

# 拡張認証を使った、IPSec - PIX からの Cisco VPN クライアント ワイルドカード、事前共有、モードの設定

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## 概要

この設定例は、ワイルドカード、モード設定、`sysopt connection permit-ipsec` コマンド、および拡張認証 ( Xauth ) を使用して、VPN クライアントを PIX ファイアウォールに接続する方法を示しています。

PIX 6.3 以降の TACACS+ と RADIUS の設定を確認するには、[PIX 6.3 および PIX/ASA 7.x 用の TACACS+ および RADIUS の設定例](#)を参照してください。

VPN クライアントは、Cisco VPN Client リリース 3.6.1 以降および PIX Firewall 6.3 での暗号化アルゴリズムとして Advanced Encryption Standard ( AES ) をサポートしています。VPN クライアントは、128 ビットと 256 ビットのキー サイズのみをサポートしています。AES の設定方法の詳細については、「[AES を使用して PIX に Cisco VPN Client を設定する方法](#)」を参照してください。

Microsoft Windows 2003 Internet Authentication Service ( IAS ) RADIUS サーバを使用して Cisco VPN Client ( 4.x for Windows ) と PIX 500 シリーズ セキュリティ アプライアンス 7.x の間のリモート アクセス VPN 接続を設定する方法については、『[Windows 2003 IAS RADIUS サーバの Active Directory 認証を使用した PIX/ASA 7.x と Cisco VPN Client 4.x 間のリモートアクセス VPN](#)』

[の設定例](#)』を参照してください。

ユーザ認証とアカウントिंगに RADIUS を使用して Cisco VPN 3000 コンセントレータと Cisco VPN Client 4.x for Windows の間に IPsec トンネルを確立する方法については、『[ユーザ認証とアカウントングに RADIUS を使用した VPN 3000 コンセントレータと VPN Client 4.x for Windows 間の IPsec 設定例](#)』を参照してください。

ユーザ認証に RADIUS を使用してルータと Cisco VPN Client 4.x の間の接続を設定する方法については、『[RADIUS を使用した Cisco IOS ルータと Cisco VPN Client 4.x for Windows 間の IPsec の設定](#)』を参照してください。

## 前提条件

### 要件

このドキュメントに関する固有の要件はありません。

### 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くものです。

- Cisco VPN Client 4.x この製品には Cisco Secure VPN Client 1.x にはない、高度な VPN 機能が搭載されています。
- PIX Firewall 515E バージョン 6.3(3)

注: 暗号化テクノロジーは輸出規制の対象になります。暗号化テクノロジーの輸出に関連する法規を理解することは、お客様の責任となります。詳細については、[輸出管理局 Web サイト](#)を参照してください。[輸出規制に関する詳細については、電子メールで export@cisco.com](#) までお問い合わせください。

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たものです。このドキュメントで使用するすべてのデバイスは、クリアな (デフォルト) 設定で作業を開始しています。ネットワークが稼働中の場合は、コマンドが及ぼす潜在的な影響を十分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。

## 背景説明

`sysopt connection permit-ipsec` コマンドは、IPsec トンネルから到達するパケットが、IPsec 接続の関連する `access-list`、`conduit`、または `access-group` コマンドの検査をバイパスすることを暗黙的に許可します。Xauth は、IPsec ユーザを外部の TACACS+ または RADIUS サーバに対して認証します。ワイルドカード事前共有キーに加えて、ユーザはユーザ名とパスワードを提供する必要があります。

VPN クライアントのユーザは ISP から IP アドレスを受け取ります。このアドレスは、PIX の IP アドレスプールからの IP アドレスで置き換えられます。ユーザはファイアウォールの内部にあるすべて (ネットワークを含む) にアクセスできます。VPN クライアントを実行しないユーザ

は、単に静的な割り当てによって提供された外部アドレスを使って Web サーバに接続できます。

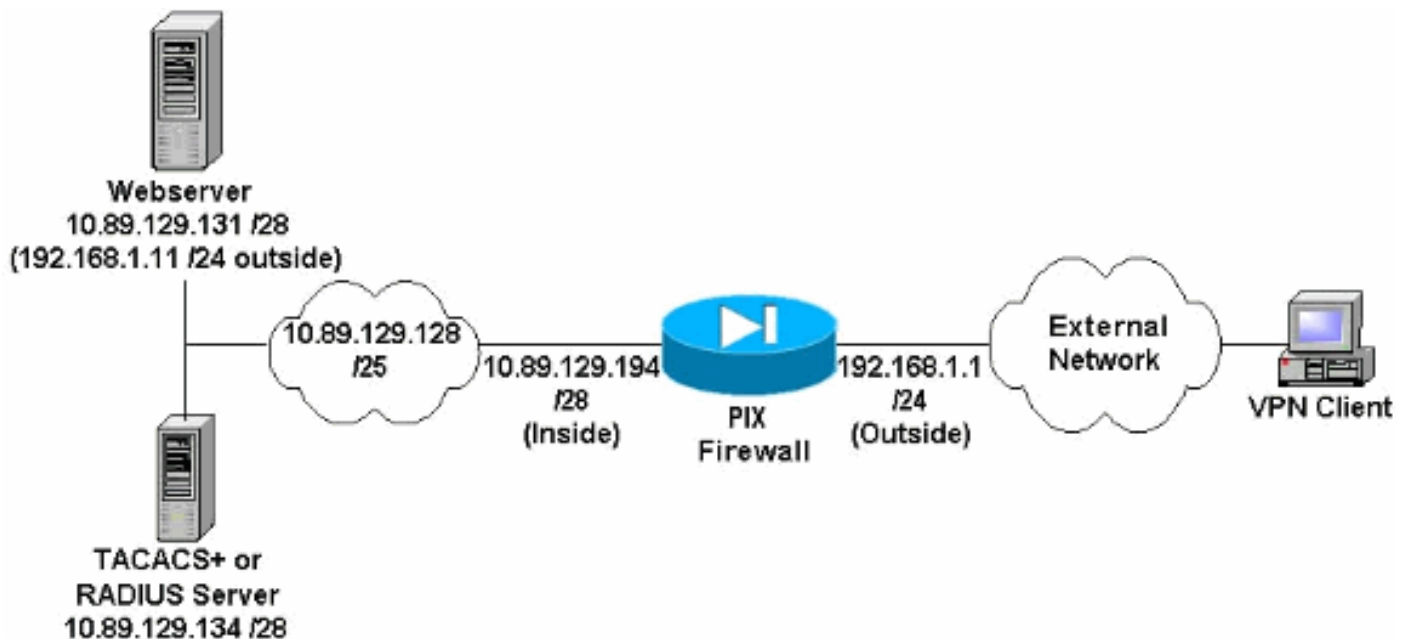
## 設定

この項では、このドキュメントで説明する機能の設定に必要な情報を提供します。

注: このドキュメントで使用されてい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、次のネットワーク構成を使用しています。



## ネットワーク構成図に関する注記

- グローバル IP アドレス 192.168.1.1 を使用して Web サーバにアクセスするインターネットホストは、VPN 接続が確立されない場合でも認証されます。このトラフィックは暗号化されません。
- いったん IPsec トンネルが確立されると、VPN クライアントは内部ネットワーク ( 10.89.129.128 /25 ) のすべてのホストにアクセスできます。VPN クライアントから PIX ファイアウォールに向かうすべてのトラフィックが暗号化されます。IPsec トンネルがない場合、単にグローバル IP アドレスを使って Web サーバにアクセスできますが、引き続き認証が必要です。
- VPN Client はインターネットから到達するので、IP アドレスは事前にはわかりません。

## 設定

このドキュメントでは、次の設定を使用します。

- [PIX 設定 6.3\(3\)](#)
- [VPN Client 4.0.5 の設定](#)

- [VPN Client 3.5 の設定](#)
- [VPN Client 1.1 の設定](#)

### PIX 設定 6.3(3)

```

pixfirewall#show run
: Saved
:
PIX Version 6.3(3)
interface ethernet0 100full
interface ethernet1 100full
nameif ethernet0 outside security0
nameif ethernet1 inside security100
enable password 8Ry2YjIyt7RRXU24 encrypted
passwd 2KFQnbNIdI.2KYOU encrypted
hostname pixfirewall
fixup protocol dns maximum-length 512
fixup protocol ftp 21
fixup protocol h323 h225 1720
fixup protocol h323 ras 1718-1719
fixup protocol http 80
fixup protocol rsh 514
fixup protocol rtsp 554
fixup protocol sip 5060
fixup protocol sip udp 5060
fixup protocol skinny 2000
fixup protocol smtp 25
fixup protocol sqlnet 1521
fixup protocol tftp 69
names
!--- Do not use Network Address Translation (NAT) for
inside-to-pool !--- traffic. This should not go through
NAT. access-list 101 permit ip 10.89.129.128
255.255.255.240 10.89.129.192 255.255.255.240 !---
Permits Internet Control Message Protocol (ICMP) !---
Transmission Control Protocol (TCP) and User Datagram
Protocol (UDP) !--- traffic from any host on the
Internet (non-VPN) to the web server. access-list 120
permit icmp any host 10.89.129.131 access-list 120
permit tcp any host 10.89.129.131 access-list 120 permit
udp any host 10.89.129.131 pager lines 24 mtu outside
1500 mtu inside 1500 ip address outside 192.168.1.1
255.255.255.0 ip address inside 10.89.129.194
255.255.255.240 ip audit info action alarm ip audit
attack action alarm !--- Specifies the inside IP address
range to be assigned !--- to the VPN Clients. ip local
pool VPNpool 10.89.129.200-10.89.129.204 no failover
failover timeout 0:00:00 failover poll 15 no failover ip
address outside no failover ip address inside pdm
history enable arp timeout 14400 !--- Defines a pool of
global addresses to be used by NAT. global (outside) 1
192.168.1.6-192.168.1.10 nat (inside) 0 access-list 101
nat (inside) 1 0.0.0.0 0.0.0.0 0 0 !--- Specifies which
outside IP address to apply to the web server. static
(inside,outside) 192.168.1.11 10.89.129.131 netmask
255.255.255.255 0 0 !--- Apply ACL 120 to the outside
interface in the inbound direction. access-group 120 in
interface outside !--- Defines a default route for the
PIX. route outside 0.0.0.0 0.0.0.0 192.168.1.3 1 !---
Defines a route for traffic within the PIX's !--- subnet
to reach other inside hosts. route inside 10.89.129.128
255.255.255.128 10.89.129.193 1 timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00 rpc

```

```

0:10:00 h225 1:00:00 timeout h323 0:05:00 mgcp 0:05:00
sip 0:30:00 sip_media 0:02:00 timeout uauth 0:05:00
absolute aaa-server TACACS+ protocol tacacs+ aaa-server
RADIUS protocol radius aaa-server LOCAL protocol local
!--- Authentication, authorization, and accounting (AAA)
statements !--- for authentication. !--- Use either of
these statements to define the protocol of the group
AuthInbound. !--- You cannot use both.
aaa-server AuthInbound protocol tacacs+

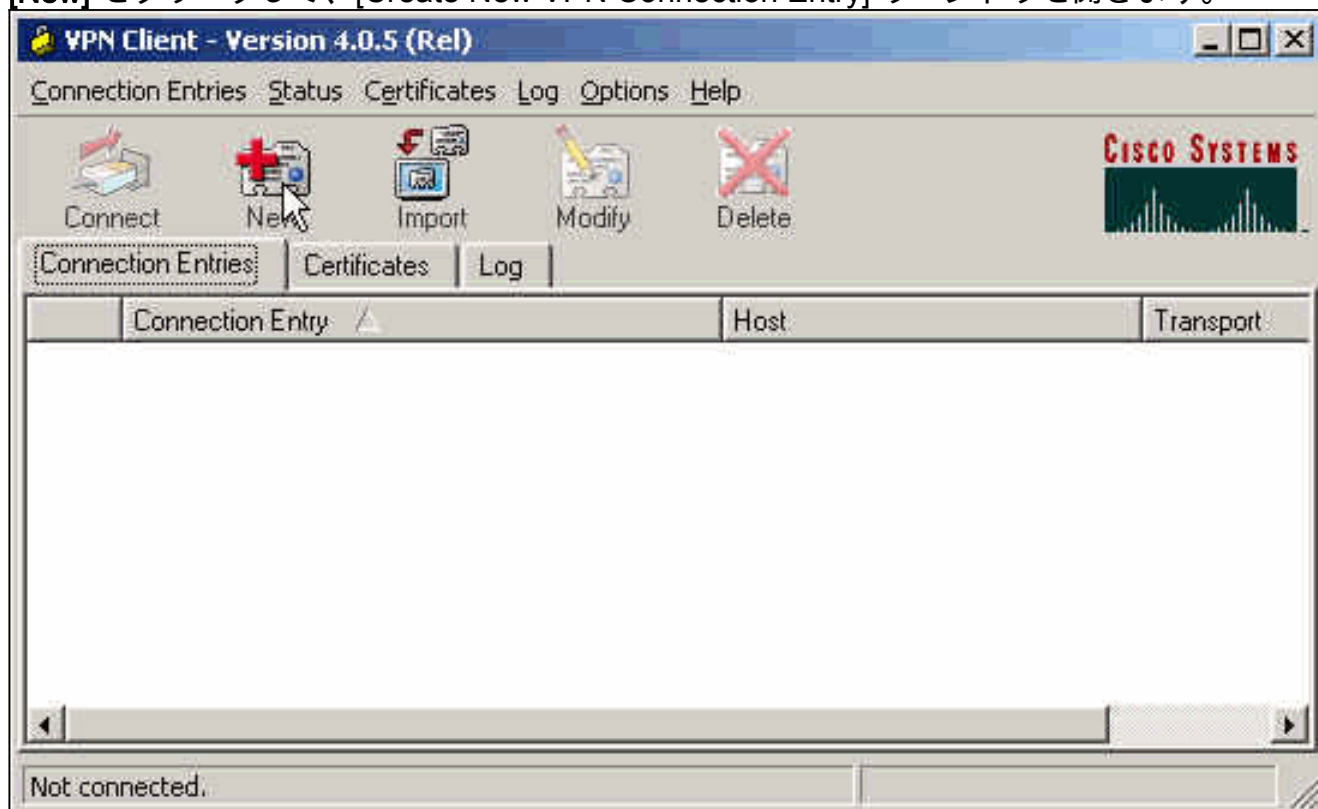
!--- OR aaa-server AuthInbound protocol radius !---
After you define the protocol of the group AuthInbound,
define !--- a server of the same type. !--- In this case
we specify the TACACS+ server and key of "secretkey".
aaa-server AuthInbound (inside) host 10.89.129.134
secretkey timeout 10 !--- Authenticate HTTP, FTP, and
Telnet traffic to the web server. aaa authentication
include http outside 10.89.129.131 255.255.255.255
0.0.0.0 0.0.0.0 AuthInbound aaa authentication include
ftp outside 10.89.129.131 255.255.255.255 0.0.0.0
0.0.0.0 AuthInbound aaa authentication include telnet
outside 10.89.129.131 255.255.255.255 0.0.0.0 0.0.0.0
AuthInbound no snmp-server location no snmp-server
contact snmp-server community public no snmp-server
enable traps floodguard enable !--- Trust IPsec traffic
and avoid going through ACLs/NAT. sysopt connection
permit-ipsec !--- IPsec and dynamic map configuration.
crypto ipsec transform-set myset esp-des esp-md5-hmac
crypto dynamic-map dynmap 10 set transform-set myset
crypto map mymap 10 ipsec-isakmp dynamic dynmap !---
Assign IP address for VPN 1.1 Clients. crypto map mymap
client configuration address initiate crypto map mymap
client configuration address respond !--- Use the AAA
server for authentication (AuthInbound). crypto map
mymap client authentication AuthInbound !--- Apply the
IPsec/AAA/ISAKMP configuration to the outside interface.
crypto map mymap interface outside isakmp enable outside
!--- Pre-shared key for VPN 1.1 Clients. isakmp key
***** address 0.0.0.0 netmask 0.0.0.0 isakmp identity
address !--- Assign address from "VPNpool" pool for VPN
1.1 Clients. isakmp client configuration address-pool
local VPNpool outside !--- ISAKMP configuration for VPN
Client 3.x/4.x. isakmp policy 10 authentication pre-
share isakmp policy 10 encryption des isakmp policy 10
hash md5 isakmp policy 10 group 2 isakmp policy 10
lifetime 86400 !--- ISAKMP configuration for VPN Client
1.x. isakmp policy 20 authentication pre-share isakmp
policy 20 encryption des isakmp policy 20 hash md5
isakmp policy 20 group 1 isakmp policy 20 lifetime 86400
!--- Assign addresses from "VPNpool" for VPN Client
3.x/4.x. vpngroup vpn3000 address-pool VPNpool vpngroup
vpn3000 idle-time 1800 !--- Group password for VPN
Client 3.x/4.x (not shown in configuration). vpngroup
vpn3000 password ***** telnet timeout 5 ssh timeout 5
console timeout 0 terminal width 80
Cryptochecksum:ba54c063d94989cbd79076955dbfeefc : end
pixfirewall#

```

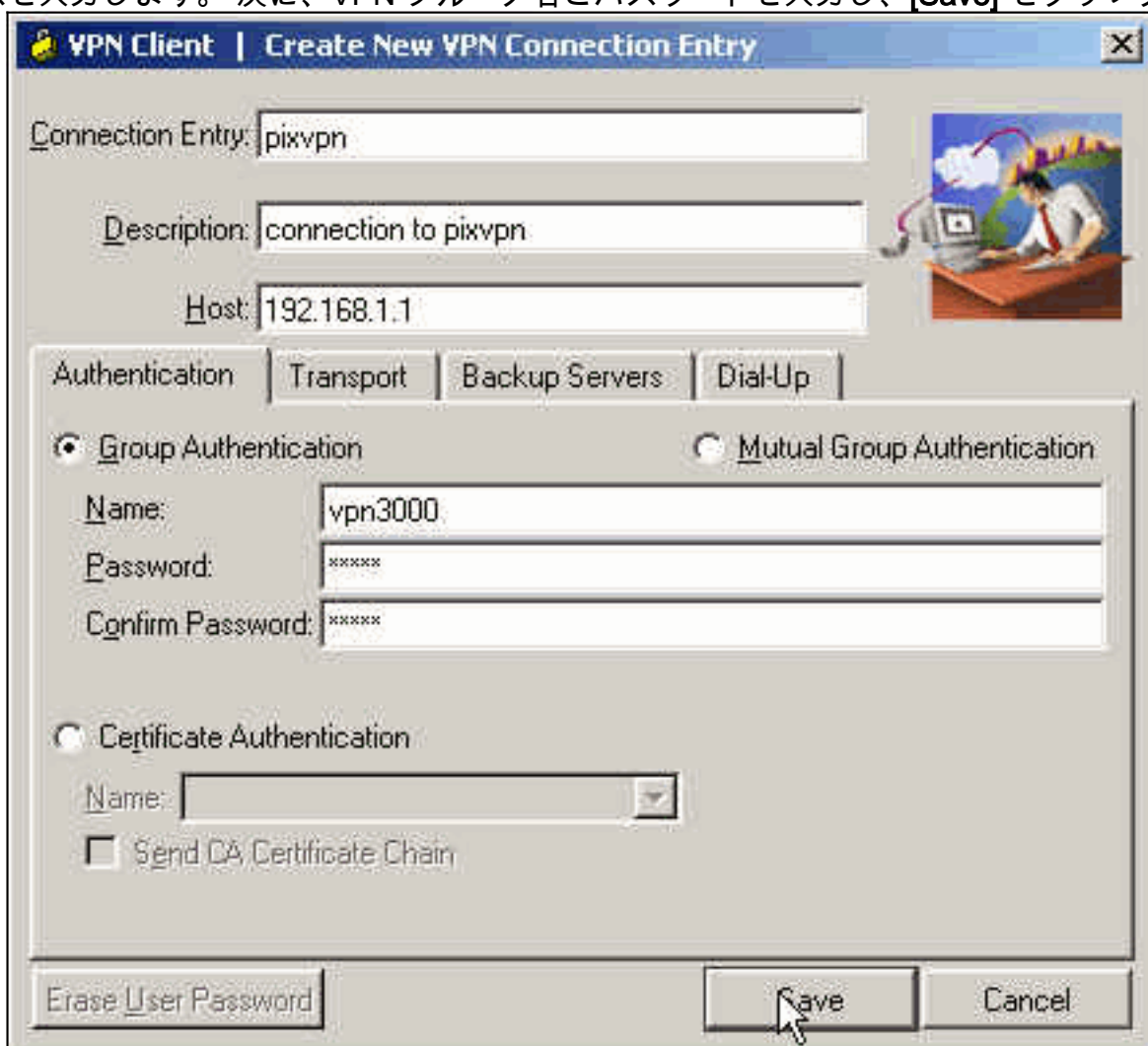
## VPN Client 4.0.5 の設定

VPN Client 4.0.5 を設定するには、次の手順を実行します。

1. [Start] > [Programs] > [Cisco Systems VPN Client] > [VPN Client] の順に選択します。
2. [New] をクリックして、[Create New VPN Connection Entry] ウィンドウを開きます。

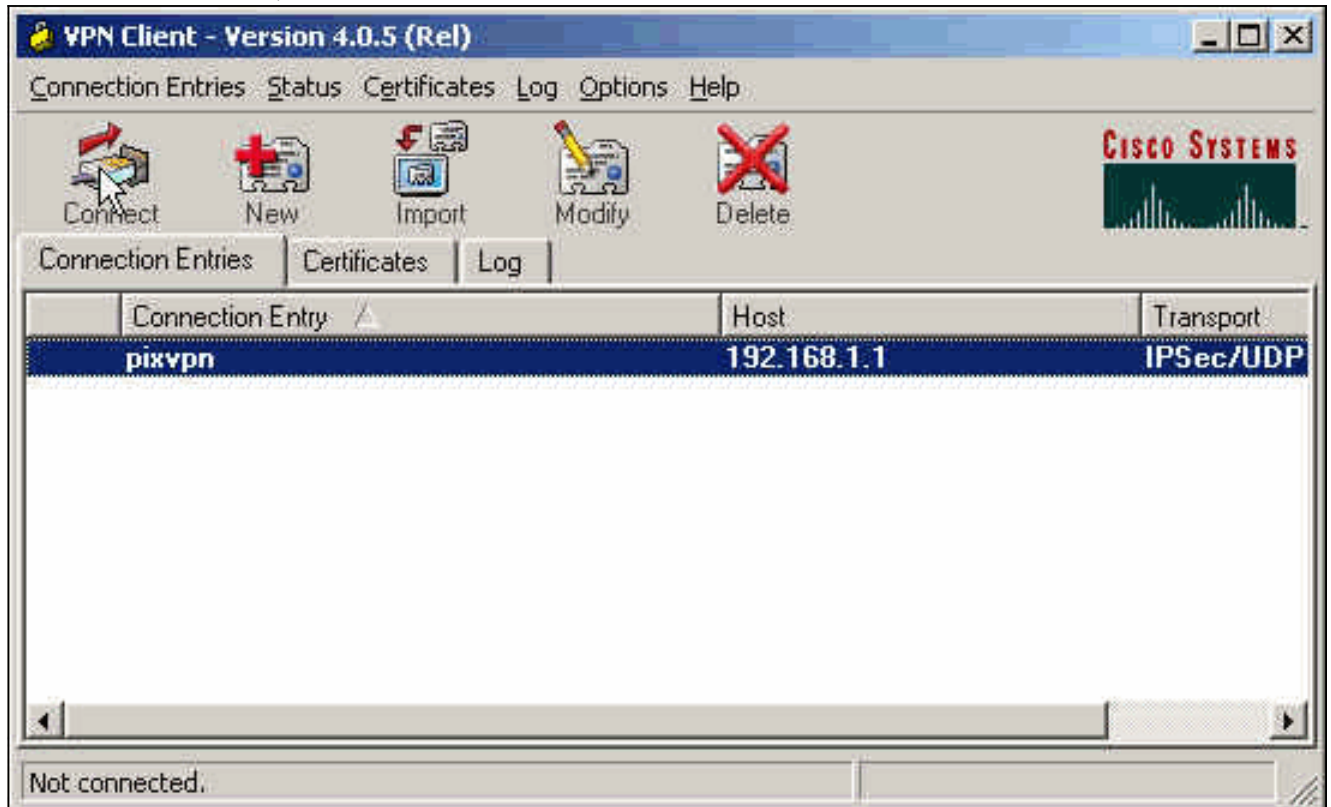


3. 接続エントリの名前と説明を入力します。Host ボックスに PIX Firewall の Outside の IP アドレスを入力します。次に、VPN グループ名とパスワードを入力し、[Save] をクリックし

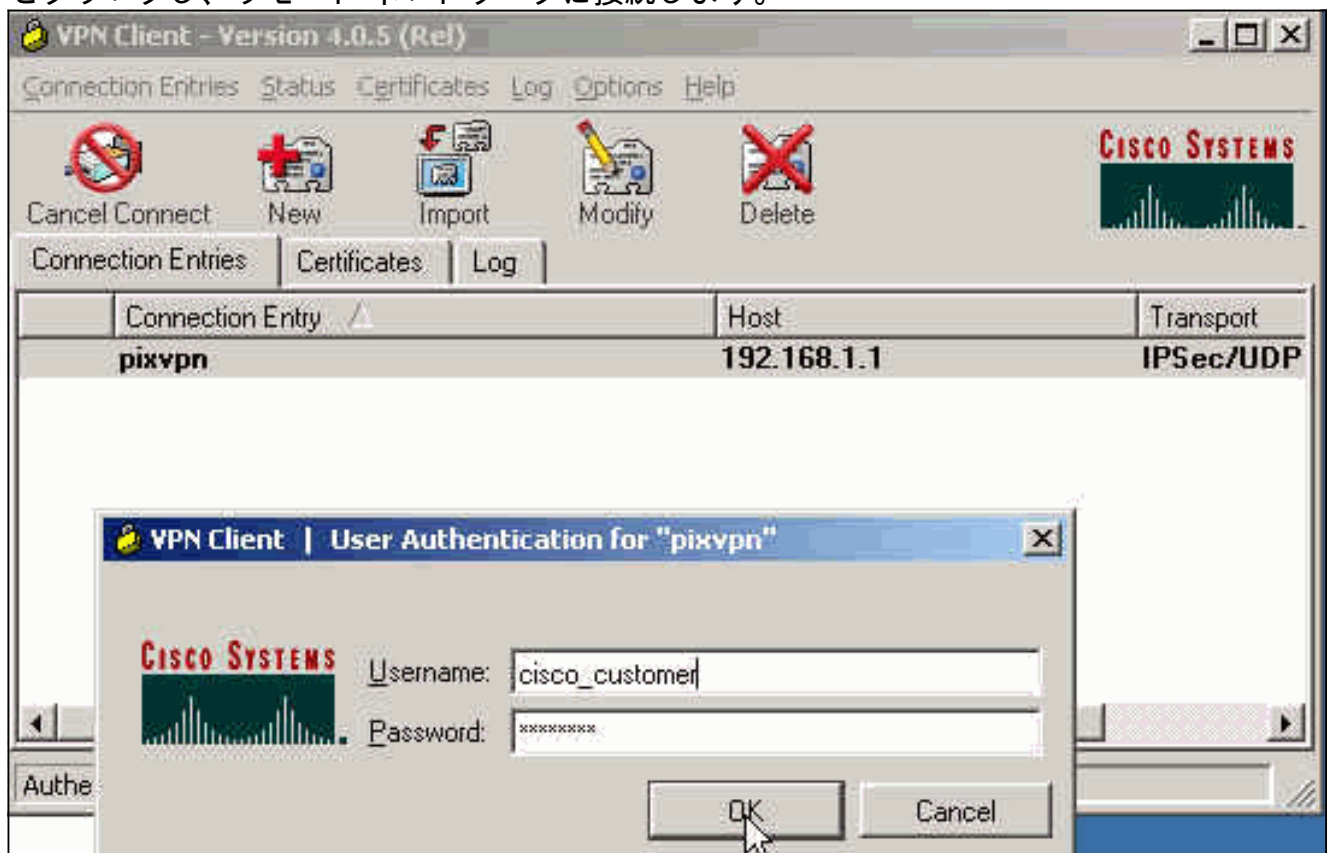


ます。

4. VPN クライアントのメイン ウィンドウから、使用する接続をクリックして [Connect] ボタンをクリックします。



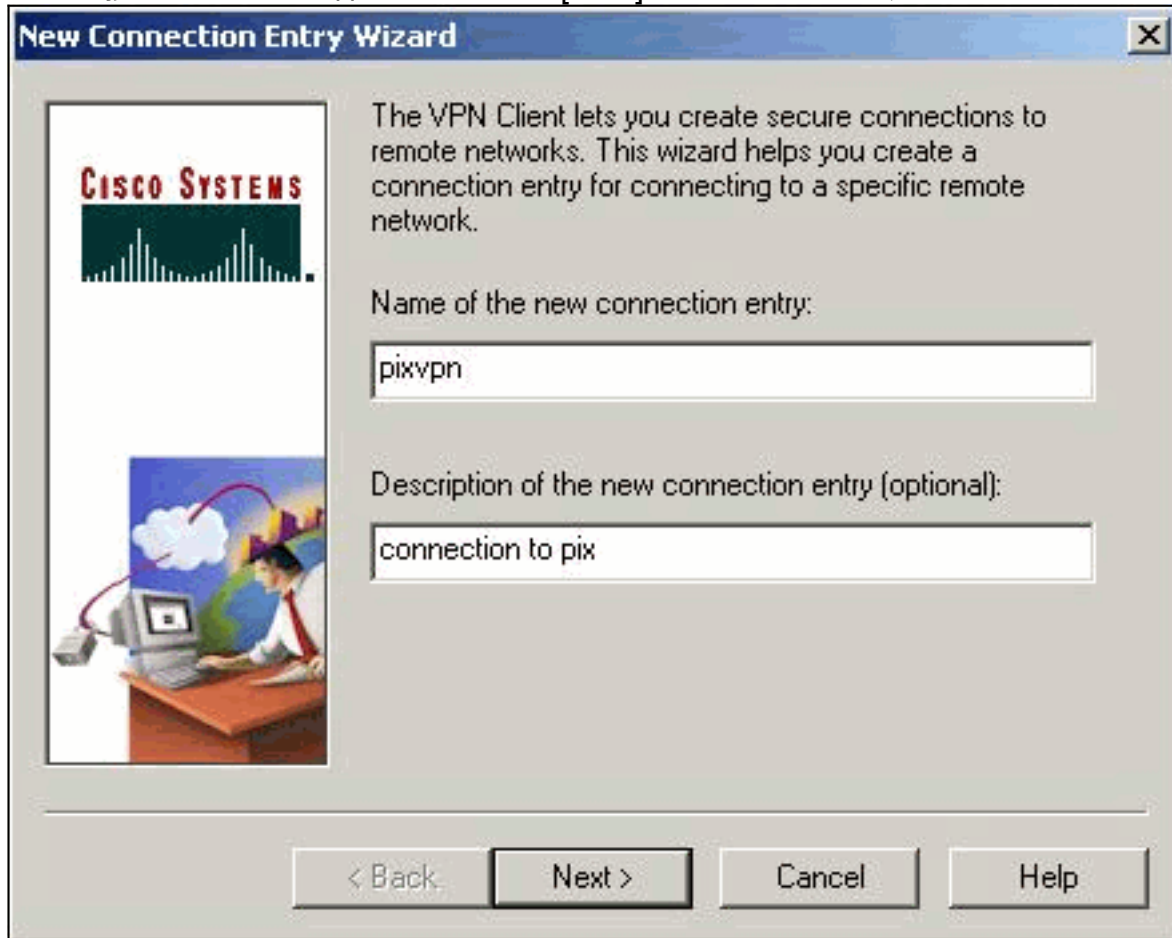
5. ダイアログボックスが表示されたら、Xauth のユーザ名とパスワード情報を入力して [OK] をクリックし、リモート ネットワークに接続します。



## [VPN Client 3.5 の設定](#)

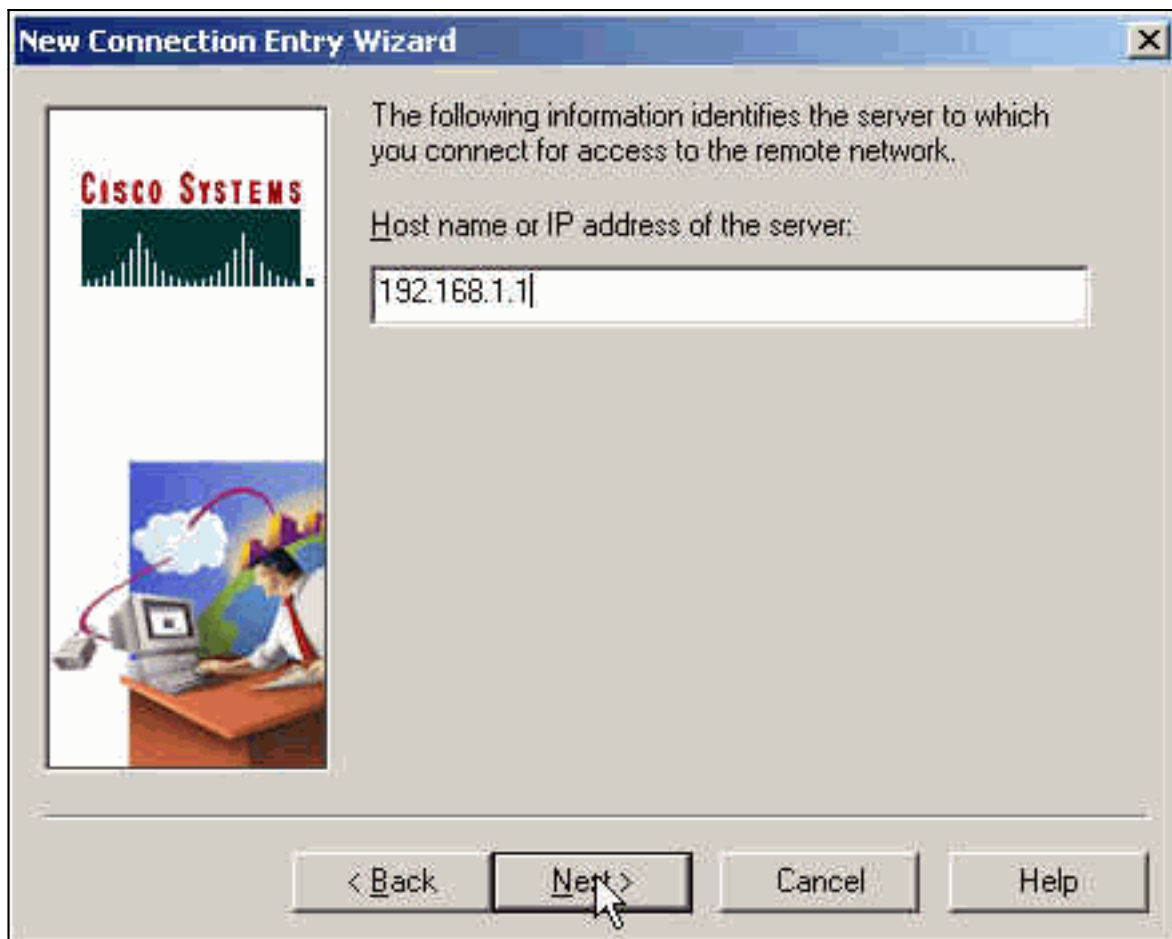
VPN Client 3.5 を設定するには次の手順を実行します。

1. [Start] > [Programs] > [Cisco Systems VPN Client] > [VPN Dialer] の順に選択します。
2. New をクリックして New Connection Entry Wizard を起動します。
3. 新しい接続エントリの名前を入力して [Next] をクリックします。



4. リモート サーバへの接続に使用されるサーバのホスト名または IP アドレスを入力し、[Next] をクリックします。

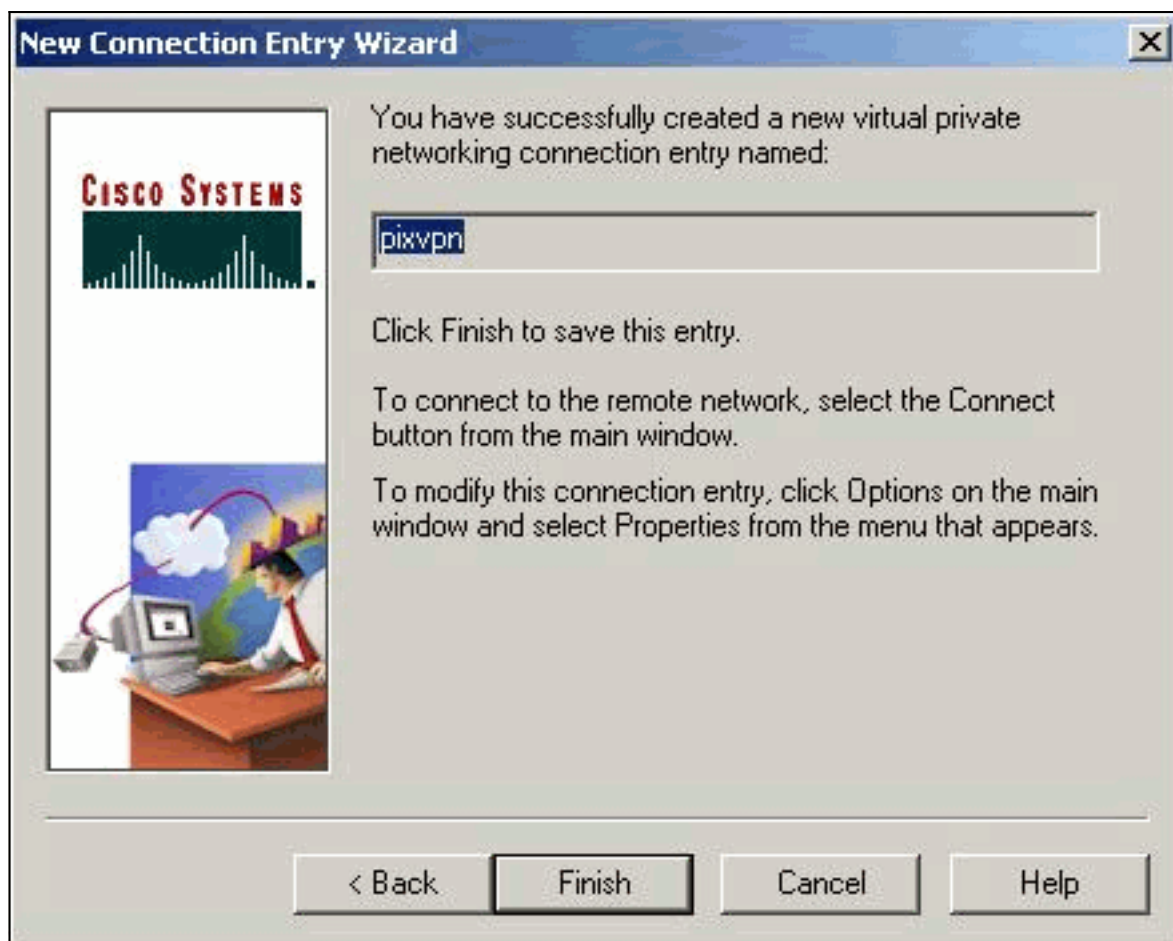




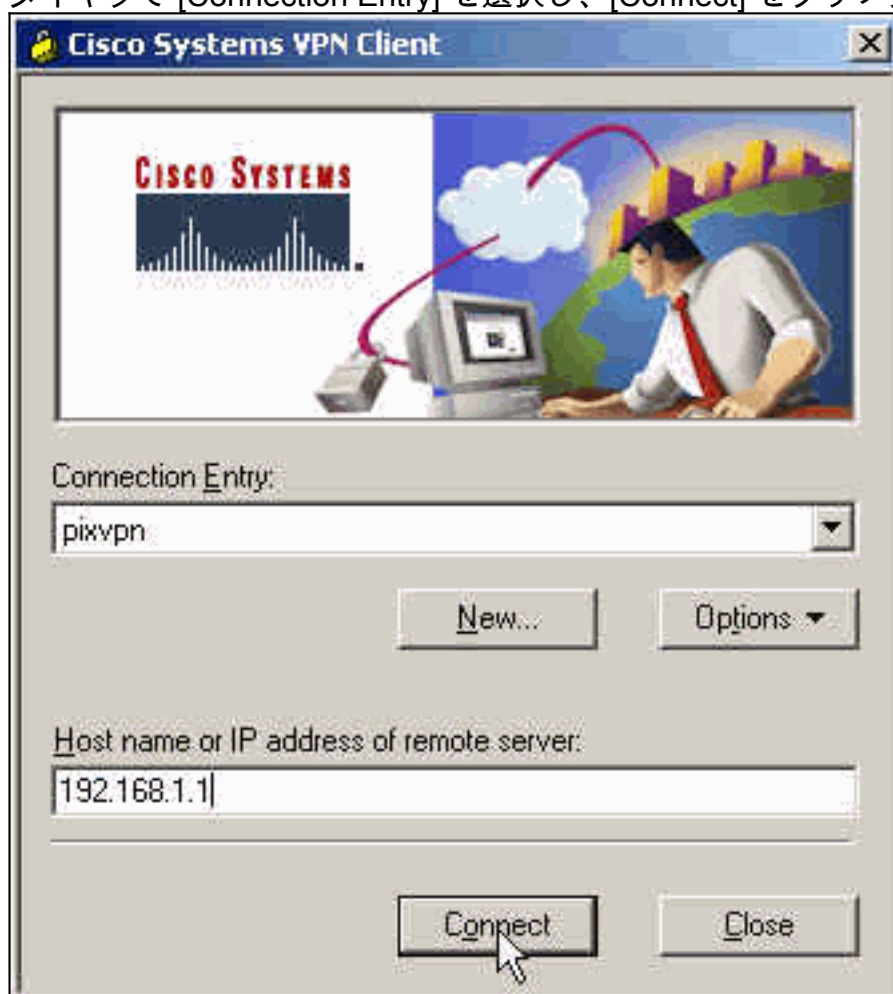
5. [Group Access Information] を選択し、リモート サーバへのアクセスの認証に使用される名前とパスワードを入力します。[Next] をクリックします。



6. Finish をクリックして新しいエントリを保存します。



7. ダイアログで [Connection Entry] を選択し、[Connect] をクリックします。



8. ダイアログボックスが表示されたら、Xauth のユーザ名とパスワード情報を入力して [OK]

をクリックし、リモート ネットワークに接続します。



## VPN Client 1.1 の設定

```
pixfirewall#show run
: Saved
:
PIX Version 6.3(3)
interface ethernet0 100full
interface ethernet1 100full
nameif ethernet0 outside security0
nameif ethernet1 inside security100
enable password 8Ry2YjIyt7RRXU24 encrypted
passwd 2KFQnbNIdI.2KYOU encrypted
hostname pixfirewall
fixup protocol dns maximum-length 512
fixup protocol ftp 21
fixup protocol h323 h225 1720
fixup protocol h323 ras 1718-1719
fixup protocol http 80
fixup protocol rsh 514
fixup protocol rtsp 554
fixup protocol sip 5060
fixup protocol sip udp 5060
fixup protocol skinny 2000
fixup protocol smtp 25
fixup protocol sqlnet 1521
fixup protocol tftp 69
names
!--- Do not use Network Address Translation (NAT) for
inside-to-pool !--- traffic. This should not go through
NAT. access-list 101 permit ip 10.89.129.128
```

```

255.255.255.240 10.89.129.192 255.255.255.240 !---
Permits Internet Control Message Protocol (ICMP) !---
Transmission Control Protocol (TCP) and User Datagram
Protocol (UDP) !--- traffic from any host on the
Internet (non-VPN) to the web server. access-list 120
permit icmp any host 10.89.129.131 access-list 120
permit tcp any host 10.89.129.131 access-list 120 permit
udp any host 10.89.129.131 pager lines 24 mtu outside
1500 mtu inside 1500 ip address outside 192.168.1.1
255.255.255.0 ip address inside 10.89.129.194
255.255.255.240 ip audit info action alarm ip audit
attack action alarm !--- Specifies the inside IP address
range to be assigned !--- to the VPN Clients. ip local
pool VPNpool 10.89.129.200-10.89.129.204 no failover
failover timeout 0:00:00 failover poll 15 no failover ip
address outside no failover ip address inside pdm
history enable arp timeout 14400 !--- Defines a pool of
global addresses to be used by NAT. global (outside) 1
192.168.1.6-192.168.1.10 nat (inside) 0 access-list 101
nat (inside) 1 0.0.0.0 0.0.0.0 0 0 !--- Specifies which
outside IP address to apply to the web server. static
(inside,outside) 192.168.1.11 10.89.129.131 netmask
255.255.255.255 0 0 !--- Apply ACL 120 to the outside
interface in the inbound direction. access-group 120 in
interface outside !--- Defines a default route for the
PIX. route outside 0.0.0.0 0.0.0.0 192.168.1.3 1 !---
Defines a route for traffic within the PIX's !--- subnet
to reach other inside hosts. route inside 10.89.129.128
255.255.255.128 10.89.129.193 1 timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00 rpc
0:10:00 h225 1:00:00 timeout h323 0:05:00 mgcp 0:05:00
sip 0:30:00 sip_media 0:02:00 timeout uauth 0:05:00
absolute aaa-server TACACS+ protocol tacacs+ aaa-server
RADIUS protocol radius aaa-server LOCAL protocol local
!--- Authentication, authorization, and accounting (AAA)
statements !--- for authentication. !--- Use either of
these statements to define the protocol of the group
AuthInbound. !--- You cannot use both.
aaa-server AuthInbound protocol tacacs+

!--- OR aaa-server AuthInbound protocol radius !---
After you define the protocol of the group AuthInbound,
define !--- a server of the same type. !--- In this case
we specify the TACACS+ server and key of "secretkey".
aaa-server AuthInbound (inside) host 10.89.129.134
secretkey timeout 10 !--- Authenticate HTTP, FTP, and
Telnet traffic to the web server. aaa authentication
include http outside 10.89.129.131 255.255.255.255
0.0.0.0 0.0.0.0 AuthInbound aaa authentication include
ftp outside 10.89.129.131 255.255.255.255 0.0.0.0
0.0.0.0 AuthInbound aaa authentication include telnet
outside 10.89.129.131 255.255.255.255 0.0.0.0 0.0.0.0
AuthInbound no snmp-server location no snmp-server
contact snmp-server community public no snmp-server
enable traps floodguard enable !--- Trust IPsec traffic
and avoid going through ACLs/NAT. sysopt connection
permit-ipsec !--- IPsec and dynamic map configuration.
crypto ipsec transform-set myset esp-des esp-md5-hmac
crypto dynamic-map dynmap 10 set transform-set myset
crypto map mymap 10 ipsec-isakmp dynamic dynmap !---
Assign IP address for VPN 1.1 Clients. crypto map mymap
client configuration address initiate crypto map mymap
client configuration address respond !--- Use the AAA
server for authentication (AuthInbound). crypto map

```

```
mymap client authentication AuthInbound !--- Apply the
IPsec/AAA/ISAKMP configuration to the outside interface.
crypto map mymap interface outside isakmp enable outside
!--- Pre-shared key for VPN 1.1 Clients. isakmp key
***** address 0.0.0.0 netmask 0.0.0.0 isakmp identity
address !--- Assign address from "VPNpool" pool for VPN
1.1 Clients. isakmp client configuration address-pool
local VPNpool outside !--- ISAKMP configuration for VPN
Client 3.x/4.x. isakmp policy 10 authentication pre-
share isakmp policy 10 encryption des isakmp policy 10
hash md5 isakmp policy 10 group 2 isakmp policy 10
lifetime 86400 !--- ISAKMP configuration for VPN Client
1.x. isakmp policy 20 authentication pre-share isakmp
policy 20 encryption des isakmp policy 20 hash md5
isakmp policy 20 group 1 isakmp policy 20 lifetime 86400
!--- Assign addresses from "VPNpool" for VPN Client
3.x/4.x. vpngroup vpn3000 address-pool VPNpool vpngroup
vpn3000 idle-time 1800 !--- Group password for VPN
Client 3.x/4.x (not shown in configuration). vpngroup
vpn3000 password ***** telnet timeout 5 ssh timeout 5
console timeout 0 terminal width 80
Cryptochecksum:ba54c063d94989cbd79076955dbfeefc : end
pixfirewall#
```

## [アカウントिंगの追加](#)

アカウントングを追加するためのコマンドの構文は次のとおりです。

```
aaa accounting include acctg_service inbound|outbound l_ip l_mask [f_ip f_mask] server_tag
```

たとえば PIX の設定では、このコマンドが追加されます。

```
aaa accounting include any inbound
0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 AuthInbound
```

注: Xauth アカウントングが動作するには、**sysopt ipsec pl-compatible** コマンドではなく、**sysopt connection permit-ipsec** コマンドが必要です。Xauth アカウントングは、**sysopt ipsec pl-compatible** コマンドだけでは動作しません。Xauth アカウントングは TCP 接続に有効です。ICMP または UDP には有効ではありません。

TACACS+ アカウントング レコードの出力例を次に示します。

```
aaa accounting include any inbound
0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 AuthInbound
```

## [確認](#)

ここでは、設定が正常に動作していることを確認します。

[Output Interpreter Tool](#) ( OIT ) ( [登録ユーザ専用](#) ) では、特定の **show** コマンドがサポートされています。OIT を使用して、**show** コマンド出力の解析を表示できます。

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。

クライアント側のデバッグを表示するには Cisco Secure Log Viewer を有効にしてください。

- **debug crypto ipsec** : これを使用してフェーズ 2 の IPsec ネゴシエーションを表示します。
- **debug crypto isakmp** : これを使用してフェーズ 1 の ISAKMP ネゴシエーションを表示します。

## トラブルシューティング

ここでは、設定のトラブルシューティングに役立つ情報について説明します。デバッグ出力例も紹介しています。

### トラブルシューティングのためのコマンド

[Output Interpreter Tool](#) ( OIT ) ( [登録ユーザ専用](#) ) では、特定の **show** コマンドがサポートされています。OIT を使用して、**show** コマンド出力の解析を表示できます。

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 engine** : これを使用して暗号化エンジン プロセスのデバッグを行います。

### PIX のデバッグ例

```
pixfirewall#show debug
debug crypto ipsec 1
debug crypto isakmp 1
debug crypto engine
debug fover status
    tx      Off
    rx      Off
    open    Off
    cable   Off
    txdmp   Off
    rxdmp   Off
    ifc     Off
    rxip    Off
    txip    Off
    get     Off
    put     Off
    verify  Off
    switch  Off
    fail    Off
    fmsg    Off
```

### VPN Client 4.x のデバッグ

```
pixfirewall#
crypto_isakmp_process_block: src 192.168.1.2, dest 192.168.1.1
VPN Peer: ISAKMP: Added new peer: ip:192.168.1.2
Total VPN Peers:1
VPN Peer: ISAKMP: Peer ip:192.168.1.2 Ref cnt incremented
to:1 Total VPN Peers:1
OAK_AG exchange
ISAKMP (0): processing SA payload. message ID = 0

ISAKMP (0): Checking ISAKMP transform 1 against priority 10 policy
ISAKMP:      encryption 3DES-CBC
ISAKMP:      hash SHA
ISAKMP:      default group 2
ISAKMP:      extended auth pre-share
```

ISAKMP: life type in seconds  
ISAKMP: life duration (VPI) of 0x0 0x20 0xc4 0x9b  
ISAKMP (0): atts are not acceptable. Next payload is 3  
ISAKMP (0): Checking ISAKMP transform 2 against priority 10 policy  
ISAKMP: encryption 3DES-CBC  
ISAKMP: hash MD5  
ISAKMP: default group 2  
ISAKMP: extended auth pre-share  
ISAKMP: life type in seconds  
ISAKMP: life duration (VPI) of 0x0 0x20 0xc4 0x9b  
ISAKMP (0): atts are not acceptable. Next payload is 3  
ISAKMP (0): Checking ISAKMP transform 3 against priority 10 policy  
ISAKMP: encryption 3DES-CBC  
ISAKMP: hash SHA  
ISAKMP: default group 2  
ISAKMP: auth pre-shared  
ISAKMP: life type in seconds  
ISAKMP: life duration (VPI) of 0x0 0x20 0xc4 0x9b  
ISAKMP (0): atts are not acceptable. Next payload is 3  
ISAKMP (0): Checking ISAKMP transform 4 against priority 10 policy  
ISAKMP: encryption 3DES-CBC  
ISAKMP: hash MD5  
ISAKMP: default group 2  
ISAKMP: auth pre-share  
ISAKMP: life type in seconds  
ISAKMP: life duration (VPI) of 0x0 0x20 0xc4 0x9b  
ISAKMP (0): atts are not acceptable. Next payload is 3  
ISAKMP (0): Checking ISAKMP transform 5 against priority 10 policy  
ISAKMP: encryption DES-CBC  
ISAKMP: hash SHA  
ISAKMP: default group 2  
ISAKMP: extended auth pre-share  
ISAKMP: life type in seconds  
ISAKMP: life duration (VPI) of 0x0 0x20 0xc4 0x9b  
ISAKMP (0): atts are not acceptable. Next payload is 3  
ISAKMP (0): Checking ISAKMP transform 6 against priority 10 policy  
**ISAKMP: encryption DES-CBC**  
**ISAKMP: hash MD5**  
**ISAKMP: default group 2**  
**ISAKMP: extended auth pre-share**  
**ISAKMP: life type in seconds**  
**ISAKMP: life duration (VPI) of 0x0 0x20 0xc4 0x9b**  
**ISAKMP (0): atts are acceptable. Next payload is 3**  
*!--- Attributes offered by the VPN Client are accepted by the PIX.* ISAKMP (0): processing KE payload. message ID = 0 ISAKMP (0): processing NONCE payload. message ID = 0 ISAKMP (0): processing ID payload. message ID = 0 ISAKMP (0): processing vendor id payload ISAKMP (0): processing vendor id payload ISAKMP (0): remote peer supports dead peer detection ISAKMP (0): processing vendor id payload ISAKMP (0): speaking to a Unity client ISAKMP (0): ID payload next-payload: 10 type : 1 protocol : 17 port : 500 length : 8 ISAKMP (0) : Total payload length: 12 return status is IKMP\_NO\_ERROR crypto\_isakmp\_process\_block: src 192.168.1.2, dest 192.168.1.1 OAK\_AG exchange ISAKMP (0): processing HASH payload. message ID = 0 ISAKMP (0): processing NOTIFY payload 24578 protocol 1 spi 0, message ID = 0 ISAKMP (0): processing notify INITIAL\_CONTACT IPSEC(key\_engine): got a queue event... IPSEC(key\_engine\_delete\_sas): rec'd delete notify from ISAKMP IPSEC(key\_engine\_delete\_sas): delete all SAs shared with 192.168.1.2 ISAKMP (0): SA has been authenticated return status is IKMP\_NO\_ERROR ISAKMP/xauth: request attribute XAUTH\_TYPE ISAKMP/xauth: request attribute XAUTH\_USER\_NAME ISAKMP/xauth: request attribute XAUTH\_USER\_PASSWORD ISAKMP (0:0): initiating peer config to 192.168.1.2. ID = 1623347510 (0x60c25136) crypto\_isakmp\_process\_block: src 192.168.1.2, dest 192.168.1.1 ISAKMP\_TRANSACTION exchange ISAKMP (0:0): processing transaction payload from 192.168.1.2. message ID = 84 ISAKMP: Config payload CFG\_REPLY return status is IKMP\_ERR\_NO\_RETRANS ISAKMP (0:0): initiating peer config to 192.168.1.2. ID = 2620656926 (0x9c340dle) crypto\_isakmp\_process\_block: src 192.168.1.2, dest 192.168.1.1 ISAKMP\_TRANSACTION exchange ISAKMP (0:0): processing transaction payload from 192.168.1.2. message ID = 60 ISAKMP: Config payload CFG\_ACK return status is IKMP\_NO\_ERROR crypto\_isakmp\_process\_block: src 192.168.1.2,

dest 192.168.1.1 ISAKMP\_TRANSACTION exchange ISAKMP (0:0): processing transaction payload from 192.168.1.2. message ID = 0 ISAKMP: Config payload CFG\_REQUEST ISAKMP (0:0): checking request: ISAKMP: attribute IP4\_ADDRESS (1) ISAKMP: attribute IP4\_NETMASK (2) ISAKMP: attribute IP4\_DNS (3) ISAKMP: attribute IP4\_NBNS (4) ISAKMP: attribute ADDRESS\_EXPIRY (5) Unsupported Attr: 5 ISAKMP: attribute APPLICATION\_VERSION (7) Unsupported Attr: 7 ISAKMP: attribute UNKNOWN (28672) Unsupported Attr: 28672 ISAKMP: attribute UNKNOWN (28673) Unsupported Attr: 28673 ISAKMP: attribute UNKNOWN (28674) ISAKMP: attribute UNKNOWN (28676) ISAKMP: attribute UNKNOWN (28679) Unsupported Attr: 28679 ISAKMP: attribute UNKNOWN (28680) Unsupported Attr: 28680 ISAKMP: attribute UNKNOWN (28677) Unsupported Attr: 28677 ISAKMP (0:0): responding to peer config from 192.168.1.2. ID = 177917346 return status is IKMP\_NO\_ERROR crypto\_isakmp\_process\_block: src 192.168.1.2, dest 192.168.1.1 OAK\_QM exchange oakley\_process\_quick\_mode: OAK\_QM\_IDLE ISAKMP (0): processing SA payload. message ID = 942875080 ISAKMP : Checking IPsec proposal 1 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 IPSEC(validate\_proposal): transform proposal (prot 3, trans 3, hmac\_alg 1) not supported ISAKMP (0): atts not acceptable. Next payload is 0 ISAKMP (0): skipping next ANDED proposal (1) ISAKMP : Checking IPsec proposal 2 ISAKMP: transform 1, ESP\_3DES ISAKMP: attributes in transform: ISAKMP: authenticator is HMAC-SHA ISAKMP: encaps is 1 ISAKMP: SA life type in seconds ISAKMP: SA life duration (VPI) of 0x0 0x20 0xc4 0x9b IPSEC(validate\_proposal): transform proposal (prot 3, trans 3, hmac\_alg 2) not supported ISAKMP (0): atts not acceptable. Next payload is 0 ISAKMP (0): skipping next ANDED proposal (2) ISAKMP: Checking IPsec proposal 3 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 IPSEC(validate\_proposal): transform proposal (prot 3, trans 3, hmac\_alg 1) not supported ISAKMP (0): atts not acceptable. Next payload is 0 ISAKMP: Checking IPsec proposal 4 ISAKMP: transform 1, ESP\_3DES ISAKMP: attributes in transform: ISAKMP: authenticator is HMAC-SHA ISAKMP: encaps is 1 ISAKMP: SA life type in seconds ISAKMP: SA life duration (VPI) of 0x0 0x20 0xc4 0x9b IPSEC(validate\_proposal): transform proposal (prot 3, trans 3, hmac\_alg 2) not supported ISAKMP (0): atts not acceptable. Next payload is 0 ISAKMP : Checking IPsec proposal 5 ISAKMP: transform 1, ESP\_DES 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 ISAKMP (0): atts are acceptable. ISAKMP (0): bad SPI size of 2 octets! ISAKMP: Checking IPsec proposal 6 ISAKMP: transform 1, ESP\_DES ISAKMP: attributes in transform: ISAKMP: authenticator is HMAC-SHA ISAKMP: encaps is 1 ISAKMP: SA life type in seconds ISAKMP: SA life duration (VPI) of 0x0 0x20 0xc4 0x9b IPSEC(validate\_proposal): transform proposal (prot 3, trans 2, hmac\_alg 2) not supported ISAKMP (0): atts not acceptable. Next payload is 0 ISAKMP (0): skipping next ANDED proposal (6) ISAKMP : Checking IPsec proposal 7 ISAKMP: transform 1, ESP\_DES 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 ISAKMP (0): atts are acceptable. IPSEC(validate\_proposal\_request): proposal part #1, (key eng. msg.) dest= 192.168.1.1, src= 192.168.1.2, dest\_proxy= 192.168.1.1/255.255.255.255/0/0 (type=1), src\_proxy= 10.89.129.200/255.255.255.255/0/0 (type=1), protocol= ESP, transform= esp-des esp-md5-hmac , lifedur= 0s and 0kb, spi= 0x0(0), conn\_id= 0, keysize= 0, flags= 0x4 ISAKMP (0): processing NONCE payload. message ID = 942875080 ISAKMP (0): processing ID payload. message ID = 942875080 ISAKMP (0): ID\_IPV4\_ADDR src 10.89.129.200 prot 0 port 0 ISAKMP (0): processing ID payload. message ID = 942875080 ISAKMP (0): ID\_IPV4\_ADDR dst 192.168.1.1 prot 0 port 0 IPSEC(key\_engine): got a queue event... IPSEC(spi\_response): getting spi 0x64d7a518(1691854104) for SA from 192.168.1.2 to 192.168.1.1 for prot 3 return status is IKMP\_NO\_ERROR crypto\_isakmp\_process\_block: src 192.168.1.2, dest 192.168.1.1 OAK\_QM exchange oakley\_process\_quick\_mode: OAK\_QM\_IDLE ISAKMP (0): processing SA payload. message ID = 3008609960 ISAKMP: Checking IPsec proposal 1 ISAKMP: transform 1, ESP\_3DES ISAKMP: attributes in transform: ISAKMP: authenticator is HMAC-MD5 crypto\_isakmp\_process\_block: src 192.168.1.2, dest 192.168.1.1 OAK\_QM exchange oakley\_process\_quick\_mode: OAK\_QM\_AUTH\_AWAITmap\_alloc\_entry: allocating entry 2 map\_alloc\_entry: allocating entry 1 ISAKMP (0): Creating IPsec SAs inbound SA from 192.168.1.2 to 192.168.1.1 (proxy 10.89.129.200 to 192.168.1.1) has spi 1691854104 and conn\_id 2 and flags 4 lifetime of 2147483 seconds outbound SA from 192.168.1.1 to 192.168.1.2 (proxy 192.168.1.1 to 10.89.129.200) has spi 1025193431 and conn\_id 1 and flags 4 lifetime of 2147483 seconds IPSEC(key\_engine): got a queue event... IPSEC(initialize\_sas): ,(key eng. msg.) dest= 192.168.1.1, src= 192.168.1.2, dest\_proxy= 192.168.1.1/0.0.0.0/0/0 (type=1), src\_proxy= 10.89.129.200/0.0.0.0/0/0 (type=1), protocol= ESP, transform= esp-des esp-md5-hmac , lifedur= 2147483s and 0kb, spi= 0x64d7a518(1691854104),conn\_id= 2, keysize= 0, flags= 0x4 IPSEC(initialize\_sas): , (key eng. msg.) src= 192.168.1.1, dest=192.168.1.2, src\_proxy= 192.168.1.1/0.0.0.0/0/0 (type=1), dest\_proxy= 10.89.129.200/0.0.0.0/0/0 (type=1), protocol= ESP, transform=esp-des esp-md5-hmac , lifedur= 2147483s and 0kb, spi= 0x3d1b35d7(1025193431),conn\_id=



```

1, keysize= 0, flags= 0x4 VPN Peer: IPSEC: Peer ip:192.168.1.2 Ref cnt incremented to:2 Total
VPN Peers:1 VPN Peer: IPSEC: Peer ip:192.168.1.2 Ref cnt incremented to:3 Total VPN Peers:1
return status is IKMP_NO_ERROR crypto_isakmp_process_block: src 192.168.1.2, dest 192.168.1.1
OAK_QM exchange oakley_process_quick_mode: OAK_QM_AUTH_AWAITmap_alloc_entry: allocating entry 4
map_alloc_entry: allocating entry 3 ISAKMP (0): Creating IPsec SAs inbound SA from 192.168.1.2
to 192.168.1.1 (proxy 10.89.129.200 to 0.0.0.0) has spi 3415657865 and conn_id 4 and flags 4
lifetime of 2147483 seconds outbound SA from 192.168.1.1 to 192.168.1.2 (proxy 0.0.0.0 to
10.89.129.200) has spi 2383969893 and conn_id 3 and flags 4 lifetime of 2147483
secondsIPSEC(key_engine): got a queue event... IPSEC(initialize_sas): , (key eng. msg.) dest=
192.168.1.1, src=192.168.1.2, dest_proxy= 0.0.0.0/0.0.0.0/0/0 (type=4), src_proxy=
10.89.129.200/0.0.0.0/0/0 (type=1), protocol= ESP, transform=esp-des esp-md5-hmac , lifedur=
2147483s and 0kb, spi= 0xcb96cd89(3415657865),conn_id= 4, keysize= 0, flags= 0x4
IPSEC(initialize_sas): , (key eng. msg.) src= 192.168.1.1, dest=192.168.1.2, src_proxy=
0.0.0.0/0.0.0.0/0/0 (type=4), dest_proxy= 10.89.129.200/0.0.0.0/0/0 (type=1), protocol= ESP,
transform=esp-des esp-md5-hmac , lifedur= 2147483s and 0kb, spi= 0x8e187e65(2383969893),conn_id=
3, keysize= 0, flags= 0x4 VPN Peer: IPSEC: Peer ip:192.168.1.2 Ref cnt incremented to:4 Total
VPN Peers:1 VPN Peer: IPSEC: Peer ip:192.168.1.2 Ref cnt incremented to:5 Total VPN Peers:1
return status is IKMP_NO_ERROR pixfirewall#show uauth
Current      Most Seen
Authenticated Users
1            1
Authen In Progress
0            1
ipsec user 'cisco_customer' at 10.89.129.200, authenticated
pixfirewall#

```

## VPN Client 1.1 のデバッグ

```

pixfirewall#
crypto_isakmp_process_block: src 192.168.1.2, dest 192.168.1.1
VPN Peer: ISAKMP: Added new peer: ip:192.168.1.2
Total VPN Peers:1
VPN Peer: ISAKMP: Peer ip:192.168.1.2 Ref cnt incremented
to:1 Total VPN Peers:1
OAK_AG exchange
ISAKMP (0): processing SA payload. message ID = 0

ISAKMP (0): Checking ISAKMP transform 1 against priority 10 policy
ISAKMP:      encryption 3DES-CBC
ISAKMP:      hash SHA
ISAKMP:      default group 2
ISAKMP:      extended auth pre-share
ISAKMP:      life type in seconds
ISAKMP:      life duration (VPI) of 0x0 0x20 0xc4 0x9b
ISAKMP (0): atts are not acceptable. Next payload is 3
ISAKMP (0): Checking ISAKMP transform 2 against priority 10 policy
ISAKMP:      encryption 3DES-CBC
ISAKMP:      hash MD5
ISAKMP:      default group 2
ISAKMP:      extended auth pre-share
ISAKMP:      life type in seconds
ISAKMP:      life duration (VPI) of 0x0 0x20 0xc4 0x9b
ISAKMP (0): atts are not acceptable. Next payload is 3
ISAKMP (0): Checking ISAKMP transform 3 against priority 10 policy
ISAKMP:      encryption 3DES-CBC
ISAKMP:      hash SHA
ISAKMP:      default group 2
ISAKMP:      auth pre-shared
ISAKMP:      life type in seconds
ISAKMP:      life duration (VPI) of 0x0 0x20 0xc4 0x9b
ISAKMP (0): atts are not acceptable. Next payload is 3
ISAKMP (0): Checking ISAKMP transform 4 against priority 10 policy
ISAKMP:      encryption 3DES-CBC
ISAKMP:      hash MD5

```

ISAKMP: default group 2  
ISAKMP: auth pre-share  
ISAKMP: life type in seconds  
ISAKMP: life duration (VPI) of 0x0 0x20 0xc4 0x9b  
ISAKMP (0): atts are not acceptable. Next payload is 3  
ISAKMP (0): Checking ISAKMP transform 5 against priority 10 policy  
ISAKMP: encryption DES-CBC  
ISAKMP: hash SHA  
ISAKMP: default group 2  
ISAKMP: extended auth pre-share  
ISAKMP: life type in seconds  
ISAKMP: life duration (VPI) of 0x0 0x20 0xc4 0x9b  
ISAKMP (0): atts are not acceptable. Next payload is 3  
ISAKMP (0): Checking ISAKMP transform 6 against priority 10 policy  
**ISAKMP: encryption DES-CBC**  
**ISAKMP: hash MD5**  
**ISAKMP: default group 2**  
**ISAKMP: extended auth pre-share**  
**ISAKMP: life type in seconds**  
**ISAKMP: life duration (VPI) of 0x0 0x20 0xc4 0x9b**  
**ISAKMP (0): atts are acceptable. Next payload is 3**  
*!--- Attributes offered by the VPN Client are accepted by the PIX.* ISAKMP (0): processing KE payload. message ID = 0 ISAKMP (0): processing NONCE payload. message ID = 0 ISAKMP (0): processing ID payload. message ID = 0 ISAKMP (0): processing vendor id payload ISAKMP (0): processing vendor id payload ISAKMP (0): remote peer supports dead peer detection ISAKMP (0): processing vendor id payload ISAKMP (0): speaking to a Unity client ISAKMP (0): ID payload next-payload: 10 type : 1 protocol : 17 port : 500 length : 8 ISAKMP (0) : Total payload length: 12 return status is IKMP\_NO\_ERROR crypto\_isakmp\_process\_block: src 192.168.1.2, dest 192.168.1.1 OAK\_AG exchange ISAKMP (0): processing HASH payload. message ID = 0 ISAKMP (0): processing NOTIFY payload 24578 protocol 1 spi 0, message ID = 0 ISAKMP (0): processing notify INITIAL\_CONTACT IPSEC(key\_engine): got a queue event... IPSEC(key\_engine\_delete\_sas): rec'd delete notify from ISAKMP IPSEC(key\_engine\_delete\_sas): delete all SAs shared with 192.168.1.2 ISAKMP (0): SA has been authenticated return status is IKMP\_NO\_ERROR ISAKMP/xauth: request attribute XAUTH\_TYPE ISAKMP/xauth: request attribute XAUTH\_USER\_NAME ISAKMP/xauth: request attribute XAUTH\_USER\_PASSWORD ISAKMP (0:0): initiating peer config to 192.168.1.2. ID = 1623347510 (0x60c25136) crypto\_isakmp\_process\_block: src 192.168.1.2, dest 192.168.1.1 ISAKMP\_TRANSACTION exchange ISAKMP (0:0): processing transaction payload from 192.168.1.2. message ID = 84 ISAKMP: Config payload CFG\_REPLY return status is IKMP\_ERR\_NO\_RETRANS ISAKMP (0:0): initiating peer config to 192.168.1.2. ID = 2620656926 (0x9c340dle) crypto\_isakmp\_process\_block: src 192.168.1.2, dest 192.168.1.1 ISAKMP\_TRANSACTION exchange ISAKMP (0:0): processing transaction payload from 192.168.1.2. message ID = 60 ISAKMP: Config payload CFG\_ACK return status is IKMP\_NO\_ERROR crypto\_isakmp\_process\_block: src 192.168.1.2, dest 192.168.1.1 ISAKMP\_TRANSACTION exchange ISAKMP (0:0): processing transaction payload from 192.168.1.2. message ID = 0 ISAKMP: Config payload CFG\_REQUEST ISAKMP (0:0): checking request: ISAKMP: attribute IP4\_ADDRESS (1) ISAKMP: attribute IP4\_NETMASK (2) ISAKMP: attribute IP4\_DNS (3) ISAKMP: attribute IP4\_NBNS (4) ISAKMP: attribute ADDRESS\_EXPIRY (5) Unsupported Attr: 5 ISAKMP: attribute APPLICATION\_VERSION (7) Unsupported Attr: 7 ISAKMP: attribute UNKNOWN (28672) Unsupported Attr: 28672 ISAKMP: attribute UNKNOWN (28673) Unsupported Attr: 28673 ISAKMP: attribute UNKNOWN (28674) ISAKMP: attribute UNKNOWN (28676) ISAKMP: attribute UNKNOWN (28679) Unsupported Attr: 28679 ISAKMP: attribute UNKNOWN (28680) Unsupported Attr: 28680 ISAKMP: attribute UNKNOWN (28677) Unsupported Attr: 28677 ISAKMP (0:0): responding to peer config from 192.168.1.2. ID = 177917346 return status is IKMP\_NO\_ERROR crypto\_isakmp\_process\_block: src 192.168.1.2, dest 192.168.1.1 OAK\_QM exchange oakley\_process\_quick\_mode: OAK\_QM\_IDLE ISAKMP (0): processing SA payload. message ID = 942875080 ISAKMP : Checking IPsec proposal 1 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 IPSEC(validate\_proposal): transform proposal (prot 3, trans 3, hmac\_alg 1) not supported ISAKMP (0): atts not acceptable. Next payload is 0 ISAKMP (0): skipping next ANDED proposal (1) ISAKMP : Checking IPsec proposal 2 ISAKMP: transform 1, ESP\_3DES ISAKMP: attributes in transform: ISAKMP: authenticator is HMAC-SHA ISAKMP: encaps is 1 ISAKMP: SA life type in seconds ISAKMP: SA life duration (VPI) of 0x0 0x20 0xc4 0x9b IPSEC(validate\_proposal): transform proposal (prot 3, trans 3, hmac\_alg 2) not supported ISAKMP (0): atts not acceptable. Next payload is 0 ISAKMP (0): skipping next ANDED proposal (2) ISAKMP: Checking IPsec proposal 3 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  
IPSEC(validate\_proposal): transform proposal (prot 3, trans 3, hmac\_alg 1) not supported ISAKMP  
(0): atts not acceptable. Next payload is 0 ISAKMP: Checking IPsec proposal 4 ISAKMP: transform  
1, ESP\_3DES ISAKMP: attributes in transform: ISAKMP: authenticator is HMAC-SHA ISAKMP: encaps is  
1 ISAKMP: SA life type in seconds ISAKMP: SA life duration (VPI) of 0x0 0x20 0xc4 0x9b  
IPSEC(validate\_proposal): transform proposal (prot 3, trans 3, hmac\_alg 2) not supported ISAKMP  
(0): atts not acceptable. Next payload is 0 ISAKMP : Checking IPsec proposal 5 ISAKMP: transform  
1, ESP\_DES 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 ISAKMP  
(0): atts are acceptable. ISAKMP (0): bad SPI size of 2 octets! ISAKMP: Checking IPsec proposal  
6 ISAKMP: transform 1, ESP\_DES ISAKMP: attributes in transform: ISAKMP: authenticator is HMAC-  
SHA ISAKMP: encaps is 1 ISAKMP: SA life type in seconds ISAKMP: SA life duration (VPI) of 0x0  
0x20 0xc4 0x9b IPSEC(validate\_proposal): transform proposal (prot 3, trans 2, hmac\_alg 2) not  
supported ISAKMP (0): atts not acceptable. Next payload is 0 ISAKMP (0): skipping next ANDED  
proposal (6) ISAKMP : Checking IPsec proposal 7 ISAKMP: transform 1, ESP\_DES 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 ISAKMP (0): atts are  
acceptable.IPSEC(validate\_proposal\_request): proposal part #1, (key eng. msg.) dest=  
192.168.1.1, src= 192.168.1.2, dest\_proxy= 192.168.1.1/255.255.255.255/0/0 (type=1), src\_proxy=  
10.89.129.200/255.255.255.255/0/0 (type=1), protocol= ESP, transform= esp-des esp-md5-hmac ,  
lifedur= 0s and 0kb, spi= 0x0(0), conn\_id= 0, keysize= 0, flags= 0x4 ISAKMP (0): processing  
NONCE payload. message ID = 942875080 ISAKMP (0): processing ID payload. message ID = 942875080  
ISAKMP (0): ID\_IPV4\_ADDR src 10.89.129.200 prot 0 port 0 ISAKMP (0): processing ID payload.  
message ID = 942875080 ISAKMP (0): ID\_IPV4\_ADDR dst 192.168.1.1 prot 0 port 0IPSEC(key\_engine):  
got a queue event... IPSEC(spi\_response): getting spi 0x64d7a518(1691854104) for SA from  
192.168.1.2 to 192.168.1.1 for prot 3 return status is IKMP\_NO\_ERROR  
crypto\_isakmp\_process\_block: src 192.168.1.2, dest 192.168.1.1 OAK\_QM exchange  
oakley\_process\_quick\_mode: OAK\_QM\_IDLE ISAKMP (0): processing SA payload. message ID =  
3008609960 ISAKMP: Checking IPsec proposal 1 ISAKMP: transform 1, ESP\_3DES ISAKMP: attributes in  
transform: ISAKMP: authenticator is HMAC-MD5 crypto\_isakmp\_process\_block: src 192.168.1.2, dest  
192.168.1.1 OAK\_QM exchange oakley\_process\_quick\_mode: OAK\_QM\_AUTH\_AWAITmap\_alloc\_entry:  
allocating entry 2 map\_alloc\_entry: allocating entry 1 ISAKMP (0): Creating IPsec SAs inbound SA  
from 192.168.1.2 to 192.168.1.1 (proxy 10.89.129.200 to 192.168.1.1) has spi 1691854104 and  
conn\_id 2 and flags 4 lifetime of 2147483 seconds outbound SA from 192.168.1.1 to 192.168.1.2  
(proxy 192.168.1.1 to 10.89.129.200) has spi 1025193431 and conn\_id 1 and flags 4 lifetime of  
2147483 seconds IPSEC(key\_engine): got a queue event... IPSEC(initialize\_sas): ,(key eng. msg.)  
dest= 192.168.1.1, src= 192.168.1.2, dest\_proxy= 192.168.1.1/0.0.0.0/0/0 (type=1), src\_proxy=  
10.89.129.200/0.0.0.0/0/0 (type=1), protocol= ESP, transform= esp-des esp-md5-hmac , lifedur=  
2147483s and 0kb, spi= 0x64d7a518(1691854104),conn\_id= 2, keysize= 0, flags= 0x4  
IPSEC(initialize\_sas): , (key eng. msg.) src= 192.168.1.1, dest=192.168.1.2, src\_proxy=  
192.168.1.1/0.0.0.0/0/0 (type=1), dest\_proxy= 10.89.129.200/0.0.0.0/0/0 (type=1), protocol= ESP,  
transform=esp-des esp-md5-hmac , lifedur= 2147483s and 0kb, spi= 0x3d1b35d7(1025193431),conn\_id=  
1, keysize= 0, flags= 0x4 VPN Peer: IPSEC: Peer ip:192.168.1.2 Ref cnt incremented to:2 Total  
VPN Peers:1 VPN Peer: IPSEC: Peer ip:192.168.1.2 Ref cnt incremented to:3 Total VPN Peers:1  
return status is IKMP\_NO\_ERROR crypto\_isakmp\_process\_block: src 192.168.1.2, dest 192.168.1.1  
OAK\_QM exchange oakley\_process\_quick\_mode: OAK\_QM\_AUTH\_AWAITmap\_alloc\_entry: allocating entry 4  
map\_alloc\_entry: allocating entry 3 ISAKMP (0): Creating IPsec SAs inbound SA from 192.168.1.2  
to 192.168.1.1 (proxy 10.89.129.200 to 0.0.0.0) has spi 3415657865 and conn\_id 4 and flags 4  
lifetime of 2147483 seconds outbound SA from 192.168.1.1 to 192.168.1.2 (proxy 0.0.0.0 to  
10.89.129.200) has spi 2383969893 and conn\_id 3 and flags 4 lifetime of 2147483  
secondsIPSEC(key\_engine): got a queue event... IPSEC(initialize\_sas): , (key eng. msg.) dest=  
192.168.1.1, src=192.168.1.2, dest\_proxy= 0.0.0.0/0.0.0.0/0/0 (type=4), src\_proxy=  
10.89.129.200/0.0.0.0/0/0 (type=1), protocol= ESP, transform=esp-des esp-md5-hmac , lifedur=  
2147483s and 0kb, spi= 0xcb96cd89(3415657865),conn\_id= 4, keysize= 0, flags= 0x4  
IPSEC(initialize\_sas): , (key eng. msg.) src= 192.168.1.1, dest=192.168.1.2, src\_proxy=  
0.0.0.0/0.0.0.0/0/0 (type=4), dest\_proxy= 10.89.129.200/0.0.0.0/0/0 (type=1), protocol= ESP,  
transform=esp-des esp-md5-hmac , lifedur= 2147483s and 0kb, spi= 0x8e187e65(2383969893),conn\_id=  
3, keysize= 0, flags= 0x4 VPN Peer: IPSEC: Peer ip:192.168.1.2 Ref cnt incremented to:4 Total  
VPN Peers:1 VPN Peer: IPSEC: Peer ip:192.168.1.2 Ref cnt incremented to:5 Total VPN Peers:1  
return status is IKMP\_NO\_ERROR pixfirewall#show uauth  
Current Most Seen  
Authenticated Users  
1 1  
Authen In Progress

0

1

```
ipsec user 'cisco_customer' at 10.89.129.200, authenticated  
pixfirewall#
```

## 関連情報

- [PIX 500 シリーズ セキュリティ アプライアンス](#)
- [PIX コマンド リファレンス](#)
- [IPSec ネゴシエーション/IKE プロトコル](#)
- [IPSec の概要](#)
- [Cisco PIX ファイアウォールを経由した接続の確立](#)
- [Requests for Comments \( RFC \)](#)
- [テクニカルサポートとドキュメント - Cisco Systems](#)