TACACS+ のユーザ認証を使用した、IOS ルータと Cisco VPN Client 4.x for Windows 間の IPSec トンネルの設定例

内容

概要

このドキュメントは、ユーザ認証に Terminal Access Controller Access Control System Plus（TACACS+）を使用した、ルータと Cisco Virtual Private Network（VPN）Client 4.x 間での IPSec 接続を設定する方法について説明します。Cisco IOS®ソフトウェアリリース12.2(8)T以降のリリースでは、Cisco VPN Client 4.xからの接続がサポートされています。VPN Client 4.x は Diffie-Hellman（D-H）グループ 2 ポリシーを使用します。**isakmp policy # group 2**コマンド**は、**4.xクライアントの接続を有効にします。

このドキュメントでは、Windows Internet Naming Service(WINS)やDomain Naming Service(DNS)の割り当てなど、ルータによってローカルに実行される認可を使用したTACACS+サーバでの認証について説明します。

ユーザ認証がCisco IOSルータでローカルに行われるシナリオの詳細については、『ローカル拡張認証を使用したCisco VPN Client 3.x for WindowsからIOSへの設定』を参照してください。

RADIUS プロトコルを使用して外部でユーザ認証を行うシナリオについての詳細は、「RADIUS をユーザ認証に使用する Cisco IOS ルータと Cisco VPN Client 4.x for Windows の間の IPSec の設定」を参照してください。

前提条件

要件

この設定を開始する前に、次の要件が満たされていることを確認してください。

- IPSec 用に割り当てるためのアドレスのプール
- パスワードが「cisco123」の「vpngroup」という名前のグループ
- TACACS+ サーバでのユーザ認証

使用するコンポーネント

このドキュメントの情報は、次のソフトウェアとハードウェアのバージョンに基づいています。

- Cisco VPN Client for Windowsバージョン4.0.2D（任意のVPN Client 3.x以降が動作します）
- Cisco Secure for Windowsバージョン3.0（任意のTACACS+サーバが動作する必要があります）
- IPsecフィーチャセットを搭載したCisco IOS 1710ルータバージョン12.2(8)T1ルータでの**show version**コマンドの出力を次に示します。

```
1710#show version
Cisco Internetwork Operating System Software
IOS (tm) C1700 Software (C1710-K9O3SY-M),
   Version 12.2(8)T1, RELEASE SOFTWARE (fc2)
TAC Support: http://www.cisco.com/tac
Copyright (c) 1986-2002 by cisco Systems, Inc.
Compiled Sat 30-Mar-02 13:30 by ccai
Image text-base: 0x80008108, data-base: 0x80C1E054

ROM: System Bootstrap, Version 12.2(1r)XE1, RELEASE SOFTWARE (fc1)

1710 uptime is 1 week, 6 days, 22 hours, 30 minutes
System returned to ROM by reload
System image file is "flash:c1710-k9o3sy-mz.122-8.T1"

cisco 1710 (MPC855T) processor (revision 0x200)
   with 27853K/4915K bytes of memory.
Processor board ID JAD052706CX (3234866109), with hardware revision 0000
MPC855T processor: part number 5, mask 2
Bridging software.
X.25 software, Version 3.0.0.
1 Ethernet/IEEE 802.3 interface(s)
1 FastEthernet/IEEE 802.3 interface(s)
1 Virtual Private Network (VPN) Module(s)
32K bytes of non-volatile configuration memory.
16384K bytes of processor board System flash (Read/Write)

Configuration register is 0x2102
```

このドキュメントの情報は、特定のラボ環境にあるデバイスに基づいて作成されました。このドキュメントで使用するすべてのデバイスは、初期（デフォルト）設定の状態から起動しています。対象のネットワークが実稼働中である場合には、どのようなコマンドについても、その潜在的な影響について確実に理解しておく必要があります。

表記法

ドキュメント表記の詳細は、『シスコ テクニカル ティップスの表記法』を参照してください。

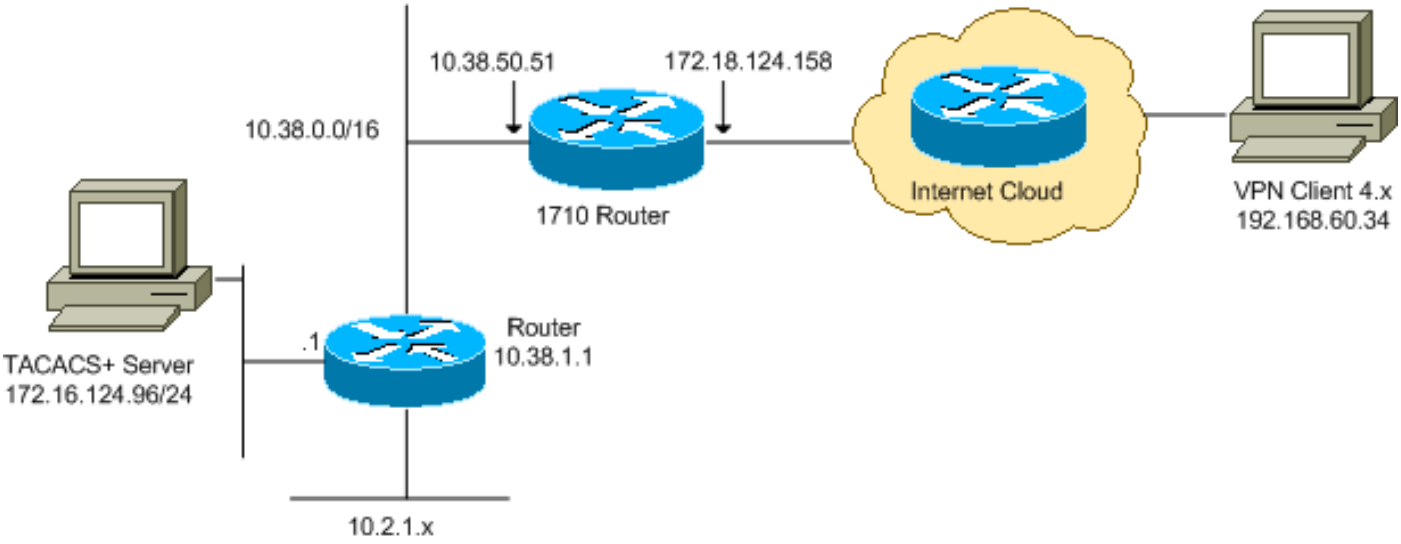
設定

このセクションでは、このドキュメントで説明する機能を設定するために必要な情報を提供しています。

注：このドキュメントで使用されるコマンドの詳細を調べるには、Command Lookup Tool(登録ユーザ専用)を使用してください。

ネットワーク図

このドキュメントでは、次のネットワーク セットアップを使用します。



注：この設定で使用されるIPアドレッシング方式は、インターネット上で正式にルーティング可能なものではありません。これらは RFC 1918 で使用されているアドレスであり、ラボ環境で使用されたものです。

設定

このドキュメントでは、次の構成を使用します。

- Cisco 1710 ルータ
- TACACS+サーバ
- VPN Client 4.x
- スプリット トンネリング

Cisco 1710 ルータ

Cisco 1710 ルータ

```
1710#show run
Building configuration...

Current configuration : 1884 bytes
!
version 12.2
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname 1710
```

```
!
!--- 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. !--- The group TACACS+ command
specifies TACACS+ user authentication.

aaa authentication login userauthen group tacacs+
!--- In order to enable group authorization, !--- enable
the aaa authorization commands.

aaa authorization network groupauthor local
!
!
ip subnet-zero
!
!
!
ip audit notify log
ip audit po max-events 100
!
!--- 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 in order to specify the !--- WINS
and DNS server addresses to the VPN Client, !--- along
with the pre-shared key for authentication. crypto
isakmp client configuration group vpngroup
key cisco123
dns 10.2.1.10
wins 10.2.1.20
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 previously 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
!
!
fax interface-type fax-mail
mta receive maximum-recipients 0
!
```

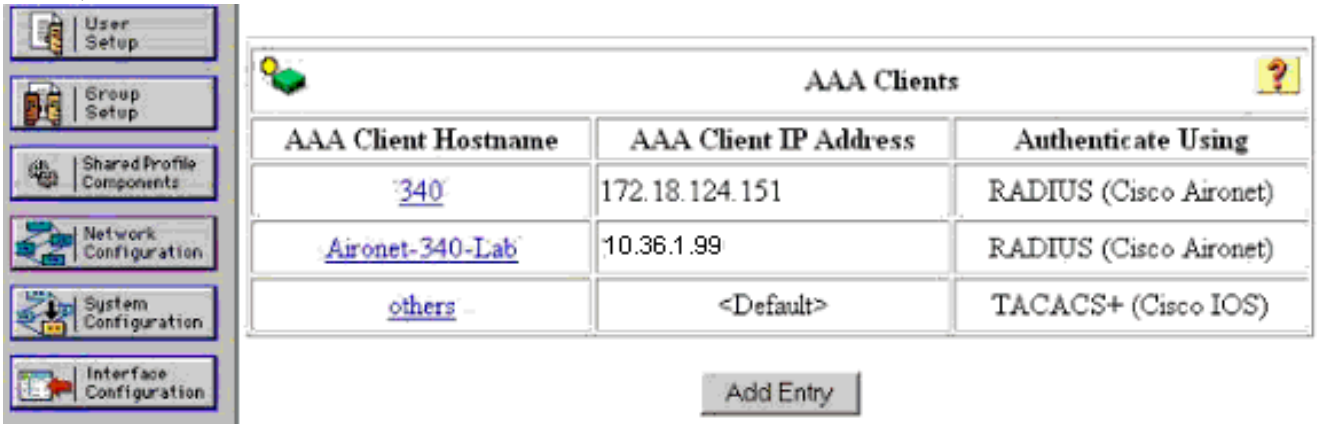
```
!
!
!--- Apply the crypto map on the outside interface.
interface FastEthernet0
ip address 172.18.124.158 255.255.255.0
crypto map clientmap
!
interface Ethernet0
ip address 10.38.50.51 255.255.0.0
!

!--- Create a pool of addresses to be assigned to the
VPN Clients. ip local pool ippool 10.1.1.100 10.1.1.200
ip classless
ip route 0.0.0.0 0.0.0.0 172.18.124.1
ip route 172.16.124.0 255.255.255.0 10.38.1.1
ip route 10.2.1.0 255.255.255.0 10.38.1.1
ip http server
ip pim bidir-enable
!
!
!
!--- Specify the IP address of the TACACS+ server, !---
along with the TACACS+ shared secret key. tacacs-server
host 172.16.124.96 key cisco123
!
!
line con 0
 exec-timeout 0 0
line aux 0
line vty 0 4
!
!
end
```

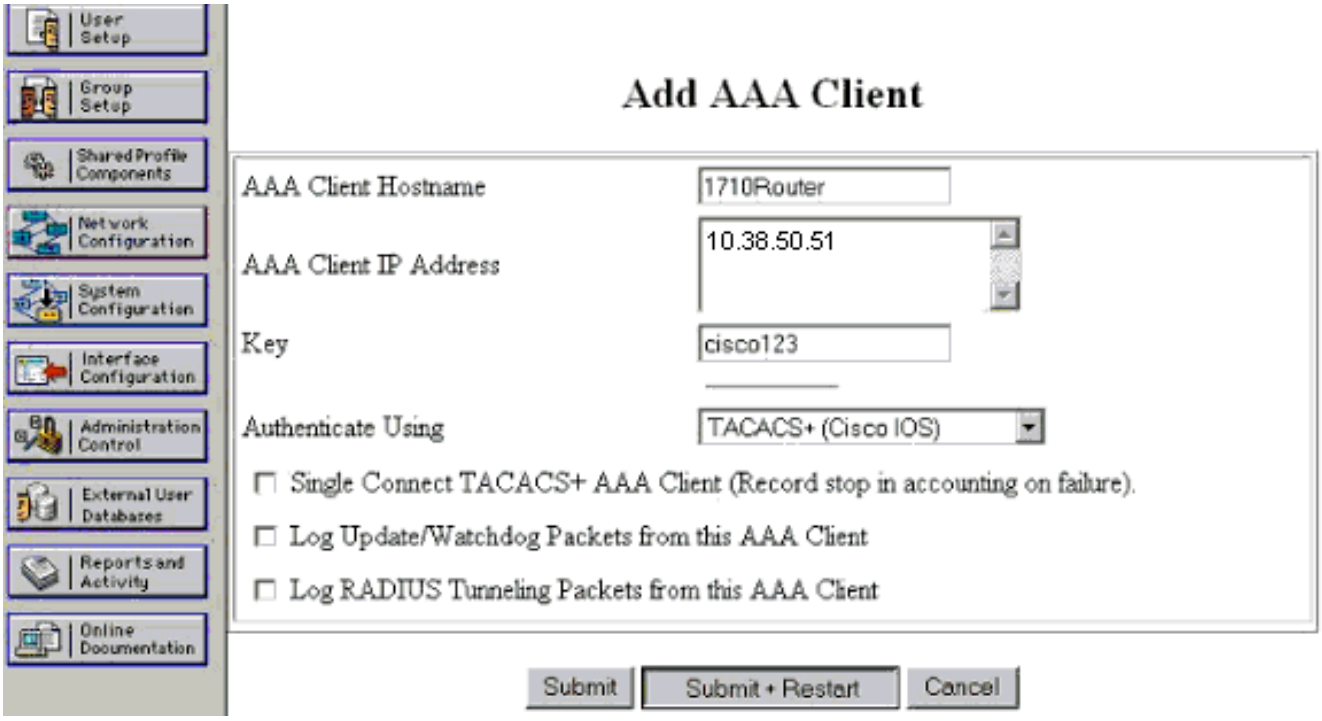
TACACS+サーバ

TACACS+サーバを設定するには、次の手順を実行します。

1. TACACS+サーバデータベースにルータのエントリを追加するには、[Add Entry]をクリックします。

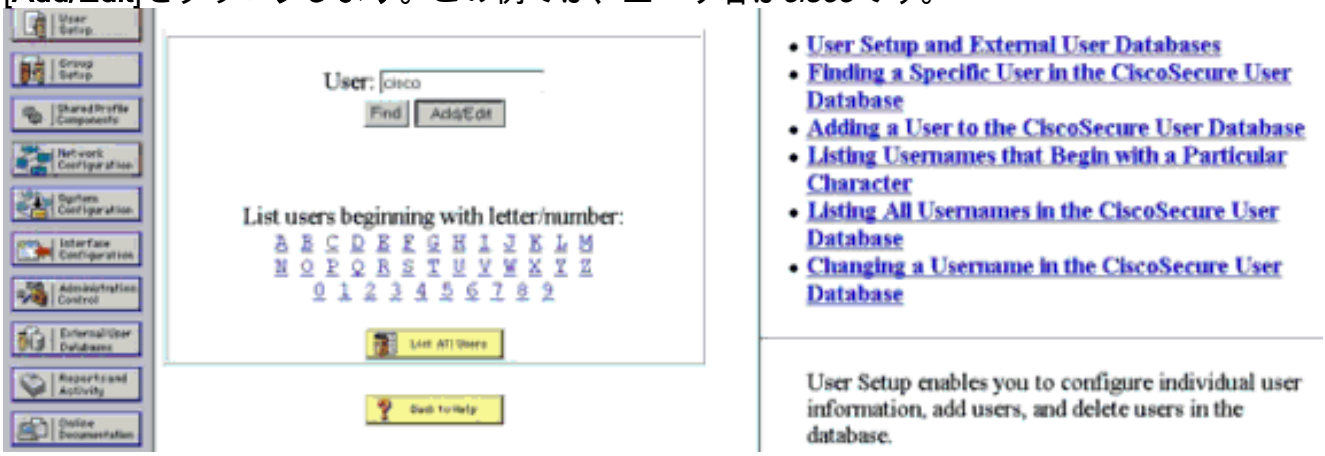


2. [Add AAA Client]ページで、次の図に示すようにルータ情報を入力します。

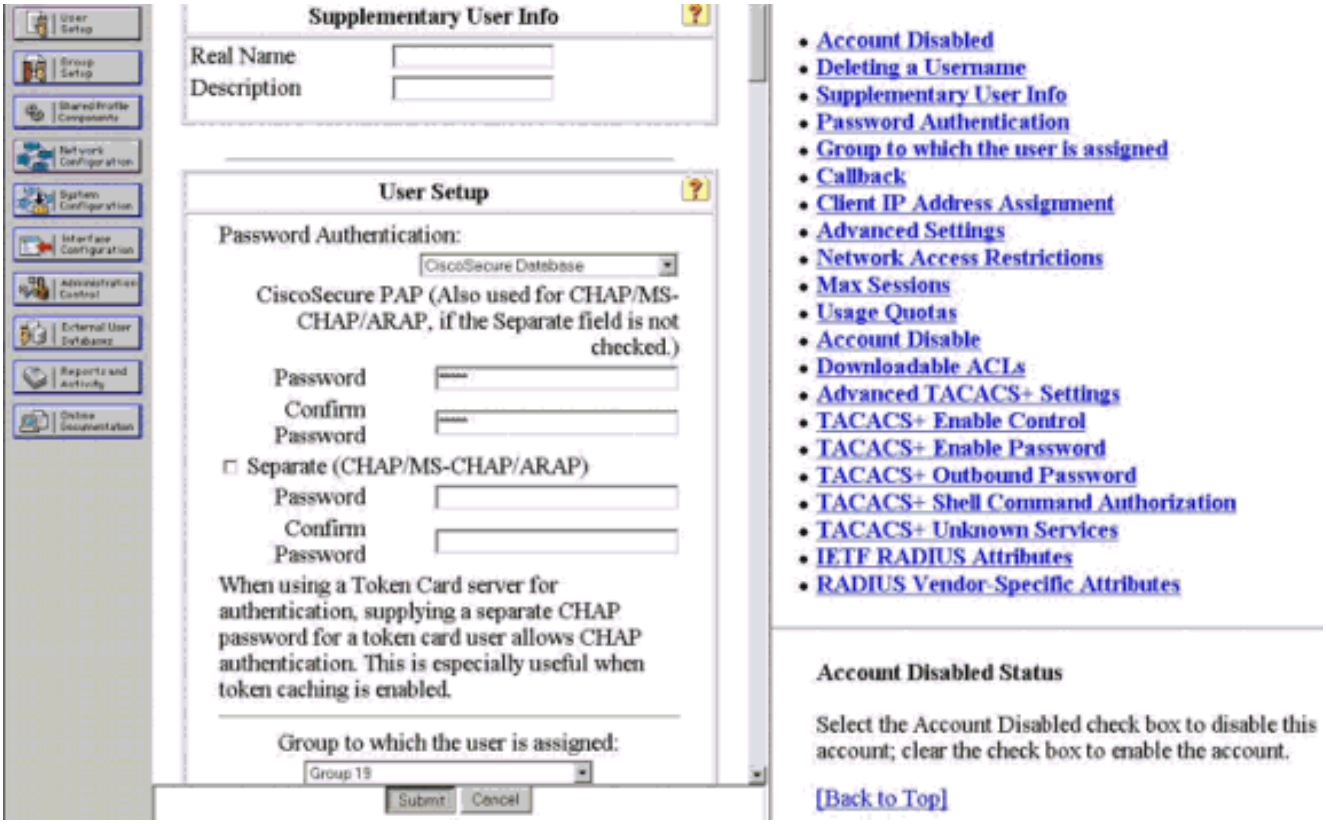


[AAA Client Hostname]フィールドに、ルータの名前を入力します。[AAA Client IP Address]フィールドに10.38.50.**51と入力します。**[Key]フィールドに、共有秘密**キーとして**cisco123と入力します。[Authenticate Using]ドロップダウンリストから**[TACACS+ (Cisco IOS)]を選択し、[Submit]をクリックします。**

3. [User]フィールドに、Cisco Secureデータベースの**VPN**ユーザのユーザ名を入力し、**[Add/Edit]をクリックします。**この例では、ユーザ名は*cisco*です。



4. 次のページで、ユーザciscoのパスワードを入力して確認**します。**この例では、パスワードも cisco です。

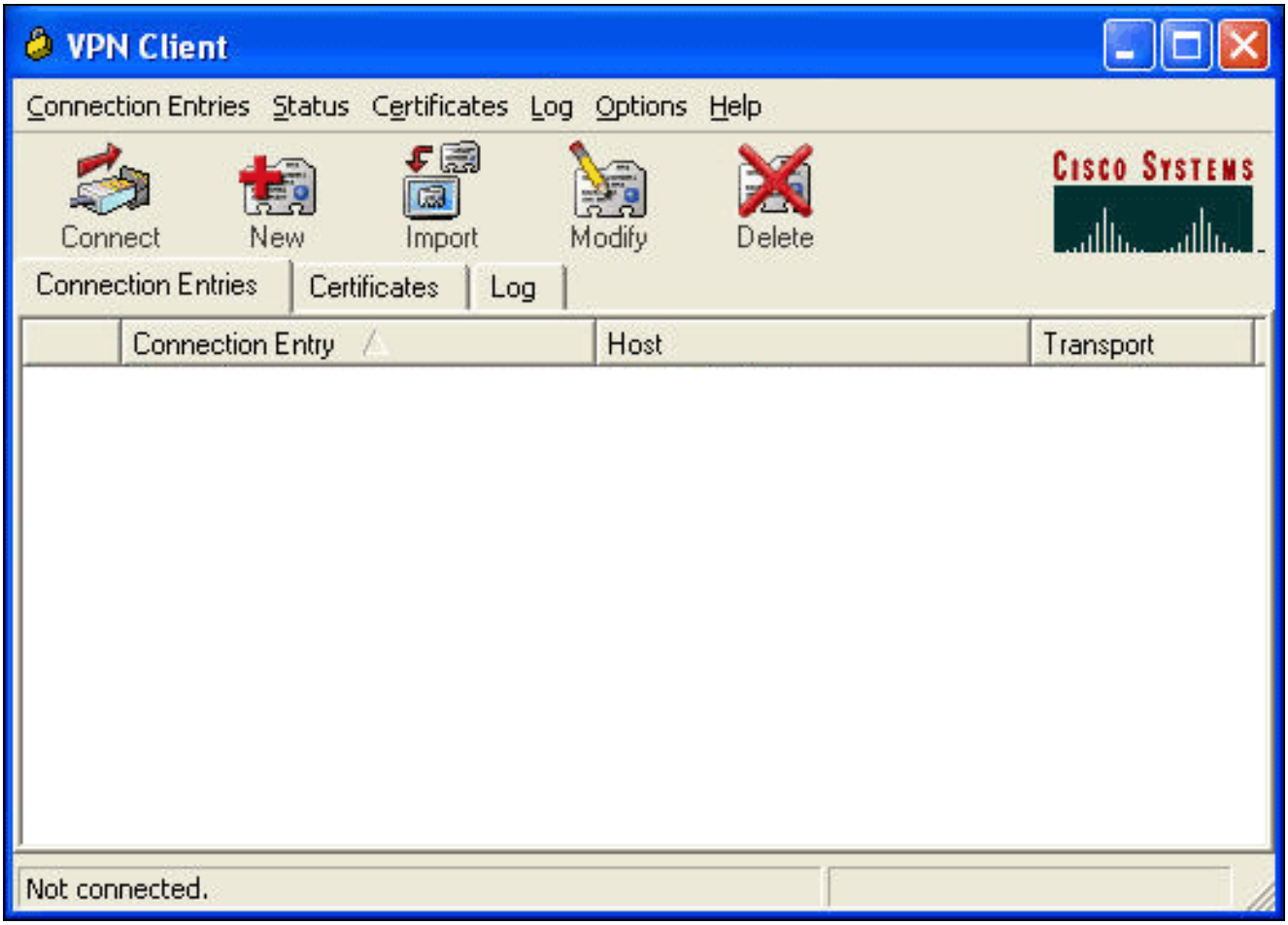


5. ユーザアカウントをグループにマッピングする場合は、この手順を実行します。終了したら、[Submit] をクリックします。

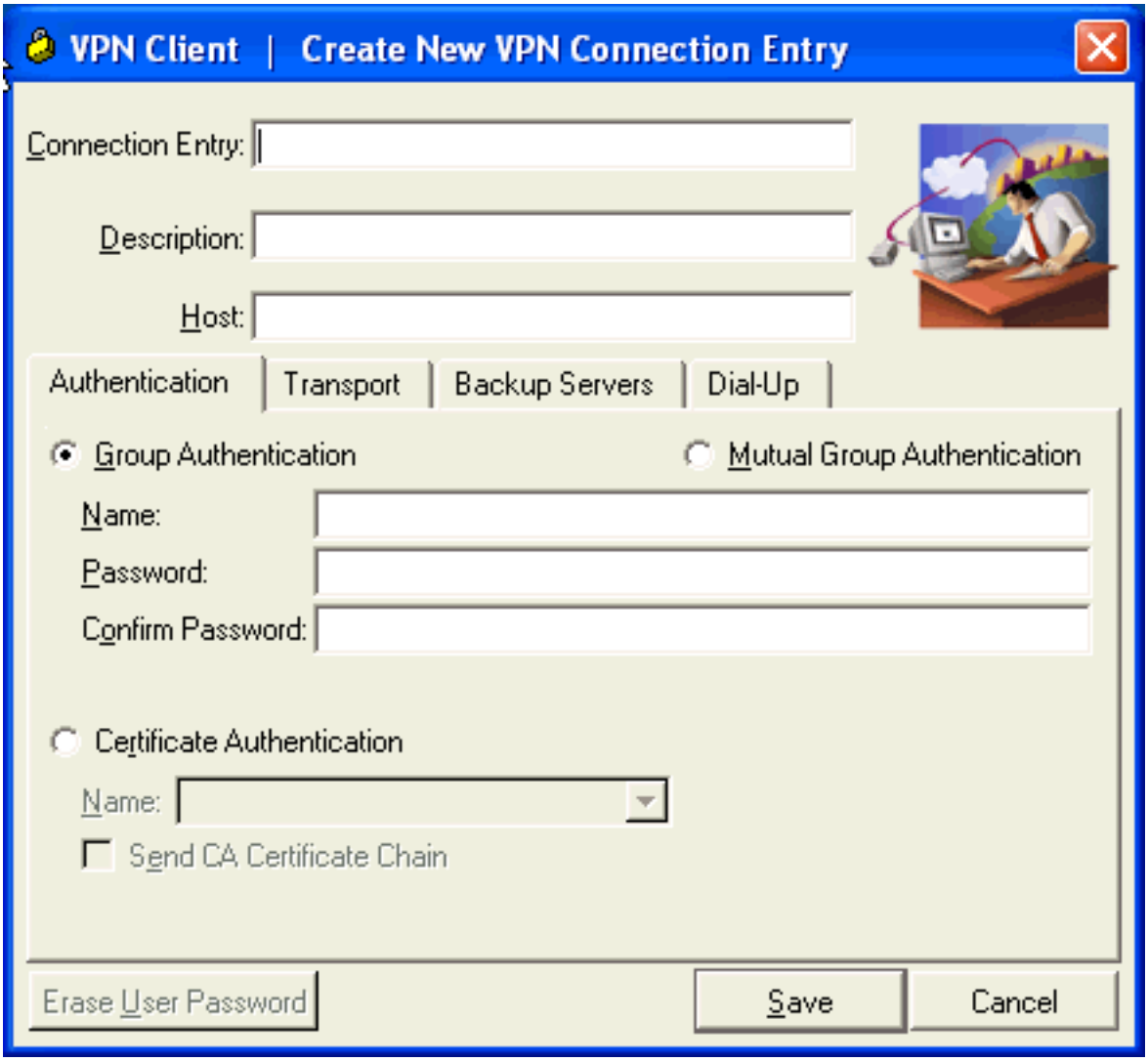
VPN Client 4.x

VPN Client 4.xを設定するには、次の手順を実行します。

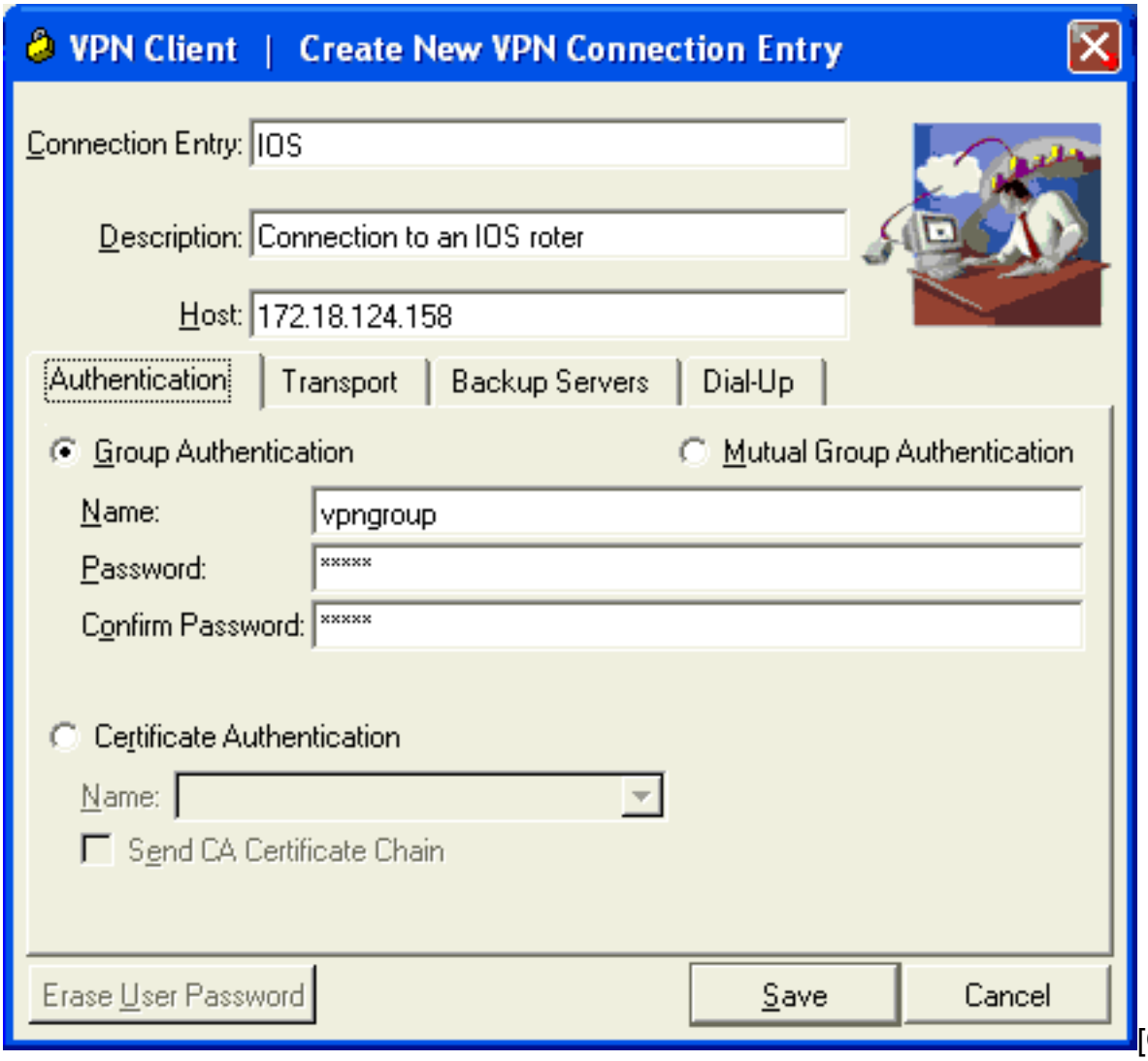
1. VPN Clientを起動し、[**New**]をクリックして新しい接続を作成します。



[VPN Client Create New VPN Connection Entry]ダイアログボックスが表示されます。

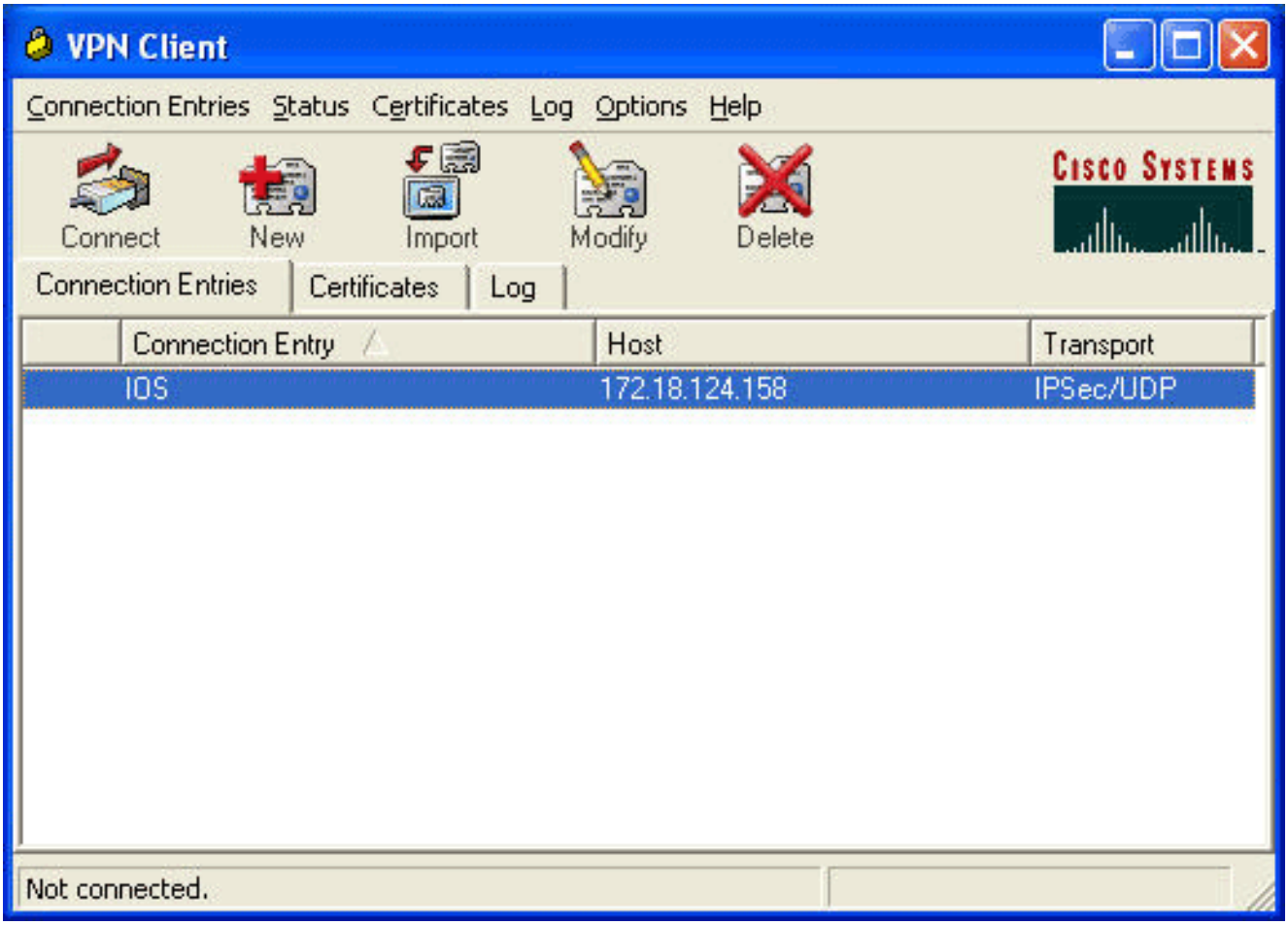


2. [Create New VPN Connection Entry]ダイアログボックスで、次の図に示すように接続情報を入力します。



[Connection Entry]フィールドに、接続の名前を入力します。[Description]フィールドと[Host]フィールドに、接続エントリの説明とホストIPアドレスを入力します。[Authentication]タブで、[**Group Authentication**]ラジオ・ボタンをクリックし、ユーザーの名前とパスワードを入力します。[**Save**]をクリックして、接続を保存します。

3. [VPN Client]ウィンドウで、作成した接続エントリを選択し、[**Connect**]をクリックしてルータに接続します。



4. IPsecがネゴシエートすると、ユーザ名とパスワードの入力を求められます。ユーザ名とパスワードを入力します。ウィンドウに次のメッセージが表示されます。「セキュリティプロファイルのネゴシエーション」「これでリンクが安全になりました」

スプリット トンネリング

VPN接続のスプリットトンネリングをイネーブルにするには、ルータにアクセスコントロールリスト(ACL)を設定していることを確認します。この例では、**access-list 102**コマンドがスプリットトンネリング用のグループに関連付けられ、トンネルは10.38.X.X /16および10.2.x.xネットワークに対して形成されます。ACL 102 で定義されていないデバイス (インターネット上のデバイスなど) へのトラフィック フローは暗号化されません。

```
access-list 102 permit ip 10.38.0.0 0.0.255.255 10.1.1.0 0.0.0.255
access-list 102 permit ip 10.2.0.0 0.0.255.255 10.1.1.0 0.0.0.255
```

グループ プロパティで ACL を適用します。

```
crypto isakmp client configuration group vpngroup
 key cisco123
 dns 10.2.1.10
 wins 10.2.1.20
 domain cisco.com
 pool ippool
 acl 102
```

確認

このセクションでは、設定が正しく動作していることを確認するために使用できる情報を示します。

一部の show コマンドが、アウトプット インタープリタ ツール（登録ユーザ専用）でサポートされています。 このツールを使用すると、showコマンド出力の分析を表示できます。

```
1710#show crypto isakmp sa
dst             src             state          conn-id    slot
172.18.124.158  192.168.60.34   QM_IDLE              3       0


1710#show crypto ipsec sa

interface: FastEthernet0
Crypto map tag: clientmap, local addr. 172.18.124.158

local ident (addr/mask/prot/port): (172.18.124.158/255.255.255.255/0/0)
remote ident (addr/mask/prot/port): (10.1.1.114/255.255.255.255/0/0)
current_peer: 192.168.60.34
PERMIT, flags={}
#pkts encaps: 0, #pkts encrypt: 0, #pkts digest 0
#pkts decaps: 0, #pkts decrypt: 0, #pkts verify 0
#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.: 172.18.124.158, remote crypto endpt.: 192.168.60.34
path mtu 1500, media mtu 1500
current outbound spi: 8F9BB05F

inbound esp sas:
spi: 0x61C53A64(1640315492)
transform: esp-3des esp-sha-hmac ,
in use settings ={Tunnel, }
slot: 0, conn id: 200, flow_id: 1, crypto map: clientmap
sa timing: remaining key lifetime (k/sec): (4608000/3294)
IV size: 8 bytes
replay detection support: Y

inbound ah sas:

inbound pcp sas:

outbound esp sas:
spi: 0x8F9BB05F(2409345119)
transform: esp-3des esp-sha-hmac ,
in use settings ={Tunnel, }
slot: 0, conn id: 201, flow_id: 2, crypto map: clientmap
sa timing: remaining key lifetime (k/sec): (4608000/3294)
IV size: 8 bytes
replay detection support: Y

outbound ah sas:

outbound pcp sas:


local ident (addr/mask/prot/port): (10.38.0.0/255.255.0.0/0/0)
```

```
remote ident (addr/mask/prot/port): (10.1.1.114/255.255.255.255/0/0)
current_peer: 192.168.60.34
PERMIT, flags={}
#pkts encaps: 3, #pkts encrypt: 3, #pkts digest 3
#pkts decaps: 3, #pkts decrypt: 3, #pkts verify 3
#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.: 172.18.124.158, remote crypto endpt.: 192.168.60.34
path mtu 1500, media mtu 1500
current outbound spi: 8B57E45E

inbound esp sas:
spi: 0x89898D1A(2307493146)
transform: esp-3des esp-sha-hmac ,
in use settings ={Tunnel, }
slot: 0, conn id: 202, flow_id: 3, crypto map: clientmap
sa timing: remaining key lifetime (k/sec): (4607999/3452)
IV size: 8 bytes
replay detection support: Y

inbound ah sas:

inbound pcp sas:

outbound esp sas:
spi: 0x8B57E45E(2337793118)
transform: esp-3des esp-sha-hmac ,
in use settings ={Tunnel, }
slot: 0, conn id: 203, flow_id: 4, crypto map: clientmap
sa timing: remaining key lifetime (k/sec): (4607999/3452)
IV size: 8 bytes
replay detection support: Y

outbound ah sas:

outbound pcp sas:


1710#show crypto engine connections active

ID   Interface      IP-Address      State  Algorithm           Encrypt  Decrypt
2    FastEthernet0  172.18.124.158  set    HMAC_SHA+3DES_56_C  0        0
200  FastEthernet0  172.18.124.158  set    HMAC_SHA+3DES_56_C  0        0
201  FastEthernet0  172.18.124.158  set    HMAC_SHA+3DES_56_C  0        0
202  FastEthernet0  172.18.124.158  set    HMAC_SHA+3DES_56_C  0        3
203  FastEthernet0  172.18.124.158  set    HMAC_SHA+3DES_56_C  3        0
```

トラブルシュート

ここでは、設定のトラブルシューティングに使用できる情報を示します。

トラブルシューティングのためのコマンド

アウトプット インタープリタ ツール（登録ユーザ専用）（OIT）は、特定の show コマンドをサポートします。show コマンドの出力の解析を表示するには、OIT を使用します。

注：debug コマンドを使用する前に、**『debug コマンドの重要な情報』**を参照してください。

- **debug crypto ipsec**：IPsec 接続に関するデバッグ情報を表示します。
- **debug crypto isakmp**:IPSec接続に関するデバッグ情報を表示し、両端で互換性がないために拒否された最初の属性セットを表示します。
- **debug crypto engine**：暗号エンジンからの情報を表示します。
- **debug aaa authentication**：AAA/TACACS+ 認証に関する情報を表示します。
- **debug aaa authorization**：AAA/TACACS+ 許可に関する情報を表示します。
- **debug tacacs**:TACACS+サーバとルータ間の通信のトラブルシューティングを行うための情報を表示します。

ルータのログ

```
1710#show debug
General OS:
TACACS access control debugging is on
AAA Authentication debugging is on
AAA Authorization debugging is on
Cryptographic Subsystem:
Crypto ISAKMP debugging is on
Crypto Engine debugging is on
Crypto IPSEC debugging is on


1710#
1w6d: ISAKMP (0:0): received packet from 192.168.60.34 (N) NEW SA
1w6d: ISAKMP: local port 500, remote port 500
1w6d: ISAKMP (0:2): (Re)Setting client xauth list userauthen and state
1w6d: ISAKMP: Locking CONFIG struct 0x8158B894 from
   crypto_ikmp_config_initialize_sa, count 2
1w6d: ISAKMP (0:2): processing SA payload. message ID = 0
1w6d: ISAKMP (0:2): processing ID payload. message ID = 0
1w6d: ISAKMP (0:2): processing vendor id payload
1w6d: ISAKMP (0:2): vendor ID seems Unity/DPD but bad major
1w6d: ISAKMP (0:2): vendor ID is XAUTH
1w6d: ISAKMP (0:2): processing vendor id payload
1w6d: ISAKMP (0:2): vendor ID is DPD
1w6d: ISAKMP (0:2): processing vendor id payload
1w6d: ISAKMP (0:2): vendor ID is Unity
1w6d: ISAKMP (0:2): Checking ISAKMP transform 1 against priority 3 policy
1w6d: ISAKMP: encryption 3DES-CBC
1w6d: ISAKMP: hash SHA
1w6d: ISAKMP: default group 2
1w6d: ISAKMP: auth XAUTHInitPreShared
1w6d: ISAKMP: life type in seconds
1w6d: ISAKMP: life duration (VPI) of 0x0 0x20 0xC4 0x9B
1w6d: ISAKMP (0:2): atts are acceptable. Next payload is 3
1w6d: CryptoEngine0: generate alg parameter
1w6d: CryptoEngine0: CRYPTO_ISA_DH_CREATE(hw)(ipsec)
1w6d: CRYPTO_ENGINE: Dh phase 1 status: 0
1w6d: ISAKMP (0:2): processing KE payload. message ID = 0
1w6d: CryptoEngine0: generate alg parameter
1w6d: CryptoEngine0: CRYPTO_ISA_DH_SHARE_SECRET(hw)(ipsec)
1w6d: ISAKMP (0:2): processing NONCE payload. message ID = 0
1w6d: ISAKMP (0:2): processing vendor id payload
1w6d: ISAKMP (0:2): processing vendor id payload
1w6d: ISAKMP (0:2): processing vendor id payload
1w6d: AAA: parse name=ISAKMP-ID-AUTH idb type=-1 tty=-1
1w6d: AAA/MEMORY: create_user (0x817F63F4) user='vpngroup' ruser='NULL' ds0=0
   port='ISAKMP-ID-AUTH' rem_addr='192.168.60.34' authen_type=NONE
   service=LOGIN priv=0 initial_task_id='0'
```

```
1w6d: ISAKMP (0:2): Input = IKE_MESG_FROM_PEER, IKE_AM_EXCH
Old State = IKE_READY New State = IKE_R_AM_AAA_AWAIT

1w6d: ISAKMP-ID-AUTH AAA/AUTHOR/CRYPTO AAA(1472763894):
   Port='ISAKMP-ID-AUTH' list='groupauthor' service=NET
1w6d: AAA/AUTHOR/CRYPTO AAA: ISAKMP-ID-AUTH(1472763894) user='vpngroup'
1w6d: ISAKMP-ID-AUTH AAA/AUTHOR/CRYPTO AAA(1472763894): send AV service=ike
1w6d: ISAKMP-ID-AUTH AAA/AUTHOR/CRYPTO AAA(1472763894): send AV protocol=ipsec
1w6d: ISAKMP-ID-AUTH AAA/AUTHOR/CRYPTO AAA(1472763894): found list "groupauthor"
1w6d: ISAKMP-ID-AUTH AAA/AUTHOR/CRYPTO AAA(1472763894): Method=LOCAL
1w6d: AAA/AUTHOR (1472763894): Post authorization status = PASS_ADD
1w6d: 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 timeout*0
AAA/AUTHOR/IKE: Processing AV idletime*0
AAA/AUTHOR/IKE: Processing AV inacl*102
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
1w6d: CryptoEngine0: create ISAKMP SKEYID for conn id 2
1w6d: CryptoEngine0: CRYPTO_ISA_SA_CREATE(hw)(ipsec)
1w6d: ISAKMP (0:2): SKEYID state generated
1w6d: ISAKMP (0:2): SA is doing pre-shared key authentication plux
   XAUTH using id type ID_IPV4_ADDR
1w6d: ISAKMP (2): ID payload
next-payload : 10
type : 1
protocol : 17
port : 500
length : 8
1w6d: ISAKMP (2): Total payload length: 12
1w6d: CryptoEngine0: generate hmac context for conn id 2
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
1w6d: ISAKMP (0:2): sending packet to 192.168.60.34 (R) AG_INIT_EXCH
1w6d: ISAKMP (0:2): Input = IKE_MESG_FROM_AAA, PRESHARED_KEY_REPLY
Old State = IKE_R_AM_AAA_AWAIT New State = IKE_R_AM2

1w6d: AAA/MEMORY: free_user (0x817F63F4) user='vpngroup'
   ruser='NULL' port='ISAK MP-ID-AUTH' rem_addr='192.168.60.34'
   authen_type=NONE service=LOGIN priv=0
1w6d: ISAKMP (0:2): received packet from 192.168.60.34 (R) AG_INIT_EXCH
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
1w6d: ISAKMP (0:2): processing HASH payload. message ID = 0
1w6d: CryptoEngine0: generate hmac context for conn id 2
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
1w6d: ISAKMP (0:2): processing NOTIFY INITIAL_CONTACT protocol 1
   spi 0, message ID = 0, sa = 81673884
1w6d: ISAKMP (0:2): Process initial contact, bring down
   existing phase 1 and 2 SA's
1w6d: ISAKMP (0:2): returning IP addr to the address pool: 10.1.1.113
1w6d: ISAKMP (0:2): returning address 10.1.1.113 to pool
1w6d: ISAKMP (0:2): peer does not do paranoid keepalives.

1w6d: ISAKMP (0:2): SA has been authenticated with 192.168.60.34
1w6d: CryptoEngine0: clear dh number for conn id 1
1w6d: CryptoEngine0: CRYPTO_ISA_DH_DELETE(hw)(ipsec)
1w6d: IPSEC(key_engine): got a queue event...
1w6d: IPSEC(key_engine_delete_sas): rec'd delete notify from ISAKMP
1w6d: IPSEC(key_engine_delete_sas): delete all SAs shared with 192.168.60.34
1w6d: CryptoEngine0: generate hmac context for conn id 2
```

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1w6d: CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_ENCRYPT(hw)(ipsec)
1w6d: ISAKMP (0:2): sending packet to 192.168.60.34 (R) QM_IDLE
1w6d: ISAKMP (0:2): purging node 1324880791
1w6d: ISAKMP: Sending phase 1 responder lifetime 86400

1w6d: ISAKMP (0:2): Input = IKE_MESG_FROM_PEER, IKE_AM_EXCH
Old State = IKE_R_AM2 New State = IKE_P1_COMPLETE

1w6d: ISAKMP (0:2): Need XAUTH
1w6d: AAA: parse name=ISAKMP idb type=-1 tty=-1
1w6d: AAA/MEMORY: create_user (0x812F79FC) user='NULL'
   ruser='NULL' ds0=0 port='
ISAKMP' rem_addr='192.168.60.34' authen_type=ASCII service=LOGIN
   priv=0 initial_task_id='0'
1w6d: ISAKMP (0:2): Input = IKE_MESG_INTERNAL, IKE_PHASE1_COMPLETE
Old State = IKE_P1_COMPLETE New State = IKE_XAUTH_AAA_START_LOGIN_AWAIT

1w6d: AAA/AUTHEN/START (2017610393): port='ISAKMP' list='userauthen'
   action=LOGIN service=LOGIN
1w6d: AAA/AUTHEN/START (2017610393): found list userauthen
1w6d: AAA/AUTHEN/START (2017610393): Method=tacacs+ (tacacs+)
1w6d: TAC+: send AUTHEN/START packet ver=192 id=2017610393
1w6d: TAC+: Using default tacacs server-group "tacacs+" list.
1w6d: TAC+: Opening TCP/IP to 172.16.124.96/49 timeout=5
1w6d: TAC+: Opened TCP/IP handle 0x8183D638 to 172.16.124.96/49
1w6d: TAC+: 172.16.124.96 (2017610393) AUTHEN/START/LOGIN/ASCII queued
1w6d: TAC+: (2017610393) AUTHEN/START/LOGIN/ASCII processed
1w6d: TAC+: ver=192 id=2017610393 received AUTHEN status = GETUSER
1w6d: AAA/AUTHEN(2017610393): Status=GETUSER
1w6d: ISAKMP: got callback 1
1w6d: ISAKMP/xauth: request attribute XAUTH_TYPE_V2
1w6d: ISAKMP/xauth: request attribute XAUTH_MESSAGE_V2
1w6d: ISAKMP/xauth: request attribute XAUTH_USER_NAME_V2
1w6d: ISAKMP/xauth: request attribute XAUTH_USER_PASSWORD_V2
1w6d: CryptoEngine0: generate hmac context for conn id 2
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
1w6d: ISAKMP (0:2): initiating peer config to 192.168.60.34. ID = 1641488057
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_ENCRYPT(hw)(ipsec)
1w6d: ISAKMP (0:2): sending packet to 192.168.60.34 (R) CONF_XAUTH
1w6d: ISAKMP (0:2): Input = IKE_MESG_FROM_AAA, IKE_AAA_START_LOGIN
Old State = IKE_XAUTH_AAA_START_LOGIN_AWAIT
   New State = IKE_XAUTH_REQ_SENT

1w6d: ISAKMP (0:2): received packet from 192.168.60.34 (R) CONF_XAUTH
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
1w6d: ISAKMP (0:2): processing transaction payload from 192.168.60.34.
   message ID = 1641488057
1w6d: CryptoEngine0: generate hmac context for conn id 2
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
1w6d: ISAKMP: Config payload REPLY
1w6d: ISAKMP/xauth: reply attribute XAUTH_TYPE_V2 unexpected
1w6d: ISAKMP/xauth: reply attribute XAUTH_USER_NAME_V2
1w6d: ISAKMP/xauth: reply attribute XAUTH_USER_PASSWORD_V2
1w6d: ISAKMP (0:2): deleting node 1641488057 error FALSE
   reason "done with xauth request/reply exchange"
1w6d: ISAKMP (0:2): Input = IKE_MESG_FROM_PEER, IKE_CFG_REPLY
Old State = IKE_XAUTH_REQ_SENT
   New State = IKE_XAUTH_AAA_CONT_LOGIN_AWAIT

1w6d: AAA/AUTHEN/CONT (2017610393): continue_login (user='(undef)')
1w6d: AAA/AUTHEN(2017610393): Status=GETUSER
1w6d: AAA/AUTHEN(2017610393): Method=tacacs+ (tacacs+)
1w6d: TAC+: send AUTHEN/CONT packet id=2017610393
```

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1w6d: TAC+: 172.16.124.96 (2017610393) AUTHEN/CONT queued
1w6d: TAC+: (2017610393) AUTHEN/CONT processed
1w6d: TAC+: ver=192 id=2017610393 received AUTHEN status = GETPASS
1w6d: AAA/AUTHEN(2017610393): Status=GETPASS
1w6d: AAA/AUTHEN/CONT (2017610393): continue_login (user='cisco')
1w6d: AAA/AUTHEN(2017610393): Status=GETPASS
1w6d: AAA/AUTHEN(2017610393): Method=tacacs+ (tacacs+)
1w6d: TAC+: send AUTHEN/CONT packet id=2017610393
1w6d: TAC+: 172.16.124.96 (2017610393) AUTHEN/CONT queued
1w6d: TAC+: (2017610393) AUTHEN/CONT processed
1w6d: TAC+: ver=192 id=2017610393 received AUTHEN status = PASS
1w6d: AAA/AUTHEN(2017610393): Status=PASS
1w6d: ISAKMP: got callback 1
1w6d: TAC+: Closing TCP/IP 0x8183D638 connection to 172.16.124.96/49
1w6d: CryptoEngine0: generate hmac context for conn id 2
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
1w6d: ISAKMP (0:2): initiating peer config to 192.168.60.34. ID = 1736579999
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_ENCRYPT(hw)(ipsec)
1w6d: ISAKMP (0:2): sending packet to 192.168.60.34 (R) CONF_XAUTH
1w6d: ISAKMP (0:2): Input = IKE_MESG_FROM_AAA, IKE_AAA_CONT_LOGIN
Old State = IKE_XAUTH_AAA_CONT_LOGIN_AWAIT
   New State = IKE_XAUTH_SET_SENT

1w6d: AAA/MEMORY: free_user (0x812F79FC) user='cisco' ruser='NULL'
   port='ISAKMP' rem_addr='192.168.60.34' authen_type=ASCII
   service=LOGIN priv=0
1w6d: ISAKMP (0:2): received packet from 192.168.60.34 (R) CONF_XAUTH
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
1w6d: ISAKMP (0:2): processing transaction payload from 192.168.60.34.
   message ID = 1736579999
1w6d: CryptoEngine0: generate hmac context for conn id 2
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
1w6d: ISAKMP: Config payload ACK
1w6d: ISAKMP (0:2): XAUTH ACK Processed
1w6d: ISAKMP (0:2): deleting node 1736579999 error FALSE
   reason "done with transaction"
1w6d: ISAKMP (0:2): Input = IKE_MESG_FROM_PEER, IKE_CFG_ACK
Old State = IKE_XAUTH_SET_SENT New State = IKE_P1_COMPLETE

1w6d: ISAKMP (0:2): Input = IKE_MESG_INTERNAL, IKE_PHASE1_COMPLETE
Old State = IKE_P1_COMPLETE New State = IKE_P1_COMPLETE

1w6d: ISAKMP (0:2): received packet from 192.168.60.34 (R) QM_IDLE
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
1w6d: ISAKMP (0:2): processing transaction payload from 192.168.60.34.
   message ID = 398811763
1w6d: CryptoEngine0: generate hmac context for conn id 2
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
1w6d: ISAKMP: Config payload REQUEST
1w6d: ISAKMP (0:2): checking request:
1w6d: ISAKMP: IP4_ADDRESS
1w6d: ISAKMP: IP4_NETMASK
1w6d: ISAKMP: IP4_DNS
1w6d: ISAKMP: IP4_NBNS
1w6d: ISAKMP: ADDRESS_EXPIRY
1w6d: ISAKMP: APPLICATION_VERSION
1w6d: ISAKMP: UNKNOWN Unknown Attr: 0x7000
1w6d: ISAKMP: UNKNOWN Unknown Attr: 0x7001
1w6d: ISAKMP: DEFAULT_DOMAIN
1w6d: ISAKMP: SPLIT_INCLUDE
1w6d: ISAKMP: UNKNOWN Unknown Attr: 0x7007
1w6d: ISAKMP: UNKNOWN Unknown Attr: 0x7008
1w6d: ISAKMP: UNKNOWN Unknown Attr: 0x7005
1w6d: AAA: parse name=ISAKMP-GROUP-AUTH idb type=-1 tty=-1
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1w6d: AAA/MEMORY: create_user (0x812F79FC) user='vpngroup' ruser='NULL' ds0=0 po
rt='ISAKMP-GROUP-AUTH' rem_addr='192.168.60.34' authen_type=NONE service=LOGIN pr
iv=0 initial_task_id='0'
1w6d: ISAKMP (0:2): Input = IKE_MESG_FROM_PEER, IKE_CFG_REQUEST
Old State = IKE_P1_COMPLETE New State = IKE_CONFIG_AUTHOR_AAA_AWAIT

1w6d: ISAKMP-GROUP-AUTH AAA/AUTHOR/CRYPTO AAA(1059453615):
   Port='ISAKMP-GROUP-AUTH' list='groupauthor' service=NET
1w6d: AAA/AUTHOR/CRYPTO AAA: ISAKMP-GROUP-AUTH(1059453615)
   user='vpngroup'
1w6d: ISAKMP-GROUP-AUTH AAA/AUTHOR/CRYPTO AAA(1059453615):
   send AV service=ike
1w6d: ISAKMP-GROUP-AUTH AAA/AUTHOR/CRYPTO AAA(1059453615):
   send AV protocol=ipsec
1w6d: ISAKMP-GROUP-AUTH AAA/AUTHOR/CRYPTO AAA(1059453615):
   found list "groupauthor"
1w6d: ISAKMP-GROUP-AUTH AAA/AUTHOR/CRYPTO AAA(1059453615):
   Method=LOCAL
1w6d: AAA/AUTHOR (1059453615): Post authorization status = PASS_ADD
1w6d: 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 timeout*0
AAA/AUTHOR/IKE: Processing AV idletime*0
AAA/AUTHOR/IKE: Processing AV inacl*102
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
1w6d: ISAKMP (0:2): attributes sent in message:
1w6d: Address: 0.2.0.0
1w6d: ISAKMP (0:2): allocating address 10.1.1.114
1w6d: ISAKMP: Sending private address: 10.1.1.114
1w6d: ISAKMP: Unknown Attr: IP4_NETMASK (0x2)
1w6d: ISAKMP: Sending IP4_DNS server address: 10.1.1.10
1w6d: ISAKMP: Sending IP4_NBNS server address: 10.1.1.20
1w6d: ISAKMP: Sending ADDRESS_EXPIRY seconds left to use the address: 86396
1w6d: ISAKMP: Sending APPLICATION_VERSION string:
   Cisco Internetwork Operating System Software IOS (tm) C1700 Software
   (C1710-K9O3SY-M), Version 12.2(8)T1, RELEASE SOFTWARE (fc2)
   TAC Support: http://www.cisco.com/tac
   Copyright (c) 1986-2002 by cisco Systems, Inc.
   Compiled Sat 30-Mar-02 13:30 by ccai
1w6d: ISAKMP: Unknown Attr: UNKNOWN (0x7000)
1w6d: ISAKMP: Unknown Attr: UNKNOWN (0x7001)
1w6d: ISAKMP: Sending DEFAULT_DOMAIN default domain name: cisco.com
1w6d: ISAKMP: Sending split include name 102 network 10.38.0.0
   mask 255.255.0.0 protocol 0, src port 0, dst port 0

1w6d: ISAKMP: Unknown Attr: UNKNOWN (0x7007)
1w6d: ISAKMP: Unknown Attr: UNKNOWN (0x7008)
1w6d: ISAKMP: Unknown Attr: UNKNOWN (0x7005)
1w6d: CryptoEngine0: generate hmac context for conn id 2
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
1w6d: ISAKMP (0:2): responding to peer config from 192.168.60.34. ID = 398811763
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_ENCRYPT(hw)(ipsec)
1w6d: ISAKMP (0:2): sending packet to 192.168.60.34 (R) CONF_ADDR
1w6d: ISAKMP (0:2): deleting node 398811763 error FALSE reason ""
1w6d: ISAKMP (0:2): Input = IKE_MESG_FROM_AAA, IKE_AAA_GROUP_ATTR
Old State = IKE_CONFIG_AUTHOR_AAA_AWAIT New State = IKE_P1_COMPLETE

1w6d: AAA/MEMORY: free_user (0x812F79FC) user='vpngroup'
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   ruser='NULL' port='ISAKMP-GROUP-AUTH' rem_addr='192.168.60.34'
   authen_type=NONE service=LOGIN priv=0
1w6d: ISAKMP (0:2): received packet from 192.168.60.34 (R) QM_IDLE
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
1w6d: CryptoEngine0: generate hmac context for conn id 2
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
1w6d: ISAKMP (0:2): processing HASH payload. message ID = 1369459046
1w6d: ISAKMP (0:2): processing SA payload. message ID = 1369459046
1w6d: ISAKMP (0:2): Checking IPSec proposal 1
1w6d: ISAKMP: transform 1, ESP_3DES
1w6d: ISAKMP: attributes in transform:
1w6d: ISAKMP: authenticator is HMAC-MD5
1w6d: ISAKMP: encaps is 1
1w6d: ISAKMP: SA life type in seconds
1w6d: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B
1w6d: validate proposal 0
1w6d: IPSEC(validate_proposal): transform proposal
   (prot 3, trans 3, hmac_alg 1) not supported
1w6d: ISAKMP (0:2): atts not acceptable. Next payload is 0
1w6d: ISAKMP (0:2): skipping next ANDed proposal (1)
1w6d: ISAKMP (0:2): Checking IPSec proposal 2
1w6d: ISAKMP: transform 1, ESP_3DES
1w6d: ISAKMP: attributes in transform:
1w6d: ISAKMP: authenticator is HMAC-SHA
1w6d: ISAKMP: encaps is 1
1w6d: ISAKMP: SA life type in seconds
1w6d: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B
1w6d: validate proposal 0
1w6d: ISAKMP (0:2): atts are acceptable.
1w6d: ISAKMP (0:2): Checking IPSec proposal 2
1w6d: ISAKMP (0:2): transform 1, IPPCP LZS
1w6d: ISAKMP: attributes in transform:
1w6d: ISAKMP: encaps is 1
1w6d: ISAKMP: SA life type in seconds
1w6d: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B
1w6d: IPSEC(validate_proposal): transform proposal
   (prot 4, trans 3, hmac_alg 0) not supported
1w6d: ISAKMP (0:2): atts not acceptable. Next payload is 0
1w6d: ISAKMP (0:2): Checking IPSec proposal 3
1w6d: ISAKMP: transform 1, ESP_3DES
1w6d: ISAKMP: attributes in transform:
1w6d: ISAKMP: authenticator is HMAC-MD5
1w6d: ISAKMP: encaps is 1
1w6d: ISAKMP: SA life type in seconds
1w6d: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B
1w6d: validate proposal 0
1w6d: IPSEC(validate_proposal): transform proposal
   (prot 3, trans 3, hmac_alg 1) not supported
1w6d: ISAKMP (0:2): atts not acceptable. Next payload is 0
1w6d: ISAKMP (0:2): Checking IPSec proposal 4
1w6d: ISAKMP: transform 1, ESP_3DES
1w6d: ISAKMP: attributes in transform:
1w6d: ISAKMP: authenticator is HMAC-SHA
1w6d: ISAKMP: encaps is 1
1w6d: ISAKMP: SA life type in seconds
1w6d: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B
1w6d: validate proposal 0
1w6d: ISAKMP (0:2): atts are acceptable.
1w6d: IPSEC(validate_proposal_request): proposal part #1,
   (key eng. msg.) INBOUND local= 172.18.124.158,
   remote= 192.168.60.34, local_proxy= 172.18.124.158/255.255.255.255/0/0
   (type=1), remote_proxy= 10.1.1.114/255.255.255.255/0/0 (type=1),
   protocol= ESP, transform= esp-3des esp-sha-hmac , lifedur= 0s and 0kb,
   spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x4
```

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1w6d: validate proposal request 0
1w6d: ISAKMP (0:2): processing NONCE payload. message ID = 1369459046
1w6d: ISAKMP (0:2): processing ID payload. message ID = 1369459046
1w6d: ISAKMP (0:2): processing ID payload. message ID = 1369459046
1w6d: ISAKMP (0:2): asking for 1 spis from ipsec
1w6d: ISAKMP (0:2): Node 1369459046, Input = IKE_MESG_FROM_PEER, IKE_QM_EXCH
Old State = IKE_QM_READY New State = IKE_QM_SPI_STARVE

1w6d: IPSEC(key_engine): got a queue event...
1w6d: IPSEC(spi_response): getting spi 1640315492 for SA
   from 172.18.124.158 to 192.168.60.34 for prot 3
1w6d: ISAKMP: received ke message (2/1)
1w6d: CryptoEngine0: generate hmac context for conn id 2
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_ENCRYPT(hw)(ipsec)
1w6d: ISAKMP (0:2): sending packet to 192.168.60.34 (R) QM_IDLE
1w6d: ISAKMP (0:2): Node 1369459046,
   Input = IKE_MESG_FROM_IPSEC, IKE_SPI_REPLY
Old State = IKE_QM_SPI_STARVE New State = IKE_QM_R_QM2

1w6d: ISAKMP (0:2): received packet from 192.168.60.34 (R) QM_IDLE
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_DECRYPT(hw)(ipsec)
1w6d: CryptoEngine0: generate hmac context for conn id 2
1w6d: CryptoEngine0: CRYPTO_ISA_IKE_HMAC(hw)(ipsec)
1w6d: ipsec allocate flow 0
1w6d: ipsec allocate flow 0
1w6d: CryptoEngine0: CRYPTO_ISA_IPSEC_KEY_CREATE(hw)(ipsec)
1w6d: CryptoEngine0: CRYPTO_ISA_IPSEC_KEY_CREATE(hw)(ipsec)
1w6d: ISAKMP (0:2): Creating IPSec SAs
1w6d: inbound SA from 192.168.60.34 to 172.18.124.158
   (proxy 10.1.1.114 to 172.18.124.158)
1w6d: has spi 0x61C53A64 and conn_id 200 and flags 4
1w6d: lifetime of 2147483 seconds
1w6d: outbound SA from 172.18.124.158 to 192.168.60.34
   (proxy 172.18.124.158 to 10.1.1.114 )
1w6d: has spi -1885622177 and conn_id 201 and flags C
1w6d: lifetime of 2147483 seconds
1w6d: ISAKMP (0:2): deleting node 1369459046 error FALSE
   reason "quick mode done (await()"
1w6d: ISAKMP (0:2): Node 1369459046,
   Input = IKE_MESG_FROM_PEER, IKE_QM_EXCH
Old State = IKE_QM_R_QM2 New State = IKE_QM_PHASE2_COMPLETE

1w6d: IPSEC(key_engine): got a queue event...
1w6d: IPSEC(initialize_sas): ,
   (key eng. msg.) INBOUND local= 172.18.124.158,
   remote= 192.168.60.34, local_proxy= 172.18.124.158/0.0.0.0/0/0
   (type=1), remote_proxy= 10.1.1.114/0.0.0.0/0/0 (type=1),
   protocol= ESP, transform= esp-3des esp-sha-hmac ,
   lifedur= 2147483s and 0kb, spi= 0x61C53A64(1640315492),
   conn_id= 200, keysize= 0, flags= 0x4
1w6d: IPSEC(initialize_sas): , (key eng. msg.)
   OUTBOUND local= 172.18.124.158, remote= 192.168.60.34,
   local_proxy= 172.18.124.158/0.0.0.0/0/0 (type=1),
   remote_proxy= 10.1.1.114/0.0.0.0/0/0 (type=1),
   protocol= ESP, transform= esp-3des esp-sha-hmac ,
   lifedur= 2147483s and 0kb, spi= 0x8F9BB05F(2409345119),
   conn_id= 201, keysize= 0, flags= 0xC
1w6d: IPSEC(create_sa): sa created, (sa) sa_dest= 172.18.124.158,
   sa_prot= 50, sa_spi= 0x61C53A64(1640315492),
   sa_trans= esp-3des esp-sha-hmac , sa_conn_id= 200
1w6d: IPSEC(create_sa): sa created, (sa) sa_dest= 192.168.60.34,
   sa_prot= 50, sa_spi= 0x8F9BB05F(2409345119),
   sa_trans= esp-3des esp-sha-hmac , sa_conn_id= 201
```

クライアント ログ

ログを表示するには、VPN ClientでLog Viewerを起動し、すべての設定済みクラスのフィルタを*High*に設定します。

ログの出力例を次に示します。

```
1 11:56:06.609 06/05/02 Sev=Info/6 DIALER/0x63300002
Initiating connection.

2 11:56:06.609 06/05/02 Sev=Info/4 CM/0x63100002
Begin connection process

3 11:56:06.609 06/05/02 Sev=Info/4 CM/0x63100004
Establish secure connection using Ethernet

4 11:56:06.609 06/05/02 Sev=Info/4 CM/0x63100026
Attempt connection with server "172.18.124.158"

5 11:56:06.609 06/05/02 Sev=Info/6 IKE/0x6300003B
Attempting to establish a connection with 172.18.124.158.

6 11:56:06.669 06/05/02 Sev=Info/4 IKE/0x63000013
SENDING >>> ISAKMP OAK AG (SA, KE, NON, ID, VID, VID, VID) to 172.18.124.158

7 11:56:07.250 06/05/02 Sev=Info/5 IKE/0x6300002F
Received ISAKMP packet: peer = 172.18.124.158

8 11:56:07.250 06/05/02 Sev=Info/4 IKE/0x63000014
RECEIVING <<< ISAKMP OAK AG (SA, VID, VID, VID, VID, KE, ID, NON, HASH) from
172.18.124.158

9 11:56:07.250 06/05/02 Sev=Info/5 IKE/0x63000059
Vendor ID payload = 12F5F28C457168A9702D9FE274CC0100

10 11:56:07.250 06/05/02 Sev=Info/5 IKE/0x63000001
Peer is a Cisco-Unity compliant peer

11 11:56:07.250 06/05/02 Sev=Info/5 IKE/0x63000059
Vendor ID payload = AFCAD71368A1F1C96B8696FC77570100

12 11:56:07.250 06/05/02 Sev=Info/5 IKE/0x63000001
Peer supports DPD

13 11:56:07.250 06/05/02 Sev=Info/5 IKE/0x63000059
Vendor ID payload = 0A0E5F2A15C0B2F2A41B00897B816B3C

14 11:56:07.250 06/05/02 Sev=Info/5 IKE/0x63000059
Vendor ID payload = 09002689DFD6B712

15 11:56:07.280 06/05/02 Sev=Info/4 IKE/0x63000013
SENDING >>> ISAKMP OAK AG *(HASH, NOTIFY:STATUS_INITIAL_CONTACT) to
172.18.124.158

16 11:56:07.320 06/05/02 Sev=Info/5 IKE/0x6300002F
Received ISAKMP packet: peer = 172.18.124.158

17 11:56:07.320 06/05/02 Sev=Info/4 IKE/0x63000014
RECEIVING <<< ISAKMP OAK INFO *(HASH, NOTIFY:STATUS_RESP_LIFETIME) from
```

```
172.18.124.158

18 11:56:07.320 06/05/02 Sev=Info/5 IKE/0x63000044
RESPONDER-LIFETIME notify has value of 86400 seconds

19 11:56:07.320 06/05/02 Sev=Info/5 IKE/0x63000046
This SA has already been alive for 1 seconds, setting expiry to 86399 seconds
from now

20 11:56:07.561 06/05/02 Sev=Info/5 IKE/0x6300002F
Received ISAKMP packet: peer = 172.18.124.158

21 11:56:07.561 06/05/02 Sev=Info/4 IKE/0x63000014
RECEIVING <<< ISAKMP OAK TRANS *(HASH, ATTR) from 172.18.124.158

22 11:56:07.561 06/05/02 Sev=Info/4 CM/0x63100015
Launch xAuth application

23 11:56:07.571 06/05/02 Sev=Info/4 IPSEC/0x63700014
Deleted all keys

24 11:56:09.734 06/05/02 Sev=Info/4 CM/0x63100017
xAuth application returned

25 11:56:09.734 06/05/02 Sev=Info/4 IKE/0x63000013
SENDING >>> ISAKMP OAK TRANS *(HASH, ATTR) to 172.18.124.158

26 11:56:10.174 06/05/02 Sev=Info/5 IKE/0x6300002F
Received ISAKMP packet: peer = 172.18.124.158

27 11:56:10.184 06/05/02 Sev=Info/4 IKE/0x63000014
RECEIVING <<< ISAKMP OAK TRANS *(HASH, ATTR) from 172.18.124.158

28 11:56:10.184 06/05/02 Sev=Info/4 CM/0x6310000E
Established Phase 1 SA. 1 Phase 1 SA in the system

29 11:56:10.184 06/05/02 Sev=Info/4 IKE/0x63000013
SENDING >>> ISAKMP OAK TRANS *(HASH, ATTR) to 172.18.124.158

30 11:56:10.204 06/05/02 Sev=Info/5 IKE/0x6300005D
Client sending a firewall request to concentrator

31 11:56:10.204 06/05/02 Sev=Info/5 IKE/0x6300005C
Firewall Policy: Product=Cisco Integrated Client, Capability= (Centralized
Policy Push).

32 11:56:10.204 06/05/02 Sev=Info/4 IKE/0x63000013
SENDING >>> ISAKMP OAK TRANS *(HASH, ATTR) to 172.18.124.158

33 11:56:10.265 06/05/02 Sev=Info/5 IKE/0x6300002F
Received ISAKMP packet: peer = 172.18.124.158

34 11:56:10.265 06/05/02 Sev=Info/4 IKE/0x63000014
RECEIVING <<< ISAKMP OAK TRANS *(HASH, ATTR) from 172.18.124.158

35 11:56:10.265 06/05/02 Sev=Info/5 IKE/0x63000010
MODE_CFG_REPLY: Attribute = INTERNAL_IPV4_ADDRESS: , value = 10.1.1.114

36 11:56:10.265 06/05/02 Sev=Info/5 IKE/0x63000010
MODE_CFG_REPLY: Attribute = INTERNAL_IPV4_DNS(1): , value = 10.1.1.10

37 11:56:10.265 06/05/02 Sev=Info/5 IKE/0x63000010
MODE_CFG_REPLY: Attribute = INTERNAL_IPV4_NBNS(1) (a.k.a. WINS) : , value =
10.1.1.20
```

```
38 11:56:10.265 06/05/02 Sev=Info/5 IKE/0xA3000017
MODE_CFG_REPLY: The received (INTERNAL_ADDRESS_EXPIRY) attribute and value
(86396) is not supported

39 11:56:10.265 06/05/02 Sev=Info/5 IKE/0x6300000E
MODE_CFG_REPLY: Attribute = APPLICATION_VERSION,
value = Cisco Internetwork Operating System Software
IOS (tm) C1700 Software (C1710-K9O3SY-M), Version 12.2(8)T1,
RELEASE SOFTWARE (fc2)
TAC Support: http://www.cisco.com/tac
Copyright (c) 1986-2002 by cisco Systems, Inc.
Compiled Sat 30-Mar-02 13:30 by ccai

40 11:56:10.265 06/05/02 Sev=Info/5 IKE/0x6300000E
MODE_CFG_REPLY: Attribute = MODECFG_UNITY_DEFDOMAIN: , value = cisco.com

41 11:56:10.265 06/05/02 Sev=Info/5 IKE/0x6300000D
MODE_CFG_REPLY: Attribute = MODECFG_UNITY_SPLIT_INCLUDE (# of split_nets),
value = 0x00000001

42 11:56:10.265 06/05/02 Sev=Info/5 IKE/0x6300000F
SPLIT_NET #1
subnet = 10.38.0.0
mask = 255.255.0.0
protocol = 0
src port = 0
dest port=0

43 11:56:10.265 06/05/02 Sev=Info/4 CM/0x63100019
Mode Config data received

44 11:56:10.275 06/05/02 Sev=Info/5 IKE/0x63000055
Received a key request from Driver for IP address 172.18.124.158, GW IP =
172.18.124.158

45 11:56:10.275 06/05/02 Sev=Info/4 IKE/0x63000013
SENDING >>> ISAKMP OAK QM *(HASH, SA, NON, ID, ID) to 172.18.124.158

46 11:56:10.575 06/05/02 Sev=Info/4 IPSEC/0x63700014
Deleted all keys

47 11:56:10.605 06/05/02 Sev=Info/5 IKE/0x6300002F
Received ISAKMP packet: peer = 172.18.124.158

48 11:56:10.605 06/05/02 Sev=Info/4 IKE/0x63000014
RECEIVING <<< ISAKMP OAK QM *(HASH, SA, NON, ID, ID,
NOTIFY:STATUS_RESP_LIFETIME) from 172.18.124.158

49 11:56:10.605 06/05/02 Sev=Info/5 IKE/0x63000044
RESPONDER-LIFETIME notify has value of 3600 seconds

50 11:56:10.605 06/05/02 Sev=Info/5 IKE/0x63000045
RESPONDER-LIFETIME notify has value of 4608000 kb

51 11:56:10.605 06/05/02 Sev=Info/4 IKE/0x63000013
SENDING >>> ISAKMP OAK QM *(HASH) to 172.18.124.158

52 11:56:10.605 06/05/02 Sev=Info/5 IKE/0x63000058
Loading IPsec SA (Message ID = 0x51A04966 OUTBOUND SPI = 0x61C53A64 INBOUND
SPI = 0x8F9BB05F)

53 11:56:10.605 06/05/02 Sev=Info/5 IKE/0x63000025
Loaded OUTBOUND ESP SPI: 0x61C53A64
```

```
54 11:56:10.605 06/05/02 Sev=Info/5 IKE/0x63000026
Loaded INBOUND ESP SPI: 0x8F9BB05F

55 11:56:10.605 06/05/02 Sev=Info/4 CM/0x6310001A
One secure connection established

56 11:56:10.625 06/05/02 Sev=Info/6 DIALER/0x63300003
Connection established.

57 11:56:10.735 06/05/02 Sev=Info/6 DIALER/0x63300008
MAPI32 Information - Outlook not default mail client

58 11:56:11.677 06/05/02 Sev=Info/4 IPSEC/0x63700010
Created a new key structure

59 11:56:11.677 06/05/02 Sev=Info/4 IPSEC/0x6370000F
Added key with SPI=0x643ac561 into key list

60 11:56:11.677 06/05/02 Sev=Info/4 IPSEC/0x63700010
Created a new key structure

61 11:56:11.677 06/05/02 Sev=Info/4 IPSEC/0x6370000F
Added key with SPI=0x5fb09b8f into key list
```

関連情報

- Terminal Access Controller Access Control System(TACACS+)のサポート
- Cisco Secure Access Control Server for Unixのサポート
- Cisco Secure ACS for Windows のサポート
- Cisco VPN Clientのサポート
- IPSec ネゴシエーション/IKE プロトコルのサポート
- テクニカル サポートとドキュメント – Cisco Systems