# Configuring the VPN Client 3.x to Get a Digital Certificate

Document ID: 4302

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This document demonstrates how to configure the Cisco VPN Client 3.x to get a digital certificate.

# Prerequisites

#### Requirements

There are no specific requirements for this document.

#### **Components Used**

The information in this document is based on a PC that runs Cisco VPN Client 3.x.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

#### Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

# **Configure the VPN Client**

Complete these steps to configure the VPN Client.

1. Select Start > Programs > Cisco Systems Inc. VPN client > Certificate Manager to launch the VPN Client Certificate Manager.



2. Select the Personal Certificates tab and click New.

ersonal certificates identify re signed by a certificate a certificate authority (CA) is nrollment requests are cert	y you to people and hosts you communicate with an authority. s an organization that issues certificates. tificate requests that a CA has yet to approve.
Personal Certificates CA	Certificates Enrollment Requests

Note: Machine certificates to authenticate users for VPN connections cannot be done with IPsec.

3. When the VPN Client prompts you for a password, specify a password to protect the certificate. Any operation that requires access to the certificate's private key requires the specified password to continue.

CISCO SYSTEMS	Password protecting your certificate provides an additional level of security. This password is optional. By choosing to protect your certificate with a password any operation that requires access to the certificate's private key will require the specified password to continue.
	Note - File based enrollments require the password used here to be re-entered when the approved certificate is imported. <u>Password:</u> <u>Confirmation Password:</u>

4. Select **File** to request a certificate using PKCS #10 format on the Enrollment page. Then click **Next**.

CISCO SYSTEMS	The enrollment wizard allows you to request a personal identity certificate from a Certificate Authority (CA). Network based enrollment allows you to connect directly
millionutlion	to a CA over a network connection.
<ul> <li>de la constanta de la constanta de la</li> </ul>	File based enrollment will produce a certificate request file which you need to submit to your administrator.
	Please select the method you wish to proceed with:
	Enrollment type:
	C N <u>e</u> twork
	· E⊫

5. Click **Browse**, and specify a filename for the certificate request file. For the file type, select **PEM Encoded Request File** (\*.req) and click **Save**.

Save in: 🛛 🖸	Desktop	1000			<b>*</b>	•
My Docume	ents ter	client2.r	eq			
Bry Comparent Street My Network	k Places	eliencon				
any notivor	KT IGCOD					
cases	NT IOCOS					
cases jazib vpn	AT Ideos					
cases jazib vpn	, rideos					

6. Click **Next** on the VPN Client Enrollment page.

Enrollment - File Locati	on 📲 📃 💌
Cisco Systems	To create an enrollment request file, please select the type of file you wish to generate. Contact your network administrator if you are not sure which encoded file type is required. When you select a file extension in the Browse dialog the associated file type will be selected on this page.
	Eile name: * C:\My Documents\client5.req File type: Base 64 encoded (.req) Binary encoded (.p10)
	* Required Field
	Back Next> Cancel Help

7. Fill out the fields on the Enrollment Form.

This example shows the fields:

- ♦ Common Name = User1
- Department = IPSECCERT (This should match the organizational unit (OU) and the group name on the VPN 3000 Concentrator.)
- ◆ Company = Cisco Systems
- ♦ State = NorthCarolina
- Country = US
- ◆ Email = User1@email.com
- IP Address = (optional; used to specify the IP address on the certificate request )
- ♦ Domain = cisco.com

Click Next when you are done.

1911 - 1917 - 19	Enter your certificate e provided below.	enrollment information in the fields
CISCO SYSTEMS	Common Name (cn):*	User1
	Department (ou):	IPSECCERT
	C <u>o</u> mpany (o):	Cisco Systems
	<u>S</u> tate (st):	NorthCarolina
0	Country (c):	US
	<u>E</u> mail (e):	User1@email.com
	IP Address:	
	Do <u>m</u> ain:	cisco.com
	A CONTRACTOR OF A CONTRACTOR	* Required Fie

8. Click **Finish** to proceed with the enrollment.

CISCO SYSTEMS	This is a summary of the information you have provided for this certificate enrollment request. Select Finish to proceed with the enrollment or Back to make modifications.
	Enrollment: File - client5.reg Certificate Store: Cisco Common Name: User1 Department: IPSECCERT Company: Cisco Systems State: NorthCarolina Country: US Email: User1@email.com IP Address: Domain: cisco.com
< <u> </u>	Back Finish Cancel Help

9. Select the Enrollment Requests tab to check the request on the VPN Client Certificate Manager.

re signed by a certifica	entify you to peop ate authority.	le and hosts you communicate with an	1
certificate authority (C	CA) is an organiza	tion that issues certificates.	
nrollment requests are	certificate reque	sts that a CA has yet to approve.	
Personal Certificates	CA Certificates	Enrollment Requests	
Certificate		Store	
User5		Request	

- 10. Bring up the Certification Authority (CA) server and the VPN Client interfaces concurrently to submit the request.
- 11. Select **Request a certificate** and click **Next** on the CA server.



12. Select Advanced request for the type of request and click Next.

Microsoft Certificate Services - Microsoft Internet Explorer	28 X
Elle Edit View Favorites Iools Help	
tion → . O D A O	
Agdeess A Http://192.168.2.50/cetrum/cetrum.asp	▼ ∂Go   Links **
Microsoft Certificate Services - wrizkserver	Home
Choose Request Type	
Please select the type of request you would like to make:	
C. User certificate request:	
Web Environm Cemticate E-Mail Protection Centicate	
Advanced request	
	Next>
	14
(a) Done	2 Internet

13. Select Submit a certificate request using a base64 encoded PKCS #10 file or a renewal request using a base64 encoded PKCS #7 file under Advanced Certificate Requests, and then click Next.

🗿 Microsoft Certificate Services - Microsoft Internet Explorer	- 8 X
Elle Edit View Favorites Ioole Help	<b>16</b>
キー・サージ 「「「」」 「」 「」 「」 「」 「」 Back Troverd Stop Referent Home Search Favorites History Nail Pint	
Address D Mp://192.168.2.50/centre/centrad arp	
Microsoft Cedificate Services — win2kserver	liome
Advanced Certificate Requests	
You can request a certificate for yourself, another user, or a computer using one of the following methods. Note that the po- authority (CA) will determine the certificates that you can obtain.	licy of the certification
<ul> <li>Submit a certificate request to this CA using a form.</li> </ul>	
R Submit a certificate request using a base64 encoded PKCS #10 file or a renewal request using a base64 encoded P	KCS #7 file.
C Request a certificate for a smart card on behalf of another user using the Smart Card Enrollment Station. You must have an enrollment agent certificate to submit a request for another user.	
	Next >
	<u>×</u>
2 Done	internet

14. Highlight the VPN Client request file, and paste it to the CA server under Saved Request. Then click **Submit**.

🛿 Microsoft Ceclificate Services - Microsoft Internet Explorer	Ŀ	8 >
Elle Edit View Favorites Iools Help		
Back Forward Stop Reflect Home Search Favorites History Mail Print		
Address 🛃 Http://192.168.2.50/cetrav/cetrapt.asp	• @Go ]	Links <sup>2</sup>
Microsoft Certificate Services - wer2kserver	Herr	u
Submit A Saved Request		
Paste a base64 encoded PKCS #10 certificate request or PKCS #7 renewal request generated by an external application (such server) into the request field to submit the request to the certification authority (CA).	as a web	
Saved Request:		
Base64 Encoded Bill BGJCBxQIBADB IMRAwDgTDVQQDFAdbYLlOZIXO Certificate Request (PKCS #10 or #7) wisigva/AgQAAAAFMAGCCSqCBIbSDQEBBAUAADEx Bicowsg for a file to insert.		
Additional Attributes:		
Attributes:		
	Submit >	-
2 Date	and the second	2

15. On the CA server, issue the identity certificate for the VPN Client request.

Certification Authority		3					
Tree	Request ID	Binary Request	Request Dis	position Message	Request Submission Date	Requester Name	Request Country/F
Certification Authority (Local)		BEGEN NE	Refresh Help	r Subolistion Issue Deny	3(23)2001 9:13 AM	GHOST2KUUSR	US

16. Download the root and identity certificates to the VPN Client. On the CA server, select **Check on a pending certificate**, and then click **Next**.

Microsoft Certificate Services – jfrahim.pc	Home
Welcome	
You use this web site to request a certificate for your web browser, e-mail client, or other secure program. Once you acquire a certificate will be able to securely identify yourself to other people over the web, sign your e-mail messages, encrypt your e-mail messages, and mo depending upon the type of certificate you request.	, you pre
Select a task:	
C Retrieve the CA certificate or certificate revocation list	
C Request a certificate	
Check on a pending certificate	
Next	12

17. Select Base 64 encoded. Then click Download CA certificate on the CA server.

Microsoft Certificate Services - jfrahim-pc					Hor
Certificate you requested was issu C DER encoded or C Ba Download CA certificate Download CA certification	ed to you. File Download				
	Saving centrem of Save As Estimated Download Transfer re Close 1 Close 1 Clos	ve in: Dasktop My Documents My Computer My Network Places Cases Sabb Ypn		◆ 歯 <mark>ざ □</mark> •	212
	My Compu My Network	P. File name: client_cont.c	cer -	2	Save Cancel

18. Select a file to download from the Retrieve the CA Certificate or Certificate Revocation List page to get the root certificate on the CA server. Then click **Next**.

Microsoft Certific	cate Services – phahim-pc								Home
Retrieve The (	CA Certificate Or Certi	ficate Rev	ocation List						
Install this CA c It is not necessa because the C/ Choose file to	ertification path to allow ary to manually install th A certification path will t download:	your comp	uter to trust c	ertificates issued	from this cer	rtification licate from	authority. In this certifi	ication	authority
CA Certificate	Current [(trehim-pc(3)) Previous [(trehim-pc(1))] Previous [(trehim-pc)] C DER encoded or Download CA certifica Download CA certifica Download latest certifica	certnew.cer	iave As Save in: Save in: History Desktop My Documents	Desktep My Documents My Computer My Ketwork Places cases jacb ypn client_cert.cer			+ ® ₫		2)3
			My Network P	File name: cli Save as type: Se	eni_root_cert.cer scurity Certificate				Save Cancel

19. Select Certificate Manager > CA Certificate > Import on the VPN Client, and then select the root CA file to install the root and identity certificates.

	Open ? ×
zation that issues certificates.	Look in: 🕜 Desktop
uests that a CA has yet to approve.	Mu Decimente Elejient cert cer
© Enrollment Requests   Store Import Certificate - Source	My Documents Cert.cer My Computer Elient_root_cert.cer My Network Places Cases Case Case
CISCO SYSTEMS	File name: client_root_cert.cer Open
-Certifica	Files of type: X.509 DER Files (*.der,*.cer) Cancel
Mic     Mic     File     Import pase	osoft certificate:
Back	Next > Cancel Help

20. Select Certificate Manager > Personal Certificates > Import, and choose the identity certificate file.

	e - Source			2
Cisco Syste	The ceri imported importing below.	tificate source in I from. Addition g is protected by cate source: —	dentifies where th ally, if the certifca y a password, ple-	e certificate is te you are ase enter it
		ICIUSUIT CEITINCE		*
5	P EI	le:		Browse
	Import p	assword:		
Doen	< Back	Next >	Cancel	Help
Look in: 🚮 De	esktop			 * <b></b>
My Document: My Computer My Network P	s Client Client	_cert.cer _root_cert.cer		2003 <u>-</u>
🚞 jazib 🚞 vpn				
iazib vpn File name: cl	lient_cert.cer			Open

21. Ensure that the identity certificate appears under the Personal Certificates tab.

sonal certificates identify	you to people and hosts you communicate with a
signed by a certificate a	uthority.
ertificate authority (CA) is	an organization that issues certificates.
ollment requests are certi	ificate requests that a CA has yet to approve.
ersonal Certificates CA	Certificates Enrollment Requests
Certificate	Store
User5	Cisco
<u>S</u> tores:	▼ <u>N</u> ew <u>Options</u> ▼
<u>à</u> tores: <all></all>	New Options

22. Ensure that the root certificate appears under the CA Certificates tab.

Cisco Systems VP	N Client Certific	ate Manager	×
Personal certificates id are signed by a certific	entify you to peopl ate authority.	le and hosts you communicate with and	
A certificate authority (	CA) is an organiza	tion that issues certificates.	
Enrollment requests are	e certificate reque:	sts that a CA has yet to approve.	
Personal Certificates	CA Certificates	Enrollment Requests	ř
Certificate		Store	l
jfrahim-pc		CA	Т
Stores: ZAIN	T	Dotions +	

# Verify

There is currently no verification procedure available for this configuration.

# Troubleshoot

When you attempt to enroll with the Microsoft CA Server, it can generate this error message.

```
Initiating online request
Generating key pair
Generating self-signed Certificate
Initiating online request
Received a response from the CA
Your certificate request was denied
```

If you receive this error message, refer to the Microsoft CA logs for details, or refer to these resources for more information.

- Windows Cannot Find a Certificate Authority That Processes the Request  $rac{d}$
- XCCC: "Your Certificate Request was Denied" Error Message Occurs When You Request a Certificate for Secure Conferences

### **Related Information**

- Cisco VPN 3000 Product Documentation
- IPsec Negotiation/IKE Protocols

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