ل Windows CA تاداەش بلاوق ءاشنإ CUCM تاداەش ب

<u>قمدق ملا</u> <u>قمدق ملا</u> <u>قمدت مل ا تابل ط تملا</u> <u>تابل ط تملا</u> <u>قمدت سمل ا تانوكمل ا</u> <u>قمدت سمل تامول عم</u> <u>تي وك تلا</u> <u>ني وك تلا</u> <u>تابل حال ال ال الم قم مت الم</u> <u>الم المار المار المار المار المار</u>

ەمدقملا

قيدصتلا تائيه" ىلع تاداهش بلاوق ءاشنإل ليصفتلاب ءارجإ دنتسملا اذه فصي نم عون لكل X.509 قرحلم تابلطتم عم ةقفاوتملا ،(CA)، Windows مداخ ىلإ ةدنتسملا نم ةدحوملا تالاصتالا ريدم تاداهش

ةيساسألا تابلطتملا

تابلطتملا

:ةيلاتا عيضاوملاب ةفرعم كيدل نوكت نأب Cisco يصوت

- ثدحأ رادصإ وأ (1).5(1 رادصإلا CUCM
- Windows Server ل ةيساسألا ةرادالا ةفرعم اضيأ نسحتسملا نم •

ةمدختسملا تانوكملا

ةيلاتلا ةيداملا تانوكملاو جماربلا تارادصإ ىلإ دنتسملا اذه يف ةدراولا تامولعملا دنتست:

- تارادصإلا وأ CUCM نم (1).11 رادصإلاا ىلإ دنتسملا اذه يف ةدراولا تامولعملا دنتست ثدحألا.
- Microsoft Windows Server 2012 R2 تامدخ عم CA تامد

ةصاخ ةيلمعم ةئيب يف ةدوجوملا ةزهجألاا نم دنتسملا اذه يف ةدراولا تامولعملا عاشنإ مت. تناك اذإ .(يضارتفا) حوسمم نيوكتب دنتسملا اذه يف ةمدختسُملا ةزهجألا عيمج تأدب رمأ يأل لمتحملا ريثأتلل كمهف نم دكأتف ،ليغشتلا ديق كتكبش.

ةيساسأ تامولعم

يجراخ قدصم عجرم لبق نم اهعيقوت نكمي يتلا تاداهشلا نم عاوناً ةسمخ كانه:

ةداەش	مادختسإ	ةرثأتملا تامدخلا
CallManager	تافلم ىلع عيقوتلا نكمي صيخرتلاب ةقثلا ةمئاق (CTL) قيلخادلا ةقثلا ةمئاق/(CTL)، تالعافتلل اممادختسإ متي يتلا لثم ىرخألا مداوخلا عم ةنمآلا عدب لوكوتورب لاصتا طوطخ (SIP)	[.] تاملاكملا ريدم Cisco Call Manager ·Cisco CTI Manager ·Cisco TFTP
tomcat	ةنمآلا تالعافتل ضورعم صنلا لقن لوكوتوربل HTTPS).	·Cisco Tomcat · يداحأ لوخد ليجست ·Extension Mobility · ةكرشلا ليلد
IPsec	خسنلا تافلم ءاشنإل مدختسي لعافت ىلإ ةفاضإلاب ،يطايتحالا مكحتلا تاباوب عم (IP (IPsec) تامأ وأ (MGCP) طئاسولا ةرابع يف H323.	Cisco نم DRF ريدم [.] ∙DRF نم يلحملا Cisco
CAPF	تاذ تاداەش ءاشنإل مدختسي .فتاوەلل (LSC) ةيلحم ةميق	Cisco ةداەش ةەج ليكو ةفيظو [.]
TVS	ةمدخب لااصتا ءاشنإل مدختسي امدنع ،(TVS) ةقثلا نم ققحتلا ىلع ةرداق ريغ فتاوهلا نوكت .ةفورعم ريغ ةداهش ةقداصم	نم ةقثلا نم ققحتلا ةمدخ [.] Cisco

،اەنييعت بجي يتلا X.509 دادتمالا تابلطتم ضعب ىلع تاداەشلا ەذە نم ةداەش لك يوتحت، افنآ ةروكذملا تامدخلا نم يأ يف كولس ءوس ەجاوت دق ،الإو:

ةداەش	حاتفم مادختسإ X.509	عسوملا X.509 حاتفم مادختسإ
CallManager	يمقرلا عيقوتلا [.] · حاتفم ريفشت تانايبلا ريفشت·	بيو مداخ ةقداصم بيو ليمع ةقداصم
tomcat	يمقرلا عيقوتلا [.] · حاتفم ريفشت تانايبلا ريفشت·	بيو مداخ ةقداصم بيو ليمع ةقداصم
IPsec	يمقرلا عيقوتلا [.] حاتفم ريفشت تانايبلا ريفشت	· بيو مداخ ةقداصم · بيو ليمع ةقداصم IPsec ·
CAPF	يمقرلا عيقوتلا [.] ةداەش ةمالع حاتفم ريفشت	· بيو مداخ ةقداصم · بيو ليمع ةقداصم
TVS	يمقرلا عيقوتلا [.] · حاتفم ريفشت تانايبلا ريفشت·	· بيو مداخ ةقداصم · بيو ليمع ةقداصم

Cisco Unified Communications Manager ل نامِأَلِ الَيِلَدِ يَلَإِ عِجَرًا ،تَامُولَعُمَلًا نَمَ دِيزَمَل

نيوكتلا

يف حضوم وه امك ،**قدصم عجرم < تاودأ < مداخلا ريدم** ىلإ لقتنا، Windows مداخ ىلع 1. ةوطخلا ةروصلا

<u>k</u>		- 54	rver Manager		
€ . Server Ma	anager • Dashboard	i	· @	1 🗖 🗤 🛌	New Tally
Deshboard	WELCOME TO SERVER MAN	AGER		_	Active Directory Administrative Center Active Directory Domains and Thuth Active Directory Lightweight Directory Services Setup Waard
Local Server At Servers R AD CS	0	Confi	gure this local server		Action Directory Madule for Windows PowerShell Action Directory Siles and Services Action Directory Siles and Services Action Directory Siles and Services
曜 AD 05 神 AD 15 曜 AD 105	Add roles and features Add roles rand features				ADD Sale Certification Authority Component Territors
DNS File and Storage Services F	WHAT'S NOW	4 Cre	Conjuder Management Defragment and Optimize Onixes DMS Austral Viscourt		
	USARNI MORE				Group Policy Management Internet Information Services (PE) Manager IRCS Instature
	ROLES AND SERVER GROUP Autors 7 Server prosps 1 Se	s men bial			Local Descriptivity Microsoft Asses Services CODE: Data Tourism (32-64)
	嗜 AD CS	1	W AD DS 1	최 AD FS	CORC Data Sources (M-54) Partnersport Maritan
	Managrability Events Services Performance BPA results		Managrability Events Senices Performance BPA results	Manapeability Events Services Performance BPA results	Resource Norther Security Configuration Waterd Securit System Configuration System Universities System Versionation Test Scheduler Windown Neurosy Diagnostic Windown Neurosy Diagnostic Windown Neurosy Diagnostic
	AD LDS	1	🛔 DNS 1	ig File and Stor Services	Windows PyserShell (4H) Windows PyserShell 52 Windows PyserShell 52 (4H)
	Manageability		Manapeability	Manageobility	Windows Server Backup

قوف نميألا سواملا رزب رقناو ،**تاداهشلا بلاوق** ىلإ لقتنا مث ،قدصملا عجرملا ددح .2 ةوطخلا ةروصلا يف حضوم وه امك ،**قرادإ** ددحو ةمئاقلا.

certsrv	(Certification Authority (Local)\Colla	b CA\Certificate Templates]
File Action View Help		
🗭 🔿 🙎 🙆 📓 📓		
Certification Authority (Local) Collab CA Revoked Certificates Susued Certificates Failed Requests Certificate Templates	Name CAPF2 CAPF CUCM Tomcat CUCM Directory Email Replication Kerberos Authentication EFS Recovery Agent Basic EFS Domain Controller Web Server Computer Subordinate Certification Authority Administrator	Intended Purpose Server Authentication, IP security end s Server Authentication, IP security end s Server Authentication, Client Authentic Directory Service Email Replication Client Authentication, Server Authentic File Recovery Encrypting File System Client Authentication, Server Authentic Server Authentication Client Authentication, Server Authentic Server Authentication Client Authentication, Server Authentic Encrypting File System, Secure Email, CL «All» Microsoft Trust List Signing, Encrypting
tarts Certificate Templates snapin		View +
		Arrange loons Line up loons
		Help

CallManager / Tomcat / TVS بلاق

اهسفن تاوطخلا عابتا نكمي نكلو ،طقف CallManager بلاق ءاشنإ ةيلاتلا روصلا ضرعت نم دكأتلا يف ديحولا فالتخالا نمكي .TVS و Tomcat تامدخل تاداهشلا بلاوق ءاشنإل 2. ةوطخلا يف ديدج بلاق لكل صاخلا ةمدخلا مسا مادختسإ امك ،**بلاقلا راركت** ددجو ەقوف نميألا سواملا رزب رقناو ،**بيولا مداخ** بلاق نع ثحبا .1 ةوطخلا ةروصلا يف حضوم وە.

3		c	ertificate Te	mplates	Console	
File Action View Help						
Certificate Templates (win12.collab.m	Template Display Name	Schema Version	Versi	Intende	I Purposes	
	Workstation Authentication	2	101.0	Client A	uthentication	
	Web Server		4.1	-	and the second second	-
	I User Signature Only	1	4.1		Duplicate Template	
	🗟 User	1	3.1		All Tasks	
	Trust List Signing	1	3.1		Properties	
	Tomcat CUCM	2	100.3	Serve	risperses	- in
	Subordinate Certification Authority	1	5.1		Help	
	Smartcard User	1	11.1			
	Smartcard Logon	1	6.1			
	Router (Offline request)	1	4.1			
	Root Certification Authority	1	5.1			
	RAS and IAS Server	2	101.0	Client A	uthentication, Server Auther	tication

.خلإ ،ةيحالصلا ،ضرعلا مسا ،ةداەشلا بلاق مسا رييغت كنكمي ،**ماع** تحت .2 ةوطخلا

	Pro	perties	of New	Template		x
Subject Nam	e	Sen	ver	Issuance	Requirements	
Superseded	Templa	tes	Ede	nsions	Security	
Compatibility Ge	neral	Request	Handling	Cryptograph	Key Attest	ation
Template display	name:					
CallManager CL	ICM					ור
Template name: CallManager CL Validity period: 5 years	ICM V]	Renewa 6	period: weeks	•	
Publish certifi Do not au Directory	icate in tomatic	Active Dir ally reenro	rectory oll if a dupli	cate certificate	e exists in Activ	re
	OK	(Cancel	Apply	Hel;	>

.ةروصلا يف حضوم وه امك ،**ريرحت < حيتافملا مادختسإ < تاقحلملا** ىلإ لقتنا .3 ةوطخلا

	Pro	perties	of New	Template	X
Compatibility	General	Request	Handling	Cryptography	Key Attestation
Subject	Name	Se	ver	Issuance	Hequirements
Superse	ided Templa	tes		ensions	Security
To modify a Extensions Applica Basic C Certifici Issuanc Key Us	n extension included in t tion Policies constraints ate Templation pe Policies age	, select it,	and then o ste:	slick Edit.	Edd
Description Signature r Digital sign	of Key Usa; equirements ature	ge: :			
Allow key e Critical exte	exchange or	ily with ke	iy encryptic	'n	~
	OK		Cancel	Apply	Help

ةروصلا يف حضوم وه امك ،**قفاوم** ددحو تارايخلا هذه ددح .4 ةوطخلا.

- يمقرلا عيقوتلا •
- (حاتفملا ريفشت) حاتفملا ريفشت عم طقف حيتافملاً لدابتب حامسلا •
- مدختسملا تانايب ريفشتب حامسلا •

	Pro	perties of New	Template	l	x		
Compatibility Subject N	General Name	Request Handing Server	Cryptography Issuance F	Key Attesta Requirements	tion		
0	Ec	dit Key Usage E	xtension		x		
Specify the revension. Signature Digital Signature Certific CRL signature Allow I Nove	Specify the required signature and security options for a key usage extension. Signature Digital signature Signature is proof of origin (nonrepudiation) Certificate signing CRL signing Encryption Allow key exchange without key encryption (key agreement) Minutes and here exclanate the security options for a key usage						
✔ ✔ Make thi	Allow encry s extension	ption of user data critical	Ж	Cancel			
[OK	Cancel	Apply	Help			

يف حضوم وه امك ،**ةفاضإ < ريرحت < قيبطتلا تاسايس < تاقحلملا** ىلإ لقتنا. 5 ةوطخلا ةروصلا

	Pro	perties	of New	Template)
Compatibility	General	Request	Handling	Cryptography	Key Attestation
Subject Na	ame	Ser	ver	Issuance F	Requirements
Supersede	ed Templa	tes	Exte	nsions	Security
To modify an	extension,	select it,	and then c	lick Edit.	
Extensions in	cluded in t	his templa	te:		
Application	n Policies				
Basic Cor	nstraints				
Centricate	Policies	e informati	on		
Key Usad	e				
10.00 COO					
					Edit
Description of	Application	on Policies	9:		
Server Authe	ntication				^
					~
	OK	(Cancel	Apply	Help

Edit Applicatio	on Policies Ex	tension 🗶				
An application policy defines how a certificate can be used.						
Application policies:						
Server Authentication						
Add	Edit	Remove				
Make this extension	critical					
	ОК	Cancel				

،ةقباسلا ةذفانلاو راطإلا اذه نم لك ىلع OK ددحو اهددحو ،**ليمعلا ةقداصم** نع ثحبا .6 ةوطخلا ةروصلا يف حضوم وه امك.

Properties of New Template	X
Compatibility General Request Handling Cryptography Key Attes Subject Name Server Issuance Requirement Contraction Dulisies Extension X Add Application Policy	tation ts
An application policy (called enhanced key usage in Windows 2000) defines how a certificate can be used. Select the application policy req for valid signatures of certificates issued by this template.	uired
Application policies: Any Purpose Attestation Identity Key Certificate Certificate Request Agent Citent Authentication Code Signing CTL Usage Digital Rights Directory Service Email Replication Disallowed List Document Encryption Document Encryption	
Document Signing Domain Name System (DNS) Server Trust Dynamic Code Generator New	
OK Cancel Apply He	al a

.قفاوم مث **قيبطت** ددح ،بالقالا ىلا عوجرلاب .7 ةوطخلا

	Pro	perties	of New	Template		X
Compatibility	General	Request	Handling	Cryptograph	y Key Attest	stion
Subject	Name	Se	ver E.	Issuance	Requirements	_
Superse	ded Templa	tes	0	ensions	Security	_
To modify a Extensions Basic C Certifica Issuanc A Key Us	n extension, included in t tion Policies constraints ate Template ce Policies age	, select it, his temple e Informat	and then o ste:	slick Edit.		
Description	of Application	on Policie	s:		Edt	
Server Aut	entication hentication					~
	ОК		Cancel	Apply	Help)

< **ديدج** ىلإ حفصتو ،لوألا راطإلا ىلإ عجرا مث ،**ةداەشلا بلاق مكحت ةدحو** ةذفان قلغاً .8 ةوطخلا ةروصلا يف حضوم وه امك ،**ەرادصإ دارملا ةداەشلا بلاق**.



.ةروصلا يف حضوم وه امك ،OK ددجو CallManager ديدجلا CUCM بلاق ددح .9 ةوطخلا

3	Enable Certificate Templates							
Select (Note: II Informat All of the For motion	one Certificate Template to enable on this C f a certificate template that was recently cre tion about this template has been replicated we certificate templates in the organization m one information, see <u>Certificate Templa</u>	Certification Authority. Nated does not appear on this list, you may need to wait until d to all domain controllers. nay not be available to your CA. <u>ste Concepts</u> .						
Name		Intended Purpose	~					
	thenticated Session	Client Authentication						
🗷 C/	A Exchange	Private Key Archival						
🗷 C	allManager CUCM	Server Authentication, Client Authentication	=					
🗷 CE	EP Encryption	Certificate Request Agent						
🗷 Ca	ode Signing	Code Signing						
🗟 Cr	ross Certification Authority	<ab< td=""><td></td></ab<>						
🗷 G	nrollment Agent	Certificate Request Agent						
🖲 E	nrollment Agent (Computer)	Certificate Request Agent						
ЭБ	change Enrolment Agent (Offline request)	Certificate Request Agent						
ЭБ	change Signature Only	Secure Email						
🗐 Fi	rchange User	Secure Final	~					
		OK Cano	el					

بسح TVS و Tomcat تامدخل تاداهش بلاوق ءاشنإل ةقباسلا تاوطخلا ةفاك ررك .10 ةوطخلا .ةجاحلا

IPsec بلاق

امك ،**ٻلاقلا راركت** ددجو ەقوف نميألا سواملا رزب رقناو ،**ٻيولا مداخ** بلاق نع ثحبا .1 ةوطخلا ةروصلا يف حضوم وە.

2		c	Certificate Te	mplates	Console	
File Action View Help						
🕈 🔶 🔟 📰 🐨 🔛 🔟 📰						
Certificate Templates (win12.collab.m	Template Display Name	Schema Version	Vesi	Intended	I Purposes	
	Workstation Authentication	2	101.0	Client A	uthentication	
	Web Server		4.1	_	and the second second	-
	I User Signature Only	1	4.1		Duplicate Template	
	🗟 User	1	3.1		All Tasks	
	Trust List Signing	1	3.1		Properties	
	Tomcat CUCM	2	100.3	Serve	· · · · · · · · · · · · · · · · · · ·	20
	Subordinate Certification Authority	1	5.1		Help	
	Smartcard User	1	11.1			
	Smartcard Logon	1	6.1			
	Router (Offline request)	1	4.1			
	Root Certification Authority	1	5.1			
	RAS and IAS Server	2	101.0	Client Ar	uthentication, Server Authe	ntication

..خلإ ،ةيحالصلا ،ضرعلا مسا ،ةداەشلا بلاق مسا رييغت كنكمي ،**ماع** تحت .2 ةوطخلا

Properties of New Template								
Subject Name	Subject Name Server Issuance Requirements							
Superseded Templa	tes Extensions Security			Security				
Compatibility General	Request	Request Handling Cryptography Key Attestation						
Template display name:								
IPSEC CUCM	-							
Template name: IPSEC CUCM Validity period: 2 years v B weeks v								
Publish certificate in Active Directory Do not automatically reenroll if a duplicate certificate exists in Active Directory								
OK		Cancel	Apply	Help				

ةروصلا يف حضوم وه امك ،**ريرحت < حيتافملا مادختسإ < تاقحلملا** ىلإ لقتنا .3 ةوطخلا.

	Properties of New Template						
Compatibility	General	General Request Handling Cryptography Key Attestation					
Subject	Name	Se	Server Issuance Requirer				
Superse	Superseded Templates Extensions Security						
To modify an extension, select it, and then click Edit. Extensions included in this template: Application Policies Basic Constraints Certificate Template Information Issuance Policies Key Usage							
Description Signature r Digital sign	Edit Description of Key Usage: Signature requirements: Diatal signature						
Allow key exchange only with key encryption Critical extension.							
	OK		Cancel	Apply	Help		

ةروصلا يف حضوم وه امك ،**قفاوم** ددحو تارايخلا هذه ددح .4 ةوطخلا.

- يمقرلا عيقوتلا •
- (حاتفملا ريفشت) حاتفملا ريفشت عم طقف حيتافملاً لدابتب حامسلا •
- مدختسملا تانايب ريفشتب حامسلا •

	Pro	perties of New	Template	l	x	
Compatibility Subject N	General Name	Request Handing Server	Cryptography Issuance F	Key Attesta Requirements	tion	
0	Ec	dit Key Usage E	xtension		x	
Specify the revension. Signature Digital Signature Certific CRL signature Allow I Nove	Specify the required signature and security options for a key usage extension. Signature Digital signature Signature is proof of origin (nonrepudiation) Certificate signing CRL signing Encryption Allow key exchange without key encryption (key agreement) Allow key exchange only with key encountion (key agreement)					
Allow encryption of user data Make this extension critical OK Cancel						
[OK	Cancel	Apply	Help		

يف حضوم وه امك ،**ةفاضإ < ريرحت < قيبطتلا تاسايس < تاقحلملا** ىلإ لقتنا. 5 ةوطخلا ةروصلا

	Pro	perties	of New	Template		×
Compatibility	General	Request	Handling	Cryptography	Key Att	estation
Subject N	lame	Ser	ver	Issuance	Requireme	ints
Superseded Templates Extensions Security						
To modify an extension, select it, and then click Edit. Extensions included in this template: Application Policies Basic Constraints Certificate Template Information Issuance Policies Key Usage						
Edt Description of Application Policies:						
[ОК		Cancel	Apply		Help

Edit Applicatio	n Policies E	tension 🗶				
An application policy defines how a certificate can be used.						
Application policies:						
Server Authentication						
Add	Edit	Remove				
Make this extension of	critical					
	OK	Cancel				

ةروصلا يف حضوم وه امك ،**قفاوم** مث اهددح **،ليمعلا ةقداصم** نع ثحبا .6 ةوطخلا.

Properties of New Template
Compatibility General Request Handling Cryptography Key Attestation Subject Name Server Issuance Requirements Critic A collipsion Dulision Fotosoice X Add Application Policy X
An application policy (called enhanced key usage in Windows 2000) defines how a certificate can be used. Select the application policy required for valid signatures of certificates issued by this template.
Application policies: Any Purpose ^ Attestation Identity Key Certificate ^ Certificate Request Agent III Dient Authentication IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
New OK Cancel
OK Cancel Apply Help

راطإلا اذه ىلع **قفاوم** ددح مث هددحو ،**IP نامأ ةياهن ماظن** نع ثحبا ،ىرخأ ةرم **ةفاضإ** ددح .7 ةوطخلا اضيأ قباسلا راطإلاا ىلعو.

Properties of New Template
Subject Name Server Issuance Requirements Compatibility General Request Handling Contography Key Attestation S Edit Application Policies Extension X Add Application Policy
An application policy (called enhanced key usage in Windows 2000) defines how a certificate can be used. Select the application policy required for valid signatures of certificates issued by this template.
Application policies: Early Launch Antimalware Driver Embedded Windows System Component Verification Encrypting File System Endorsement Key Certificate File Recovery HAL Extension IP security end system IP security turnel termination IP security user KDC Authentication Kemel Mode Code Signing Kewel Mode Code Signing
New OK Cancel
OK Cancel Apply Help

ةروصلا يف حضوم وه امك ،**قفاوم** مث **قيبطت** ددح ،بلاقلا ىلاٍ ةدوع .8 ةوطخلا.

	Pro	perties	of New	Template	x		
Subject	ject Name Server Issuance Requirements				Requirements		
Compatibility	General	Request	Request Handling Cryptography		Key Attestation		
Supers	Superseded Templates Extensions Security						
To modify an extension, select it, and then click Edit. Extensions included in this template: Application Policies Basic Constraints Certificate Template Information Issuance Policies Key Usage							
Description Client Aut IP security Server Au	n of Application nentication r end system thentication	on Policie	E		Edt		
	ОК		Cancel	Apply	Help		

حفصتو ،لوألا راطإلا ىلإ عجرا مث ،**تاداەشلا بلاوق مكحت ةدحو** ةذفان قالغإب مق .9 ةوطخلا .ةروصلا يف حضوم وه امك ،**ەرادصإ دارملا ةداەشلا بلاق < ديدج** ىل



.ةروصلا يف حضوم وه امك ،OK ىلع ددجو ديدجلا **IPSec CUCM** بلاق ددح .10 ةوطخلا

•	Enable Certificate Templates	x
Select one Certificate Template to Note: If a certificate template that information about this template has All of the certificate templates in to For more information, see <u>Ce</u>	o enable on this Certification Authority. t was recently created does not appear on this list, you may need to wait until as been replicated to all domain controllers. he organization may not be available to your CA. rtificate Template Concepts.	
Name	Intended Purpose	
Exchange Signature Only	Secure Email	
Exchange User	Secure Email	
IP Sec	IP security IKE intermediate	
IPSEC CUCM	Server Authentication, IP security end system, Client Authentication	
Key Recovery Agent	Key Recovery Agent	
OCSP Response Signing	OCSP Signing	Ξ.
RAS and IAS Server	Client Authentication, Server Authentication	
Router (Offine request)	Client Authentication	
Smartcard Logon	Client Authentication, Smart Card Logon	
Smartcard User	Secure Email, Client Authentication, Smart Card Logon	
Trust List Signing	Mcrosoft Trust List Signing	× .
	OK Cano	el

CAPF بلاق

ددح مث .نميألا سواملا رزب هقوف رقناو **رذجلا قدصملا عجرملا** بلاق نع ثحبا .1 ةوطخلا ةروصلا يف حضوم وه امك ،**بلاقلا ةفعاضم**.

3		c	ertificate Templ	ates Console	
File Action View Help					
** 🗊 🗉 🖬 📰					
🗟 Cetificate Templates (win12.col	Template Display Name	Schema Version	Veni Int	ended Purposes	
	Router (Offline request)	1	4.1		
	Root Certification Authority	1	5.1	Designed Translation	
	RMS and IAS Server	2	101.0 Ch	Dupricate Template	dign.
	CCSP Response Signing	3	101.0 00	All Tasks	
	E LOAPS	2	100.6 KD	Properties	Server Authentication, Client A
	Key Recovery Agent	2	105.0 Ke		
	Enteros Authentication	2	110.0 Ck	Help	etion, Smart Card Logon, KDC A
	B PSEC CUCM	2	100.4 Ser	ver Authentication, IP securit	ly end system, Client Authentication
	IPSec (Offline request)	1	7.1		
	E Plet	1	8.1		

خلاٍ ،ةيحالصلا ،ضرعلا مسا ،ةداەشلا بلاق مسا رييغت كنكمي ،**ماع** تحت .2 ةوطخلا.

Properties of New Template				
Superseded Temp	lates Extensions Security			
Compatibility	Gene	General Issuance Requirements		Requirements
Template display name	e:			
CAPF CUCM				
Template name: CAPF DUCM				
Validity period: 5 years v 6 weeks v				
Publish certificate Do not automat Directory	in Active Dir tically reenro	ectory oll if a dup	licate certificat	e exists in Active
ОК		Cancel	Apply	Help

.ةروصلا يف حضوم وه ام^ل ،**ريرحت < حيتافملا مادختسإ < تاقحلملا** ىلإ لقتنا .3 ةوطخلا

Properties	of New	Template	X
Compatibility Gene	eral	Issuance	e Requirements
Superseded Templates	Ed	ensions	Security
To modify an extension, select it,	and then	click Edit.	
Extensions included in this templa	ste:		
Application Policies			
Resic Constraints			
Certificate Template Informat	ion		
Issuance Policies			
Key Usage			
			Edit
Description of Key Usage:			
Signature requirements:			~
Digital signature Certificate signing			
CRL signing			
Critical extension.			
			~
01	Control	And	
OK	Lancei	Apply	нер

ةروصلا يف حضوم وه امك ،**قفاوم** ددحو تارايخلا هذه ددح .4 ةوطخلا.

- يمقرلا عيقوتلا •
- ةداەشلاً عيقوت •
- CRL عيقوت •

	Pro	perties of New	Template	l	x
Compatibility Subject N	General Name	Request Handing Server	Cryptography Issuance F	Key Attesta Requirements	tion
0	Ec	dit Key Usage E	xtension		x
Specify the revension. Signature Digital Signature Certific CRL signature Allow I Nove	signature signature are is proof ate signing gning key exchan key exchan	nature and security of origin (nonrepudi ige without key enc ige only with key enc	options for a key stion) syption (key agre cryption (key en	vusage vement) cipherment)	
✔ ✔ Make thi	Allow encry s extension	ption of user data critical	Ж	Cancel	
[OK	Cancel	Apply	Help	

يف حضوم وه امك ،**ةفاضإ < ريرحت < قيبطتلا تاسايس < تاقحلملا** ىلإ لقتنا. 5 ةوطخلا ةروصلا

	Pro	perties	of New	Template)
Compatibility	General	Request	Handling	Cryptography	Key Attestation
Subject Na	ame	Ser	ver	Issuance F	Requirements
Supersede	ed Templa	tes	Exte	nsions	Security
To modify an	extension,	select it,	and then c	lick Edit.	
Extensions in	cluded in t	his templa	te:		
Application	n Policies				
Basic Cor	nstraints				
Centricate	Policies	e informati	on		
Key Usad	e				
10.00 COO					
					Edit
Description of	Application	on Policies	9:		
Server Authe	ntication				^
					~
	OK	(Cancel	Apply	Help

Edit Applicatio	n Policies E	tension 🗶	
An application policy defines how a certificate can be used.			
Application policies:			
Server Authentication			
Add	Edit	Remove	
Make this extension of	critical		
	OK	Cancel	

.ةروصلا يف حضوم وه امك ،**OK** ددح مث اهددحو ،**ليمعلا ةقداصم** نع ثحبا .6 ةوطخلا

Properties of New Template
Compatibility General Request Handling Cryptography Key Attestation Subject Name Server Issuance Requirements Compatibility Company Key Attestation Subject Name Server Issuance Requirements Company Key Attestation Company Key Attestation Subject Name Server Issuance Requirements Company Key Attestation
An application policy (called enhanced key usage in Windows 2000) defines how a certificate can be used. Select the application policy required for valid signatures of certificates issued by this template.
Application policies: Any Purpose ^ Attestation Identity Key Certificate ^ Certificate Request Agent III Client Authentication III Code Signing CTL Usage Digital Rights Directory Service Email Replication Disallowed List Document Encryption Document Signing Domain Name System (DNS) Server Trust Dynamic Code Generator v
New OK Cancel
OK Cancel Apply Help

ىلعو اذه ىلع قفاوم ددح مث هددحو ،**IP نامأ ةياهن ماظن** نع ثحبا ،ىرخأ قرم **قفاضاٍ** ددح .7 ةوطخلا ةروصلا يف حضوم وه امك ،اضيأ قباسلا راطإلا.

Properties of New Template
Subject Name Server Issuance Requirements Compatibility General Request Handling Contography Key Attestation Contagraphy Key Attestation Contagraphy Key Attestation
An application policy (called enhanced key usage in Windows 2000) defines how a certificate can be used. Select the application policy required for valid signatures of certificates issued by this template.
Application policies: Early Launch Antimalware Driver ^ Embedded Windows System Component Verification ^ Encrypting File System * Endorsement Key Certificate * File Recovery # HAL Extension # IP security end system * IP security Life Intermediate * IP security user * KDC Authentication * Kemel Mode Code Signing *
Key Pack Ucenses
OK Cancel Apply Help

ةروصلا يف حضوم وه امك ،**قفاوم** مث **قيبطت** ددح ،بلاقلا ىلاٍ ةدوع .8 ةوطخلا.

Properties of New Template					
Subject	Name	Server Issuance Requirements		Requirements	
Compatibility	General	Request	Handing	Cryptography	Key Attestation
Supers	eded Templa	tes	Exte	nsions	Security
To modify a Extensions Applic Basic Certific Issuan	an extension, included in t ation Policies Constraints ate Template ce Policies sage	, select it, his templa e Informat	and then d	ick Edt.	
Description Client Aut IP security Server Au	n of Application nentication r end system thentication	on Policie	E		Edt
	ОК		Cancel	Apply	Help

حفصتو ،لوألا راطإلا ىلإ عجرا مث ،**تاداەشلا بلاوق مكحت ةدحو** ةذفان قالغإب مق .9 ةوطخلا .ةروصلا يف حضوم وه امك ،**ەرادصإ دارملا ةداەشلا بلاق < ديدج** ىل



.ةروصلا يف حضوم وه امك ،OK ددجو ديدجلا CAPF CUCM بالق ددح .10 ةوطخلا

	Enable Certificate Templates				
St N II A F	lect one Certificate Template to te: if a certificate template that is ormation about this template has of the certificate templates in th or more information, see <u>Cert</u>	enable on this Certification Authority. was recently created does not appear on this list, you may need to wait until i been replicated to all domain controllers. e organization may not be available to your CA. ificate Template Concepts.			
	Name	Intended Purpose			
1	Authenticated Session	Client Authentication			
1.2	CA Exchange	Private Key Archival			
1	CAPF CUCM	Server Authentication, IP security end system, Client Authentication	Ξ		
12	Code Signing	Code Signing			
12	Cross Certification Authority	(Al)			
12	Enrolment Agent	Certificate Request Agent			
12	Enrollment Agent (Computer)	Certificate Request Agent			
12	Exchange Signature Only	Secure Email			
12	Exchange User	Secure Email			
1	IPSec	IP security IKE intermediate			
12	IPSEC CLICM	Server Authentication IP security end system Client Authentication	~		
		OK Cano	d		

ةداەش عيقوت بلط ءاشنإ

اثيدح اهؤاشنإ مت يتلا بلاوقلا مادختساب CallManager ةداهش ءاشنإل لاثملا اذه مدختسأ بلاقلاو ةداهشلا عاونأ ديدحت ىوس كيلع امف ،ةداهش عون يأل ءارجإلا سفن مادختسإ نكمي كلذل اقفو

.CSR ءاشنإ < تاداهشلا قرادإ < نامألا < ليغشتلا ماظن قرادإ يل لقتنا ،CUCM يف 1. قوطخلا

ةروصلا يف حضوم وه امك ،**ديلوت** ددحو تارايخلا هذه ددح .2 ةوطخلا.

- تەداەشلا ضرغ: CallManager
- <ةددعتم SAN تاكبشل وأ دحاو مداخل طقف اذه نوكي نأ نكمي> :عيزوتلا •

enera	te Certifica	te Sign	ing Req

Generate Certificate Sign	ing Request		
Certificate Purpose**	CallManager	•	
Distribution*	Hulti-server(SAN)	•	
Common Name*	115PUB-ms.maucabal.lab		
Subject Alternate Names	(SANs)		
Auto-populated Domains	1159UB.maucabal.lab 1155UB.maucabal.lab		
Parent Domain	maucabal.lab		
Other Domains			Choose File No file chosen Please import .TXT file only. For more information please refer to the notes in the Help Section
			🗄 Add
Key Type**	RSA		
Key Length*	2048	•	
Hash Algorithm*	SH4256		

.ةروصلا يف حضوم وه امك ،ديكأت ةلااسر ءاشنإ متي .3 ةوطخلا

Generate Certificate Signing Request
Generate 🕎 Close
r Status
Success: Certificate Signing Request Generated
CSR export operation successful on the nodes [115PUB.maucabal.lab, 115SUB.maucabal.lab].

يف حضوم وه امك ،هددحو **طقف CSR** عونلاا يذ لخدملا نع ثحبا ،صيخرتلاا ةمئاق يف .4 ةوطخلا ةروصلا

Generate Self-s	igned Rest Central Central	sticate chain	Cene	rate CSR			
			-0				
Status							
16 records fo	und						
_							
Certificate List	(1 - 50 of 56)						Rows per Page 50 .
Find Certificate List	t where Certificate • beg	ins with +		Find Clear	filter 💠 🚥		
Certificate*	Common Name	Tupe	Key Type	Distribution	based By	Expiration	Description
autha	AUTH2 admin	Self-	RSA	115PU8.maucabal.lab	AUTH2_admin	01/27/2038	Self-signed certificate penerated by system
Calimanager	115PUB-ms.maucabal.lab	CSR Only	RSA	Hulti-server(SAN)	-	-	
cannanager	TURNER ADDRESS	signed	K2A	1119/08/#2012120.46	115PU8.maocabal.lab	05/30/2023	Self-signed certificate penerated by system
Califianaper- ECDSA	115PUB-EC.mascabal.lab	Self- signed	0C	115PU8.maucabal.lab	115PUB- EC.maucabal.lab	63/64/2023	Self-signed certificate generated by system
CallManager-brust	115PUB.BC.mascabal.lab	Self- signed	8C	115PU8.maucabal.lab	115PU8- EC.maucabal.lab	03/04/2023	Trust Certificate
-							

رتويبمكلا ىلع فلملا ظفحاو ،**CSR ليزنت** ددح ،ةقثبنملا ةذفانلا يف .5 ةوطخلا.

X Delete Q Download CSR	
Status Status: Ready	
Certificate Settings	
File Name CallManager.csr	
Certificate Purpose CallManager	
Certificate Type certs	
Certificate Group product-cm	
Description(friendly name)	
PKCS10 Request: [Version: 0 Subject: CN=115PUB-ms.maucabal.lab, OU=cisco, O=cisco, L=cisco, ST=cisco, C=MX SubjectPKInfo: RSA (1.2.840.113549.1.1.1) Key value: 3082010a0282010100c18a6119e66450eef211e6ac9a2349f3466616bd77017095303de7 cabc144fd5f1538efe514fd8207d3ddea43b35ce4f0512cf748a2032bfd72fd7431b41a7cc34 f902277c2ee55d7e5a4d680f8c96b6f46ed533b21c6146619f775b65da8b7a5a2de7dd8dd; 9fbd3d5aae5f4f02237ecabca74cf6e2d9b463805ea9ee17b98f83e5232ccc0a7dcd33c76b 79d661582952880d98b3290d44117a2d8cbfac2b164ace9a23611fa8683ba82d9a3d30a00 9be410e8d3b4e1f18a89bcd3858463ae5e039fd2fd31a8fdd6e45cf48734f97b339a962164 Sa9467d4963f226b6ab0567b7f92735368edee64713f627d76b0c0e1e1b45b23698f15b8c 6b25a37e84cd0203010001 Attributes: [Requested Extensions [

ةدحو لوؤسم دامتعا تانايب لخدأو ،اذه URL ناونع ىلإ لقتنا ،ضرعتسملا ىلع .6 ةوطخلا كيدل لاجملا مكحت: https://<WindowsServerIP>/certsrv/.

ةروصلا يف حضوم وه امك ،**مدقتم ةداهش بلط < ةداهش بلط** ىلإ لقتنا .7 ةوطخلا.



:ەتايوتحم لك خسناو CSR فلم حتفا .8 ةوطخلا



ددج ،**ةداەشلا بلاق** تحت .**64 ساسألاب زمرم ةداەشلا بلط** لقح يف CSR قصلاا .9 ةوطخلا ةروصلا يف حضوم وه امك ،**لاسرا** ددجو چيحصلا بلاقلا.

icate Request or Renewal Request ed request to the CA, paste a base-64-encod ce (such as a Web server) in the Saved Req	ded CMC or PKCS #10 certificate request or PKCS #7 renewal request generated by quest box.
ed request to the CA, paste a base-64-encod ce (such as a Web server) in the Saved Reg	ded CMC or PKCS #10 certificate request or PKCS #7 renewal request generated by quest box.
ThAy213/2g058-rg4-ya886-g7120-g * 8705.har1398-195974-K22g447150-ha8376-r7483988 PaseAdp979 PaseAdp970 PaseAdp	
te:	
CalManager CUCH ~	
#5:	
Submit >	
	Skýzil V godi slov pri prvad Holger I. Dene ji svo V folk ben i joh Križdogu Križišou Adol V koli V

عيطتسي دلوملا فلملا ،**قلسلس ةداهش download**و ةزمرم **64 ةدعاقلا** ددح ،اريخاً .10 ةوطخلا ل المحي نأ نآلا CUCM.



ةحصلا نم ققحتلا

عقاولا يف نيوكتلا ةيلمع نم اءزج ةحصلا نم ققحتلا ءارجإ دعي.

اهحالصإو ءاطخألا فاشكتسا

ليكشت اذه ل رفوتي ةمولعم اهحالصإو ءاطخألاا فاشكتسأ صاخ نم ام ايلاح كانه.

ةمجرتاا مذه لوح

تمجرت Cisco تايان تايانق تال نم قعومجم مادختساب دنتسمل اذه Cisco تمجرت ملاعل العامي عيمج يف نيم دختسمل لمعد يوتحم ميدقت لقيرشبل و امك ققيقد نوكت نل قيل قمجرت لضفاً نأ قظعالم يجرُي .قصاخل امهتغلب Cisco ياخت .فرتحم مجرتم اممدقي يتل القيفارت عال قمجرت اعم ل احل اوه يل إ أم اد عوجرل اب يصوُتو تامجرت الاذة ققد نع اهتي لوئسم Systems الما يا إ أم الا عنه يل الان الانتيام الال الانتيال الانت الما