test.test.com	cucm14test-EC.test.com	09/30/2028	Self-signed certificate generated by system

CUCM Tomcat 인증서

OS 관리 페이지에서 Cisco Unified Presence Server(CUPS)에 로그인하고 CUPS 인증서로 Security > Certificate Management 이동하여 다운로드합니다.

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 인증서

Tomcat 및 Cup 인증서에 서명한 ROOT CA 인증서를 다운로드합니다.

Cisco Unified Operating System Administration

Navigation: Cisco Unified OS Administration

Show Settings Security Software Upgrades Services Help

Certificate List

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

Status

3 records found

Certificate List (1 - 5 of 5)

Find Certificate List where Certificate begins with tomcat-trust

Certificate	Common Name/Common Name_SerialNumber	Usage	Type	Key Type	Distribution	Issued By	Expiration	Description
tomcat-trust	cuom1dtest-EC.test.com 486baed0456ba0b40f7716999d41ad	Trust	Self-signed	EC	cuom1dtest.test.com	cuom1dtest-EC.test.com	09/30/2028	Trust Certificate
tomcat-trust	S-WIN2008R2-CA_04736d12017d07d7f59a9a7381b2d388e	Trust	Self-signed	RSA	S-WIN2008R2-CA	S-WIN2008R2-CA	09/29/2028	Signed Certificate
tomcat-trust	impnew-impnw.com 38082e2e380808e3801a33083d05883	Trust	Self-signed	RSA	impnew.test.com	impnew-impnw.com	09/30/2028	Trust Certificate
tomcat-trust	cuom1dtest.test.com 26a73869200002000204	Trust	CA-signed	RSA	cuom1dtest.test.com	S-WIN2008R2-CA	10/04/2025	Trust Certificate
tomcat-trust	impnew-EC.test.com 729ac9d72e3fe922487583a1071417e	Trust	Self-signed	EC	impnew.test.com	impnew-EC.test.com	09/30/2028	Trust Certificate

Tomcat의 루트 인증서

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)

Find Certificate List where Certificate begins with cup-trust

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

CUPS용 루트 인증서

CUCM 인증서의 인증서 번들을 만듭니다. 번들 인증서는 서버 인증서를 맨 위에 놓고 중간 인증서(any)를 가운데에 두고 ROOT 인증서를 맨 아래에 두고 캐리지 리턴을 1개 추가하는 것을 의미합니다.

다음은 BUNDLE 인증서의 샘플입니다.

```

1 -----BEGIN CERTIFICATE-----
2 MIIFqgCCBjOgAwIBAgIKNqYeYQAAAAABDANBqkqhkiG9w0BAQsFADBBMRMwEQQYK
3 CZImiZPyLQGBGRYDY29tMREwDwYKCC2ImiZPyLQGBGRYBUzEXMBUGA1UEAwdMOUy1X
4 SU4yMDA4UjItQ0EwHhcNMjMxMDA0MTMyNzE2WncNMjUxMDA0MTMzNzE2WjBXMQsw
5 CQYDVQQGEwJlZEMMAQGA1UECMBDQ2FyMzQwYyYDVQVHwEwNpbmQxZjAMBGNVBAOT
6 BWNpc2NvMRswGgYDVQQDEkxNjE2X2N0Z2XN0LnRlc3QuY29tMIIBIjANBgkqhkiG
7 9w0BAQEFAAOCAQ8AMIIBCgKCAQEAAoYE9an27hV05JUwAEwutEy5RA4WwaxIvkqEI
8 ah0fDpRI2GgY+mrH9q70hAvG3uDYBtBHKYJpkYepeULNjZkh07a39IeeJMG8/q28
9 SckZ+j1VIyw8gt+cnG6E6ibCD+HNdtKfwL0ipSdlTnlieX6DsF05Z1K4Alm4yrsN
10 +b0/wSikfV0+ValyC90nbTCUkIKgVqvqGsdidb6TRfhi+w4RD+0NgOBjWHqcXX
11 WXgp9JWYQdy7YeX8Y2kljBAyRhSPfa35hojy470hE91N8axmHRm2m5htqEe0kSOy
12 2o09pj7f7Aq1waVAFVpQCxkl2sXtZARHpGdswpm4M8r5MoXPtWIDAQABo4ICjTCC
13 AokwDgYDVR0PAQH/BAQDAgWgMB0GA1UdJQQWMBQGCCsGAQUFBwMBBggrBgEFBQcD
14 AjAoBgNVHREEITAfghh0ZXN0LmNvbYITy3VjbTE0dGVudC50ZXN0LmNvbTAdBgNV
15 HQ4EFgQUTMtpsuTu05EBH2wgGf6qii7M38wHwYDVR0jBBgwFoAUA6L6fIQ4Vp+QI
16 UDz/X6MwFAVhJ4IwgcgGA1UdHwSBwDCBwTCBuqCBt6CBtIaBsWakYXA6Ly8vQ049
17 Uy1XSU4yMDA4UjItQ0EwQ049V010MjAwOFIyLENOPUNEUCxDTj1lQdWJsaWMM1MjBL
18 ZXklMjBTZXJ2aWNlcykDTj1lTXJ2aWNlcykDTj1lDb25maWdlcmF0aW9uLERDPVMS
19 REM9Y29tP2N1cnRpZmljYXRlUmV2b2b2NhdG1vbkkxc3Q/YmFzZT9vYmplY3RDdbGFs
20 csljUkxEXN0cmliidXRpb25Qb2ludDCBugYIKwYBBQUHAQEEdga0wgaowgacGCCsG
21 AUFBAChchoGABGRhcDovLy9DTj1lTLVdJTj1lMDhSM1lDQ3xDTj1lBSUESQ049UHVl
22 bGljJT1wS2V5JT1wU2VydmljZXMsQ049U2VydmljZXMsQ049Q29uZmlndXJhdG1v
23 bixEQslTLERDPWNvbT9jQUN1cnRpZmljYXRlP2Jhc2U/b2JqZWN0Q2xhc3M5Y2V5
24 dG1maWNhdG1vbkkfIdGhvcml0eTA9BgkkrBgEEAYI3FQcEMDAuBiYrBgEEAYI3FQcE
25 yrsWhcnoHIXEjS6B5uhFhsusPgeGpusehts3XAIBZAIbAjAnBgkkrBgEEAYI3FQcE
26 GjAYMAoGCCsGAQUFBwMBMAoGCCsGAQUFBwMCMAoGCCsG8Ib3DQEBCwUAA4IBAQCQ
27 hREe6ZJHVx1N7JNgY0RE4V9S3FiyQPIVYFVEdaKAL+AfvlS214D7ohFIjL5rSA
28 ThWiFFS1wmeA5Cjlg9gi2leHI2uDuor6XEXKWB/bkC9BXoDkRMFV7bh9CoosFmXk8
29 r6xeN7H9cAHAs3wFILUnAip1KF/7odBkNUSgT39NJAL1UgVFPt81r6lk8OR5TAYI
30 9vs4dw5ocQzs7Z0Av8ZDKNFDTsWoOGtU2dCMIXasJ05ALmMBtagqYBNj16URkR8i
31 f2sOkb+NdPZD4XAE00tW8rji124ukr7JBgeWYsjsD2tsZsJgslMprNaVuMDh280Q
32 JQFAiCOp3GgYjkJBZcH2
33 -----END CERTIFICATE-----
34 -----BEGIN CERTIFICATE-----
35 MIIDXTCCAkWgAwIBAgIQDXWNEgF8t79Jqac4Gz04jjANBgkqhkiG9w0BAQsFADBB
36 MRMwEQQYKCC2ImiZPyLQGBGRYDY29tMREwDwYKCC2ImiZPyLQGBGRYBUzEXMBUGA1UE
37 AwdMOUy1XSU4yMDA4UjItQ0EwHhcNMjMxMDA0MTMyNzE2WncNMjUxMDA0MTMzNzE2WjBXMQsw
38 WjBEMRMwEQQYKCC2ImiZPyLQGBGRYDY29tMREwDwYKCC2ImiZPyLQGBGRYBUzEXMBUG
39 A1UEAwdMOUy1XSU4yMDA4UjItQ0EwEwgEiMA0GC8qG8Ib3DQEBAQUAA4IBDwAwggEK
40 AoIBAQCXa6tjSyoUyn6GkoSbe98SasKRUNGbCORKnI41tWEiX0vPITEsqZUPRJq4
41 7C8useeDiJFUBWAY9e8F4nm+VhGSEKqkwekrlJAF1mV4hkypkR0Wz64b4y04Ln8e
42 3E/F6/SXA6HOqHDylq1QMWSA/PXB441GKbSnfA4pjTB8nMP5WL+iBruYH9tX6EJ
43 IJq5Fe+RZYNH/mLuB+0Qf1OCn4sqsxZGf8DxhJNHU+2m3q7h319exxioDcwiVwZO
44 xqUKrvBs6jBtOg4Kvs3sa4AHyP91SAA2vp42MwtBdis8O3wx+vm/HoVr0fHum/W1
45 Z92iwR9Jx44tKoJHVpBwMvnrK7TrAgMBAAGjUTBPMAsGA1UdDwQEAwIBhJAPEgNV
46 HRMBAf8EBTADAQH/MB0GA1UdDgQWBBERovp8hDhWn5AhQ0s9fosAUBWEngjAQBgkr
47 BgEEAYI3FQEEAwIBADANBgkqhkiG9w0BAQsFAAOCAQEA5nsa91K4BISCAuBgMMe
48 YSPEXl5kEXPQcFtJt1FjnC5uTC4IOMQQFfuralBQfr4DokDXK5892npt5DAFors5
49 k60GpH1bRPBaoxJhR0Ta3imL6yAZ0f2o380nrVRDZKlug/1VeXF/2hlTeZc73utt
50 k5sqewqTQ04NHrBp0Udybmpf2L5BjhlctoH490PI0HEBmVDE0WALKXliqsuEzrmm
51 mrl0MRRlS2ZBpX2W3qw90IrmPW13fde2kE2S1DvuaNcc7B8W0hgWT3HnyuMTyZi
52 b6Yf7hb5F3Z3OpHFU1b222tqk4qouEigyaaUZaLcVhV5UdBCCvwyU19yU6+EscnM
53 Ww==
54 -----END CERTIFICATE-----
55

```

Server Certificate on TOP

CUCM TOMCAT CERT

Root certificate at bottom



just 1 carriage return

Tomcat 인증서 번들

CUPS 인증서의 인증서 번들을 생성합니다. 번들 인증서는 서버 인증서를 맨 위에 놓고 중간 인증서(any)를 가운데에 두고 ROOT 인증서를 맨 아래에 두고 캐리지 리턴을 1개 추가하는 것을 의미합니다.

```
1 -----BEGIN CERTIFICATE-----
2 MIIFqTCCBjGgAwIBAgIKNrMm8gAAAAAABTANBgkqhkiG9w0BAQsFADEBMMRMwEQYK
3 CZImiZPyLgQBGRYDY29tMREwDwYKZCZImiZPyLgQBGRYBUzEXMBUGA1UEAxMOUy1X
4 SU4yMDA4UjItQ0EwHhcNMjM5MDA0MTMzOTU0WhcNMjUzMDA0MTMzOTU0WjBjMQsw
5 CQYDVQQGEwJtJjEOMAwGA1UECBMFA2FybmExDDAKBgNVBACTA2JnbDEOMAwGA1UE
6 CmFY21sY28xDDAKBgNVBAwTA2t0c3EYMBYGA1UEAxMPaW1wbmV3LnRlc3QuY29t
7 MIIIBjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAKHb9jzWYhi6i4IkSx8hC
8 Z1USLZHBQZ8RDQw1vT3CFGZut+dayK9KshYtsOAhRfWLPWgGtABJWMr98f+DM0RG
9 FsmCtNo1ZsEOq3QCR6b/kbQuC+6LhhgIM8I448tLaAF4neZ/5dmCUSzJNCpnbpH
10 EbqbXKkH8W42BZLeLP0T2savk5V+vriGuMjV299vGrEu49kB0EN2M+mnfcnf20xT5
11 wtFqCY9jijKSKC40cu6iJ88A7Hi/yJQJ1NeUmnLpGpF/HKUrclu5pBdfiV1EXBkS
12 LX2bm49PFGRS0guxJZVC457vmAgACgKvwE5s3HvW1t3Tp1WE4AZtSn3z9tsYSOC7
13 bwIDAQABO4ICfzCCAnsWHDYDVR01BBYwFAYIKwYBBQUHAWEGCCsGAQUFBwMCMA4G
14 A1UdDwEe/wQEAwIFoDAAEgNVHREEEzARgg9pbXBu2XcudGVsdC5jb20wHQYDVR0O
15 BBEYFOxvmV/jdcIDMEVOjzWR/yRAo9ktMB8GA1UdIwYMBaAFGi+nyEOfafkCFA7
16 Pl+jMBQFYSeCMIHIBgNVHR8EgcAwgb0wgbqggbbeggb3GgbFsZGFwOi8vL0NOPVMe
17 V01OMjAwOFIyLUNBLENOFVdJTjIwMDhSMixDTj1DRFAzQ049UHVibGljJTJwS2Vt
18 JTIwU2VydmljZXMzQ049U2VydmljZXMzQ049Q29uZmlndXJhdGlvbixEQs1TLERD
19 FWNvbT9jZkxJ0aWZpY2F0ZVJldm9jYXRpb25MaXN0P2Jhc2U/b3JqZWN0Q2xhc3M9
20 Y1JMRGlzdHJpYnV0aW9uUG9pbmQwgb0GCCsGAQUFBwEBB1IGtMIGqMIGnBggrBgEF
21 BQcwAoaBmmxkYXA6Ly8vQ049Uy1XSU4yMDA4UjItQ0EzQ049QU1BLENOFVBlYmcp
22 YyUyMEtleSUyMFN1cnZpY2VsLENOPVN1cnZpY2VsLENOPUNvbmZpZ2VYXRpb24s
23 REM9UyxEQs1jb20/Y0FDZkxJ0aWZpY2F0ZT9iYXN1P29iamVjdENsYXNsPWN1cnRp
24 ZmljYXRpb25EeXRob3JpdHkxPQYJKwYBBAGCNxUHBDAwLgYmKwYBBAGCNxUIhcq7
25 FoXJ6ByFwY0ugeboRyBLSz4HhqbRbHobc91wCAWQCAQIwJwYJKwYBBAGCNxUKBBow
26 GDAKBggrBgEFBQcDATAKBggrBgEFBQcDAjANBgkqhkiG9w0BAQsFAAOCAQEAUJdy
27 3mM0FwGwLW4hiShn/XCPChLMPG54IE+EINTBqsoqxs12XLl1do0JjNAI7Xd+FoAGQ
28 UXRjRN3q26yiY5C2itLe/vAplC5yN6krL/8PEBnmopubQVdqRUCbn4r21iNV
29 sNcBrUeOY0Vr2/EVeB0bVh1DGowfrxMj59v40k15wYc88h0bopL1I/Sc2mpw5m2Z
30 R5nyyx3XfjkmZSvWmO+Suz7dbJu2zfI6sw0EhF12tRRQHCsq9n9uQDSUXCjQFdq
31 Y3A+LJGwL1AuPt4+sqOxjYKYNP8m8+WIBIUEv+oXAOVbz8ffQFoPKYf/ZmWxBJRP
32 2v/At0ns31UdcKFUPw==
33 -----END CERTIFICATE-----
34 -----BEGIN CERTIFICATE-----
35 MIIDXTCCAkWgAwIBAgIQDXWNEgF8t79Jqac4Gz04jjANBgkqhkiG9w0BAQsFADEB
36 MRMwEQYKZCZImiZPyLgQBGRYDY29tMREwDwYKZCZImiZPyLgQBGRYBUzEXMBUGA1UE
37 AxMOUy1XSU4yMDA4UjItQ0EwHhcNMjM5MDA0MTMzOTU0WhcNMjUzMDA0MTMzOTU0WjBjMQsw
38 WjBEMRMwEQYKZCZImiZPyLgQBGRYDY29tMREwDwYKZCZImiZPyLgQBGRYBUzEXMBUG
39 A1UEAxMOUy1XSU4yMDA4UjItQ0EwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEK
40 AoIBAQCXa6tj8yOUyn6GkoSbe988Sa3KrUNGBCORKnI41tWEiX0vPITEsqZUPRJq4
41 7C8useeDiJPUBWAY9e8F4nm+VhGSEKqkwekr1JAF1mV4hkypxR0Wz64b4yO4Ln8e
42 3E/F6/SXA6HOqHDylq1QMWSA/PXB441GKb8nfa4pjTBSnMP5WL+iBruYHp9tX6EJ
43 IJq5Fe+RZYnh/mLUB+0Qf1OCn4sqxszGf8DxhJNHU+2m3q7h319exxioDcwiVwZO
44 xqUKRvBs6jBtOg4Kvs3sa4AHyP91SAA2vp42MwtBdis803wx+vm/HoVr0fHum/W1
45 Z92iwR9Jx4tK0JHVpBwMvnrK7TrAgMBAAgJUTBPMAsGA1UdDwQEAwIBhjaFBGjNV
46 HRMBAF8EBTADAQH/MB0GA1UdDgQWBRRovp8hDhWn5AhQOz9fozAUBWEngjAQBgkr
47 BgEEAYI3FQEEAwIBADANBgkqhkiG9w0BAQsFAAOCAQEAU5nsa91K4BISCAuBgmMe
48 YSPEXl5kExPQCfTJt1FjnCSuTC4IOMQQFfuralBQfr4DokDXK5892npt5DAFor5
49 k60GpHlBRPBAoxJhK0TaSimL6yAZ0fZ0380nrVRDZKlug/lVeXF/2h1TeZc73utt
50 k5sqewqTQO4NhrBp0Udybmf2L5BJh1ctoH490PIOHEbmVDE0WALEKXliqsuE2rmm
51 Mr10MRRLs22BpX2WSqw90IrmPWI3fds2kE2S1DvuaNcc7B8W0hgWT3HxnyuMTyZi
52 b6Yf7hb5F2ZSOpHFU1bZ22tqk4qouEigyoaUZaLcVhV5UdBCCvwyU19yU6+EscnM
53 Ww==
54 -----END CERTIFICATE-----
55
```

CUPS Certificate

Root Certificate



carriage return

CUPS 인증서 번들

이전에 생성한 번들 인증서를 WinSCP를 통해 CMS 서버에 푸시합니다.

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

CMS에 인증서 번들 복사

를 사용하여 Callbridge에 TOMCAT 번들 인증서를 callbridge ucm certs <cert-bundle> 할당합니다.

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

Callbridge 인증서 신뢰

를 사용하여 Callbridge에 CUP 서버 번들 인증서를 callbridge imps certs <cert-bundle> 할당합니다.

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

인증서 번들이callbridge 할당되었는지 확인하려면 명령을 실행합니다.

```

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>

```

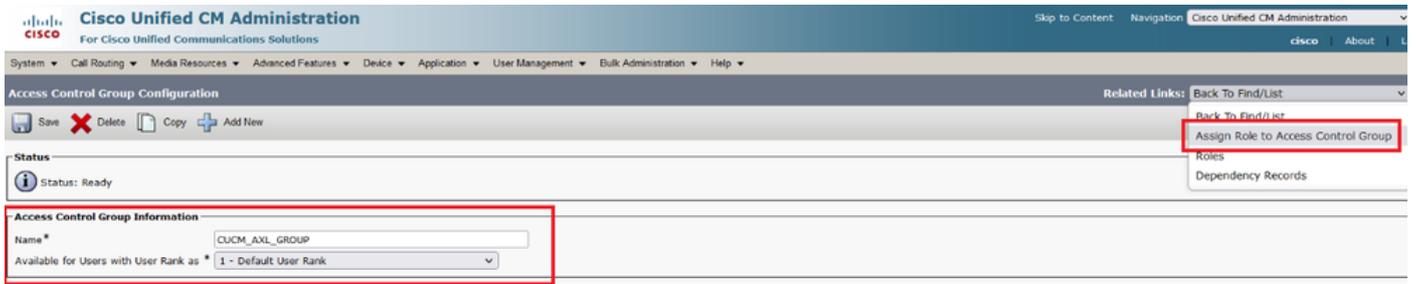
Callbridge 트러스트 인증서 확인

CUCM Administrator로 CUCM에 로그인하고 로 이동하여 User Management > User Settings > Access Control Group Add New 을 클릭한 다음 Access Control Group(액세스 제어 그룹)을 생성합니다CUCM_AXL_Group.

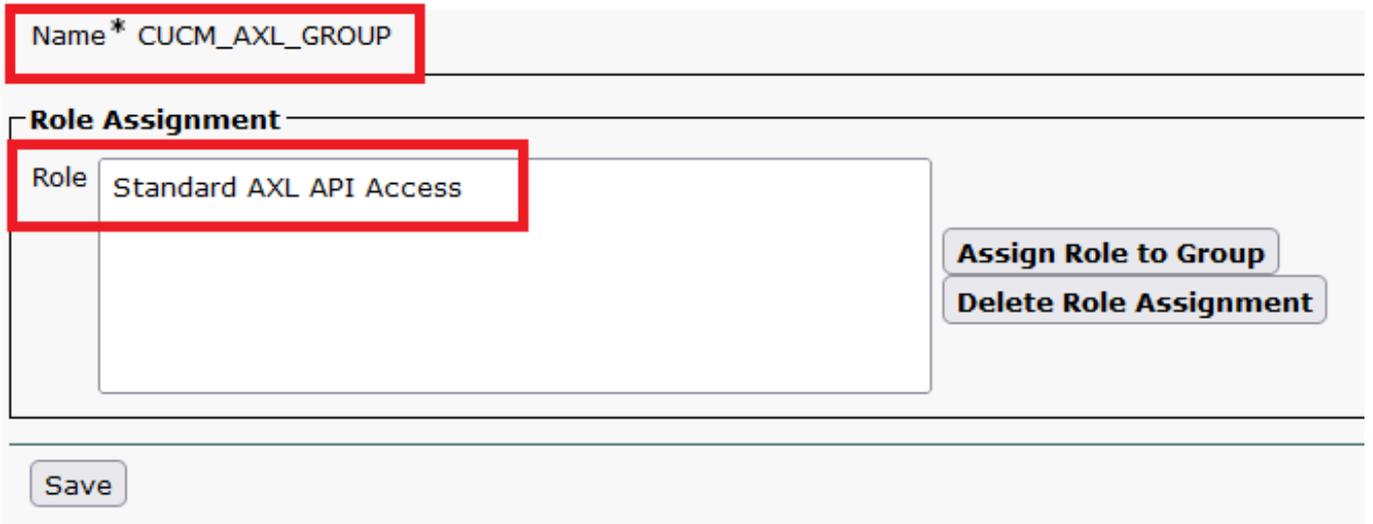
The screenshot shows the Cisco Unified CM Administration interface. The breadcrumb navigation is: System > Call Routing > Media Resources > Advanced Features > Device > Application > User Management > Bulk Administration > Help. The page title is 'Access Control Group Configuration'. There is a 'Save' 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*' with the value 'CUCM_AXL_GROUP' and 'Available for Users with User Rank as *' with a dropdown menu set to '1 - Default User Rank'. There is another 'Save' button at the bottom left. A note at the bottom left states '* - indicates required item.'

AXL 그룹 생성

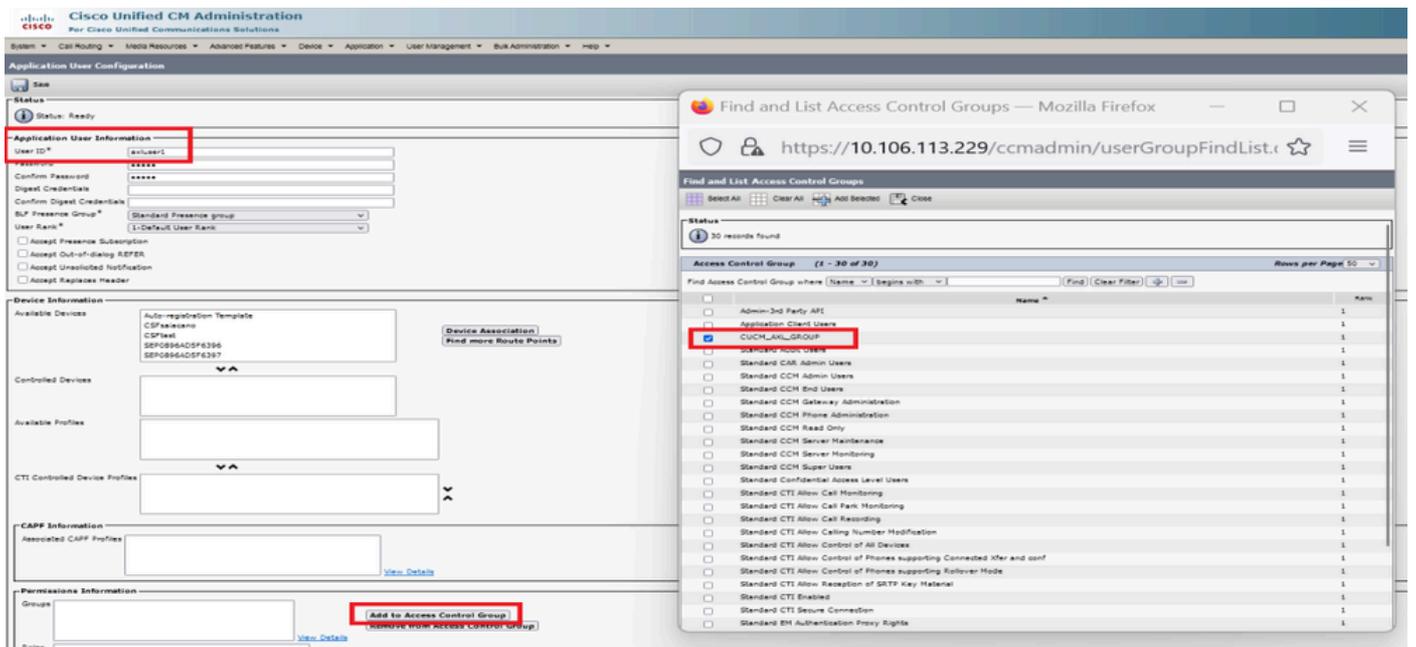
이전에 Standard AXL API Access 생성한 액세스 제어 그룹에 역할을 할당합니다.



AXL 그룹에 API 액세스 할당

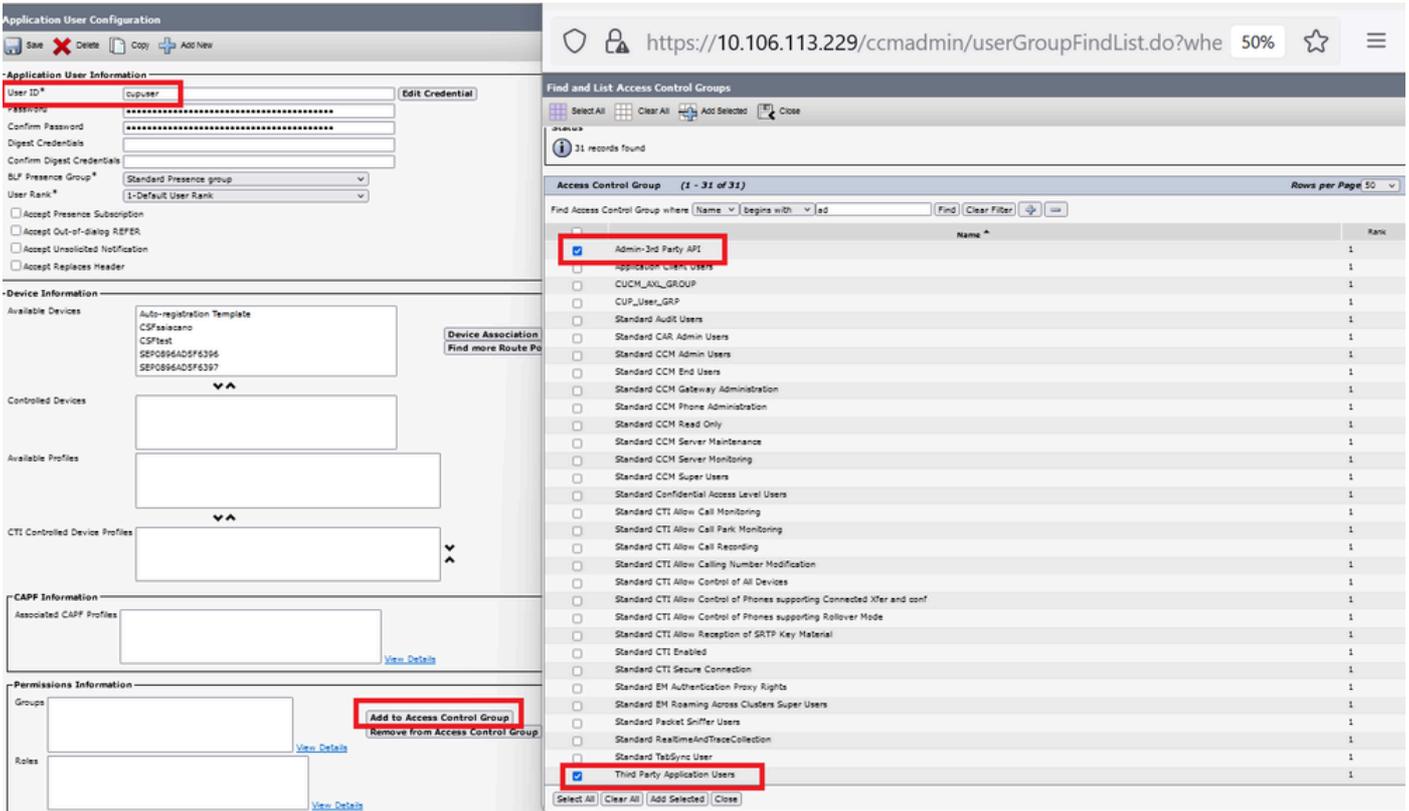


Application User(애플리케이션 사용자)로 User Management > Application User이동하여 을 클릭하고Add New 생성합니다AXLuser. 그런 다음 이전에 생성한 액세스 제어 그룹을 할당합니다.



사용자 생성 및 AXL 그룹 할당

CUP 사용자를 만들고 Third Party Application Users 및Admin-3rd Party API 두 가지 역할을 할당합니다.



CUP 사용자 생성

다음을 사용하여 CMS에서 CUCM 및 Cisco Unified Communications Manager IM & Presence Service(IMPS) 인증서에 대한 인증서 확인을 활성화합니다.

```
callbridge ucm verify <enable/disable>
```

```
callbridge impes verify <enable/disable>
```

```
wb3>
wb3> callbridge ucm verify enable
wb3>
wb3>
wb3> callbridge impes verify enable
wb3>
```

Callbridge CUCM 및 CUPS 인증서 확인

명령을 실행하여 callbridge 확인합니다.

```

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 명령 검사

이제 CMS에서 callbridge ucm add <hostname/IP> <axl_user> <presence_user>를 사용하여 이전에 생성한 CUCM FQDN(Fully Qualified Domain Name) 및 사용자 AXL 및 CUPS를 추가합니다.

axl_user = CUCM의 AXL 사용자

presence_user = 이전에 생성한 CUP 사용자

```

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>

```

Callbridge에 CUCM 추가

이제 CMS가 다음과 같은 방법으로 CUCM 서비스를 신뢰하는지 확인합니다.

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 상태

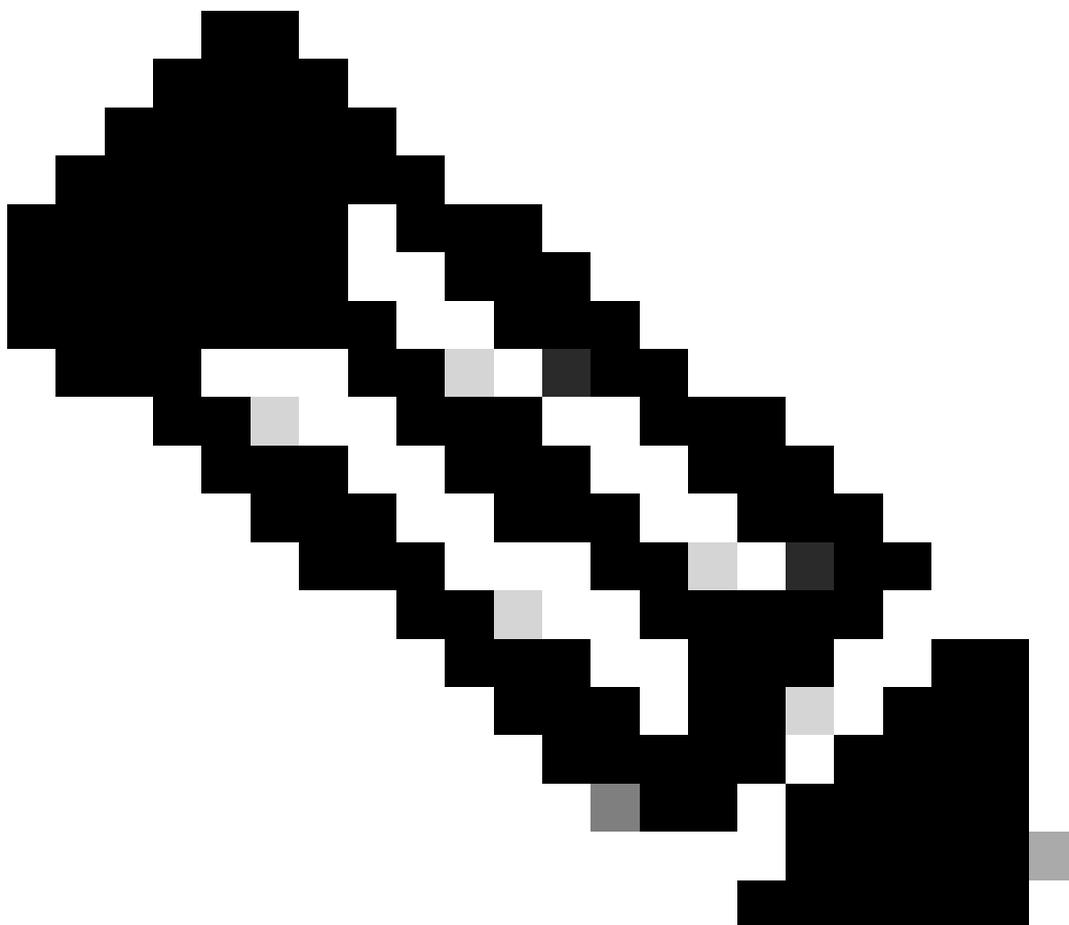
callbridge imps <hostname/IP> <presence_user> presence_service status

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 프레즌스 상태

사용 가능한 서비스는 CUCM과 CMS가 AXL 및 프레즌스 서비스에 대해 서로 신뢰한다는 것을 의미합니다.



참고:

CUCM에 LDAP(Lightweight Directory Access Protocol) 사용자가 동기화되어 있으며 CUPS에서도 업데이트됩니다. 사용자는 동일한 웹 앱 사용자 ID와 Jabber JID를 가져야 하며, Jabber에서 프레즌스를 업데이트하려면 동일한 사용자 ID로 웹 앱에 로그인해야 합니다.

Webapp과 Jabber 클라이언트 간의 프레즌스 공유를 위한 CUCM 전용 컨피그레이션

CUCM에 LDAP가 구성되어 있어야 합니다.

LDAP 시스템:

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: Microsoft Active Directory
- LDAP Attribute for User ID: sAMAccountName

CUCM LDAP 컨피그레이션 1

LDAP 디렉터리:

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 컨피그레이션 2

LDAP 인증:

CUCM LDAP 컨피그레이션 1 CUCM LDAP 컨피그레이션 1 CUCM LDAP 컨피그레이션 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* Use TLS

389

Add Another Redundant LDAP Server

CUCM LDAP 컨피그레이션 3

LDAP에서 Mail-ID가 구성된 CUCM으로 사용자를 가져옵니다.

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

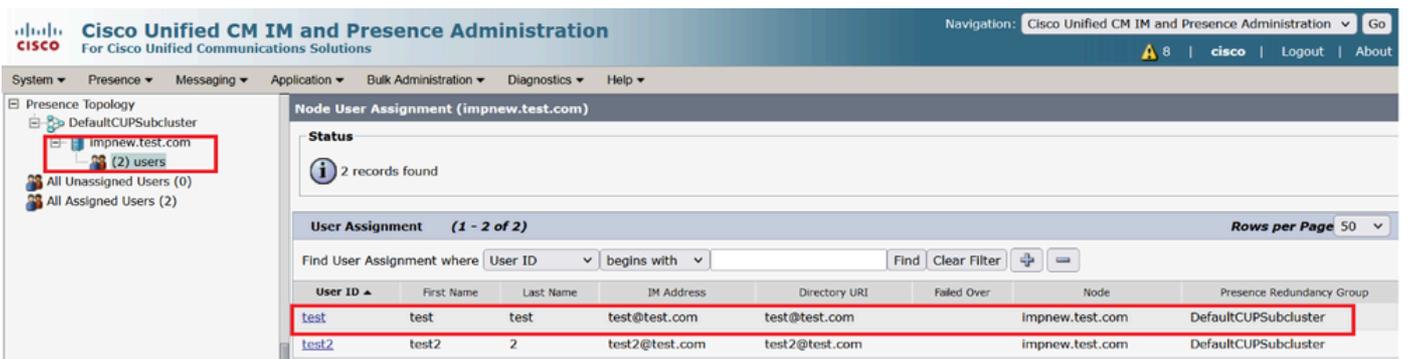
Pager Number

Mail ID

Manager User ID

CUCM의 사용자

CUCM 사용자가 CUPS 서버에서 업데이트됨:



The screenshot shows the Cisco Unified CM IM and Presence Administration interface. The left sidebar shows the 'Presence Topology' with 'impnew.test.com' selected, containing '(2) users'. The main content area is titled 'Node User Assignment (impnew.test.com)' and shows a status of '2 records found'. Below this is a table of user assignments:

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 사용자

동일한 LDAP 디렉토리가 CMS에도 구성됩니다. 사용자 데이터베이스가 CMS에서 풀링되고 동기화됩니다.

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 사용자

이제 CMS가 CUCM을 신뢰할 수 있음을 이미 검증했으므로 프레즌스 테스트를 진행할 수 있습니다.

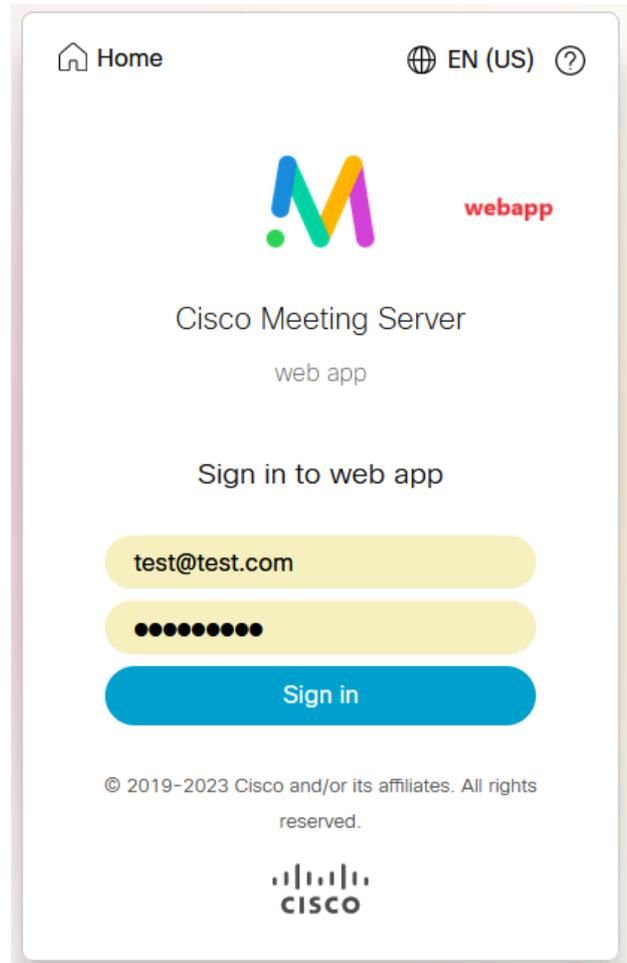
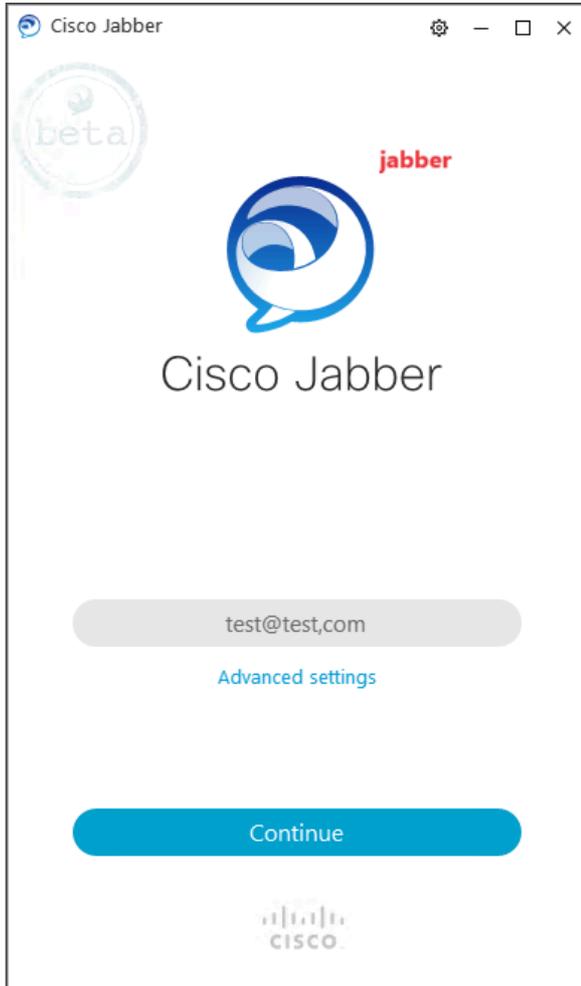
```

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> █
    
```

CMS에 컵 및 CUCM 추가

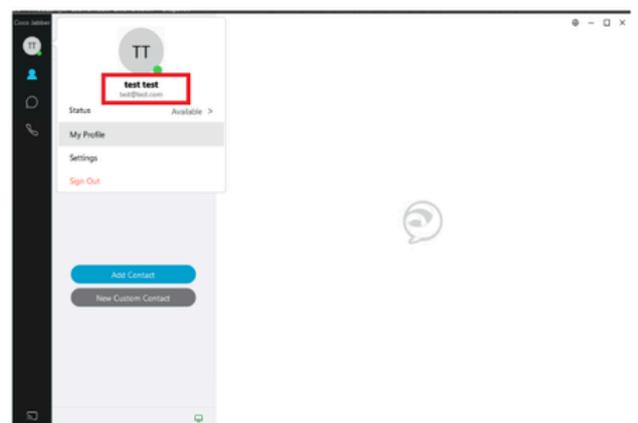
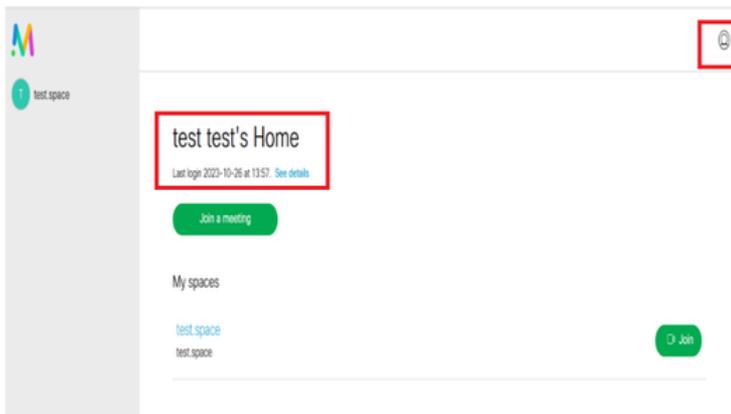
다음을 확인합니다.

동일한 사용자(동일한 LDAP에서 동기화됨)로 두 클라이언트에 서명됨:

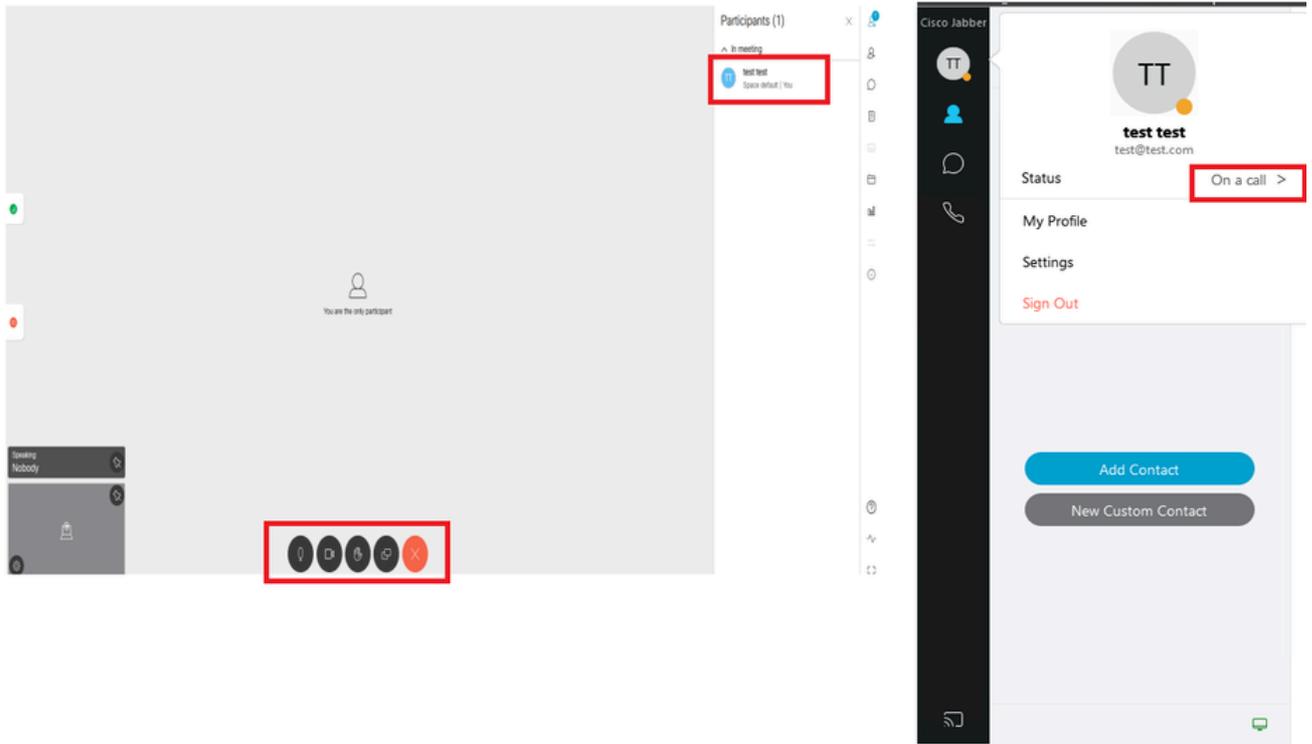


Jabber 및 webapp에서 사용자 로그인

두 클라이언트가 동일한 사용자 test@test.com에 [로그인했습니다.](#)



통화 전 Jabber 및 Webapp 프레즌스



Webapp에서 통화에 참가할 때 프레즌스 상태가 변경됩니다.

Jabber 사용자가 웹 앱에 로그인하고 미팅에 참여하면 Meeting Server는 Jabber 상태를 'In a meeting, In a call'로 업데이트하고 사용자가 회의를 종료한 후 이전 상태로 되돌립니다. 예를 들어, Jabber의 사용자 상태가 'Available(사용 가능)'로 표시되면 웹 앱 미팅에 있을 때 'In a meeting, In a call(미팅 중, 통화 중)'로 업데이트됩니다. 사용자가 미팅에서 나가면 Jabber 상태가 다시 'Available(사용 가능)'로 설정됩니다. Jabber 사용자가 웹 앱 미팅에 참가하는 동안 다른 미팅/통화에 있는 경우 Meeting Server는 Jabber 상태를 업데이트하지 않습니다. Jabber 사용자가 웹 앱 미팅에 참가하기 전에 상태를 'DND - Do not disturb'로 설정한 경우 Meeting Server는 Jabber 상태를 업데이트하지 않습니다. 사용자가 웹 앱 회의 중에 언제든지 수동으로 Jabber 상태를 업데이트할 경우 Meeting Server는 수동으로 업데이트된 사용자 상태를 재정의하지 않습니다.

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