使用RADIUS進行使用者身份驗證，在Cisco IOS路由器和Cisco VPN客戶端4.x for Windows之間配置IPSec

目錄

簡介

本文檔演示如何使用遠端身份驗證撥入使用者服務(RADIUS)進行使用者身份驗證，在路由器和Cisco VPN客戶端4.x之間配置連線。Cisco IOS®軟體版本12.2(8)T和更新版本支援來自Cisco VPN Client 4.x的連線。VPN客戶端3.x和4.x使用Diffie Hellman(DH)組2策略。**isakmp policy # group 2**命令使VPN客戶端能夠連線。

本檔案將說明RADIUS伺服器上的驗證和路由器本機的授權(例如分配Windows Internet命名服務(WINS)和網域命名服務(DNS))。如果您對通過RADIUS伺服器執行身份驗證和授權感興趣，請參閱使用RADIUS在Cisco IOS路由器和Cisco VPN Client 4.x for Windows之間配置IPSec。

注意：IPSec VPN記賬現在可用。有關詳細資訊和配置示例，請參閱IPSec VPN記帳。

請參閱使用TACACS+的使用者身份驗證在IOS路由器和Cisco VPN客戶端4.x for Windows之間的IPsec隧道配置示例，瞭解有關使用TACACS+協定在外部進行使用者身份驗證的方案的詳細資訊。

請參閱使用本地擴展身份驗證將Cisco VPN Client 3.x for Windows配置為IOS，瞭解有關在Cisco

IOS路由器本地進行使用者身份驗證的方案的詳細資訊。

有關如何使用Microsoft Windows 2003 Internet Authentication Service(IAS)RADIUS伺服器在Cisco VPN客戶端(4.x for Windows)和PIX 500系列安全裝置7.x之間設定遠端訪問VPN連線的資訊，請參閱PIX/ASA 7.x和Cisco VPN Client 4.x for Windows with Microsoft Windows 2003 IAS RADIUS身份驗證配置示例。

有關如何使用萬用字元、mode-config、**sysopt connection permit-ipsec**命令和擴展身份驗證(Xauth)將VPN客戶端連線到PIX防火牆的資訊，請參閱IPSec - PIX到VPN客戶端萬用字元、預共用模式配置。

有關如何使用RADIUS進行使用者身份驗證和記帳在Cisco VPN 3000集中器和Cisco VPN Client 4.x for Windows之間建立IPSec隧道的資訊，請參閱使用RADIUS進行使用者身份驗證和記帳的VPN 3000集中器和VPN Client 4.x for Windows之間的IPsec配置示例。

必要條件

需求

嘗試此組態之前，請確保符合以下要求：

- 要為IPSec分配的地址池
- 一個名為「3000clients」、密碼為「cisco123」的組
- RADIUS伺服器上的使用者驗證

採用元件

本文中的資訊係根據以下軟體和硬體版本：

- 執行Cisco IOS軟體版本12.2(15)T2的2621XM路由器
- 適用於Windows 2000的CiscoSecure ACS版本4.2（任何RADIUS伺服器都應正常運作）
- 適用於Windows版本4.8的Cisco VPN客戶端（任何VPN客戶端4.x及更高版本都應工作）

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設）的組態來啟動。如果您的網路正在作用，請確保您已瞭解任何指令可能造成的影響。

以下是在路由器上**show version**指令的輸出：

```
vpn2621#show version
Cisco Internetwork Operating System Software
IOS (tm) C2600 Software (C2600-IK9S-M), Version 12.2(15)T2,  RELEASE SOFTWARE (fc2)
TAC Support: http://www.cisco.com/tac
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled Thu 01-May-03 10:39 by nmasa
Image text-base: 0x80008098, data-base: 0x81BBB0BC

ROM: System Bootstrap, Version 12.2(7r) [cmong 7r], RELEASE SOFTWARE (fc1)

vpn2621 uptime is 1 hour, 34 minutes
System returned to ROM by reload
System image file is "flash:c2600-ik9s-mz.122-15.T2.bin"
```

```
This product contains cryptographic features and is subject to United
States and local country laws governing import, export, transfer and
use. Delivery of Cisco cryptographic products does not imply
third-party authority to import, export, distribute or use encryption.
Importers, exporters, distributors and users are responsible for
compliance with U.S. and local country laws. By using this product you
agree to comply with applicable laws and regulations. If you are unable
to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to
export@cisco.com.

cisco 2621XM (MPC860P) processor (revision 0x100) with 125952K/5120K bytes of memory.
Processor board ID JAD064503FK (64188517)
M860 processor: part number 5, mask 2
Bridging software.
X.25 software, Version 3.0.0.
2 FastEthernet/IEEE 802.3 interface(s)
2 Serial(sync/async) network interface(s)
1 terminal line(s)
1 Virtual Private Network (VPN) Module(s)
1 cisco content engine(s)
32K bytes of non-volatile configuration memory.
32768K bytes of processor board System flash (Read/Write)

Configuration register is 0x2102
```

慣例

如需文件慣例的詳細資訊，請參閱思科技術提示慣例。

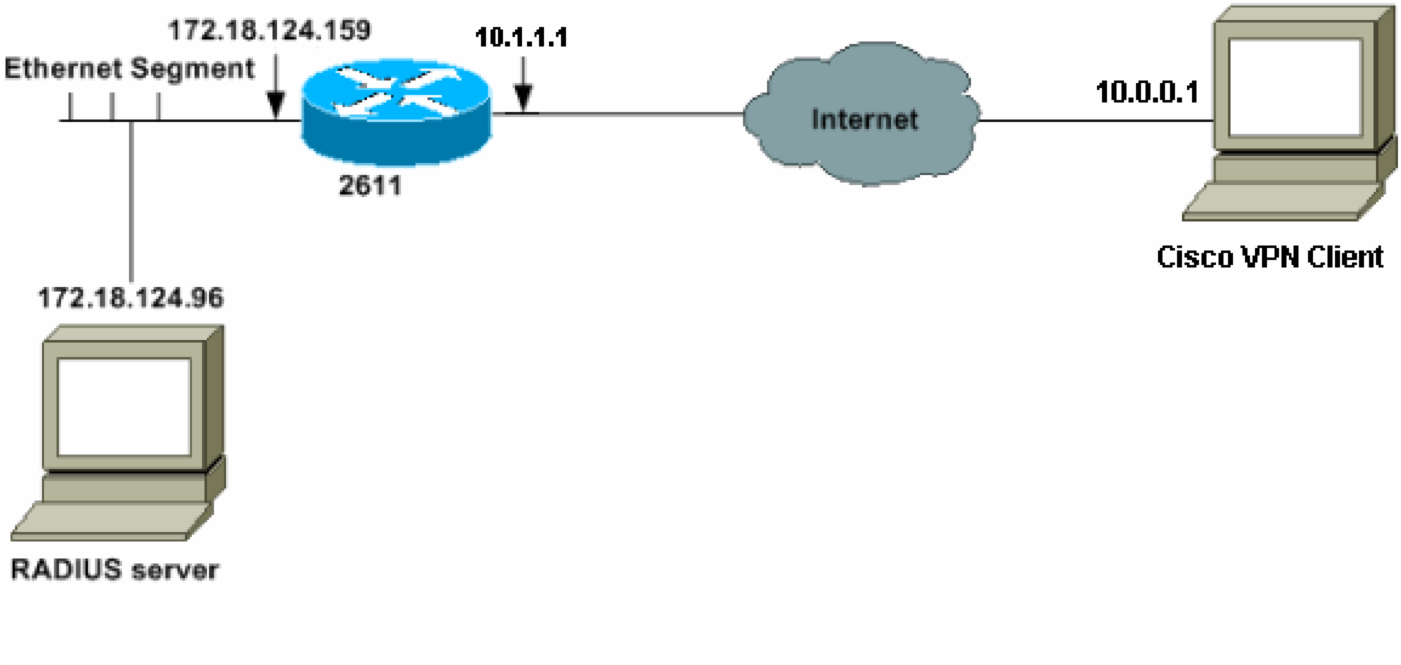
設定

本節提供用於設定本文件中所述功能的資訊。

註：使用Command Lookup Tool(僅限註冊客戶)查詢有關本文檔中使用的命令的更多資訊。

網路圖表

本檔案會使用以下網路設定：



配置2621XM路由器

2621XM路由器

```
!--- Enable authentication, authorization and accounting
(AAA) !--- for user authentication and group
authorization. aaa new-model
!
!--- In order to enable extended authentication (Xauth)
for user authentication, !--- enable the aaa
authentication commands. !--- "Group radius local"
specifies RADIUS user authentication !--- to be used by
default and to use local database if RADIUS server is
not reachable.

aaa authentication login userauthen group radius local


!--- In order to enable group authorization, !--- enable
the aaa authorization commands.

aaa authorization network groupauthor local
!--- Create an Internet Security Association and !---
Key Management Protocol (ISAKMP) policy for Phase 1
negotiations. crypto isakmp policy 3
encr 3des
authentication pre-share
group 2
!

!--- Create a group that will be used to specify the !--
- Windows Internet Naming Service (WINS) and Domain
Naming Service (DNS) server !--- addresses to the
client, along with the pre-shared key for
authentication. crypto isakmp client configuration group
3000client
key cisco123
dns 10.1.1.10
wins 10.1.1.20
```

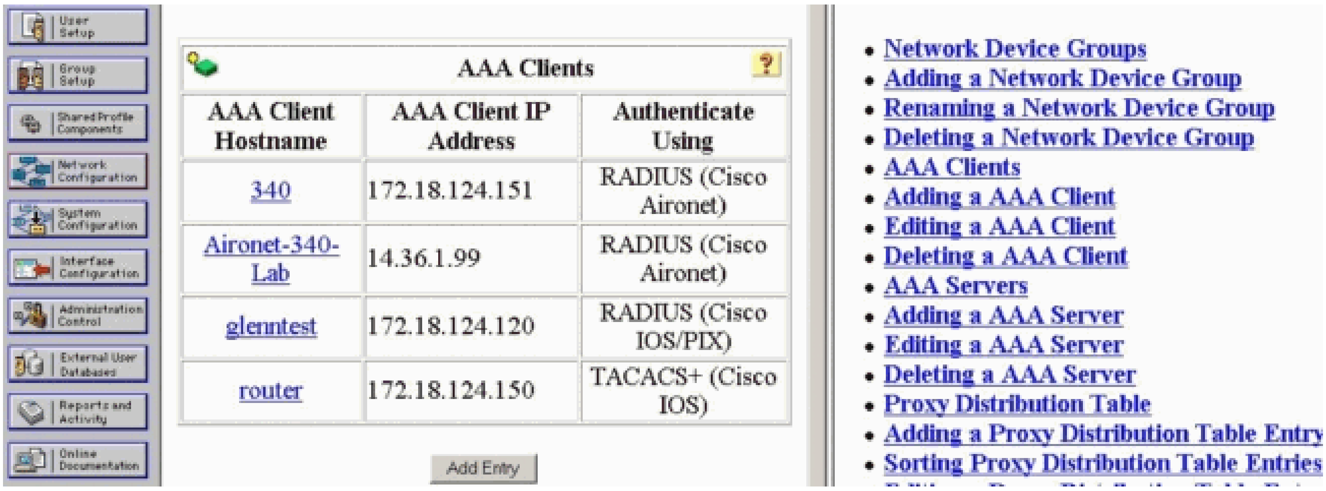
```
domain cisco.com
pool ippool
!
!--- Create the Phase 2 policy for actual data
encryption. crypto ipsec transform-set myset esp-3des
esp-sha-hmac
!

!--- Create a dynamic map and !--- apply the transform
set that was created. crypto dynamic-map dynmap 10
set transform-set myset
!
!--- Create the actual crypto map, !--- and apply the
AAA lists that were created earlier. crypto map
clientmap client authentication list userauthen
crypto map clientmap isakmp authorization list
groupauthor
crypto map clientmap client configuration address
respond
crypto map clientmap 10 ipsec-isakmp dynamic dynmap
!--- Apply the crypto map on the outside interface.
interface Ethernet0/0
ip address 10.1.1.1 255.255.255.0
 half-duplex
 crypto map clientmap
interface Ethernet0/1

ip address 172.18.124.159 255.255.255.0
 half-duplex
!

!--- Create a pool of addresses to be assigned to the
VPN Clients. ip local pool ippool  10.16.20.1
10.16.20.200
ip classless
ip route 0.0.0.0 0.0.0.0 10.1.1.2
ip http server
ip pim bidir-enable
!
!
!
!--- Specify the IP address of the RADIUS server, !---
along with the RADIUS shared secret key. radius-server
host 172.18.124.96 auth-port 1645 acct-port 1646 key
cisco123
radius-server retransmit 3
```

RADIUS伺服器組態

配置RADIUS伺服器以進行使用者身份驗證

完成以下步驟即可設定RADIUS伺服器：

1. 在RADIUS伺服器資料庫中為路由器新增專案。

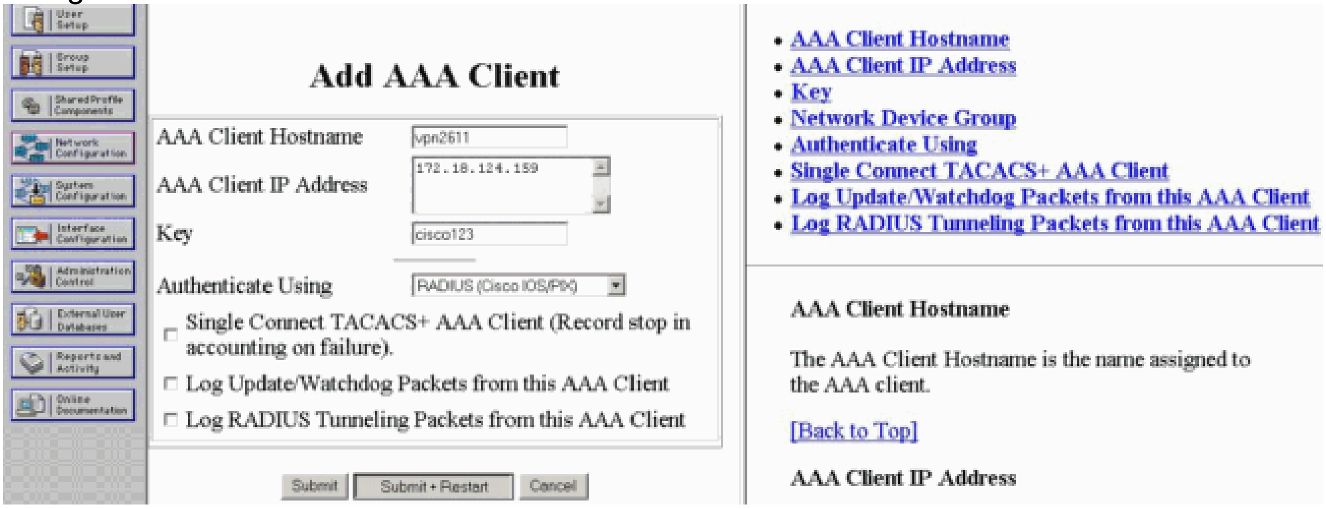


AAA Clients

AAA Client Hostname	AAA Client IP Address	Authenticate Using
340	172.18.124.151	RADIUS (Cisco Aironet)
Aironet-340-Lab	14.36.1.99	RADIUS (Cisco Aironet)
glenntest	172.18.124.120	RADIUS (Cisco IOS/PIX)
router	172.18.124.150	TACACS+ (Cisco IOS)

- Network Device Groups
- Adding a Network Device Group
- Renaming a Network Device Group
- Deleting a Network Device Group
- AAA Clients
- Adding a AAA Client
- Editing a AAA Client
- Deleting a AAA Client
- AAA Servers
- Adding a AAA Server
- Editing a AAA Server
- Deleting a AAA Server
- Proxy Distribution Table
- Adding a Proxy Distribution Table Entry
- Sorting Proxy Distribution Table Entries

2. 指定路由器「172.18.124.159」的IP地址以及共用金鑰「cisco123」。 在「Authenticate Using」下拉框中選擇**RADIUS**。



Add AAA Client

AAA Client Hostname	vpn2611
AAA Client IP Address	172.18.124.159
Key	cisco123
Authenticate Using	RADIUS (Cisco IOS/PIX)

□ Single Connect TACACS+ AAA Client (Record stop in accounting on failure).

□ Log Update/Watchdog Packets from this AAA Client

□ Log RADIUS Tunneling Packets from this AAA Client

- AAA Client Hostname
- AAA Client IP Address
- Key
- Network Device Group
- Authenticate Using
- Single Connect TACACS+ AAA Client
- Log Update/Watchdog Packets from this AAA Client
- Log RADIUS Tunneling Packets from this AAA Client

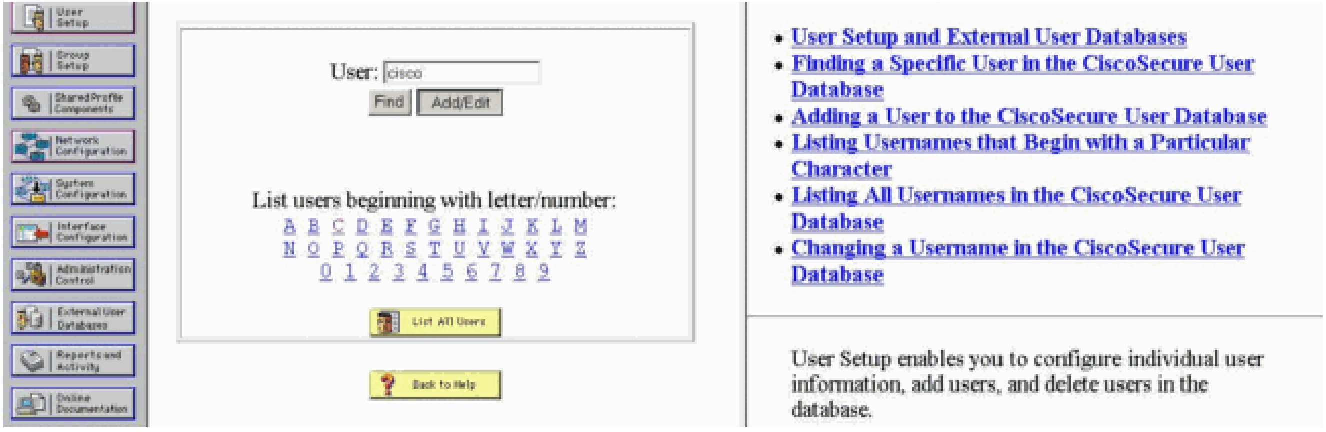
AAA Client Hostname

The AAA Client Hostname is the name assigned to the AAA client.

[Back to Top]

AAA Client IP Address

3. 在CiscoSecure資料庫中新增VPN使用者的使用者名稱。在本例中，使用者名稱為cisco。



User: cisco

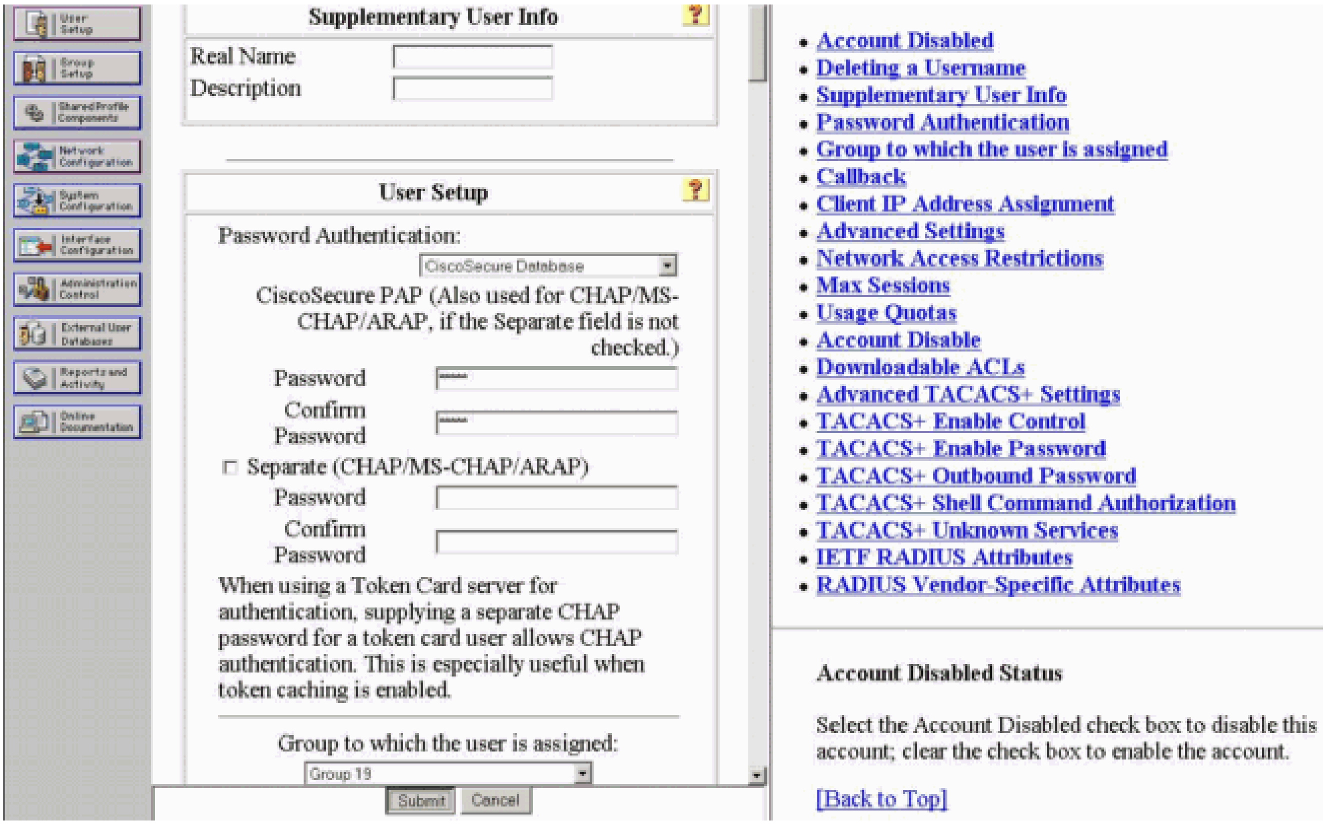
List users beginning with letter/number:

A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9

- User Setup and External User Databases
- Finding a Specific User in the CiscoSecure User Database
- Adding a User to the CiscoSecure User Database
- Listing Usernames that Begin with a Particular Character
- Listing All Usernames in the CiscoSecure User Database
- Changing a Username in the CiscoSecure User Database

User Setup enables you to configure individual user information, add users, and delete users in the database.

4. 在下一個視窗中，指定使用者cisco的口令。在本範例中，密碼也是cisco。可以將使用者帳戶對映到組。完成後，按一下**Submit**。



Supplementary User Info

Real Name

Description

User Setup

Password Authentication:

CiscoSecure Database

CiscoSecure PAP (Also used for CHAP/MS-CHAP/ARAP, if the Separate field is not checked.)

Password ******

Confirm Password ******

□ Separate (CHAP/MS-CHAP/ARAP)

Password

Confirm Password

When using a Token Card server for authentication, supplying a separate CHAP password for a token card user allows CHAP authentication. This is especially useful when token caching is enabled.

Group to which the user is assigned:

Group 19

- Account Disabled
- Deleting a Username
- Supplementary User Info
- Password Authentication
- Group to which the user is assigned
- Callback
- Client IP Address Assignment
- Advanced Settings
- Network Access Restrictions
- Max Sessions
- Usage Quotas
- Account Disable
- Downloadable ACLs
- Advanced TACACS+ Settings
- TACACS+ Enable Control
- TACACS+ Enable Password
- TACACS+ Outbound Password
- TACACS+ Shell Command Authorization
- TACACS+ Unknown Services
- IETF RADIUS Attributes
- RADIUS Vendor-Specific Attributes

Account Disabled Status

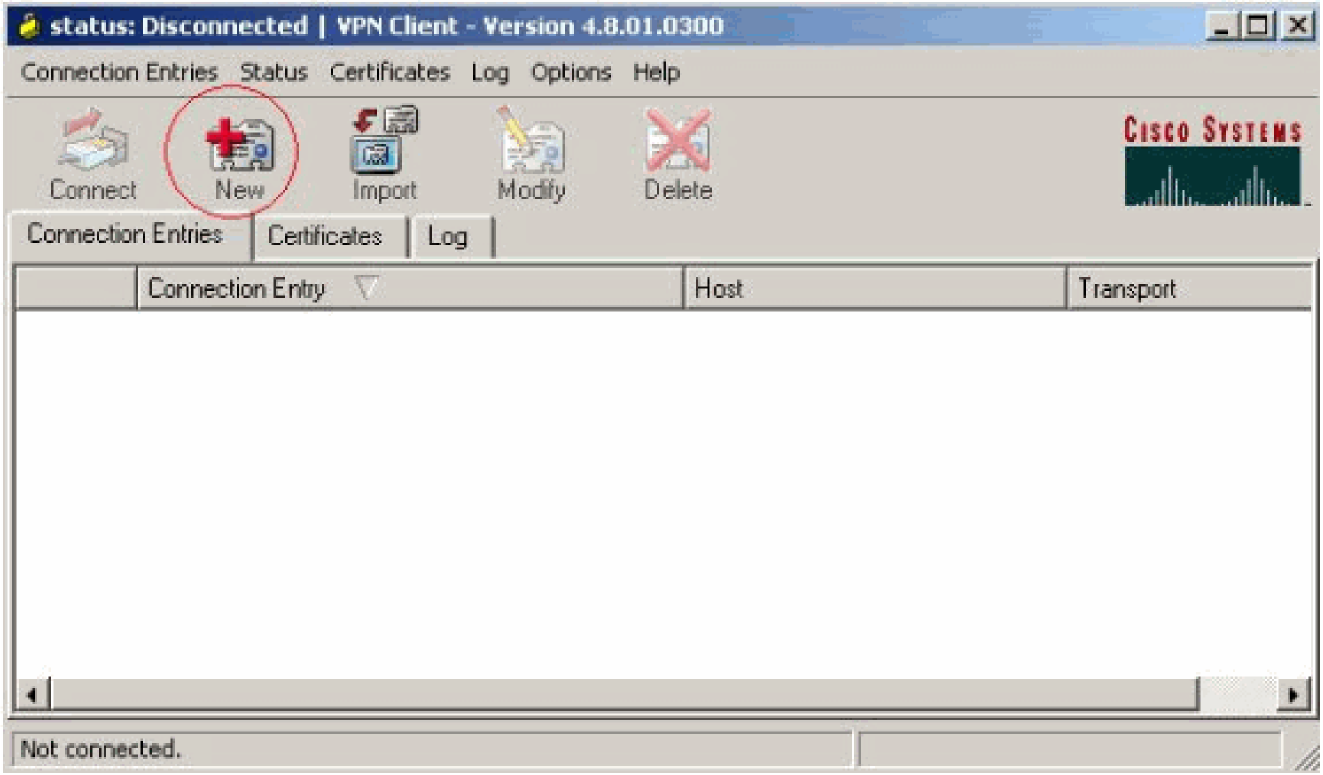
Select the Account Disabled check box to disable this account; clear the check box to enable the account.

[Back to Top]

VPN客戶端4.8配置

完成以下步驟以配置VPN客戶端4.8:

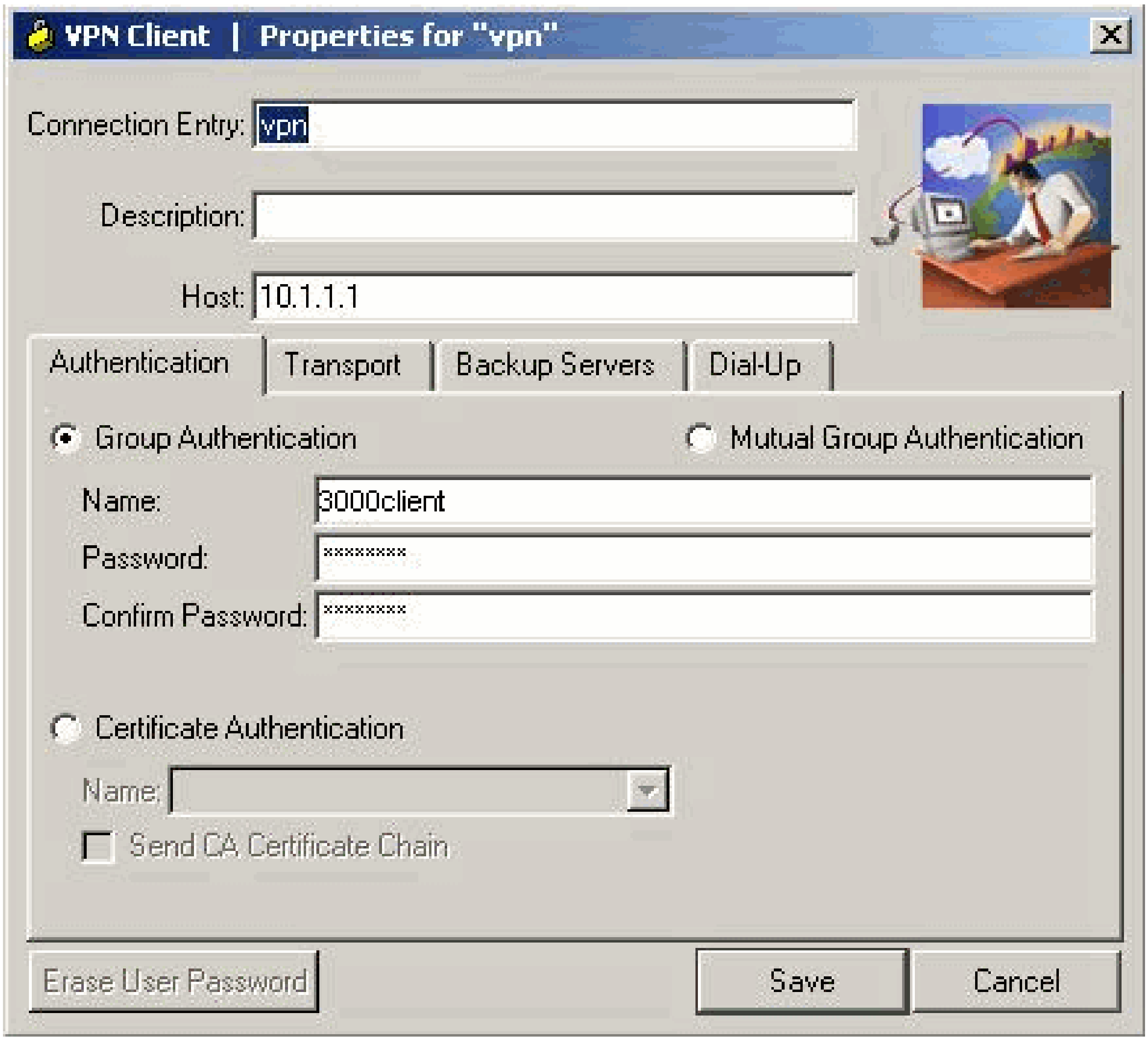
1. 選擇**Start > Programs > Cisco Systems VPN Client > VPN Client**。
2. 按一下**New**以啟動Create New VPN Connection Entry視窗。



status: Disconnected | VPN Client - Version 4.8.01.0300

Not connected.

3. 輸入連線條目的名稱和說明。在Host（主機）框中輸入路由器的外部IP地址。然後輸入VPN組名稱和密碼，然後按一下**Save**。



VPN Client | Properties for "vpn"

Connection Entry: vpn

Description:

Host: 10.1.1.1

● Group Authentication ○ Mutual Group Authentication

Name: 3000client

Password: ********

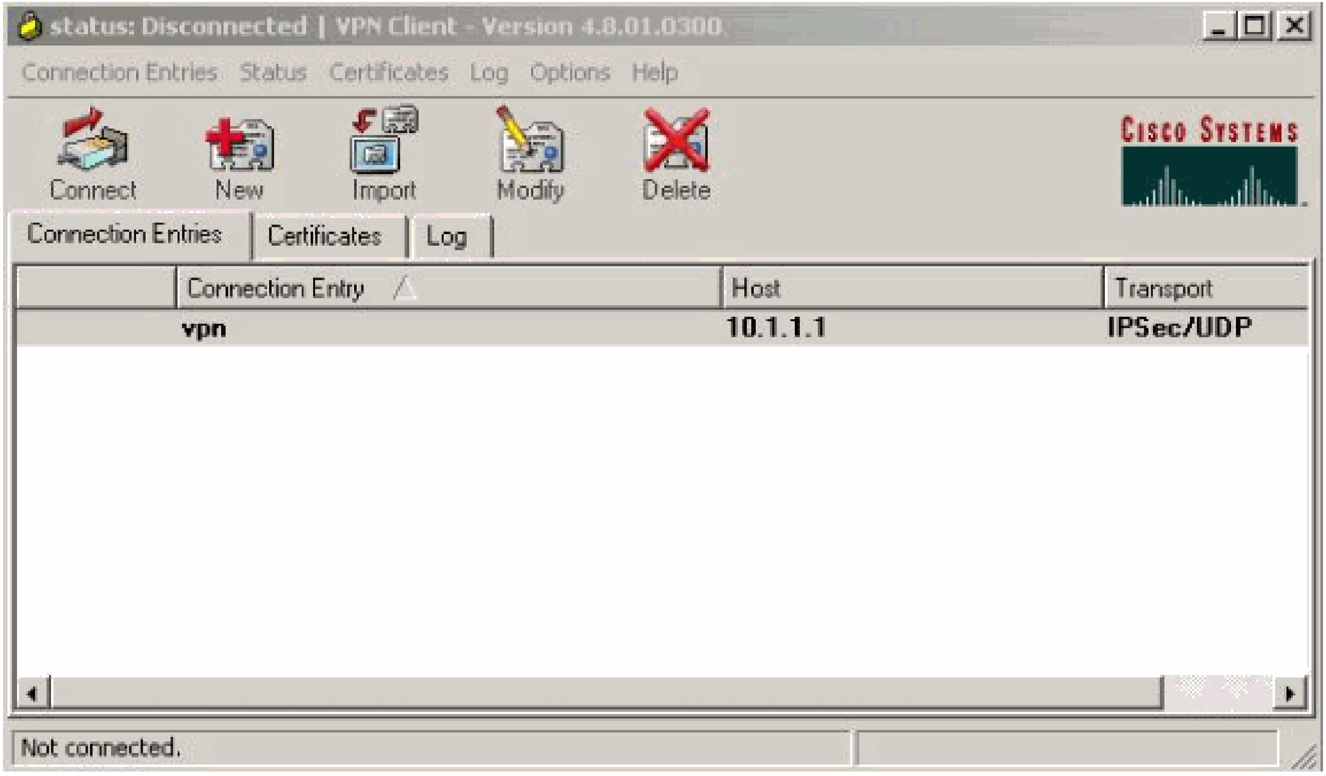
Confirm Password: ********

○ Certificate Authentication

Name:

□ Send CA Certificate Chain

4. 按一下要使用的連線，然後從VPN客戶端主視窗中按一下**Connect**。

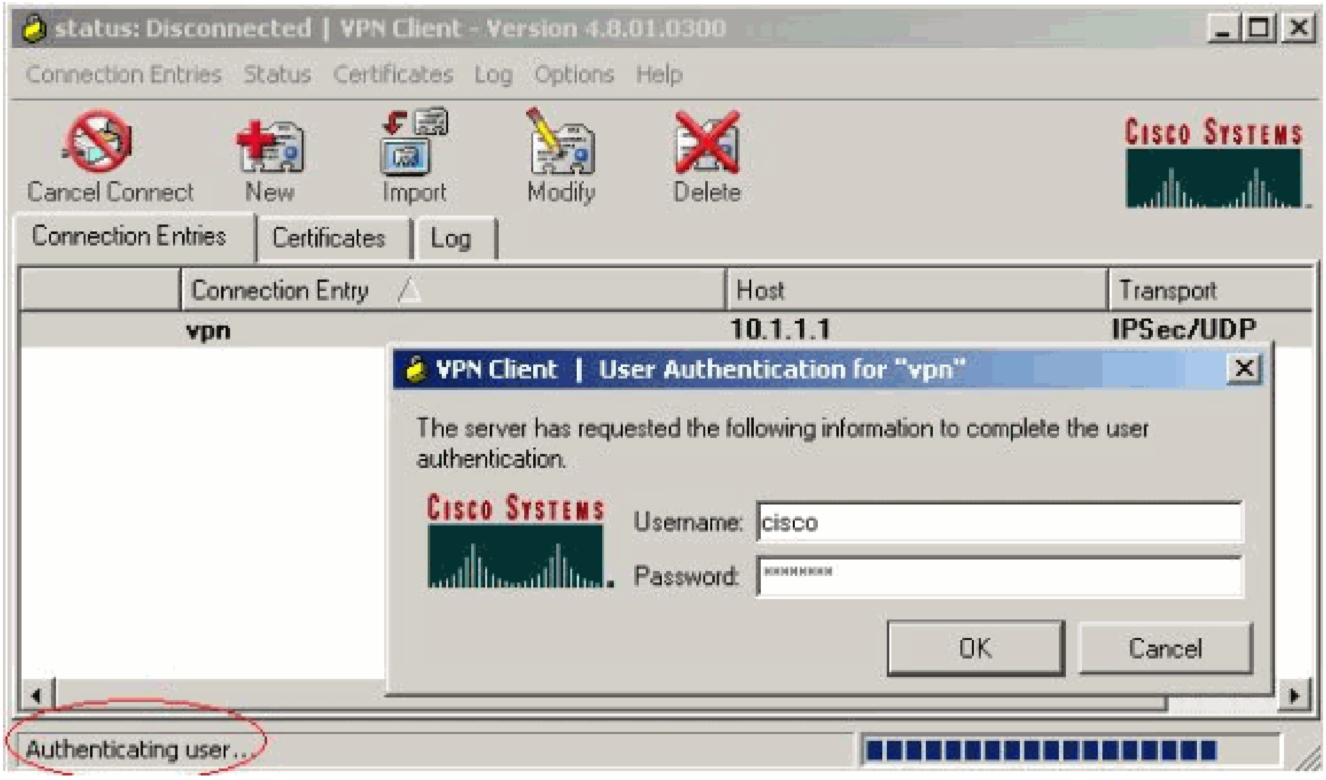


status: Disconnected | VPN Client - Version 4.8.01.0300

	Connection Entry	Host	Transport
	vpn	10.1.1.1	IPSec/UDP

Not connected.

5. 出現提示時，輸入xauth的使用者名稱和密碼資訊，然後按一下**OK**連線到遠端網路。



status: Disconnected | VPN Client - Version 4.8.01.0300

Connection Entry	Host	Transport
vpn	10.1.1.1	IPSec/UDP

VPN Client | User Authentication for "vpn"

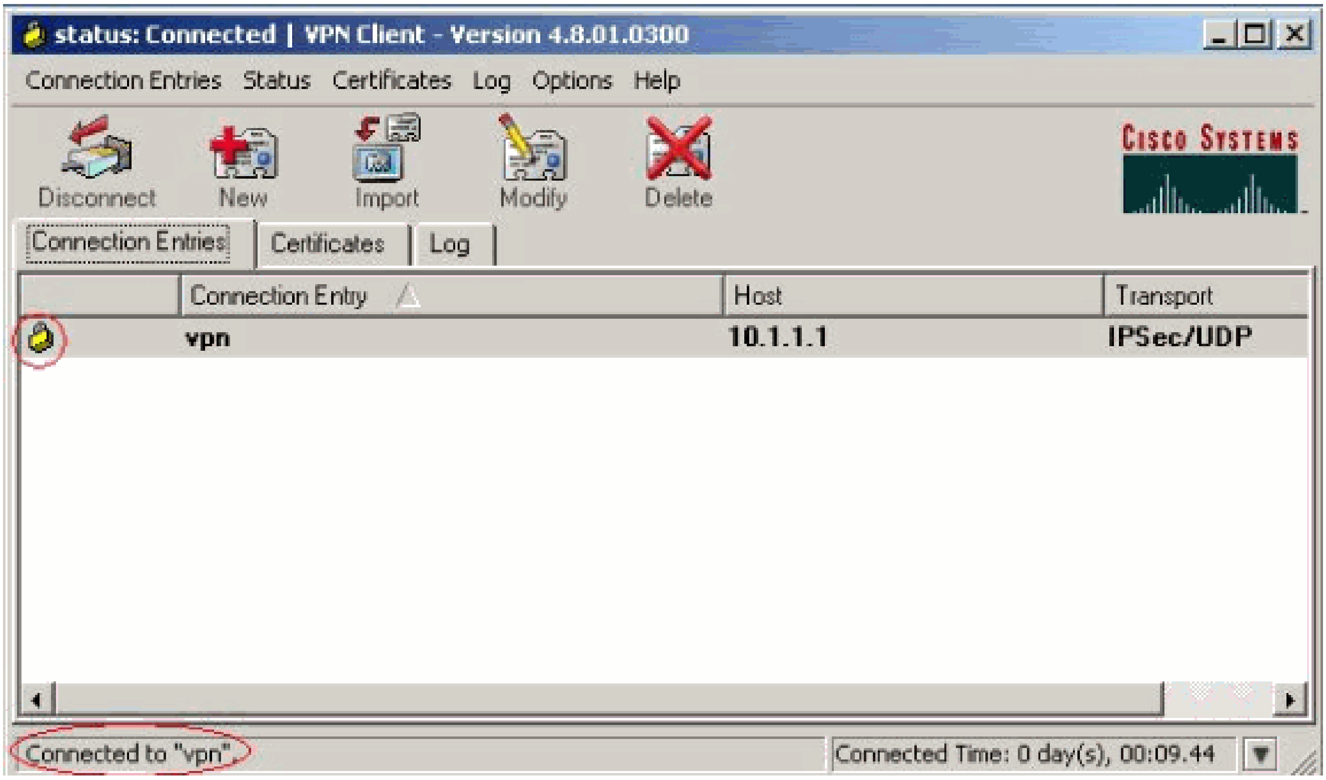
The server has requested the following information to complete the user authentication.

Username: cisco

Password: ********

Authenticating user...

VPN客戶端與中心站點的路由器連線。



status: Connected | VPN Client - Version 4.8.01.0300

Connection Entry	Host	Transport
vpn	10.1.1.1	IPSec/UDP

Connected to "vpn".

Connected Time: 0 day(s), 00:09.44

啟用分割通道

若要為VPN連線啟用分割通道，請確保在路由器上配置了訪問控制清單(ACL)。在本例中，**access-list 108**命令與用於分割隧道的組相關聯，並且隧道形成到14.38.X.X /16網路。未加密的流量流向不在ACL 108中的裝置（例如Internet）。

```
access-list 108 permit ip 172.18.124.0 0.0.255.255 10.16.20.0 0.0.0.255
```

將ACL應用於組屬性。

```
crypto isakmp client configuration group 3000client
 key cisco123
 dns 10.1.1.10
 wins 10.1.1.20
 domain cisco.com
 pool ippool
 acl 108
```

配置RADIUS伺服器回退功能

當主RADIUS伺服器不可用時，路由器將故障切換到下一個活動備份RADIUS伺服器。即使主伺服器可用，路由器也會一直使用輔助RADIUS伺服器。通常，主伺服器是高效能，是首選伺服器。如果輔助伺服器不可用，可以使用aaa authentication login userauthen group radius local 命令使用本地資料庫進行身份驗證。

驗證

使用本節內容，確認您的組態是否正常運作。

輸出直譯器工具(僅供已註冊客戶使用)(OIT)支援某些**show**命令。使用OIT檢視**show**命令輸出的分析。

以下是相關**show**命令的輸出：

```
vpn2621#show crypto isakmp sa
dst             src             state           conn-id    slot
10.1.1.1  10.0.0.1   QM_IDLE         3       0


vpn2621#show crypto ipsec sa interface: Ethernet0/0
    Crypto map tag: clientmap, local addr. 10.1.1.1

   local  ident (addr/mask/prot/port): (10.1.1.1/255.255.255.255/0/0)
   remote ident (addr/mask/prot/port): (10.16.20.2/255.255.255.255/0/0)
   current_peer: 10.0.0.1
     PERMIT, flags={}
    #pkts encaps: 5, #pkts encrypt: 5, #pkts digest 5
    #pkts decaps: 5, #pkts decrypt: 5, #pkts verify 5
    #pkts compressed: 0, #pkts decompressed: 0
    #pkts not compressed: 0, #pkts compr. failed: 0, #pkts decompress failed: 0
    #send errors 0, #recv errors 0

     local crypto endpt.: 10.1.1.1, remote crypto endpt.: 10.0.0.1
     path mtu 1500, media mtu 1500
     current outbound spi: 77AFCCFA

     inbound esp sas:
      spi: 0xC7AC22AB(3349947051)
        transform: esp-3des esp-sha-hmac ,
        in use settings ={Tunnel, }
        slot: 0, conn id: 2000, flow_id: 1, crypto map: clientmap
        sa timing: remaining key lifetime (k/sec): (4608000/3444)
        IV size: 8 bytes
        replay detection support: Y

     inbound ah sas:

     inbound pcp sas:

     outbound esp sas:
      spi: 0x77AFCCFA(2008009978)
        transform: esp-3des esp-sha-hmac ,
        in use settings ={Tunnel, }
        slot: 0, conn id: 2001, flow_id: 2, crypto map: clientmap
        sa timing: remaining key lifetime (k/sec): (4608000/3444)
        IV size: 8 bytes
        replay detection support: Y

     outbound ah sas:

     outbound pcp sas:


   local  ident (addr/mask/prot/port): (172.18.124.0/255.255.255.0/0/0)
   remote ident (addr/mask/prot/port): (10.16.20.2/255.255.255.255/0/0)
   current_peer: 10.0.0.1
     PERMIT, flags={}
#pkts encaps: 4, #pkts encrypt: 4, #pkts digest 4
    #pkts decaps: 6, #pkts decrypt: 6, #pkts verify 6
    #pkts compressed: 0, #pkts decompressed: 0
    #pkts not compressed: 0, #pkts compr. failed: 0, #pkts decompress failed: 0
    #send errors 0, #recv errors 0

     local crypto endpt.: 10.1.1.1, remote crypto endpt.: 10.0.0.1
     path mtu 1500, media mtu 1500
     current outbound spi: 2EE5BF09

     inbound esp sas:
      spi: 0x3565451F(895829279)
        transform: esp-3des esp-sha-hmac ,
        in use settings ={Tunnel, }
        slot: 0, conn id: 2002, flow_id: 3, crypto map: clientmap
        sa timing: remaining key lifetime (k/sec): (4607999/3469)
        IV size: 8 bytes
        replay detection support: Y

     inbound ah sas:

     inbound pcp sas:

     outbound esp sas:
      spi: 0x2EE5BF09(786808585)
        transform: esp-3des esp-sha-hmac ,
        in use settings ={Tunnel, }
        slot: 0, conn id: 2003, flow_id: 4, crypto map: clientmap
        sa timing: remaining key lifetime (k/sec): (4607999/3469)
        IV size: 8 bytes
        replay detection support: Y

     outbound ah sas:

     outbound pcp sas:
```

```
vpn2621#show crypto engine connections active

  ID Interface       IP-Address      State  Algorithm           Encrypt  Decrypt
   3 Ethernet0/0     10.1.1.1  set    HMAC_SHA+3DES_56_C        0        0
2000 Ethernet0/0     10.1.1.1  set    HMAC_SHA+3DES_56_C        0        5
2001 Ethernet0/0     10.1.1.1  set    HMAC_SHA+3DES_56_C        5        0
2002 Ethernet0/0     10.1.1.1  set    HMAC_SHA+3DES_56_C        0        6
2003 Ethernet0/0     10.1.1.1  set    HMAC_SHA+3DES_56_C        4        0

vpn2621#show crypto engine accelerator statistic
Virtual Private Network (VPN) Module in aim slot : 0
Statistics for Hardware VPN Module since the last clear
 of counters 5570 seconds ago
            14 packets in                        14 packets out
             0 packet overruns                    0 output packets dropped
             0 packets decompressed               0 packets compressed
             0 compressed bytes in                0 uncompressed bytes in
             0 decompressed bytes out             0 compressed bytes out
             0 packets bypass compression         0 packets abort compression
             0 packets fail decompression         0 packets fail compression
             7 packets decrypted                  7 packets encrypted
           532 bytes decrypted                  532 bytes encrypted
           784 bytes before decrypt           19200 bytes after encrypt
             0 paks/sec in                        0 paks/sec out
             0 Kbits/sec decrypted                0 Kbits/sec encrypted
        Last 5 minutes:
           14 packets in                        14 packets out
            7 packets decrypted                  7 packets encrypted
          532 bytes decrypted                  420 bytes encrypted
          784 bytes before decrypt             672 bytes after encrypt
            0 paks/sec in                        0 paks/sec out
            0 Kbits/sec decrypted                0 Kbits/sec encrypted
    rx_no_endp:          0  rx_hi_discards:       0    fw_failure:             0
    invalid_sa:          0  invalid_flow:         0    cgx_errors              0
    fw_qs_filled:        0  fw_resource_lock:     0    lotx_full_err:          0
    null_ip_error:       0  pad_size_error:       0    out_bound_dh_acc:       0
    esp_auth_fail:       0  ah_auth_failure:      0    crypto_pad_error:       0
    ah_prot_absent:      0  ah_seq_failure:       0    ah_spi_failure:         0
    esp_prot_absent:     0  esp_seq_fail:         0    esp_spi_failure:        0
    obound_sa_acc:       0  invalid_sa:           0    out_bound_sa_flow:      0
    invalid_dh:          0  bad_keygroup:         0    out_of_memory:          0
    no_sh_secret:        0  no_skeys:             0    invalid_cmd:            0
    dsp_coproc_err:      0  comp_unsupported:     0    pak_too_big:            0
    null packets:        0
    pak_mp_length_spec_fault:      0 cmd queue errors:      0
    tx_lo_queue_size_max      0 cmd_unimplemented:      0
    Interrupts:    439  Immed:      0  HiPri ints:      14
    LoPri ints:    425  POST Errs:      0 Alerts:      0
    Unk Cmds:        0  UnexpCmds:      0
    cgx_cmd_pending:0   packet_loop_max: 0packet_loop_limit: 0
vpn2621#sh crypto engine configuration

        crypto engine name:  Virtual Private Network (VPN) Module
        crypto engine type:  hardware

              Product Name:  AIM-VPN/BP
             Configuration:  0x000109010F00F00784000000
                          :  0x995FB1441BA279D5BD46CF6C
                          :  0xECE77614C30835CB0A000300
                          :  0x000000000000000000000000
           CryptIC Version:  001.000
               CGX Version:  001.009
              CGX Reserved:  0x000F
                 PCDB info:  0x07F0 0x0084 0x0000
             Serial Number:  0x5F9944B1A21BD57946BD
                          :  0x6CCFE7EC14768C3CB35
      DSP firmware version:  000.010
     DSP Bootstrap Version:  000.003
        DSP Bootstrap Info:  0x0000

               Compression:  Yes
                       DES:  Yes
                     3 DES:  Yes
                   AES CBC:  No
                  AES CNTR:  No
     Maximum buffer length:  4096
          Maximum DH index:  0210
          Maximum SA index:  0420
        Maximum Flow index:  0840
      Maximum RSA key size:  0000
     crypto engine in slot:  0
                  platform:  VPN hardware accelerator

   Crypto Adjacency Counts:
                Lock Count:  0
              Unlock Count:  0
        crypto lib version:  16.0.0
         ipsec lib version:  2.0.0
```

疑難排解

使用本節內容，對組態進行疑難排解。

疑難排解指令

輸出直譯器工具(僅供已註冊客戶使用)(OIT)支援某些**show**命令。使用OIT檢視**show**命令輸出的分析。

附註：使用 **debug** 指令之前，請先參閱有關 Debug 指令的重要資訊。

- **debug crypto ipsec** — 顯示有關IPSec連線的調試資訊。
- **debug crypto isakmp** — 顯示有關IPSec連線的調試資訊，並顯示由於兩端的不相容性而被拒絕的第一組屬性。
- **debug crypto engine** — 顯示來自加密引擎的資訊。
- **debug aaa authentication** — 顯示有關AAA/終端訪問控制器訪問控制系統Plus(TACACS+)身份驗證的資訊。
- **debug aaa authorization radius** — 顯示有關AAA/TACACS+授權的資訊。
- **debug radius** — 顯示有關RADIUS伺服器和路由器之間通訊故障排除的資訊。

調試輸出

本節提供來自路由器的調試資訊，可用於排除配置故障。

路由器日誌

```
vpn2621#show debug
```

```
General OS:
  AAA Authentication debugging is on
  AAA Authorization debugging is on

Radius protocol debugging is on
Radius packet protocol debugging is on


Cryptographic Subsystem:
  Crypto ISAKMP debugging is on
  Crypto Engine debugging is on
  Crypto IPSEC debugging is on


vpn2621#
*ISAKMP (0:0): received packet from 10.0.0.1 dport 500 sport 500 Global (N) NEW SA
*ISAKMP: Created a peer struct for 10.0.0.1, peer port 500
*ISAKMP: Locking peer struct 0x83166B20, IKE refcount 1 for
         crypto_ikmp_config_initialize_sa
*ISAKMP (0:0): Setting client config settings 82F0F82C
*ISAKMP (0:0): (Re)Setting client xauth list  and state
*ISAKMP: local port 500, remote port 500
*ISAKMP: insert sa successfully sa = 83165694
*ISAKMP (0:1): processing SA payload. message ID = 0
*ISAKMP (0:1): processing ID payload. message ID = 0
*ISAKMP (0:1): peer matches *none* of the profiles
*ISAKMP (0:1): processing vendor id payload
*ISAKMP (0:1): vendor ID seems Unity/DPD but major 215 mismatch
*ISAKMP (0:1): vendor ID is XAUTH
*ISAKMP (0:1): processing vendor id payload
*ISAKMP (0:1): vendor ID is DPD
*ISAKMP (0:1): processing vendor id payload
*ISAKMP (0:1): vendor ID seems Unity/DPD but major 123 mismatch
*ISAKMP (0:1): vendor ID is NAT-T v2
*ISAKMP (0:1): processing vendor id payload
*ISAKMP (0:1): vendor ID seems Unity/DPD but major 194 mismatch
*ISAKMP (0:1): processing vendor id payload
*ISAKMP (0:1): vendor ID is Unity
*ISAKMP (0:1) Authentication by xauth preshared
*ISAKMP (0:1): Checking ISAKMP transform 1 against priority 3 policy
*ISAKMP:      encryption AES-CBC
*ISAKMP:      hash SHA
*ISAKMP:      default group 2
*ISAKMP:      auth XAUTHInitPreShared
*ISAKMP:      life type in seconds
*ISAKMP:      life duration (VPI) of  0x0 0x20 0xC4 0x9B
*ISAKMP:      keylength of 256
*ISAKMP (0:1): Encryption algorithm offered does not match policy!
/en/US/docs/net_mgmt/wan_service_administrator/1.1/administrator/guide/getstart.html
-snip/en/US/docs/net_mgmt/wan_service_administrator/1.1/administrator/guide/getstart.html
/en/US/docs/net_mgmt/wan_service_administrator/1.1/administrator/guide/getstart.html
/en/US/docs/net_mgmt/wan_service_administrator/1.1/administrator/guide/getstart.html

!--- ISAKMP values are acceptable and then the router continues with the !--- ISAKMP negotiation
process. *ISAKMP (0:1): Checking ISAKMP transform 9 against priority 3 policy
*ISAKMP:      encryption 3DES-CBC
*ISAKMP:      hash SHA
*ISAKMP:      default group 2
*ISAKMP:      auth XAUTHInitPreShared
*ISAKMP:      life type in seconds
*ISAKMP:      life duration (VPI) of  0x0 0x20 0xC4 0x9B
*ISAKMP (0:1): atts are acceptable. Next payload is 3
*CryptoEngine0: generate alg parameter
*CryptoEngine0: CRYPTO_ISA_DH_CREATE(hw)(ipsec)
```

```
*CRYPTO_ENGINE: Dh phase 1 status: 0
*ISAKMP (0:1): processing KE payload. message ID = 0
*CryptoEngine0: generate alg parameter
*CryptoEngine0: CRYPTO_ISA_DH_SHARE_SECRET(hw)(ipsec)
*ISAKMP (0:1): processing NONCE payload. message ID = 0
*ISAKMP (0:1): vendor ID is NAT-T v2
*AAA: parse name=ISAKMP-ID-AUTH idb type=-1 tty=-1
*AAA/MEMORY: create_user (0x830E12E8) user='3000client' ruser='NULL' ds0=0
 port='ISAKMP-ID-AUTH' rem_addr='10.0.0.1' authen_type=NONE service=LOGIN
 priv=0 initial_task_id='0', vrf= (id=0)
*ISAKMP (0:1): Input = IKE_MESG_FROM_PEER, IKE_AM_EXCH
*ISAKMP (0:1): Old State = IKE_READY  New State = IKE_R_AM_AAA_AWAIT

*ISAKMP-ID-AUTH AAA/AUTHOR/CRYPTO AAA(54534875): Port='ISAKMP-ID-AUTH'
 list='groupauthor' service=NET
*AAA/AUTHOR/CRYPTO AAA: ISAKMP-ID-AUTH(54534875) user='3000client'
*ISAKMP-ID-AUTH AAA/AUTHOR/CRYPTO AAA(54534875): send AV service=ike
*ISAKMP-ID-AUTH AAA/AUTHOR/CRYPTO AAA(54534875): send AV protocol=ipsec
*ISAKMP-ID-AUTH AAA/AUTHOR/CRYPTO AAA(54534875): found list "groupauthor"
*ISAKMP-ID-AUTH AAA/AUTHOR/CRYPTO AAA(54534875): Method=LOCAL
*AAA/AUTHOR (54534875): Post authorization status = PASS_ADD
*ISAKMP: got callback 1
*
AAA/AUTHOR/IKE: Processing AV service=ike
*
AAA/AUTHOR/IKE: Processing AV protocol=ipsec
*
AAA/AUTHOR/IKE: Processing AV tunnel-password=cisco123
*
AAA/AUTHOR/IKE: Processing AV default-domain*cisco.com
*
AAA/AUTHOR/IKE: Processing AV addr-pool*ippool
*
AAA/AUTHOR/IKE: Processing AV key-exchange=ike
*
AAA/AUTHOR/IKE: Processing AV group-lock*0
*
AAA/AUTHOR/IKE: Processing AV timeout*0
*
AAA/AUTHOR/IKE: Processing AV idletime*0
*
AAA/AUTHOR/IKE: Processing AV inacl*108
*
AAA/AUTHOR/IKE: Processing AV dns-servers*10.1.1.10 0.0.0.0
*
AAA/AUTHOR/IKE: Processing AV wins-servers*10.1.1.20 0.0.0.0
*CryptoEngine0: create ISAKMP SKEYID for conn id 1
*CryptoEngine0: CRYPTO_ISA_SA_CREATE(hw)(ipsec)
*ISAKMP (0:1): SKEYID state generated
*ISAKMP (0:1): constructed NAT-T vendor-02 ID
*ISAKMP (0:1): SA is doing pre-shared key authentication plus XAUTH using
               id type ID_IPV4_ADDR
*ISAKMP (1): ID payload
        next-payload : 10
        type         : 1
        addr         : 10.1.1.1
        protocol     : 17
        port         : 0
        length       : 8
*ISAKMP (1): Toine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
*ISAKMP (0:1): processing HASH payload. message ID = 0
*CryptoEngine0: generate hmac context for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)tal payload length: 12
*CryptoEngine0: generate hmac conte
```

```
*ISAKMP (0:1): processing NOTIFY INITIAL_CONTACT protocol 1
        spi 0, message ID = 0, sa = 83165694
*ISAKMP (0:1): Process initial contact,
bring down existing phase 1 and 2 SA's with local 10.1.1.1 remote
10.0.0.1 remote port 500
*ISAKMP (0:1): returning IP addr to the address pool
*ISAKMP:received payload type 17
*ISAKMP (0:1): Detected NAT-D payload
*ISAKMP (0:1): recalc my hash for NAT-D
*ISAKMP (0:1): NAT match MINE hash
*ISAKMP:received payload type 17xt for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*ISAKMP (0:1): constructed HIS NAT-D
*ISAKMP (0:1): constructed MINE NAT-D
*ISAKMP (0:1): sending packet to 10.0.0.1 my_port 500 peer_port 500 (R) AG_INIT_EXCH
*ISAKMP (0:1): Input = IKE_MESG_FROM_AAA, PRESHARED_KEY_REPLY
*ISAKMP (0:1): Old State = IKE_R_AM_AAA_AWAIT  New State = IKE_R_AM2

*AAA/MEMORY: free_user (0x830E12E8) user='3000client' ruser='NULL' port='ISAKMP-ID-AUTH'
 rem_addr='10.0.0.1' authen_type=NONE service=LOGIN priv=0 vrf= (id=0)
*ISAKMP (0:1): received packet from 10.0.0.1 dport 500 sport 500 Global (R) AG_INIT_EXCH
*CryptoEng
*ISAKMP (0:1): Detected NAT-D payload
*ISAKMP (0:1): recalc his hash for NAT-D
*ISAKMP (0:1): NAT match HIS hash
*ISAKMP (0:1): SA has been authenticated with 10.0.0.1
*CryptoEngine0: clear dh number for conn id 1
*ISAKMP: Trying to insert a peer 10.0.0.1/500/,  and inserted successfully.
*ISAKMP (0:1): IKE_DPD is enabled, initializing timers
*ISAKMP: set new node 2011892843 to CONF_XAUTH
*CryptoEngine0: generate hmac context for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*IPSEC(key_engine): got a queue event...
*CryptoEngine0: CRYPTO_ISA_DH_DELETE(hw)(ipsec)
*CryptoEngine0: CRYPTO_ISA_IKE_ENCRYPT(hw)(ipsec)
*ISAKMP (0:1): sending packet to 10.0.0.1 my_port 500 peer_port 500 (R) QM_IDLE
*ISAKMP (0:1): purging node 2011892843
*ISAKMP: Sending phase 1 responder lifetime 86400

*ISAKMP (0:1): peer matches *none* of the profiles
*ISAKMP (0:1): Input = IKE_MESG_FROM_PEER, IKE_AM_EXCH
*ISAKMP (0:1): Old State = IKE_R_AM2  New State = IKE_P1_COMPLETE

*ISAKMP (0:1): Need XAUTH
*AAA: parse name=ISAKMP idb type=-1 tty=-1
*AAA/MEMORY: create_user (0x830DE43C) user='NULL' ruser='NULL' ds0=0 port='ISAKMP'
 rem_addr='10.0.0.1' authen_type=ASCII service=LOGIN priv=0 initial_task_id='0',
 vrf= (id=0)
*ISAKMP (0:1): Input = IKE_MESG_INTERNAL, IKE_PHASE1_COMPLETE
*ISAKMP (0:1): Old State = IKE_P1_COMPLETE  New State = IKE_XAUTH_AAA_START_LOGIN_AWAIT

*AAA/AUTHEN/START (992119247): port='ISAKMP' list='userauthen' action=LOGIN service=LOGIN
*AAA/AUTHEN/START (992119247): found list userauthen
*AAA/AUTHEN/START (992119247): Method=radius (radius)
*AAA/AUTHEN(992119247): Status=GETUSER
*ISAKMP: got callback 1
*ISAKMP: set new node -883516238 to CONF_XAUTH
*ISAKMP/xauth: request attribute XAUTH_USER_NAME_V2
*ISAKMP/xauth: request attribute XAUTH_USER_PASSWORD_V2
*CryptoEngine0: generate hmac context for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*ISAKMP (0:1): initiating peer config to 10.0.0.1. ID = -883516238
*CryptoEngine0: CRYPTO_ISA_IKE_ENCRYPT(hw)(ipsec)
*ISAKMP (0:1): sending packet to 10.0.0.1 my_port 500 peer_port 500 (R) CONF_XAUTH
```

```
*ISAKMP (0:1): Input = IKE_MESG_FROM_AAA, IKE_AAA_START_LOGIN
*ISAKMP (0:1): Old State = IKE_XAUTH_AAA_START_LOGIN_AWAIT  New State = IKE_XAUTH_REQ_SENT

*ISAKMP (0:1): retransmitting phase 2 CONF_XAUTH    -883516238 ...
*ISAKMP (0:1): incrementing error counter on sa: retransmit phase 2
*ISAKMP (0:1): incrementing error counter on sa: retransmit phase 2
*ISAKMP (0:1): retransmitting phase 2 -883516238 CONF_XAUTH
*ISAKMP (0:1): sending packet to 10.0.0.1 my_port 500 peer_port 500 (R) CONF_XAUTH
*ISAKMP (0:1): received packet from 10.0.0.1 dport 500 sport 500 Global (R) CONF_XAUTH
*CryptoEngine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
*ISAKMP (0:1): processing transaction payload from 10.0.0.1. message ID = -883516238
*CryptoEngine0: generate hmac context for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*ISAKMP: Config payload REPLY
*ISAKMP/xauth: reply attribute XAUTH_USER_NAME_V2
*ISAKMP/xauth: reply attribute XAUTH_USER_PASSWORD_V2
*ISAKMP (0:1): deleting node -883516238 error FALSE reason
              "done with xauth request/reply exchange"
*ISAKMP (0:1): Input = IKE_MESG_FROM_PEER, IKE_CFG_REPLY
*ISAKMP (0:1): Old State = IKE_XAUTH_REQ_SENT  New State = IKE_XAUTH_AAA_CONT_LOGIN_AWAIT

*AAA/AUTHEN/CONT (992119247): continue_login (user='(undef)')
*AAA/AUTHEN(992119247): Status=GETUSER
*AAA/AUTHEN(992119247): Method=radius (radius)
*AAA/AUTHEN(992119247): Status=GETPASS
*AAA/AUTHEN/CONT (992119247): continue_login (user='cisco')
*AAA/AUTHEN(992119247): Status=GETPASS
*AAA/AUTHEN(992119247): Method=radius (radius)
*RADIUS: Pick NAS IP for u=0x830DE43C tableid=0 cfg_addr=0.0.0.0 best_addr=10.1.1.1
*RADIUS: ustruct sharecount=2
*Radius: radius_port_info() success=0 radius_nas_port=1
*RADIUS(00000000): Send Access-Request to 172.18.124.96:1645 id 21645/4, len 72
*RADIUS:  authenticator F2 7F ED 86 2B D9 80 1F - 74 D7 8F 90 3B EF F0 D5
*RADIUS:  NAS-IP-Address      [4]   6   10.1.1.1
*RADIUS:  NAS-Port-Type       [61]  6   Async                     [0]
*RADIUS:  User-Name           [1]   9   "cisco"
*RADIUS:  Calling-Station-Id  [31]  13  "10.0.0.1"
*RADIUS:  User-Password       [2]   18  *
*RADIUS: Retransmit to (172.18.124.96:1645,1646) for id 21645/4
*RADIUS: Received from id 21645/4 172.18.124.96:1645, Access-Accept, len 62
*RADIUS:  authenticator 97 DF CB C8 74 AC 92 D6 - 3B D8 D9 DC 9E 85 94 35
*RADIUS:  Framed-IP-Address   [8]   6   172.17.8.123
*RADIUS:  Class               [25]  36
*RADIUS:   43 49 53 43 4F 41 43 53 3A 30 30 30 30 31 38 32  [CISCOACS:0000182]
*RADIUS:   62 2F 61 63 31 32 37 63 39 66 2F 74 6E 65 75 62  [b/ac127c9f/cisco]
*RADIUS:   65 72
*RADIUS: saved authorization data for user 830DE43C at 830DB5FC
*AAA/AUTHEN(992119247): Status=PASS
*ISAKMP: got callback 1
*ISAKMP: set new node -1874799558 to CONF_XAUTH
*CryptoEngine0: generate hmac context for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*ISAKMP (0:1): initiating peer config to 10.0.0.1. ID = -1874799558
*CryptoEngine0: CRYPTO_ISA_IKE_ENCRYPT(hw)(ipsec)
*ISAKMP (0:1): sending packet to 10.0.0.1 my_port 500 peer_port 500 (R) CONF_XAUTH
*ISAKMP (0:1): Input = IKE_MESG_FROM_AAA, IKE_AAA_CONT_LOGIN
*ISAKMP (0:1): Old State = IKE_XAUTH_AAA_CONT_LOGIN_AWAIT  New State = IKE_XAUTH_SET_SENT

*AAA/MEMORY: free_user (0x830DE43C) user='cisco' ruser='NULL' port='ISAKMP'
 rem_addr='10.0.0.1' authen_type=ASCII service=LOGIN priv=0 vrf= (id=0)
*ISAKMP (0:1): received packet from 10.0.0.1 dport 500 sport 500 Global (R) CONF_XAUTH
*CryptoEngine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
*ISAKMP (0:1): processing transaction payload from 10.0.0.1. message ID = -1874799558
*CryptoEngine0: generate hmac context for conn id 1
```

```
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*ISAKMP: Config payload ACK
*ISAKMP (0:1):        XAUTH ACK Processed
*ISAKMP (0:1): deleting node -1874799558 error FALSE reason "done with transaction"
*ISAKMP (0:1): Input = IKE_MESG_FROM_PEER, IKE_CFG_ACK
*ISAKMP (0:1): Old State = IKE_XAUTH_SET_SENT  New State = IKE_P1_COMPLETE

*ISAKMP (0:1): Input = IKE_MESG_INTERNAL, IKE_PHASE1_COMPLETE
*ISAKMP (0:1): Old State = IKE_P1_COMPLETE  New State = IKE_P1_COMPLETE

*ISAKMP (0:1): received packet from 10.0.0.1 dport 500 sport 500 Global (R) QM_IDLE
*ISAKMP: set new node -1474156599 to QM_IDLE
*CryptoEngine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
*ISAKMP (0:1): processing transaction payload from 10.0.0.1. message ID = -1474156599
*CryptoEngine0: generate hmac context for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*ISAKMP: Config payload REQUEST
*ISAKMP (0:1): checking request:
*ISAKMP:    IP4_ADDRESS
*ISAKMP:    IP4_NETMASK
*ISAKMP:    IP4_DNS
*ISAKMP:    IP4_NBNS
*ISAKMP:    ADDRESS_EXPIRY
*ISAKMP:    APPLICATION_VERSION
*ISAKMP:    UNKNOWN Unknown Attr: 0x7000
*ISAKMP:    UNKNOWN Unknown Attr: 0x7001
*ISAKMP:    DEFAULT_DOMAIN
*ISAKMP:    SPLIT_INCLUDE
*ISAKMP:    UNKNOWN Unknown Attr: 0x7003
*ISAKMP:    UNKNOWN Unknown Attr: 0x7007
*ISAKMP:    UNKNOWN Unknown Attr: 0x7008
*ISAKMP:    UNKNOWN Unknown Attr: 0x7009
*ISAKMP:    UNKNOWN Unknown Attr: 0x700A
*ISAKMP:    UNKNOWN Unknown Attr: 0x7005
*AAA: parse name=ISAKMP-GROUP-AUTH idb type=-1 tty=-1
*AAA/MEMORY: create_user (0x831663A0) user='3000client' ruser='NULL' ds0=0
 port='ISAKMP-GROUP-AUTH' rem_addr='10.0.0.1' authen_type=NONE service=LOGIN
 priv=0 initial_task_id='0', vrf= (id=0)
*ISAKMP (0:1): Input = IKE_MESG_FROM_PEER, IKE_CFG_REQUEST
*ISAKMP (0:1): Old State = IKE_P1_COMPLETE  New State = IKE_CONFIG_AUTHOR_AAA_AWAIT

*ISAKMP-GROUP-AUTH AAA/AUTHOR/CRYPTO AAA(3136771130): Port='ISAKMP-GROUP-AUTH'
 list='groupauthor' service=NET
*AAA/AUTHOR/CRYPTO AAA: ISAKMP-GROUP-AUTH(3136771130) user='3000client'
*ISAKMP-GROUP-AUTH AAA/AUTHOR/CRYPTO AAA(3136771130): send AV service=ike
*ISAKMP-GROUP-AUTH AAA/AUTHOR/CRYPTO AAA(3136771130): send AV protocol=ipsec
*ISAKMP-GROUP-AUTH AAA/AUTHOR/CRYPTO AAA(3136771130): found list "groupauthor"
*ISAKMP-GROUP-AUTH AAA/AUTHOR/CRYPTO AAA(3136771130): Method=LOCAL
*AAA/AUTHOR (3136771130): Post authorization status = PASS_ADD
*ISAKMP: got callback 1
* AAA/AUTHOR/IKE: Processing AV service=ike
* AAA/AUTHOR/IKE: Processing AV protocol=ipsec
*
AAA/AUTHOR/IKE: Processing AV tunnel-password=cisco123
*
AAA/AUTHOR/IKE: Processing AV default-domain*cisco.com
*
AAA/AUTHOR/IKE: Processing AV addr-pool*ippool
*
AAA/AUTHOR/IKE: Processing AV key-exchange=ike
*
AAA/AUTHOR/IKE: Processing AV group-lock*0
*
AAA/AUTHOR/IKE: Processing AV timeout*0
```

```
*
AAA/AUTHOR/IKE: Processing AV idletime*0
*
AAA/AUTHOR/IKE: Processing AV inacl*108
*
AAA/AUTHOR/IKE: Processing AV dns-servers*10.1.1.10 0.0.0.0
*
AAA/AUTHOR/IKE: Processing AV wins-servers*10.1.1.20 0.0.0.0
*ISAKMP (0:1): attributes sent in message:
*        Address: 0.2.0.0
*ISAKMP (0:1): allocating address 10.16.20.1
*ISAKMP: Sending private address: 10.16.20.1
*ISAKMP: Sending IP4_DNS server address: 10.1.1.10
*ISAKMP: Sending IP4_NBNS server address: 10.1.1.20
*ISAKMP: Sending ADDRESS_EXPIRY seconds left to use the address: 86388
*ISAKMP: Sending APPLICATION_VERSION string: Cisco Internetwork Operating System Software
IOS (tm) C2600 Software (C2600-IK9S-M), Version 12.2(15)T2,  RELEASE SOFTWARE (fc2)
TAC Support: http://www.cisco.com/tac
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled Thu 01-May-03 10:39 by nmasa
*ISAKMP (0/1): Unknown Attr: UNKNOWN (0x7000)
*ISAKMP (0/1): Unknown Attr: UNKNOWN (0x7001)
*ISAKMP: Sending DEFAULT_DOMAIN default domain name: cisco.com
*ISAKMP: Sending split include name 108 network 172.18.124.0 mask 255.255.255.0
 protocol 0, src port 0, dst port 0

*ISAKMP (0/1): Unknown Attr: UNKNOWN (0x7003)
*ISAKMP (0/1): Unknown Attr: UNKNOWN (0x7007)
*ISAKMP (0/1): Unknown Attr: UNKNOWN (0x7008)
*ISAKMP (0/1): Unknown Attr: UNKNOWN (0x7009)
*ISAKMP (0/1): Unknown Attr: UNKNOWN (0x700A)
*ISAKMP (0/1): Unknown Attr: UNKNOWN (0x7005)
*CryptoEngine0: generate hmac context for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*ISAKMP (0:1): responding to peer config from 10.0.0.1. ID = -1474156599
*CryptoEngi*ISAKMP (0:1): deleting node -1474156599 error FALSE reason
 ""ne0: CRYPTO_ISA_IKE_ENCRYPT(hw)(ipsec)
*ISAKMP (0:1): sending packet to 10.0.0.1 my_por231
*ISAKMP (0:1): processing SA payload. message ID = 2058744231
*ISAKMP (0:1): Checking IPSec proposal 1
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-MD5
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 256t 500 peer_port 500 (R) CONF_ADDR

*ISAKMP (0:1): Input = IKE_MESG_FROM_AAA, IKE_AAA_GROUP_ATTR
*ISAKMP (0:1): Old State = IKE_CONFIG_AUTHOR_AAA_AWAIT  New State = IKE_P1_COMPLETE

*AAA/MEMORY: free_user (0x831663A0) user='3000client' ruser='NULL' port='ISAKMP-GROUP-AUTH'
 rem_addr='10.0.0.1' authen_type=NONE service=LOGIN priv=0 vrf= (id=0)
*ISAKMP (0:1): received packet from 10.0.0.1 dport 500 sport 500 Global (R) QM_IDLE
*ISAKMP: set new node 2058744231 to QM_IDLE
*CryptoEngine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
*CryptoEngine0: generate hmac context for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*ISAKMP (0:1): processing HASH payload. message ID = 2058744
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*ISAKMP (0:1): Checking IPSec proposal 1
*ISAKMP (0:1): transform 1, IPPCP LZS
*ISAKMP:   attributes in transform:
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*ISAKMP:      encaps is 1
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 10.1.1.1/255.255.255.255/0/0 (type=1),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes 256 esp-md5-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 256, flags= 0x2
*IPSEC(validate_proposal_request): proposal part #2,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 10.1.1.1/255.255.255.255/0/0 (type=1),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= PCP, transform= comp-lzs ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes 256 esp-md5-hmac comp-lzs }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 2
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-SHA
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 256
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*ISAKMP (0:1): Checking IPSec proposal 2
*ISAKMP (0:1): transform 1, IPPCP LZS
*ISAKMP:   attributes in transform:
*ISAKMP:      encaps is 1
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 10.1.1.1/255.255.255.255/0/0 (type=1),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes 256 esp-sha-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 256, flags= 0x2
*IPSEC(validate_proposal_request): proposal part #2,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 10.1.1.1/255.255.255.255/0/0 (type=1),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= PCP, transform= comp-lzs ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes 256 esp-sha-hmac comp-lzs }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 3
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-MD5
*ISAKMP:      encaps is 1
```

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*ISAKMP:      key length is 128
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*ISAKMP (0:1): Checking IPSec proposal 3
*ISAKMP (0:1): transform 1, IPPCP LZS
*ISAKMP:   attributes in transform:
*ISAKMP:      encaps is 1
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 10.1.1.1/255.255.255.255/0/0 (type=1),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes esp-md5-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 128, flags= 0x2
*IPSEC(validate_proposal_request): proposal part #2,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 10.1.1.1/255.255.255.255/0/0 (type=1),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= PCP, transform= comp-lzs ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes esp-md5-hmac comp-lzs }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 4
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-SHA
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 128
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*ISAKMP (0:1): Checking IPSec proposal 4
*ISAKMP (0:1): transform 1, IPPCP LZS
*ISAKMP:   attributes in transform:
*ISAKMP:      encaps is 1
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 10.1.1.1/255.255.255.255/0/0 (type=1),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes esp-sha-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 128, flags= 0x2
*IPSEC(validate_proposal_request): proposal part #2,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 10.1.1.1/255.255.255.255/0/0 (type=1),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= PCP, transform= comp-lzs ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes esp-sha-hmac comp-lzs }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 5
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-MD5
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 256
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 10.1.1.1/255.255.255.255/0/0 (type=1),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes 256 esp-md5-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 256, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes 256 esp-md5-hmac }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 6
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-SHA
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 256
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 10.1.1.1/255.255.255.255/0/0 (type=1),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes 256 esp-sha-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 256, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes 256 esp-sha-hmac }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 7
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-MD5
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 128
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 10.1.1.1/255.255.255.255/0/0 (type=1),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes esp-md5-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 128, flags= 0x2
```

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*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes esp-md5-hmac }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 8
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-SHA
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 128
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 10.1.1.1/255.255.255.255/0/0 (type=1),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes esp-sha-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 128, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes esp-sha-hmac }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 9
*ISAKMP: transform 1, ESP_3DES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-MD5
*ISAKMP:      encaps is 1
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*ISAKMP (0:1): Checking IPSec proposal 9
*ISAKMP (0:1): transform 1, IPPCP LZS
*ISAKMP:   attributes in transform:
*ISAKMP:      encaps is 1
*ISAKMP:      SA life type in seconds
*IPSEC(spi_response): getting spi 3233689542 for SA
        from 10.1.1.1  to 10.0.0.1     for prot 3
*ISAKMP: received ke message (2/1)
*CryptoEngine0: generate hmac context for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*CryptoEngine0: CRYPTO_ISA_IKE_ENCRYPT(hw)(ipsec)
*ISAKMP (0:1): sending packet to 10.0.0.1 my_port 500 peer_port 500 (R) QM_IDLE
*ISAKMP (0:1): Node 2058744231, Input = IKE_MESG_FROM_IPSEC, IKE_SPI_REPLY
*ISAKMP (0:1): Old State = IKE_QM_SPI_STARVE  New State = IKE_QM_R_QM2
*ISAKMP (0:1): received packet from 10.0.0.1 dport 500 sport 500 Global (R) QM_IDLE
*CryptoEngine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
*CryptoEngine0: generate hmac context for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*CryptoEngine0: ipsec allocate flow
*CryptoEngine0: ipsec allocate flow
*CryptoEngine0: CRYPTO_ISA_IPSEC_KEY_CREATE(hw)(ipsec)
*CryptoEngine0: CRYPTO_ISA_IPSEC_KEY_CREATE(hw)(ipsec)
*ISAKMP: Locking peer struct 0x83166B20, IPSEC refcount 1 for for stuff_ke
 !--- A matching IPSec policy has been negotiated and authenticated. !--- Next, the SA's are set
up. *ISAKMP (0:1): Creating IPSec SAs
*        inbound SA from 10.0.0.1 to 10.1.1.1 (f/i)  0/ 0
        (proxy 10.16.20.1 to 10.1.1.1)
*        has spi 0xC0BE2FC6 and conn_id 420 and flags 2
*        lifetime of 2147483 seconds
*        has client flags 0x0
*        outbound SA from 10.1.1.1  to 10.0.0.1     (f/i)  0/ 0
        (proxy 10.1.1.1  to 10.16.20.1     )
*ISAKMP (0:1): received packet from 10.0.0.1 dport 500 sport 500 Global (R) QM_IDLE
*ISAKMP: set new node 1101355775 to QM_IDLE
*CryptoEngine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
*CryptoEngine0: generate hmac context for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*ISAKMP (0:1): processing HASH payload. message ID = 1101355775
*ISAKMP (0:1): processing SA payload. message ID = 1101355775
*ISAKMP (0:1): Checking IPSec proposal 1
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-MD5
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 256
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*ISAKMP (0:1): Checking IPSec proposal 1
*ISAKMP (0:1): transform 1, IPPCP LZS
*ISAKMP:   attributes in transform:
*ISAKMP:      encaps is 1
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 172.18.124.0/255.255.255.0/0/0 (type=4),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes 256 esp-md5-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 256, flags= 0x2
*IPSEC(validate_proposal_request): proposal part #2,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 172.18.124.0/255.255.255.0/0/0 (type=4),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= PCP, transform= comp-lzs ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes 256 esp-md5-hmac comp-lzs }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 2
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-SHA
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 256
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*ISAKMP (0:1): Checking IPSec proposal 2
*ISAKMP (0:1): transform 1, IPPCP LZS
*ISAKMP:   attributes in transform:
*ISAKMP:      encaps is 1
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
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*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 172.18.124.0/255.255.255.0/0/0 (type=4),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes 256 esp-sha-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 256, flags= 0x2
*IPSEC(validate_proposal_request): proposal part #2,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 172.18.124.0/255.255.255.0/0/0 (type=4),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= PCP, transform= comp-lzs ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes 256 esp-sha-hmac comp-lzs }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 3
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-MD5
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 128
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*ISAKMP (0:1): Checking IPSec proposal 3
*ISAKMP (0:1): transform 1, IPPCP LZS
*ISAKMP:   attributes in transform:
*ISAKMP:      encaps is 1
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 172.18.124.0/255.255.255.0/0/0 (type=4),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes esp-md5-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 128, flags= 0x2
*IPSEC(validate_proposal_request): proposal part #2,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 172.18.124.0/255.255.255.0/0/0 (type=4),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= PCP, transform= comp-lzs ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes esp-md5-hmac comp-lzs }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 4
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-SHA
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 128
```

```
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*ISAKMP (0:1): Checking IPSec proposal 4
*ISAKMP (0:1): transform 1, IPPCP LZS
*ISAKMP:   attributes in transform:
*ISAKMP:      encaps is 1
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 172.18.124.0/255.255.255.0/0/0 (type=4),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes esp-sha-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 128, flags= 0x2
*IPSEC(validate_proposal_request): proposal part #2,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 172.18.124.0/255.255.255.0/0/0 (type=4),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= PCP, transform= comp-lzs ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes esp-sha-hmac comp-lzs }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 5
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-MD5
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 256
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 172.18.124.0/255.255.255.0/0/0 (type=4),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes 256 esp-md5-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 256, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes 256 esp-md5-hmac }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 6
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-SHA
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 256
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
```

```
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 172.18.124.0/255.255.255.0/0/0 (type=4),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes 256 esp-sha-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 256, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes 256 esp-sha-hmac }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 7
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-MD5
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 128
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*IPSEC(validate_proposal_request): proposal part #1,
  (key eng. msg.) INBOUND local= 10.1.1.1, remote= 10.0.0.1,
    local_proxy= 172.18.124.0/255.255.255.0/0/0 (type=4),
    remote_proxy= 10.16.20.1/255.255.255.255/0/0 (type=1),
    protocol= ESP, transform= esp-aes esp-md5-hmac ,
    lifedur= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 128, flags= 0x2
*CryptoEngine0: validate proposal request
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(kei_proxy): head = clientmap, map->ivrf = , kei->ivrf =
*IPSEC(validate_transform_proposal): transform proposal not supported for identity:
    {esp-aes esp-md5-hmac }
*ISAKMP (0:1): IPSec policy invalidated proposal
*ISAKMP (0:1): Checking IPSec proposal 8
*ISAKMP: transform 1, ESP_AES
*ISAKMP:   attributes in transform:
*ISAKMP:      authenticator is HMAC-SHA
*ISAKMP:      encaps is 1
*ISAKMP:      key length is 128
*ISAKMP:      SA life type in seconds
*ISAKMP:      SA life duration (VPI) of  0x0 0x20 0xC4 0x9B
*CryptoEngine0: validate proposal
*ISAKMP (0:1): atts are acceptable.
*IPSEC(spi_response): getting spi 3438126624 for SA
        from 10.1.1.1  to 10.0.0.1     for prot 3
*ISAKMP: received ke message (2/1)
*CryptoEngine0: generate hmac context for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*CryptoEngine0: CRYPTO_ISA_IKE_ENCRYPT(hw)(ipsec)
*ISAKMP (0:1): sending packet to 10.0.0.1 my_port 500 peer_port 500 (R) QM_IDLE
*ISAKMP (0:1): Node 1101355775, Input = IKE_MESG_FROM_IPSEC, IKE_SPI_REPLY
*ISAKMP (0:1): Old State = IKE_QM_SPI_STARVE  New State = IKE_QM_R_QM2
*ISAKMP (0:1): received packet from 10.0.0.1 dport 500 sport 500 Global (R) QM_IDLE
*CryptoEngine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
*CryptoEngine0: generate hmac context for conn id 1
*CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
*CryptoEngine0: ipsec allocate flow
*CryptoEngine0: ipsec allocate flow
*CryptoEngine0: CRYPTO_ISA_IPSEC_KEY_CREATE(hw)(ipsec)
*CryptoEngine0: CRYPTO_ISA_IPSEC_KEY_CREATE(hw)(ipsec)
*ISAKMP: Locking peer struct 0x83166B20, IPSEC refcount 2 for for stuff_ke
```

```
*ISAKMP (0:1): Creating IPSec SAs
*         inbound SA from 10.0.0.1 to 10.1.1.1 (f/i)  0/ 0
        (proxy 10.16.20.1 to 172.18.124.0)
*         has spi 0xCCEDA620 and conn_id 422 and flags 2
*         lifetime of 2147483 seconds
*         has client flags 0x0
*         outbound SA from 10.1.1.1  to 10.0.0.1     (f/i)  0/ 0
        (proxy 172.18.124.0         to 10.16.20.1     )
```

客戶端日誌

在VPN客戶端上啟動LogViewer以檢視日誌。確保所有已配置類的過濾器都設定為High。以下是日誌輸出示例：

```
1      16:52:27.031  06/18/03  Sev=Info/6       DIALER/0x63300002
Initiating connection.

2      16:52:27.041  06/18/03  Sev=Info/4       CM/0x63100002
Begin connection process

3      16:52:27.051  06/18/03  Sev=Info/4       CM/0x63100004
Establish secure connection using Ethernet

4      16:52:27.051  06/18/03  Sev=Info/4       CM/0x63100024
Attempt connection with server "10.1.1.1"

5      16:52:27.101  06/18/03  Sev=Info/6       IKE/0x6300003B
Attempting to establish a connection with 10.1.1.1.

6      16:52:27.481  06/18/03  Sev=Info/4       IKE/0x63000013
SENDING >>> ISAKMP OAK AG (SA, KE, NON, ID, VID, VID, VID, VID, VID)
            to 10.1.1.1

7      16:52:27.612  06/18/03  Sev=Info/4       IPSEC/0x63700014
Deleted all keys

8      16:52:27.722  06/18/03  Sev=Info/5       IKE/0x6300002F
Received ISAKMP packet: peer = 10.1.1.1

9      16:52:27.722  06/18/03  Sev=Info/4       IKE/0x63000014
RECEIVING <<< ISAKMP OAK AG (SA, VID, VID, VID, VID, VID, KE, ID, NON, HASH, NAT-D, NAT-D)
              from 10.1.1.1

10     16:52:27.722  06/18/03  Sev=Info/5       IKE/0x63000059
Vendor ID payload = 12F5F28C457168A9702D9FE274CC0100

11     16:52:27.722  06/18/03  Sev=Info/5       IKE/0x63000001
Peer is a Cisco-Unity compliant peer

12     16:52:27.722  06/18/03  Sev=Info/5       IKE/0x63000059
Vendor ID payload = AFCAD71368A1F1C96B8696FC77570100

13     16:52:27.722  06/18/03  Sev=Info/5       IKE/0x63000001
Peer supports DPD

14     16:52:27.722  06/18/03  Sev=Info/5       IKE/0x63000059
Vendor ID payload = 4F6CF9393C7749D894C6C92D2131AE04

15     16:52:27.722  06/18/03  Sev=Info/5       IKE/0x63000059
Vendor ID payload = 09002689DFD6B712

16     16:52:27.722  06/18/03  Sev=Info/5       IKE/0x63000001
```

```
Peer supports XAUTH

17     16:52:27.722  06/18/03  Sev=Info/5       IKE/0x63000059
Vendor ID payload = 90CB80913EBB696E086381B5EC427B1F

18     16:52:27.722  06/18/03  Sev=Info/5       IKE/0x63000001
Peer supports NAT-T

19     16:52:27.782  06/18/03  Sev=Info/4       IKE/0x63000013
SENDING >>> ISAKMP OAK AG *(HASH, NOTIFY:STATUS_INITIAL_CONTACT, NAT-D, NAT-D)
            to 10.1.1.1

20     16:52:27.822  06/18/03  Sev=Info/5       IKE/0x6300002F
Received ISAKMP packet: peer = 10.1.1.1

21     16:52:27.822  06/18/03  Sev=Info/4       IKE/0x63000014
RECEIVING <<< ISAKMP OAK INFO *(HASH, NOTIFY:STATUS_RESP_LIFETIME)
              from 10.1.1.1

22     16:52:27.822  06/18/03  Sev=Info/5       IKE/0x63000044
RESPONDER-LIFETIME notify has value of 86400 seconds

23     16:52:27.822  06/18/03  Sev=Info/5       IKE/0x63000046
This SA has already been alive for 0 seconds, setting expiry to 86400 seconds from now

24     16:52:27.842  06/18/03  Sev=Info/5       IKE/0x6300002F
Received ISAKMP packet: peer = 10.1.1.1

25     16:52:27.842  06/18/03  Sev=Info/4       IKE/0x63000014
RECEIVING <<< ISAKMP OAK TRANS *(HASH, ATTR) from 10.1.1.1

26     16:52:27.842  06/18/03  Sev=Info/4       CM/0x63100015
Launch xAuth application

27     16:52:32.449  06/18/03  Sev=Info/5       IKE/0x6300002F
Received ISAKMP packet: peer = 10.1.1.1

28     16:52:32.449  06/18/03  Sev=Info/4       IKE/0x63000014
RECEIVING <<< ISAKMP OAK TRANS *(Retransmission) from 10.1.1.1

29     16:52:32.809  06/18/03  Sev=Info/4       CM/0x63100017
xAuth application returned

30     16:52:32.809  06/18/03  Sev=Info/4       IKE/0x63000013
SENDING >>> ISAKMP OAK TRANS *(HASH, ATTR) to 10.1.1.1

31     16:52:37.626  06/18/03  Sev=Info/5       IKE/0x6300002F
Received ISAKMP packet: peer = 10.1.1.1

32     16:52:37.636  06/18/03  Sev=Info/4       IKE/0x63000014
RECEIVING <<< ISAKMP OAK TRANS *(HASH, ATTR) from 10.1.1.1

33     16:52:37.636  06/18/03  Sev=Info/5       IKE/0x63000071
Automatic NAT Detection Status:
   Remote end is NOT behind a NAT device
   This   end is NOT behind a NAT device

34     16:52:37.636  06/18/03  Sev=Info/4       CM/0x6310000E
Established Phase 1 SA.  1 Phase 1 SA in the system

35     16:52:37.656  06/18/03  Sev=Info/4       IKE/0x63000013
SENDING >>> ISAKMP OAK TRANS *(HASH, ATTR) to 10.1.1.1

36     16:52:37.987  06/18/03  Sev=Info/5       IKE/0x6300005D
```

```
Client sending a firewall request to concentrator

37     16:52:37.987  06/18/03  Sev=Info/5       IKE/0x6300005C
Firewall Policy: Product=Cisco Integrated Client, Capability=
(Centralized Protection Policy).

38     16:52:38.007  06/18/03  Sev=Info/4       IKE/0x63000013
SENDING >>> ISAKMP OAK TRANS *(HASH, ATTR) to 10.1.1.1

39     16:52:38.087  06/18/03  Sev=Info/5       IKE/0x6300002F
Received ISAKMP packet: peer = 10.1.1.1

40     16:52:38.087  06/18/03  Sev=Info/4       IKE/0x63000014
RECEIVING <<< ISAKMP OAK TRANS *(HASH, ATTR) from 10.1.1.1

41     16:52:38.097  06/18/03  Sev=Info/5       IKE/0x63000010
MODE_CFG_REPLY: Attribute = INTERNAL_IPV4_ADDRESS: , value = 10.16.20.1

42     16:52:38.097  06/18/03  Sev=Info/5       IKE/0x63000010
MODE_CFG_REPLY: Attribute = INTERNAL_IPV4_DNS(1): , value = 10.1.1.10

43     16:52:38.097  06/18/03  Sev=Info/5       IKE/0x63000010
MODE_CFG_REPLY: Attribute = INTERNAL_IPV4_NBNS(1) (a.k.a. WINS) : , value = 10.1.1.20

44     16:52:38.097  06/18/03  Sev=Info/5       IKE/0xA3000017
MODE_CFG_REPLY: The received (INTERNAL_ADDRESS_EXPIRY) attribute and value (86388)
is not supported

45     16:52:38.097  06/18/03  Sev=Info/5       IKE/0x6300000E
MODE_CFG_REPLY: Attribute = APPLICATION_VERSION, value = Cisco Internetwork
Operating System Software IOS (tm) C2600 Software (C2600-IK9S-M), Version 12.2(15)T2,
RELEASE SOFTWARE (fc2)
TAC Support: http://www.cisco.com/tac
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled Thu 01-May-03 10:39 by nmasa

46     16:52:38.097  06/18/03  Sev=Info/5       IKE/0x6300000E
MODE_CFG_REPLY: Attribute = MODECFG_UNITY_DEFDOMAIN: , value = cisco.com

47     16:52:38.097  06/18/03  Sev=Info/5       IKE/0x6300000D
MODE_CFG_REPLY: Attribute = MODECFG_UNITY_SPLIT_INCLUDE (# of split_nets),
value = 0x00000001

48     16:52:38.097  06/18/03  Sev=Info/5       IKE/0x6300000F
SPLIT_NET #1
        subnet = 172.18.124.0
        mask = 255.255.255.0
        protocol = 0
        src port = 0
        dest port=0

49     16:52:38.097  06/18/03  Sev=Info/4       CM/0x63100019
Mode Config data received

50     16:52:38.347  06/18/03  Sev=Info/5       IKE/0x63000055
Received a key request from Driver for IP address 10.1.1.1,
GW IP = 10.1.1.1

51     16:52:38.347  06/18/03  Sev=Info/4       IKE/0x63000013
SENDING >>> ISAKMP OAK QM *(HASH, SA, NON, ID, ID) to 10.1.1.1

52     16:52:38.728  06/18/03  Sev=Info/5       IKE/0x6300002F
Received ISAKMP packet: peer = 10.1.1.1
```

```
53     16:52:38.728  06/18/03  Sev=Info/4       IKE/0x63000014
RECEIVING <<< ISAKMP OAK QM *(HASH, SA, NON, ID, ID, NOTIFY:STATUS_RESP_LIFETIME)
              from 10.1.1.1

54     16:52:38.738  06/18/03  Sev=Info/5       IKE/0x63000044
RESPONDER-LIFETIME notify has value of 3600 seconds

55     16:52:38.738  06/18/03  Sev=Info/5       IKE/0x63000045
RESPONDER-LIFETIME notify has value of 4608000 kb

56     16:52:38.738  06/18/03  Sev=Info/4       IKE/0x63000013
SENDING >>> ISAKMP OAK QM *(HASH) to 10.1.1.1

57     16:52:38.738  06/18/03  Sev=Info/5       IKE/0x63000058
Loading IPsec SA (Message ID = 0x7AB5F1A7 OUTBOUND SPI = 0xC0BE2FC6
INBOUND SPI = 0x56FFC535)

58     16:52:38.788  06/18/03  Sev=Info/5       IKE/0x63000025
Loaded OUTBOUND ESP SPI: 0xC0BE2FC6

59     16:52:38.798  06/18/03  Sev=Info/5       IKE/0x63000026
Loaded INBOUND ESP SPI: 0x56FFC535

60     16:52:38.798  06/18/03  Sev=Info/4       CM/0x6310001A
One secure connection established

61     16:52:38.828  06/18/03  Sev=Info/6       DIALER/0x63300003
Connection established.

62     16:52:38.868  06/18/03  Sev=Info/6       CVPND/0x63400011
Found matching adapter

63     16:52:38.968  06/18/03  Sev=Info/6       CVPND/0x63400011
Found matching adapter

64     16:52:39.819  06/18/03  Sev=Info/4       CM/0x63100037
Address watch added for 10.0.0.1.  Current address(es): 10.0.0.1.

65     16:52:40.280  06/18/03  Sev=Info/4       IPSEC/0x63700014
Deleted all keys

66     16:52:40.280  06/18/03  Sev=Info/4       IPSEC/0x63700010
Created a new key structure

67     16:52:40.290  06/18/03  Sev=Info/4       IPSEC/0x6370000F
Added key with SPI=0xc62fbec0 into key list

68     16:52:40.290  06/18/03  Sev=Info/4       IPSEC/0x63700010
Created a new key structure

69     16:52:40.290  06/18/03  Sev=Info/4       IPSEC/0x6370000F
Added key with SPI=0x35c5ff56 into key list

70     16:52:41.562  06/18/03  Sev=Info/6       DIALER/0x63300008
MAPI32 Information - Outlook not default mail client

71     16:52:54.230  06/18/03  Sev=Info/5       IKE/0x63000055
Received a key request from Driver for IP address 1.1.1.2, GW IP = 10.1.1.1

72     16:52:54.250  06/18/03  Sev=Info/4       IKE/0x63000013
SENDING >>> ISAKMP OAK QM *(HASH, SA, NON, ID, ID) to 10.1.1.1

73     16:52:54.731  06/18/03  Sev=Info/5       IKE/0x6300002F
Received ISAKMP packet: peer = 10.1.1.1
```

```
74      16:52:54.731  06/18/03  Sev=Info/4       IKE/0x63000014
RECEIVING <<< ISAKMP OAK QM *(HASH, SA, NON, ID, ID, NOTIFY:STATUS_RESP_LIFETIME)
              from 10.1.1.1

75      16:52:54.741  06/18/03  Sev=Info/5       IKE/0x63000044
RESPONDER-LIFETIME notify has value of 3600 seconds

76      16:52:54.741  06/18/03  Sev=Info/5       IKE/0x63000045
RESPONDER-LIFETIME notify has value of 4608000 kb

77      16:52:54.741  06/18/03  Sev=Info/4       IKE/0x63000013
SENDING >>> ISAKMP OAK QM *(HASH) to 10.1.1.1

78      16:52:54.741  06/18/03  Sev=Info/5       IKE/0x63000058
Loading IPsec SA (Message ID = 0x41A55AFF OUTBOUND SPI = 0xCCEDA620
INBOUND SPI = 0x0C5B3DB2)

79      16:52:54.771  06/18/03  Sev=Info/5       IKE/0x63000025
Loaded OUTBOUND ESP SPI: 0xCCEDA620

80      16:52:54.781  06/18/03  Sev=Info/5       IKE/0x63000026
Loaded INBOUND ESP SPI: 0x0C5B3DB2

81      16:52:54.781  06/18/03  Sev=Info/4       CM/0x63100021
Additional Phase 2 SA established.

82      16:52:55.472  06/18/03  Sev=Info/4       IPSEC/0x63700010
Created a new key structure

83      16:52:55.472  06/18/03  Sev=Info/4       IPSEC/0x6370000F
Added key with SPI=0x20a6edcc into key list

84      16:52:55.472  06/18/03  Sev=Info/4       IPSEC/0x63700010
Created a new key structure

85      16:52:55.472  06/18/03  Sev=Info/4       IPSEC/0x6370000F
Added key with SPI=0xb23d5b0c into key list

86      16:52:55.472  06/18/03  Sev=Info/4       IPSEC/0x63700019
Activate outbound key with SPI=0x20a6edcc for inbound key with SPI=0xb23d5b0c
```

相關資訊

- RADIUS技術支援頁面
- IPSec協商/IKE通訊協定支援頁面
- Cisco VPN使用者端支援頁面
- 要求建議(RFC)
- 技術支援與文件 - Cisco Systems