

# Configuring IPsec from VPN Client Version 3.5 Solaris to a VPN 3000 Concentrator

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## Introduction

This document illustrates how to configure the VPN Client 3.5 for Solaris 2.6 to connect to a VPN 3000 Concentrator.

## Prerequisites

### Requirements

Before attempting this configuration, please ensure that you meet the following prerequisites.

- This example uses pre-shared key for group authentication. The username and password (extended authentication) are checked against the internal database of the VPN Concentrator.
- The VPN Client must be correctly installed. Refer to *Installing the VPN Client for Solaris* for details on the installation.
- IP connectivity must exist between the VPN Client and the public interface of the VPN Concentrator. Subnet mask and gateway information must be set properly.

### Components Used

The information in this document is based on these software and hardware versions.

- Cisco VPN Client for Solaris 2.6 version 3.5, 3DES image. (image name: vpnclient-solaris5.6-3.5.Rel-k9.tar.Z)
- Cisco VPN Concentrator Type: 3005 Bootcode Rev: Altiga Networks/VPN Concentrator Version 2.2.int\_9 Jan 19 2000 05:36:41 Software Rev: Cisco Systems, Inc./VPN 3000 Concentrator Series Version 3.1.Rel Aug 06 2001 13:47:37

The information presented in this document was created from devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If you are working in a live

network, ensure that you understand the potential impact of any command before using it.

## Conventions

For more information on document conventions, see the Cisco Technical Tips Conventions.

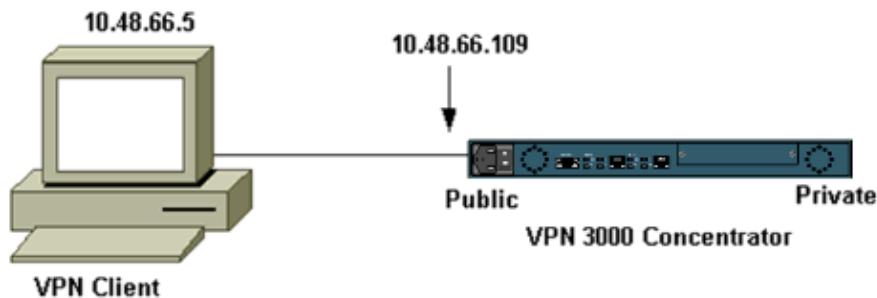
## Configure

In this section, you are presented with the information to configure the features described in this document.

**Note:** To find additional information on the commands used in this document, use the Command Lookup Tool (registered customers only) .

## Network Diagram

This document uses the network setup shown in the diagram below.



**Note:** For the VPN Client 3.5 to connect to the VPN Concentrator, you need version 3.0 or later on the concentrator.

## Configurations

### Creating a User Profile for the Connection

The user profiles are stored in the `/etc/CiscoSystemsVPNClient/Profiles` directory. These text files have a `.pcf` extension and contain parameters needed to establish a connection to a VPN Concentrator. You can create a new file or edit an existing one. You should find a sample profile, `sample.pcf`, in the profile directory. This example follows the use of that file to create a new profile named `toCORPORATE.pcf`.

```
[cholera]: ~ > cd /etc/CiscoSystemsVPNClient/Profiles/  
[cholera]: /etc/CiscoSystemsVPNClient/Profiles > cp sample.pcf toCORPORATE.pcf
```

You can use your favorite text editor to edit this new file, `toCORPORATE.pcf`. Before any modifications, the file looks like the following.

**Note:** If you want to use IPsec over Network Address Translation (NAT), the `EnableNat` entry in the configuration below must say "`EnableNat=1`" instead of "`EnableNat=0`."

```
[main]  
Description=sample user profile  
Host=10.7.44.1  
AuthType=1  
GroupName=monkeys  
EnableISPCoconnect=0  
ISPCoconnectType=0
```

```
ISPConnect=
ISPCommand=
Username=chimchim
SaveUserPassword=0
EnableBackup=0
BackupServer=
EnableNat=0
CertStore=0
CertName=
CertPath=
CertSubjectName=
CertSerialHash=00000000000000000000000000000000
DHGroup=2
ForceKeepAlives=0
```

Refer to User Profiles for a description of the user profile keywords.

To successfully configure your profile, you need to know, as a minimum, your equivalent values for the following information.

- The host name or public IP address of the VPN Concentrator (10.48.66.109)
- The group name (RemoteClient)
- The group password (cisco)
- The username (joe)

Edit the file with your information so that it will be similar to the following.

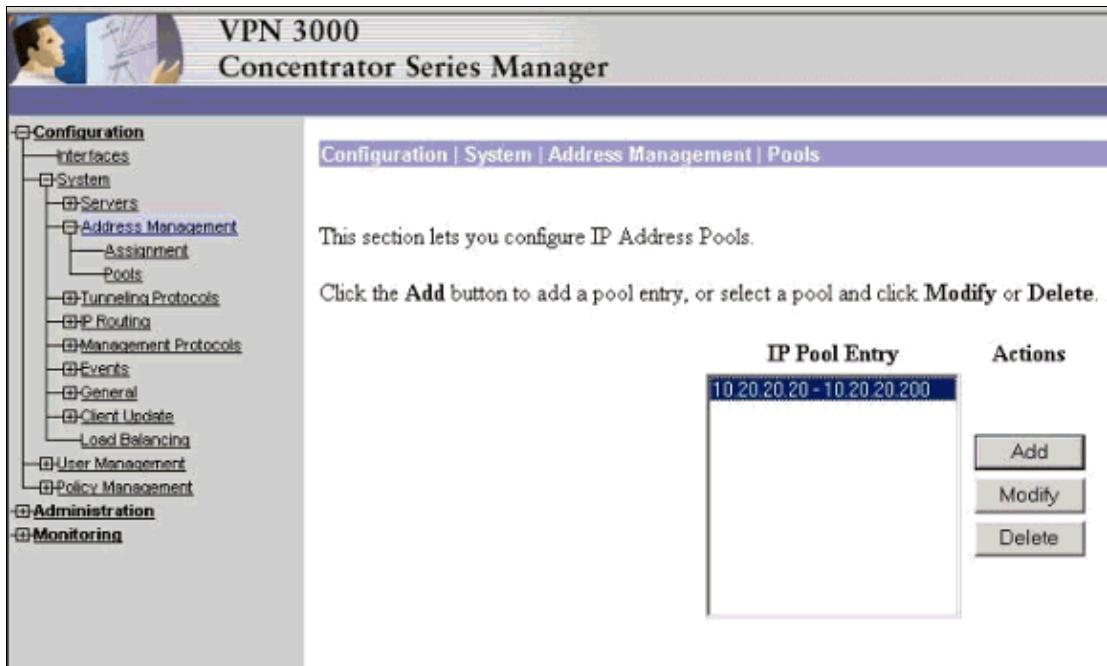
```
[main]
Description=Connection to the corporate
Host=10.48.66.109
AuthType=1
GroupName=RemoteClient
GroupPwd=cisco
EnableISPConnect=0
ISPConnectType=0
ISPConnect=
ISPCommand=
Username=joe
SaveUserPassword=0
EnableBackup=0
BackupServer=
EnableNat=0
CertStore=0
CertName=
CertPath=
CertSubjectName=
CertSerialHash=00000000000000000000000000000000
DHGroup=2
ForceKeepAlives=0
```

## Configuring the VPN Concentrator

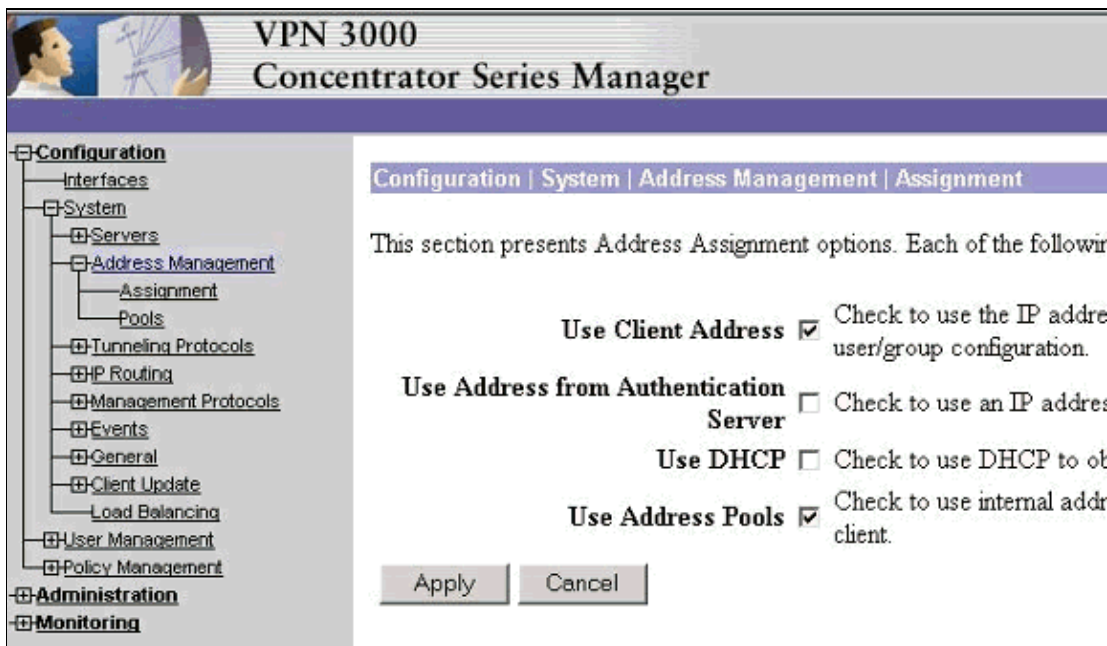
Use the following steps to configure the VPN Concentrator.

**Note:** Because of space limitations, screen captures only show partial or relevant areas.

1. Assign the pool of addresses. To assign an available range of IP addresses, point a browser to the inside interface of the VPN Concentrator and select **Configuration > System > Address Management > Pools**. Click **Add**. Specify a range of IP addresses that do not conflict with any other devices on the inside network.



2. To tell the VPN Concentrator to use the pool, select **Configuration > System > Address Management > Assignment**, check the **Use Address Pools** box, and then click **Apply**.



3. Add a group and a password. Select **Configuration > User Management > Groups**, and then click **Add Group**. Enter the correct information, and then click **Add** to submit the information.

This example uses a group named "RemoteClient" with a password of "cisco."

Configuration | User Management | Groups | Add

This section lets you add a group. Check the **Inherit?** box to set a field that you want to default to the base group value to override base group values.

Identity General IPsec Client FW PPTP/L2TP

**Identity Parameters**

Attribute	Value	Description
Group Name	RemoteClient	Enter a unique name for the group.
Password	*****	Enter the password for the group.
Verify	*****	Verify the group's password.
Type	Internal <input type="checkbox"/>	External groups are configured on an external authentication server. Internal groups are configured on the VPN 3000 Concentrator Series's Internal Database.

Add Cancel

4. On the group's IPsec tab, verify that authentication is set to **Internal**.

Configuration | User Management | Groups | Modify RemoteClient

Check the **Inherit?** box to set a field that you want to default to the base group value to override base group values.

Identity General IPsec Client FW PPTP/L2TP

**IPsec Parameters**

Attribute	Value	Inherit?
IPsec SA	ESP-3DES-MD5	<input checked="" type="checkbox"/>
IKE Peer Identity Validation	If supported by certificate	<input checked="" type="checkbox"/>
IKE Keepalives	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Reauthentication on Rekey	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tunnel Type	Remote Access	<input checked="" type="checkbox"/>

**Remote Access Parameters**

Group Lock	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Authentication	Internal	<input checked="" type="checkbox"/>

5. On the group's General tab, verify that **IPsec** is selected as the tunneling protocols.

		General Parameters		
Attribute	Value	Inherit?		
Access Hours	-No Restrictions-	<input checked="" type="checkbox"/>	Select the	
Simultaneous Logins	3	<input checked="" type="checkbox"/>	Enter the r	
Minimum Password Length	8	<input checked="" type="checkbox"/>	Enter the r	
Allow Alphabetic-Only Passwords	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Enter whe be added	
Idle Timeout	30	<input checked="" type="checkbox"/>	(minutes) I	
Maximum Connect Time	0	<input checked="" type="checkbox"/>	(minutes) I	
Filter	-None-	<input checked="" type="checkbox"/>	Enter the f	
Primary DNS		<input checked="" type="checkbox"/>	Enter the I	
Secondary DNS		<input checked="" type="checkbox"/>	Enter the I	
Primary WINS		<input checked="" type="checkbox"/>	Enter the I	
Secondary WINS		<input checked="" type="checkbox"/>	Enter the I	
Tunneling Protocols	<input type="checkbox"/> PPTP <input type="checkbox"/> L2TP <input checked="" type="checkbox"/> IPsec <input type="checkbox"/> L2TP over IPsec	<input type="checkbox"/>	Select the	
			Check to	

6. To add the user to the VPN Concentrator, select **Configuration > User Management > Users**, and then click **Add**.

- [-] Configuration
  - [-] Interfaces
  - [-] System
  - [-] User Management
    - [-] Base Group
    - [-] Groups
    - [-] Users
  - [-] Policy Management
- [-] Administration
- [-] Monitoring

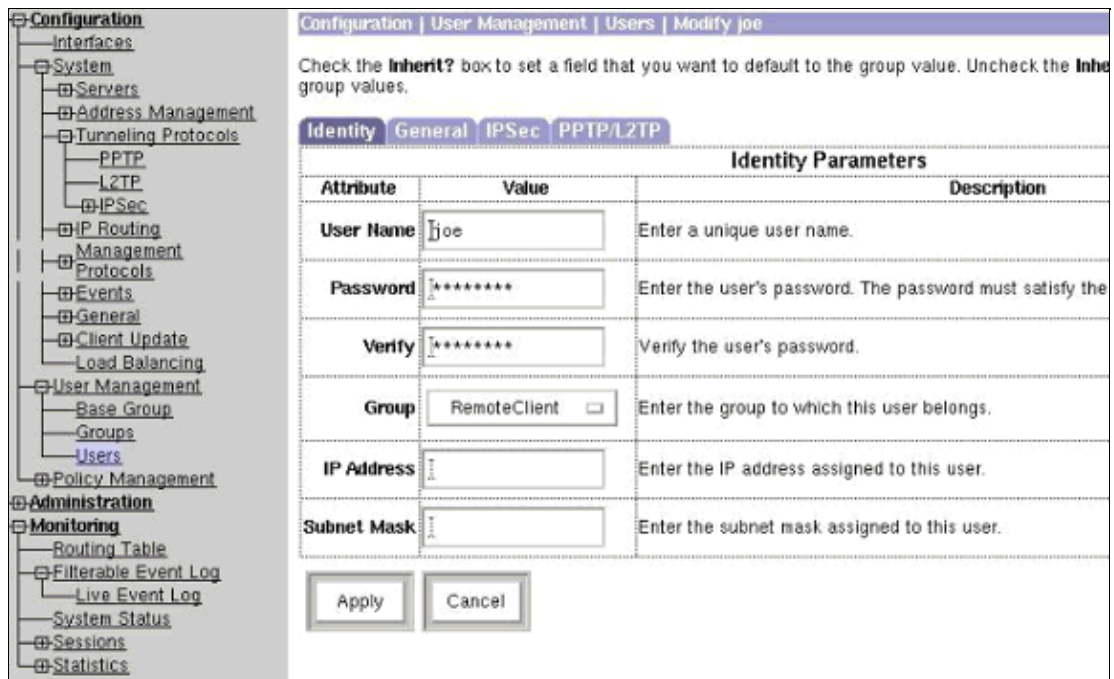
Configuration | User Management | Users

This section lets you configure users.

Click the **Add** button to add a user, or select a user and click **Modify** or **Delete**.

Current Users	Actions
Bredford-3002 itmcs-800	<div style="text-align: right;"> <input type="button" value="Add"/>  <input type="button" value="Modify"/>  <input type="button" value="Delete"/> </div>

7. Enter the correct information for the group, and then click **Apply** to submit the information.



## Verify

### Connecting to the VPN Concentrator

Now that the VPN Client and Concentrator are configured, the new profile should work to connect to the VPN Concentrator.

```
91 [cholera]: /etc/CiscoSystemsVPNClient > vpnclient connect toCORPORATE
Cisco Systems VPN Client Version 3.5 (Rel)
Copyright (C) 1998-2001 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Solaris
Running on: SunOS 5.6 Generic_105181-11 sun4u
```

```
Initializing the IPSec link.
Contacting the security gateway at 10.48.66.109
Authenticating user.
User Authentication for toCORPORATE...
```

Enter Username and Password.

```
Username [Joe]:
Password []:
Contacting the security gateway at 10.48.66.109
Your link is secure.
IPSec tunnel information.
Client address: 10.20.20.20
Server address: 10.48.66.109
Encryption: 168-bit 3-DES
Authentication: HMAC-MD5
IP Compression: None
NAT passthrough is inactive.
Local LAN Access is disabled.
```

```
^Z
Suspended
```

```
[cholera]: /etc/CiscoSystemsVPNClient > bg
[1]  vpnclient connect toCORPORATE &
(The process is made to run as background process)
```

```
[cholera]: /etc/CiscoSystemsVPNClient > vpnclient disconnect

Cisco Systems VPN Client Version 3.5 (Rel)
Copyright (C) 1998-2001 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Solaris
Running on: SunOS 5.6 Generic_105181-11 sun4u

Your IPsec link has been disconnected.
Disconnecting the IPSEC link.
[cholera]: /etc/CiscoSystemsVPNClient >
[1]      Exit -56                               vpnclient connect toCORPORATE

[cholera]: /etc/CiscoSystemsVPNClient >
```

## Troubleshoot

This section provides information you can use to troubleshoot your configuration.

## Debugs

To enable debugs, use the **ipsecclog** command. An example is shown below.

```
[cholera]: /etc/CiscoSystemsVPNClient > ipseclog /tmp/clientlog
```

### Debug on the Client When Connecting to the Concentrator

```
[cholera]: /etc/CiscoSystemsVPNClient > cat /tmp/clientlog

1      17:08:49.821  01/25/2002  Sev=Info/4      CLI/0x43900002
Started vpnclient:
Cisco Systems VPN Client Version 3.5 (Rel)
Copyright (C) 1998-2001 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Solaris
Running on: SunOS 5.6 Generic_105181-11 sun4u

2      17:08:49.855  01/25/2002  Sev=Info/4      CVPND/0x4340000F
Started cvpnd:
Cisco Systems VPN Client Version 3.5 (Rel)
Copyright (C) 1998-2001 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Solaris
Running on: SunOS 5.6 Generic_105181-11 sun4u

3      17:08:49.857  01/25/2002  Sev=Info/4      IPSEC/0x43700013
Delete internal key with SPI=0xb0f0d0c0

4      17:08:49.857  01/25/2002  Sev=Info/4      IPSEC/0x4370000C
Key deleted by SPI 0xb0f0d0c0

5      17:08:49.858  01/25/2002  Sev=Info/4      IPSEC/0x43700013
Delete internal key with SPI=0x637377d3

6      17:08:49.858  01/25/2002  Sev=Info/4      IPSEC/0x4370000C
Key deleted by SPI 0x637377d3

7      17:08:49.859  01/25/2002  Sev=Info/4      IPSEC/0x43700013
Delete internal key with SPI=0x9d4d2b9d

8      17:08:49.859  01/25/2002  Sev=Info/4      IPSEC/0x4370000C
Key deleted by SPI 0x9d4d2b9d

9      17:08:49.859  01/25/2002  Sev=Info/4      IPSEC/0x43700013
Delete internal key with SPI=0x5facd5bf
```



10 17:08:49.860 01/25/2002 Sev=Info/4 IPSEC/0x4370000C  
Key deleted by SPI 0x5facd5bf

11 17:08:49.860 01/25/2002 Sev=Info/4 IPSEC/0x43700009  
IPSec driver already started

12 17:08:49.861 01/25/2002 Sev=Info/4 IPSEC/0x43700014  
Deleted all keys

13 17:08:49.861 01/25/2002 Sev=Info/4 IPSEC/0x43700014  
Deleted all keys

14 17:08:49.862 01/25/2002 Sev=Info/4 IPSEC/0x43700009  
IPSec driver already started

15 17:08:49.863 01/25/2002 Sev=Info/4 IPSEC/0x43700009  
IPSec driver already started

16 17:08:49.863 01/25/2002 Sev=Info/4 IPSEC/0x43700014  
Deleted all keys

17 17:08:50.873 01/25/2002 Sev=Info/4 CM/0x43100002  
Begin connection process

18 17:08:50.883 01/25/2002 Sev=Info/4 CM/0x43100004  
Establish secure connection using Ethernet

19 17:08:50.883 01/25/2002 Sev=Info/4 CM/0x43100026  
Attempt connection with server "10.48.66.109"

20 17:08:50.883 01/25/2002 Sev=Info/6 IKE/0x4300003B  
Attempting to establish a connection with 10.48.66.109.

21 17:08:51.099 01/25/2002 Sev=Info/4 IKE/0x43000013  
SENDING >>> ISAKMP OAK AG (SA, KE, NON, ID, VID, VID, VID) to  
10.48.66.109

22 17:08:51.099 01/25/2002 Sev=Info/4 IPSEC/0x43700009  
IPSec driver already started

23 17:08:51.100 01/25/2002 Sev=Info/4 IPSEC/0x43700014  
Deleted all keys

24 17:08:51.400 01/25/2002 Sev=Info/5 IKE/0x4300002F  
Received ISAKMP packet: peer = 10.48.66.109

25 17:08:51.400 01/25/2002 Sev=Info/4 IKE/0x43000014  
RECEIVING <<< ISAKMP OAK AG (SA, KE, NON, ID, HASH, VID, VID, VID,  
VID) from 10.48.66.109

26 17:08:51.400 01/25/2002 Sev=Info/5 IKE/0x43000059  
Vendor ID payload = 12F5F28C457168A9702D9FE274CC0100

27 17:08:51.400 01/25/2002 Sev=Info/5 IKE/0x43000001  
Peer is a Cisco-Unity compliant peer

28 17:08:51.400 01/25/2002 Sev=Info/5 IKE/0x43000059  
Vendor ID payload = 09002689DFD6B712

29 17:08:51.400 01/25/2002 Sev=Info/5 IKE/0x43000059  
Vendor ID payload = AFCAD71368A1F1C96B8696FC77570100

30 17:08:51.400 01/25/2002 Sev=Info/5 IKE/0x43000001  
Peer supports DPD

31 17:08:51.400 01/25/2002 Sev=Info/5 IKE/0x43000059  
Vendor ID payload = 1F07F70EAA6514D3B0FA96542A500301

32 17:08:51.505 01/25/2002 Sev=Info/4 IKE/0x43000013  
SENDING >>> ISAKMP OAK AG \*(HASH, NOTIFY:STATUS\_INITIAL\_CONTACT)  
to 10.48.66.109

33 17:08:51.510 01/25/2002 Sev=Info/5 IKE/0x4300002F  
Received ISAKMP packet: peer = 10.48.66.109

34 17:08:51.511 01/25/2002 Sev=Info/4 IKE/0x43000014  
RECEIVING <<< ISAKMP OAK TRANS \*(HASH, ATTR) from 10.48.66.109

35 17:08:51.511 01/25/2002 Sev=Info/4 CM/0x43100015  
Launch xAuth application

36 17:08:56.333 01/25/2002 Sev=Info/4 CM/0x43100017  
xAuth application returned

37 17:08:56.334 01/25/2002 Sev=Info/4 IKE/0x43000013  
SENDING >>> ISAKMP OAK TRANS \*(HASH, ATTR) to 10.48.66.109

38 17:08:56.636 01/25/2002 Sev=Info/5 IKE/0x4300002F  
Received ISAKMP packet: peer = 10.48.66.109

39 17:08:56.637 01/25/2002 Sev=Info/4 IKE/0x43000014  
RECEIVING <<< ISAKMP OAK TRANS \*(HASH, ATTR) from 10.48.66.109

40 17:08:56.637 01/25/2002 Sev=Info/4 CM/0x4310000E  
Established Phase 1 SA. 1 Phase 1 SA in the system

41 17:08:56.639 01/25/2002 Sev=Info/4 IKE/0x43000013  
SENDING >>> ISAKMP OAK TRANS \*(HASH, ATTR) to 10.48.66.109

42 17:08:56.639 01/25/2002 Sev=Info/4 IKE/0x43000013  
SENDING >>> ISAKMP OAK TRANS \*(HASH, ATTR) to 10.48.66.109

43 17:08:56.645 01/25/2002 Sev=Info/5 IKE/0x4300002F  
Received ISAKMP packet: peer = 10.48.66.109

44 17:08:56.646 01/25/2002 Sev=Info/4 IKE/0x43000014  
RECEIVING <<< ISAKMP OAK TRANS \*(HASH, ATTR) from 10.48.66.109

45 17:08:56.646 01/25/2002 Sev=Info/5 IKE/0x43000010  
MODE\_CFG\_REPLY: Attribute = INTERNAL\_IPV4\_ADDRESS: ,  
value = 10.20.20.20

46 17:08:56.646 01/25/2002 Sev=Info/5 IKE/0x4300000D  
MODE\_CFG\_REPLY: Attribute = MODECFG\_UNITY\_SAVEPWD: ,  
value = 0x00000000

47 17:08:56.646 01/25/2002 Sev=Info/5 IKE/0x4300000D  
MODE\_CFG\_REPLY: Attribute = MODECFG\_UNITY\_PFS: ,  
value = 0x00000000

48 17:08:56.646 01/25/2002 Sev=Info/5 IKE/0x4300000E  
MODE\_CFG\_REPLY: Attribute = APPLICATION\_VERSION,  
value = Cisco Systems, Inc./VPN 3000 Concentrator Series  
Version 3.1.Rel built by vmurphy on Aug 06 2001 13:47:37

49 17:08:56.648 01/25/2002 Sev=Info/4 CM/0x43100019  
Mode Config data received

50 17:08:56.651 01/25/2002 Sev=Info/5 IKE/0x43000055  
Received a key request from Driver for IP address 10.48.66.109,  
GW IP = 10.48.66.109

51 17:08:56.652 01/25/2002 Sev=Info/4 IKE/0x43000013  
SENDING >>> ISAKMP OAK QM \*(HASH, SA, NON, ID, ID) to 10.48.66.109

52 17:08:56.653 01/25/2002 Sev=Info/5 IKE/0x43000055  
Received a key request from Driver for IP address 10.10.10.255,  
GW IP = 10.48.66.109

53 17:08:56.653 01/25/2002 Sev=Info/4 IKE/0x43000013  
SENDING >>> ISAKMP OAK QM \*(HASH, SA, NON, ID, ID) to 10.48.66.109

54 17:08:56.663 01/25/2002 Sev=Info/5 IKE/0x4300002F  
Received ISAKMP packet: peer = 10.48.66.109

55 17:08:56.663 01/25/2002 Sev=Info/4 IKE/0x43000014  
RECEIVING <<< ISAKMP OAK INFO \*(HASH, NOTIFY:STATUS\_RESP\_LIFETIME)  
from 10.48.66.109

56 17:08:56.663 01/25/2002 Sev=Info/5 IKE/0x43000044  
RESPONDER-LIFETIME notify has value of 86400 seconds

57 17:08:56.663 01/25/2002 Sev=Info/5 IKE/0x43000046  
This SA has already been alive for 6 seconds, setting expiry  
to 86394 seconds from now

58 17:08:56.666 01/25/2002 Sev=Info/5 IKE/0x4300002F  
Received ISAKMP packet: peer = 10.48.66.109

59 17:08:56.666 01/25/2002 Sev=Info/4 IKE/0x43000014  
RECEIVING <<< ISAKMP OAK QM \*(HASH, SA, NON, ID, ID,  
NOTIFY:STATUS\_RESP\_LIFETIME) from 10.48.66.109

60 17:08:56.667 01/25/2002 Sev=Info/5 IKE/0x43000044  
RESPONDER-LIFETIME notify has value of 28800 seconds

61 17:08:56.667 01/25/2002 Sev=Info/4 IKE/0x43000013  
SENDING >>> ISAKMP OAK QM \*(HASH) to 10.48.66.109

62 17:08:56.667 01/25/2002 Sev=Info/5 IKE/0x43000058  
Loading IPsec SA (Message ID = 0x4CEF4B32 OUTBOUND SPI =  
0x5EAD41F5 INBOUND SPI = 0xE66C759A)

63 17:08:56.668 01/25/2002 Sev=Info/5 IKE/0x43000025  
Loaded OUTBOUND ESP SPI: 0x5EAD41F5

64 17:08:56.669 01/25/2002 Sev=Info/5 IKE/0x43000026  
Loaded INBOUND ESP SPI: 0xE66C759A

65 17:08:56.669 01/25/2002 Sev=Info/4 CM/0x4310001A  
One secure connection established

66 17:08:56.674 01/25/2002 Sev=Info/5 IKE/0x4300002F  
Received ISAKMP packet: peer = 10.48.66.109

67 17:08:56.675 01/25/2002 Sev=Info/4 IKE/0x43000014  
RECEIVING <<< ISAKMP OAK QM \*(HASH, SA, NON, ID, ID,  
NOTIFY:STATUS\_RESP\_LIFETIME) from 10.48.66.109

68 17:08:56.675 01/25/2002 Sev=Info/5 IKE/0x43000044  
RESPONDER-LIFETIME notify has value of 28800 seconds

69 17:08:56.675 01/25/2002 Sev=Info/4 IKE/0x43000013  
SENDING >>> ISAKMP OAK QM \*(HASH) to 10.48.66.109

70 17:08:56.675 01/25/2002 Sev=Info/5 IKE/0x43000058  
Loading IPsec SA (Message ID = 0x88E9321A OUTBOUND SPI =

```

0x333B4239 INBOUND SPI = 0x6B040746)

71      17:08:56.677 01/25/2002 Sev=Info/5      IKE/0x43000025
Loaded OUTBOUND ESP SPI: 0x333B4239

72      17:08:56.677 01/25/2002 Sev=Info/5      IKE/0x43000026
Loaded INBOUND ESP SPI: 0x6B040746

73      17:08:56.678 01/25/2002 Sev=Info/4      CM/0x43100022
Additional Phase 2 SA established.

74      17:08:57.752 01/25/2002 Sev=Info/4      IPSEC/0x43700014
Deleted all keys

75      17:08:57.752 01/25/2002 Sev=Info/4      IPSEC/0x43700010
Created a new key structure

76      17:08:57.752 01/25/2002 Sev=Info/4      IPSEC/0x4370000F
Added key with SPI=0x5ead41f5 into key list

77      17:08:57.753 01/25/2002 Sev=Info/4      IPSEC/0x43700010
Created a new key structure

78      17:08:57.753 01/25/2002 Sev=Info/4      IPSEC/0x4370000F
Added key with SPI=0xe66c759a into key list

79      17:08:57.754 01/25/2002 Sev=Info/4      IPSEC/0x43700010
Created a new key structure

80      17:08:57.754 01/25/2002 Sev=Info/4      IPSEC/0x4370000F
Added key with SPI=0x333b4239 into key list

81      17:08:57.754 01/25/2002 Sev=Info/4      IPSEC/0x43700010
Created a new key structure

82      17:08:57.755 01/25/2002 Sev=Info/4      IPSEC/0x4370000F
Added key with SPI=0x6b040746 into key list

83      17:09:13.752 01/25/2002 Sev=Info/6      IKE/0x4300003D
Sending DPD request to 10.48.66.109, seq# = 2948297981

84      17:09:13.752 01/25/2002 Sev=Info/4      IKE/0x43000013
SENDING >>> ISAKMP OAK INFO *(HASH, NOTIFY:DPD_REQUEST)
to 10.48.66.109

85      17:09:13.758 01/25/2002 Sev=Info/5      IKE/0x4300002F
Received ISAKMP packet: peer = 10.48.66.109

86      17:09:13.758 01/25/2002 Sev=Info/4      IKE/0x43000014
RECEIVING <<< ISAKMP OAK INFO *(HASH, NOTIFY:DPD_ACK)
from 10.48.66.109

87      17:09:13.759 01/25/2002 Sev=Info/5      IKE/0x4300003F
Received DPD ACK from 10.48.66.109, seq# received = 2948297981,
seq# expected = 2948297981

debug on the client when disconnecting
88      17:09:16.366 01/25/2002 Sev=Info/4      CLI/0x43900002
Started vpnclient:
Cisco Systems VPN Client Version 3.5 (Rel)
Copyright (C) 1998-2001 Cisco Systems, Inc. All Rights Reserved.
Client Type(s): Solaris
Running on: SunOS 5.6 Generic_105181-11 sun4u

```

89 17:09:16.367 01/25/2002 Sev=Info/4 CM/0x4310000A  
Secure connections terminated

90 17:09:16.367 01/25/2002 Sev=Info/5 IKE/0x43000018  
Deleting IPsec SA: (OUTBOUND SPI = 333B4239 INBOUND SPI = 6B040746)

91 17:09:16.368 01/25/2002 Sev=Info/4 IKE/0x43000013  
SENDING >>> ISAKMP OAK INFO \*(HASH, DEL) to 10.48.66.109

92 17:09:16.369 01/25/2002 Sev=Info/5 IKE/0x43000018  
Deleting IPsec SA: (OUTBOUND SPI = 5EAD41F5 INBOUND SPI = E66C759A)

93 17:09:16.369 01/25/2002 Sev=Info/4 IKE/0x43000013  
SENDING >>> ISAKMP OAK INFO \*(HASH, DEL) to 10.48.66.109

94 17:09:16.370 01/25/2002 Sev=Info/4 IKE/0x43000013  
SENDING >>> ISAKMP OAK INFO \*(HASH, DEL) to 10.48.66.109

95 17:09:16.371 01/25/2002 Sev=Info/4 CM/0x43100013  
Phase 1 SA deleted cause by DEL\_REASON\_RESET\_SADB.  
0 Phase 1 SA currently in the system

96 17:09:16.371 01/25/2002 Sev=Info/5 CM/0x43100029  
Initializing CVPNDrv

97 17:09:16.371 01/25/2002 Sev=Info/6 CM/0x43100035  
Tunnel to headend device 10.48.66.109 disconnected:  
duration: 0 days 0:0:20

98 17:09:16.375 01/25/2002 Sev=Info/5 CM/0x43100029  
Initializing CVPNDrv

99 17:09:16.377 01/25/2002 Sev=Info/5 IKE/0x4300002F  
Received ISAKMP packet: peer = 10.48.66.109

100 17:09:16.377 01/25/2002 Sev=Warning/2 IKE/0x83000061  
Attempted incoming connection from 10.48.66.109. Inbound  
connections are not allowed.

101 17:09:17.372 01/25/2002 Sev=Info/4 IPSEC/0x43700013  
Delete internal key with SPI=0x6b040746

102 17:09:17.372 01/25/2002 Sev=Info/4 IPSEC/0x43700013  
Delete internal key with SPI=0x333b4239

103 17:09:17.373 01/25/2002 Sev=Info/4 IPSEC/0x43700013  
Delete internal key with SPI=0xe66c759a

104 17:09:17.373 01/25/2002 Sev=Info/4 IPSEC/0x43700013  
Delete internal key with SPI=0x5ead41f5

105 17:09:17.373 01/25/2002 Sev=Info/4 IPSEC/0x43700014  
Deleted all keys

106 17:09:17.374 01/25/2002 Sev=Info/4 IPSEC/0x43700009  
IPSec driver already started

107 17:09:17.374 01/25/2002 Sev=Info/4 IPSEC/0x43700014  
Deleted all keys

108 17:09:17.375 01/25/2002 Sev=Info/4 IPSEC/0x43700009  
IPSec driver already started

109 17:09:17.375 01/25/2002 Sev=Info/4 IPSEC/0x43700014  
Deleted all keys

```
110    17:09:17.375  01/25/2002  Sev=Info/4    IPSEC/0x43700009
IPSec driver already started

111    17:09:17.376  01/25/2002  Sev=Info/4    IPSEC/0x43700014
Deleted all keys
```

## Debugs on the VPN Concentrator

Select **Configuration > System > Events > Classes** to turn on the following debug if there are event connection failures.

- **AUTH** – Severity to log 1–13
- **IKE** – Severity to log 1–6
- **IPSEC** – Severity to log 1–6

The screenshot shows the configuration interface for the VPN Concentrator. The left sidebar contains a tree view with the following items: Configuration, Interfaces, System (expanded), Servers, Address Management, Tunneling Protocols, IP Routing, Management Protocols, Events (expanded), General, FTP Backup, Classes (selected), Trap Destinations, Syslog Servers, SMTP Servers, Email Recipients, General, Client Update, Load Balancing, User Management, Policy Management, Administration, and Monitoring. The main content area is titled 'Configuration | System | Events | Classes'. It contains the following text: 'This section lets you configure special handling of specific event classes.', 'Click the **Add** button to add an event class, or select an event class and click **Mod**', and a link: 'Click here to configure general event parameters.'. Below this text is a table with two columns: 'Configured Event Classes' and 'Actions'. The table lists 'AUTH', 'IKE', and 'IPSEC' in the first column. The 'Actions' column contains three buttons: 'Add', 'Modify', and 'Delete'.

Configured Event Classes	Actions
AUTH	Add Modify Delete
IKE	
IPSEC	

You can view the log by selecting **Monitoring > Event Log**.

## Related Information

- [Cisco VPN 3000 Series Concentrator Support Page](#)
- [Cisco VPN 3000 Series Client Support Page](#)
- [IPSec Support Page](#)
- [Technical Support – Cisco Systems](#)

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