



Using the VPN Client Command-Line Interface

This chapter explains how to use the VPN Client command-line interface (CLI) to connect to a Cisco VPN device, generate statistical reports, and disconnect from the device. You can create your own script files that use the CLI commands to perform routine tasks, such as connect to a corporate server, run reports, and then disconnect from the server.

CLI Commands

This section lists each command, its syntax, and gives sample output for each command. It is organized by task.

Displaying a List of VPN Client Commands

To display a list of all VPN Client commands, go to the directory that contains the VPN Client software, and enter the `vpnclient` command at the command-line prompt:

```
C:\Program Files\Cisco Systems\VPN Client>vpnclient
Cisco Systems VPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

Usage:
vpnclient connect <profile> [user <username>] [eraseuserpwd | pwd <password>]
                    [nocertpwd] [cliauth]
vpnclient disconnect
vpnclient stat [reset] [traffic] [tunnel] [route] [firewall] [repeat]
vpnclient notify
vpnclient verify [autoinitconfig]
vpnclient suspendfw
vpnclient resumefw
```

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Note

The `vpnclient` command lists all the commands and parameters available for your platform. Not all commands and parameters are available on all platforms.

Starting a Connection—`vpnclient connect`

To start a connection, enter the following command:

```
vpnclient connect <profile> [user <username>] [eraseuserpwd | pwd <password>]
[nocertpwd] [cliath]
```

Table 5-1 lists the command options you can use with the `vpnclient connect` command, includes the task that each option performs, and gives an example of each option.

Table 5-1 Command Line Options

option	Definition	Notes and Examples
<i>profile</i>	Name of the connection entry (.pcf file), that you have previously configured. Required.	If the filename contains spaces, enclose it in double quotes on the command line. Example: vpnclient connect "to VPN"
user	Specifies a username for authentication; with the <code>pwd</code> option, suppresses the username prompt in authentication dialog. Optional.	Updates the username in the .pcf file with this name. However, if the name supplied is not valid, the VPN Client displays the authentication dialog on a subsequent request. Example: vpnclient connect user robron pwd siltango toVPN
eraseuserpwd	Erases the user password saved on the Client PC thereby forcing the VPN Client to prompt for a password. Optional.	You might have configured a connection with Saved Password to suppress a password prompt when connecting using a batch file. You can then use the <code>eraseuserpwd</code> to return to the more secure state of requiring password input from the console when connecting. Example: vpnclient connect eraseuserpwd toVPN
pwd	Specifies a password for authentication; with the <code>user</code> option on the command line, suppresses the password prompt in authentication dialog. Optional.	If the password supplied is not valid, the VPN Client displays the authentication dialog on a subsequent request. After encrypting and using the password for the connection, the VPN Client clears the password in the .pcf file. Using this option on the command line compromises security and is not recommended. Example: vpnclient connect user robron pwd siltango toVPN
nocertpwd	Suppresses prompting for a certificate password. Optional.	Example: vpnclient connect nocertpwd toVPN
cliath (Windows platforms only)	Prompts for authentication information on the command line. Eliminates the GUI prompt that displays during a connection request from the command line.	The VPN client prompts for username and password. The password is displayed as asterisks. Example: vpnclient connect cliath toVPN

Table 5-1 Command Line Options

option	Definition	Notes and Examples
stdin	Causes the CLI to read input from the standard input pipe instead of from the console.	This option enables third party software to provide input directly to the CLI Example: vpnclient connect toVPN stdin
sd	Suppresses the “Do you wish to disconnect your Dial-Up Networking connection?” message that occurs when one is using Microsoft Dial-Up Networking.	Post version 4.0.3D this switch behaves as documented here. Example: vpnclient connect toVPN sd

Example 5-1 vpnclient connect Command

This example shows the vpnclient connect command that connects you to the Engineering Server using the profile name “engineering”

```

C:\Program Files\Cisco Systems\VPN Client>vpnclient connect engineering
Cisco Systems VPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

```

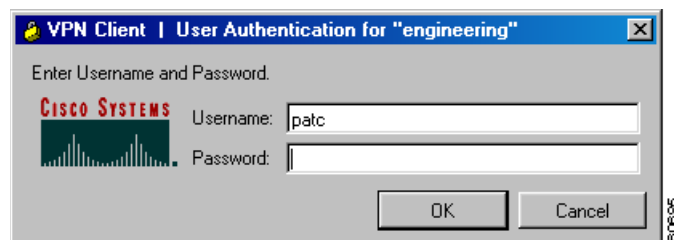
```

Initializing the UPN connection.
Contacting the gateway at 10.10.32.32
Authenticating user.

```

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At this point, the VPN Client displays an authentication dialog box that prompts for your username and password.

Figure 5-1 Authenticating a User

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After you enter your name and password, authentication succeeds, and the command continues executing.

```

Negotiating security policies.
Securing communication channel.
Welcome to Wonderland University
You can register on line beginning March 24, 2003
Do you wish to continue? (y/n):
Your UPN connection is secure.

```

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Example 5-2 *vpn connect Command Using cliauth*

Alternatively, to suppress the User Authentication window shown in Example 4-1, you can use the cliauth parameter. The command line then prompts for username and password. Using the cliauth parameter avoids having a password display in clear text on the command line.

```
C:\Program Files\Cisco Systems\VPN Client>vpnclient connect engineering cliauth
Cisco Systems VPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

Initializing the UPN connection.
Contacting the gateway at 10.10.32.32
User Authentication for engineering...

Enter Username and Password.

Username [patc]:
Password []: *****
Authenticating user.
Negotiating security policies.
Securing communication channel.
Welcome to Wonderland University
You can register on line beginning March 24, 2003
Do you wish to continue? (y/n):
Your UPN connection is secure.
```

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Example 5-3 *vpnclient connect Command Using Parameters*

The following command connects to the remote network without user interaction. Notice that the password appears on the command line in clear text.

```
C:\Program Files\Cisco Systems\VPN Client>vpnclient connect engineering user pat
c pwd Mohawk3turn
Cisco Systems VPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

Initializing the UPN connection.
Contacting the gateway at 10.10.32.32
Authenticating user.
Negotiating security policies.
Securing communication channel.
Welcome to Wonderland University
You can register on line beginning March 24, 2003
Do you wish to continue? (y/n):
Your UPN connection is secure.
```

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Displaying a Notification—vpnclient notify

When you connect, you can display a notification using the vpnclient notify command:

```
vpnclient notify
```

Example 5-4 *vpnclient notify Command*

The following session shows how to use the vpnclient notify command to display a notification from a network administrator.

```
C:\Program Files\Cisco Systems\Vpn Client>vpnclient notify
Cisco Systems VPN Client Version 4.0
Copyright <C> 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type<s>: Windows
Running on: 5.0.2195
```

```
Notification:
Your network administrator has placed an update of the Cisco Systems VPN Client at the
following location:
http://www.mycompany.com/clientupdate
```

Displaying an Automatic VPN Initiation Configuration—Windows Only

To display your configuration for auto initiation, enter the following command:

```
vpnclient verify autoinitconfig
```



Note

If the mask in the output display does not match the value in the profile, then the mask is invalid. An invalid mask is displayed as 255.255.255.255

Example 5-5 *vpnclient verify* Command

The following command shows your auto initiation configuration for one access point.

```
C:\Program Files\Cisco Systems\VPN Client>vpnclient verify autoinitconfig
Cisco Systems VPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

Auto-initiation Configuration Information.
Enable: 0
Retry Interval: 2 minutes
List Entry 0: Network: 10.10.32.32
Mask: 0.0.0.0
Connect Flag: 1
Connection Entry: "Engineering"
```

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Suspending/Resuming Stateful Firewall (Windows Only)

To suspend the stateful firewall, enter the following command:

```
vpnclient suspendfw
```

To resume a suspended stateful firewall, enter the following command;

```
vpnclient resume.fw
```

Example 5-6 *Suspending and Resuming Stateful Firewall*

The following commands control the setting of the stateful firewall. The first command output shows the response displayed when the stateful firewall is not enabled when the command is executed. The next two commands, executed after enabling the stateful firewall, first suspend the firewall and then resume it.

```

C:\Program Files\Cisco Systems\VPN Client>vpnclient suspendfw
Cisco Systems VPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

The Stateful Firewall (Always On) service is disabled so it cannot be suspended
or resumed

C:\Program Files\Cisco Systems\VPN Client>vpnclient suspendfw
Cisco Systems VPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

The Stateful Firewall (Always On) service has been suspended

C:\Program Files\Cisco Systems\VPN Client>vpnclient resumefw
Cisco Systems VPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

The Stateful Firewall (Always On) service has been resumed

```

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**Note**

If you reboot the PC after suspending the stateful firewall, the software restores the Stateful Firewall setting to enable and this will block traffic.

Ending a Connection—`vpnclient disconnect`

To disconnect from your session, enter the following command:

```
vpnclient disconnect
```

Example 5-7 *vpnclient disconnect Command*

The following command disconnects you from your secure connection.

```

C:\Program Files\Cisco Systems\VPN Client>vpnclient disconnect
Cisco Systems VPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

Disconnecting the UPN connection.
Your UPN connection has been terminated.

```

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Displaying Information About Your Connection—`vpnclient stat`

To generate status information about your connection, enter the following command:

```
vpnclient stat [reset] [traffic] [tunnel] [route] [firewall] [repeat]
```

When entered without any of the optional parameters, the `vpnclient stat` command displays all status information. The following parameters are optional:

Option	Definition	Example
<code>reset</code>	Restarts all connection counts from zero. SA stats are not reset.	<code>vpnclient stat reset</code>
<code>traffic</code>	Displays a summary of bytes in and out, packets encrypted and decrypted, packets bypassed, and packets discarded.	<code>vpnclient stat traffic</code>
<code>tunnel</code>	Displays IPsec tunneling information.	<code>vpnclient stat tunnel</code>
<code>route</code>	Displays configured routes.	<code>vpnclient stat routes</code>
<code>firewall</code>	Identifies the type of firewall in use and displays information generated by the firewall configuration. This option is available only on Windows platforms	<code>vpnclient stat firewall</code>
<code>repeat</code>	Provides a continuous display, refreshing it every few seconds. To end the display, press <ctrl-C>. To first reset the statistics information, use the reset option with the repeat option (see examples).	<code>vpnclient stat traffic repeat</code> <code>vpnclient stat repeat</code> <code>vpnclient stat reset traffic repeat</code> <code>vpnclient stat reset repeat</code>

The following examples show sample output from the `vpnclient stat` command. For more information on statistical output, see *VPN Client User Guide for Windows*.

Example 5-8 *vpnclient stat Command*

Following is an example of the information that the vpnclient stat command displays.

```
C:\Program Files\Cisco Systems\UPN Client>vpnclient stat
Cisco Systems UPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

UPN tunnel information.
Connection Entry: Engineering
Client address: 200.200.100.50
Server address: 10.10.32.32
Encryption: 168-bit 3-DES
Authentication: HMAC-MD5
IP Compression: None
NAT passthrough is inactive
Local LAN Access is disabled
Personal Firewall: Cisco Systems Integrated Client
Firewall Policy: Centralized Protection Policy (CPP)

UPN traffic summary.
Time connected: 0 day(s), 16:03.25
Bytes in: 60424
Bytes out: 176802
Packets encrypted: 1079
Packets decrypted: 1079
Packets bypassed: 3511
Packets discarded: 17324

Configured routes.
Secured      Network Destination  Netmask
0.0.0.0      0.0.0.0              0.0.0.0

Firewall Rules.
Act  Dir  Src Address          Dst Address          Pro   Src Port  Dst Port
Fwd  In   10.10.32.32/32      10.10.0.32/32       17    500       500
Fwd  Out  10.10.0.32/32      10.10.32.32/32     17    500       500
Fwd  In   10.10.32.32/32      10.10.0.32/32       50    Any       Any
Fwd  Out  10.10.0.32/32      10.10.32.32/32     50    Any       Any
Fwd  In   Any                 200.200.100.50/32  Any   N/A       N/A
Fwd  Out  200.200.100.50/32  Any                 Any   N/A       N/A
Fwd  Out  Local              Any                 Any   N/A       N/A
Drp  In   Any                 Local               Any   N/A       N/A
Drp  Out  Local              Any                 Any   N/A       N/A
```

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Example 5-9 *vpnclient stat reset Command*

The vpnclient stat reset command resets all connection counters.

```
C:\Program Files\Cisco Systems\UPN Client>vpnclient stat reset
Cisco Systems UPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

Tunnel statistics have been reset.
```

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Example 5-10 *vpnclient stat traffic Command*

Here is a sample of the information that the vpnclient stat traffic command generates.

```
C:\Program Files\Cisco Systems\UPN Client>vpnclient stat traffic
Cisco Systems UPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

UPN traffic summary.
Time connected: 0 day(s), 16:05.28
Bytes in: 60928
Bytes out: 178080
Packets encrypted: 1088
Packets decrypted: 1088
Packets bypassed: 3517
Packets discarded: 17392
```

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Example 5-11 *vpnclient stat tunnel Command*

To display only tunneling information, use the vpnclient stat tunnel command. Here is a sample.

```
C:\Program Files\Cisco Systems\UPN Client>vpnclient stat tunnel
Cisco Systems UPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

UPN tunnel information.
Connection Entry: Engineering
Client address: 200.200.100.50
Server address: 10.10.32.32
Encryption: 168-bit 3-DES
Authentication: HMAC-MD5
IP Compression: None
NAT passthrough is inactive
Local LAN Access is disabled
Personal Firewall: Cisco Systems Integrated Client
Firewall Policy: Centralized Protection Policy (CPP)
```

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Example 5-12 *vpnclient stat route Command*

The vpnclient stat route command displays information similar to the following display.

```
C:\Program Files\Cisco Systems\UPN Client>vpnclient stat route
Cisco Systems UPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

Configured routes.
Secured      Network Destination  Netmask
            0.0.0.0              0.0.0.0
```

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Example 5-13 *vpnclient stat firewall Command—Windows Only*

The `vpnclient stat firewall` command displays information similar to the following display.

```
C:\Program Files\Cisco Systems\VPN Client>vpnclient stat firewall
Cisco Systems VPN Client Version 4.0 (int_92)
Copyright (C) 1998-2003 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Windows, WinNT
Running on: 5.0.2195

Personal Firewall: Cisco Systems Integrated Client
Firewall Policy: Centralized Protection Policy (CPP)

Firewall Rules.
Act Dir Src Address          Dst Address          Pro   Src Port   Dst Port
Fwd In 10.10.32.32/32            10.10.0.32/32        17    500        500
Fwd Out 10.10.0.32/32            10.10.32.32/32        17    500        500
Fwd In 10.10.32.32/32            10.10.0.32/32        50    Any        Any
Fwd Out 10.10.0.32/32            10.10.32.32/32        50    Any        Any
Fwd In Any                    200.200.100.50/32    Any    N/A        N/A
Fwd Out 200.200.100.50/32        Any                    Any    N/A        N/A
Fwd Out Local                Any                    Any    N/A        N/A
Drp In Any                       Local                Any    N/A        N/A
Drp Out Local                Any                    Any    N/A        N/A
```

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**Note**

The maximum size of any VPN Client statistics count is 4,294,967,296. Once the VPN Client software reaches this limit, the statistics count rolls back to zero and starts again.

Return Codes

This section lists the error levels (return codes) that you can receive when using the VPN Client command-line interface.

Return Code	Message	Meaning
200	SUCCESS_START	The VPN Client connection started successfully.
201	SUCCESS_STOP	The VPN Client connection has ended.
202	SUCCESS_STAT	The VPN Client has generated statistical information successfully.
203	SUCCESS_ENUMPPP	The enumppp command has succeeded. This command lists phone book entries when connecting to the Internet via dial-up.
1	ERR_UNKNOWN	An unidentifiable error has occurred during command-line parsing.
2	ERR_MISSING_COMMAND	Command is missing from command-line input.
3	ERR_BAD_COMMAND	There is an error in the command entered; check spelling.
4	ERR_MISSING_PARAMS	The command-line input is missing required parameter(s).
5	ERR_BAD_PARAMS	The parameter(s) in the command input are incorrect; check spelling.
6	ERR_TOO_MANY_PARAMS	The command-line input contains too many parameters.
7	ERR_NO_PARAMS_NEEDED	The command entered does not require parameters.
8	ERR_ATTACH_FAILED	Interprocess communication error occurred attaching to the generic interface.
9	ERR_DETACH_FAILED	Interprocess communication error occurred detaching from the generic interface.
10	ERR_NO_PROFILE	The VPN Client failed to read the profile.
11	ERR_PWD_MISMATCHED	Reserved
12	ERR_PWD_TOO_LONG	The password contains too many characters. The group password limit is 128 characters; the certificate password limit is 255 characters.
13	ERR_TOO_MANY_TRIES	Attempts to enter a valid password have exceeded the amount allowed. The limit is three times.
14	ERR_START_FAILED	The connection attempt has failed; unable to connect.
15	ERR_STOP_FAILED	The disconnect action has failed; unable to disconnect.
16	ERR_STAT_FAILED	The attempt to display connection status has failed.
17	ERR_ENUM_FAILED	Unable to list phonebook entries.

Return Code	Message	Meaning
18	ERR_COMMUNICATION_FAILED	A serious interprocess communication error has occurred.
19	ERR_SET_HANDLER_FAILED	Set console control handler failed.
20	ERR_CLEAR_HANDLER_FAILED	Attempt to clean up after a user break failed.
21	ERR_OUT_OF_MEMORY	Out of memory. Memory allocation failed.
22	ERR_BAD_INTERFACE	Internal display error.
23	ERR_UNEXPECTED_CALLBACK	In communicating with the Connection Manager, an unexpected callback (response) occurred.
24	ERR_DO_NOT_CONTINUE	User quit at a banner requesting “continue?”
25	ERR_GUI_RUNNING	Cannot use the command-line interface when connected through the graphical interface dialer application.
26	ERR_SET_WORK_DIR_FAILED	The attempt to set the working directory has failed. This is the directory where the program files reside.
27	ERR_NOT_CONNECTED	Attempt to display status has failed because there is no connection in effect.
28	ERR_BAD_GROUP_NAME	The group name configured for the connection is too long. The limit is 128 characters.
29	ERR_BAD_GROUP_PWD	The group password configured for the connection is too long. The limit is 128 characters.
30	ERR_BAD_AUTHTYPE	The authentication type configured for the connection is invalid.
31	RESERVED_01	Reserved.
32	RESERVED_02	Reserved.
33	ERR_COMMUNICATION_TIMED_OUT	Interprocess communication timed out.
34	ERR_BAD_3RD_PARTY_DIAL	Failed to launch a third-party dialer.
35	ERR_DAEMON_NOT_RUNNING (CVPND.EXE) –Non-Windows only	Connection needs to be established for command to execute.
36	ERR_DAEMON_ALREADY_RUNNING (CVPND.EXE) –Non-Windows only	Command cannot work because connection is already established.

Application Example—Windows Only

Here is an example of a DOS batch file (.bat) that uses CLI commands to connect to the corporate office from a branch office, run an application, and then disconnect from the corporate site.

```
runxls.bat
rem assume you have generated a report in the middle of the night that needs
rem to be sent to the corporate office.

rem .. generate report.xls . .

rem connect to the home office
vpnclient connect myprofile user admin pwd admin

rem check return code from vpnclient call....
if %errorlevel% neq 200 goto failed
rem if okay continue and copy report

copy report.xls \\mycorpserver\directory\overnight_reports /v

rem now disconnect the VPN connection
vpnclient disconnect
echo Spreadsheet uploaded
goto end
:failed
echo failed to connect with error = %errorlevel%
:end
```

