

IPSec - PIX para configuração de modo curinga, pré-compartilhado e cliente VPN Cisco com autenticação estendida

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[Introduction](#)

Este exemplo de configuração demonstra como conectar um VPN Client a um PIX Firewall usando curingas, mode-config, o comando **sysopt connection permit-ipsec** e autenticação estendida (Xauth).

Para ver a configuração TACACS+ e RADIUS para PIX 6.3 e posterior, consulte [TACACS+ e RADIUS para PIX 6.3 e PIX/ASA 7.x Configuration Example](#).

O VPN Client suporta AES (Advanced Encryption Standard) como um algoritmo de criptografia no Cisco VPN Client versão 3.6.1 e posterior e com PIX Firewall 6.3. O VPN Client suporta tamanhos chave de 128 bits e 256 bits apenas. Para obter mais informações sobre como configurar AES, consulte [Como configurar o Cisco VPN Client para PIX com AES](#).

Consulte [Exemplo de Configuração de Autenticação do PIX/ASA 7.x e do Cisco VPN Client 4.x para Windows com o Microsoft Windows 2003 IAS RADIUS](#) para configurar a conexão VPN de acesso remoto entre um Cisco VPN Client (4.x para Windows) e o PIX 500 Series Security Appliance 7.x usando um Microsoft Windows 2003 Internet Authentication Service (IAS) Servidor RADIUS.

Consulte [IPsec Between a VPN 3000 Concentrator and a VPN Client 4.x for Windows using RADIUS for User Authentication and Accounting Configuration Example](#) para estabelecer um túnel IPsec entre um Cisco VPN 3000 Concentrator e um Cisco VPN Client 4.x for Windows usando RADIUS para autenticação e tarifação do usuário.

Consulte [Configurando o IPsec entre um Cisco IOS Router e um Cisco VPN Client 4.x para Windows usando RADIUS para autenticação de usuário](#) para configurar uma conexão entre um roteador e o Cisco VPN Client 4.x usando RADIUS para autenticação de usuário.

Prerequisites

Requirements

Não existem requisitos específicos para este documento.

Componentes Utilizados

As informações neste documento são baseadas nestas versões de software e hardware:

- Cisco VPN Client 4.x Esse produto possui recursos de VPN avançados, diferente do Cisco Secure VPN Client 1.x.
- PIX Firewall 515E versão 6.3(3).

Observação: a tecnologia de criptografia está sujeita a controles de exportação. É sua responsabilidade conhecer a lei sobre exportação de tecnologia de criptografia. Para obter mais informações, consulte o [site da Administração de Exportação](#). Se você tem alguma dúvida com relação ao controle de exportação, envie um e-mail para export@cisco.com.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Consulte as [Convenções de Dicas Técnicas da Cisco para obter mais informações sobre convenções de documentos](#).

Informações de Apoio

O comando **sysopt connection permit-ipsec** permite implicitamente que qualquer pacote proveniente de um túnel IPsec ignore a verificação de uma **lista de acesso** associada, **conduit** ou **grupo de acesso** para conexões IPsec. Xauth autentica o usuário IPsec em um servidor TACACS+ ou RADIUS externo. Além da chave pré-compartilhada curinga, o usuário deve fornecer um nome de usuário/senha.

Um usuário com um cliente VPN recebe um endereço IP de seu ISP. Isso é substituído por um endereço IP do pool de endereços IP no PIX. O usuário tem acesso a tudo o que está dentro do firewall, incluindo as redes. Os usuários que não executam o VPN Client podem se conectar somente ao servidor Web usando o endereço externo fornecido pela atribuição estática.

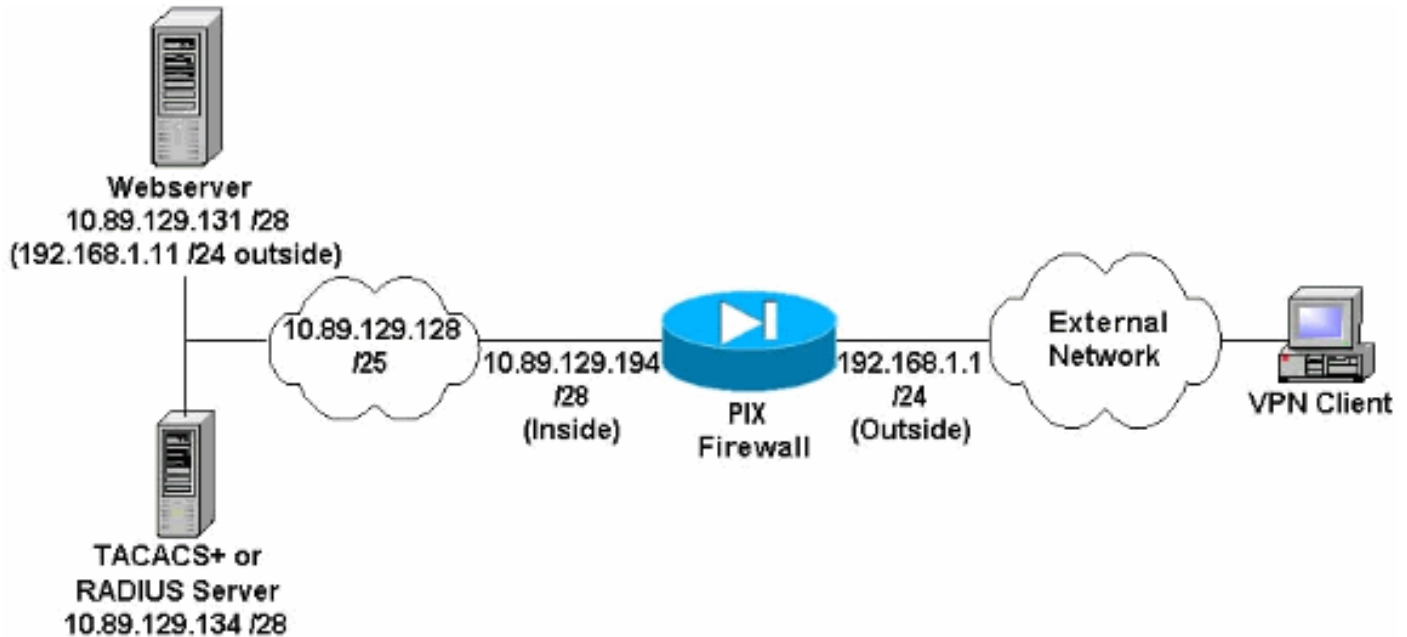
Configurar

Nesta seção, você encontrará informações para configurar os recursos descritos neste documento.

Nota: Use a Command Lookup Tool (somente clientes registrados) para obter mais informações sobre os comandos usados neste documento.

Diagrama de Rede

Este documento utiliza a seguinte configuração de rede:



Notas de Diagrama de Rede

- Os hosts da Internet que acessam o servidor Web usando o endereço IP global 192.168.1.1 são autenticados mesmo que uma conexão VPN não esteja estabelecida. Este tráfego *não* está criptografado.
- Os VPN Clients podem acessar todos os hosts na rede interna (10.89.129.128 /25) assim que o túnel IPsec for estabelecido. Todo o tráfego do VPN Client para o PIX Firewall é criptografado. Sem um túnel IPsec, eles só podem acessar o servidor Web por meio de seu endereço IP global, mas ainda são necessários para autenticar.
- Os clientes de VPN surgem da Internet e seus endereços de IP não são conhecidos com antecedência.

Configurações

Este documento utiliza estas configurações.

- [Configuração do PIX 6.3\(3\)](#)
- [Configuração do VPN Client 4.0.5](#)
- [Configuração de VPN Client 3.5](#)
- [Configuração de VPN Client 1.1](#)

Configuração do PIX 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#

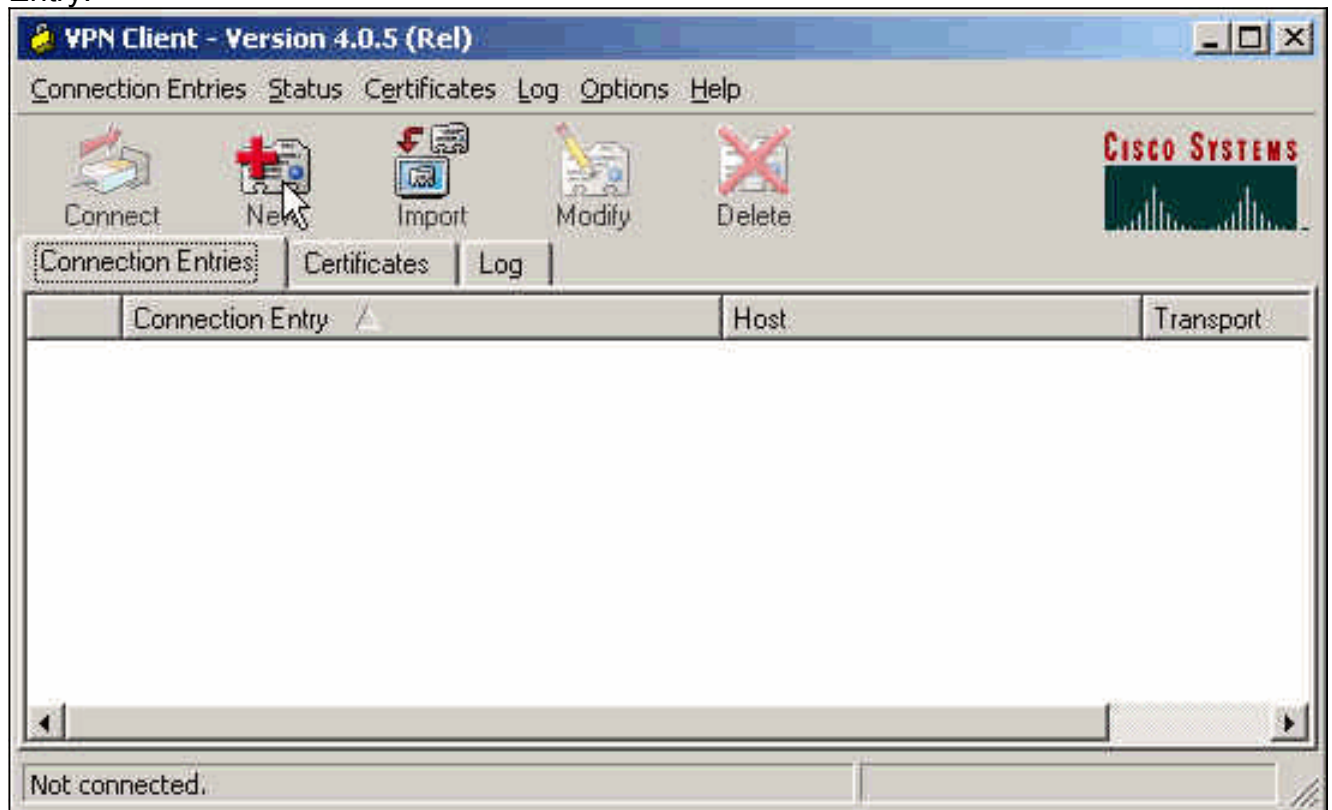
```

Configuração do VPN Client 4.0.5

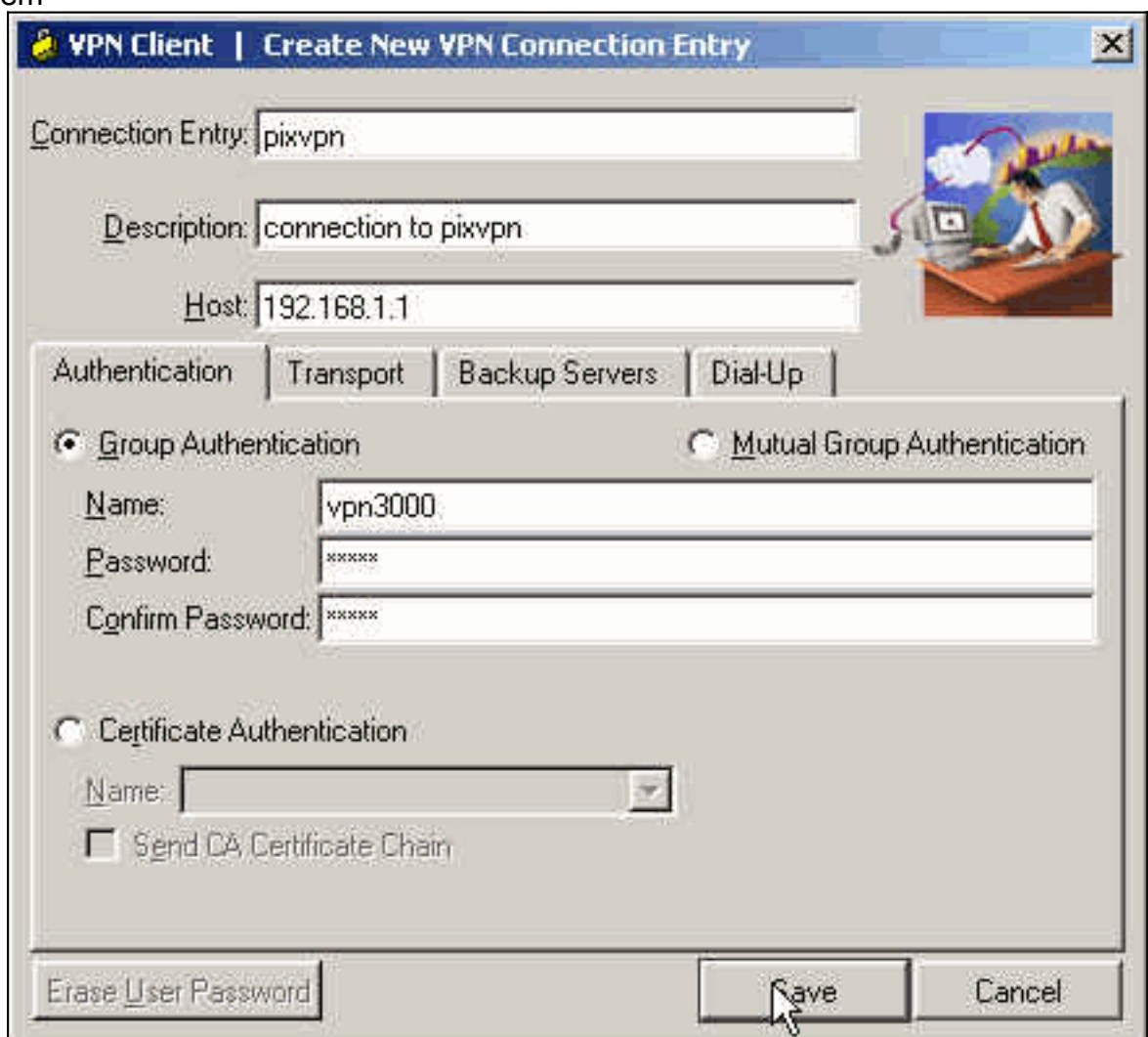
Conclua estes passos para configurar o VPN Client 4.0.5.

1. Selecione **Iniciar > Programas > Cisco Systems VPN Client > VPN Client**.
2. Clique em **New** para iniciar a janela Create New VPN Connection

Entry.

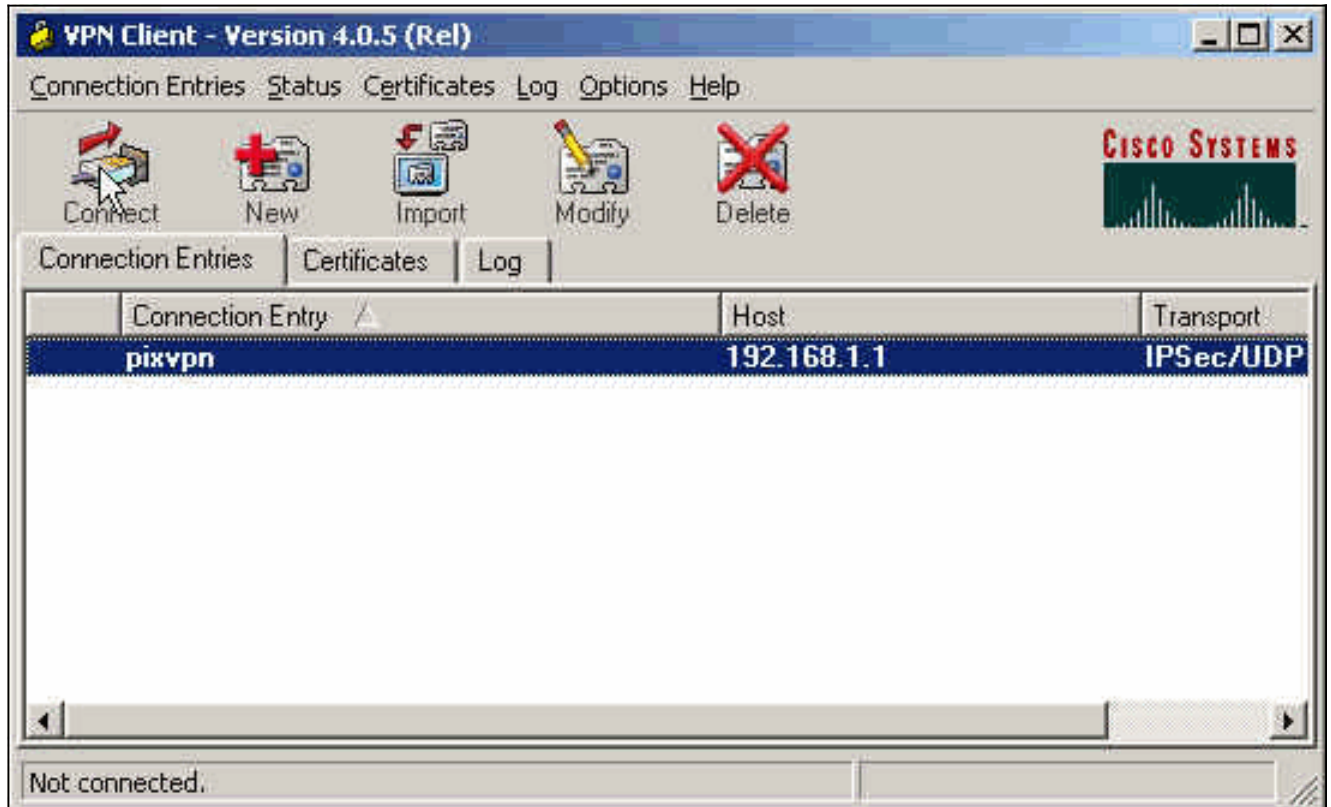


3. Insira o nome da entrada do Connection junto com uma descrição. Digite o endereço IP externo do PIX Firewall na caixa Host. Em seguida, digite o nome e a senha do grupo VPN e clique em

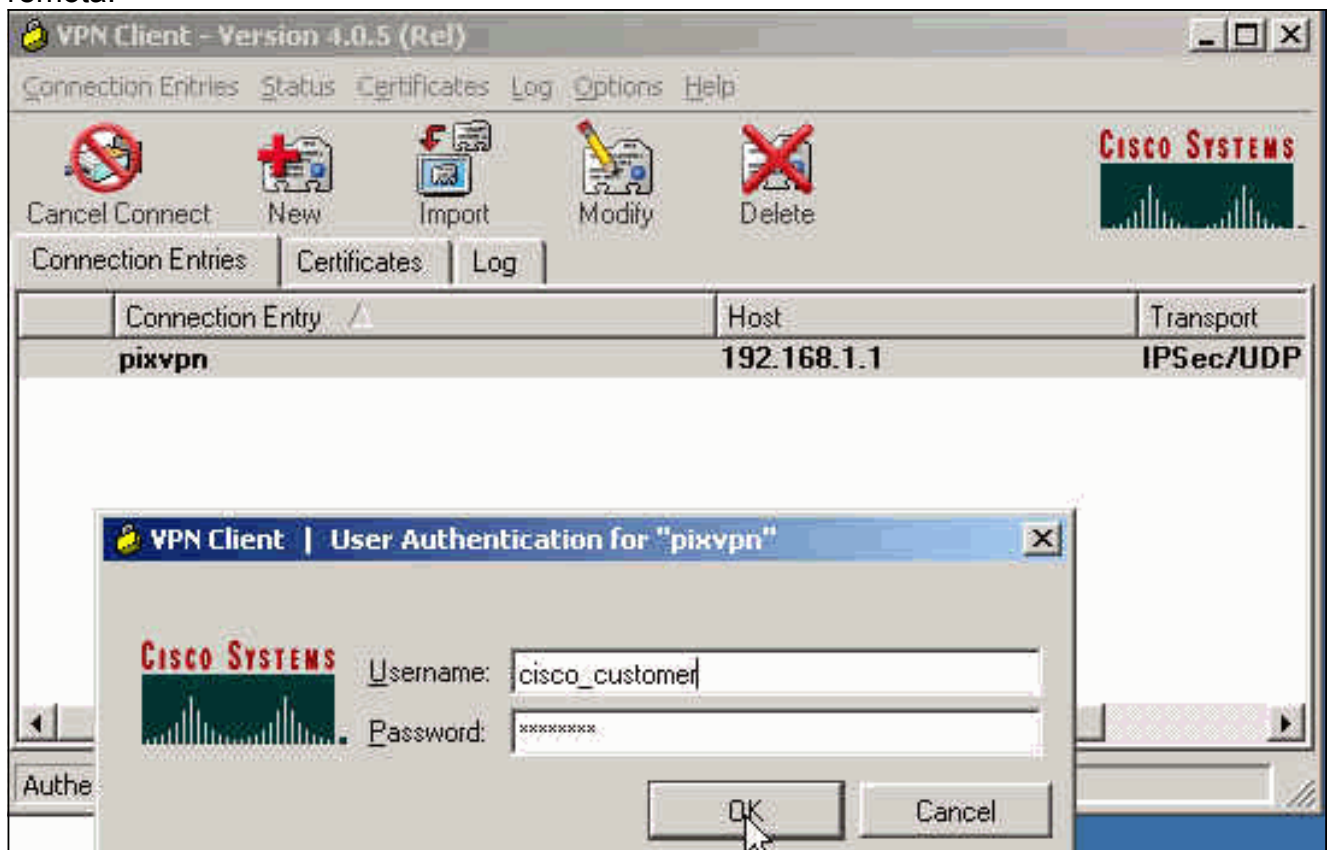


Salvar.

4. Na janela principal do VPN Client, clique na conexão que você gostaria de usar e clique no botão **Connect**.



5. Quando solicitado, introduza o nome de usuário e senha para Xauth e clique em OK para conectar-se à rede remota.



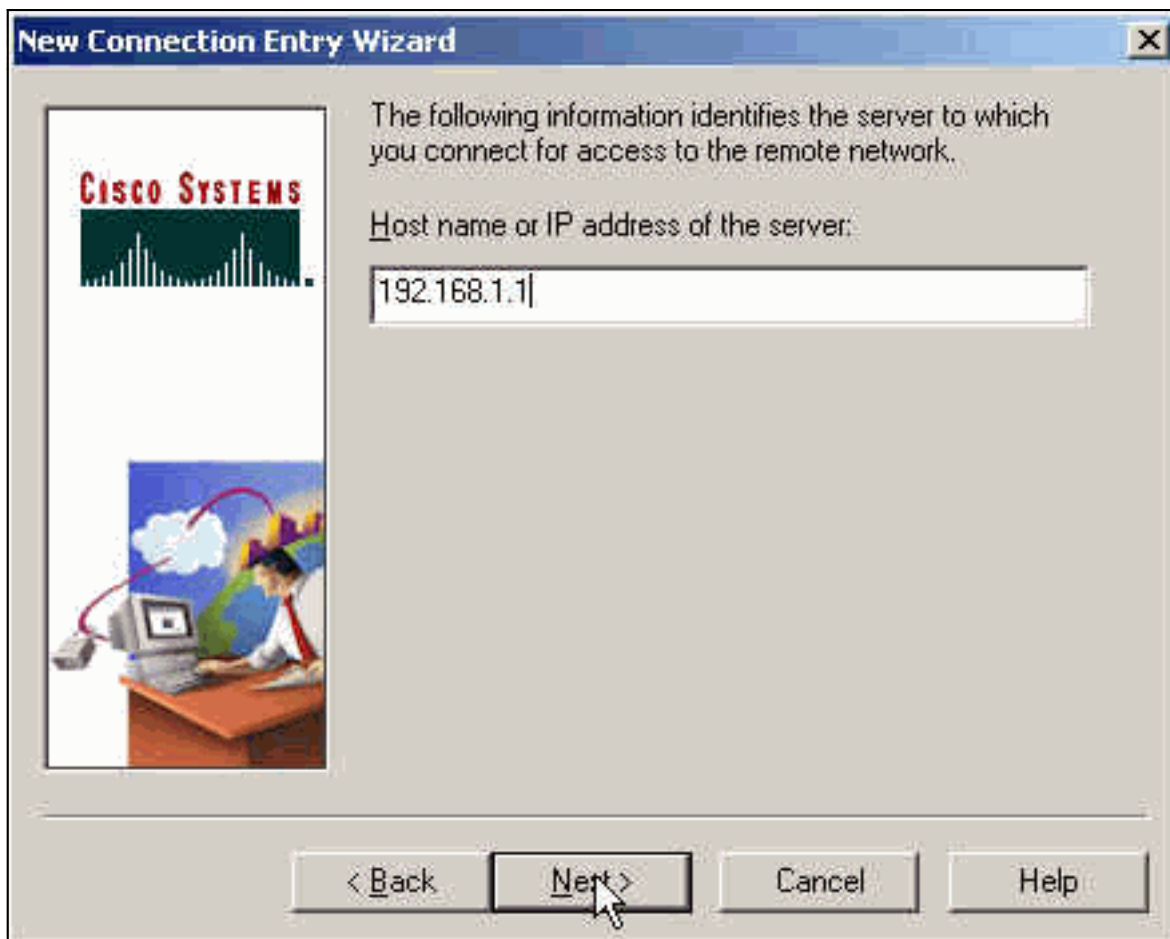
Conclua estes passos para configurar a configuração do VPN Client 3.5.

1. Selecione **Start > Programs > Cisco Systems VPN Client > VPN Dialer**.
2. Clique em **New** para iniciar o **New Connection Entry Wizard**.
3. Digite o nome de sua nova entrada de conexão e clique em



Next.

4. Digite o nome do host ou o endereço IP do servidor que é usado para se conectar ao servidor remoto e clique em



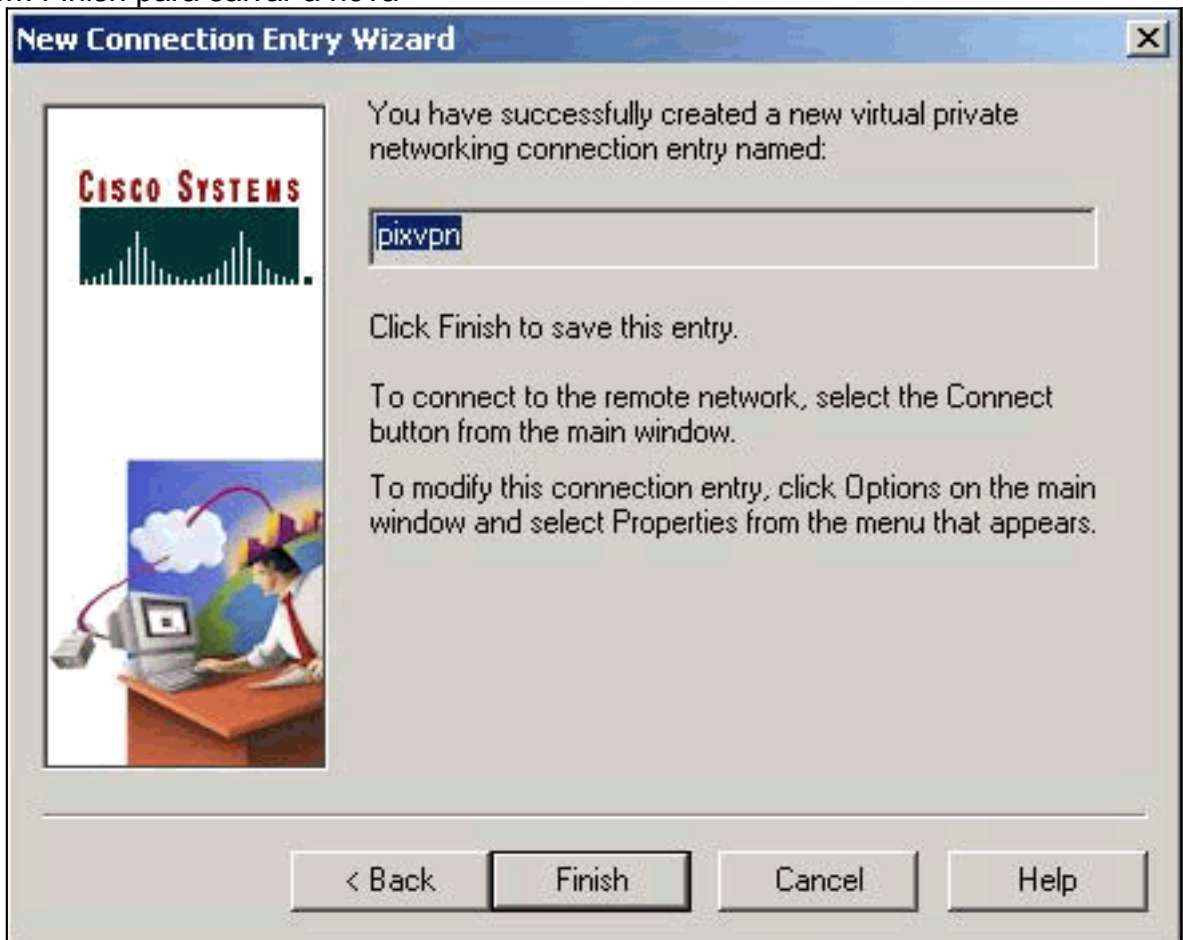
Avançar.

5. Selecione **Group Access Information** (Informações de acesso do grupo) e insira o Nome (Nome) e a Password (Senha) usados para autenticar seu acesso ao servidor remoto. Clique em



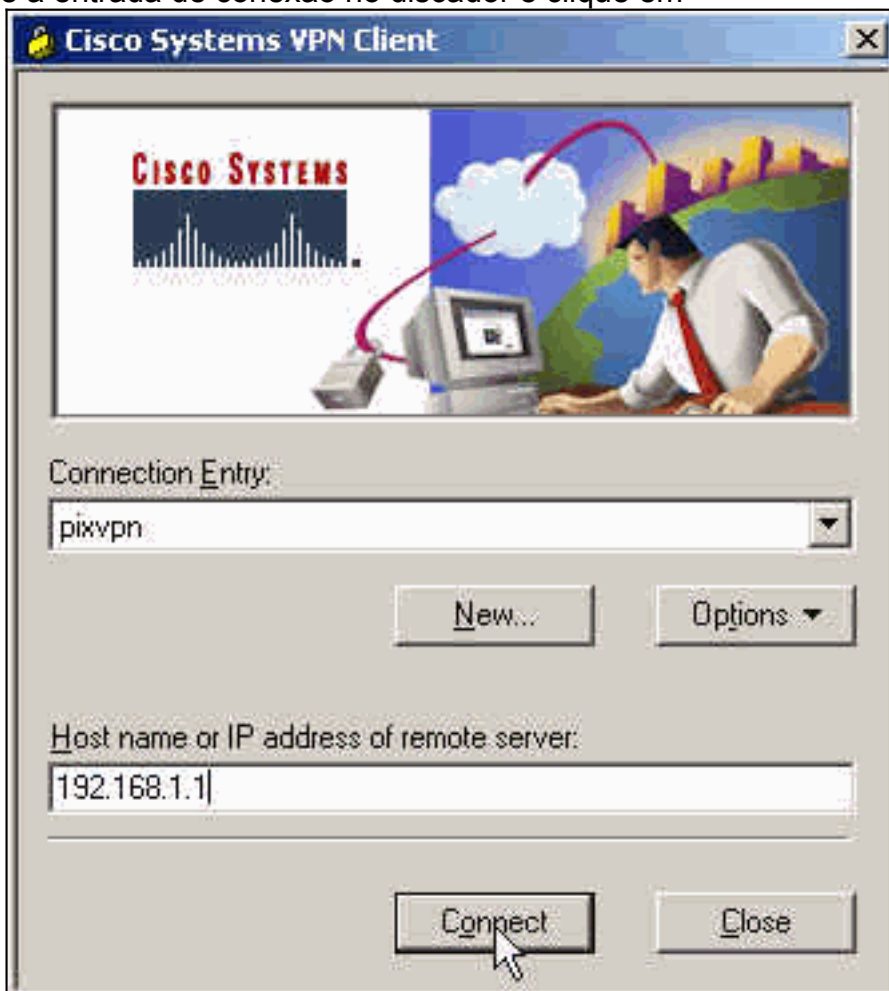
Next.

6. Clique em Finish para salvar a nova



entrada.

7. Selecione a entrada de conexão no discador e clique em



Connect.

8. Quando solicitado, introduza o nome de usuário e senha para Xauth e clique em OK para



conectar-se à rede remota.

Configuração de VPN Client 1.1

```
Network Security policy:
1- TACconn
  My Identity
    Connection security: Secure
    Remote Party Identity and addressing
    ID Type: IP subnet
    10.89.129.128
    255.255.255.128
    Port all Protocol all

  Connect using secure tunnel

    ID Type: IP address
    192.168.1.1

  Pre-shared Key=cisco1234

  Authentication (Phase 1)

  Proposal 1
    Authentication method: pre-shared key
    Encryp Alg: DES
    Hash Alg: MD5
    SA life: Unspecified
```

```
Key Group: DH 1

Key exchange (Phase 2)

Proposal 1
  Encapsulation ESP
  Encrypt Alg: DES
  Hash Alg: MD5
  Encap: tunnel
  SA life: Unspecified
  no AH

2- Other Connections
  Connection security: Non-secure
  Local Network Interface
    Name: Any
    IP Addr: Any
    Port: All
```

[Adicionar relatório](#)

A sintaxe do comando para adicionar relatório é:

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

Por exemplo, na configuração do PIX, este comando é adicionado:

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

Observação: o comando **sysopt connection permit-ipsec**, não o comando **sysopt ipsec pl-compatible**, é necessário para que a contabilidade Xauth funcione. O relatório Xauth não funciona apenas com o comando **sysopt ipsec pl-compatible**. A contabilidade Xauth é válida para conexões TCP, não para ICMP ou UDP.

Esta saída é um exemplo de registros de contabilidade TACACS+:

```
07/27/2004 15:17:54 cisco_customer Default Group 10.89.129.200 stop 15 .. 99 1879 .. ..  
0x5 .. PIX 10.89.129.194 telnet  
07/27/2004 15:17:39 cisco_customer Default Group 10.89.129.200 start .. .. .. .. ..  
0x5 .. PIX 10.89.129.194 telnet
```

[Verificar](#)

Use esta seção para confirmar se a sua configuração funciona corretamente.

A [Output Interpreter Tool \(somente clientes registrados\) \(OIT\) oferece suporte a determinados comandos show](#). Use a OIT para exibir uma análise da saída do comando show.

Nota: Consulte Informações Importantes sobre Comandos de Depuração antes de usar comandos debug.

Ative o Cisco Secure Log Viewer para ver as depurações no lado do cliente.

- **debug crypto ipsec**—Usado para ver as negociações de IPsec de fase 2.
- **debug crypto isakmp**—Usado para ver negociações de ISAKMP da fase 1.

Troubleshoot

Esta seção fornece informações que podem ser usadas para o troubleshooting da sua configuração. Exemplo de saída de depuração também é mostrado.

Comandos para Troubleshooting

A [Output Interpreter Tool \(somente clientes registrados\) \(OIT\) oferece suporte a determinados comandos show](#). Use a OIT para exibir uma análise da saída do comando show.

Nota: Consulte [Informações Importantes sobre Comandos de Depuração antes de usar comandos debug](#).

- **debug crypto engine**—Usado para depurar o processo do mecanismo de criptografia.

Exemplo de depurações de PIX

```
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
```

Depurações com VPN Client 4.x

```
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 (0x9c340d1e)
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=

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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#

```

[Depurações com VPN Client 1.1](#)

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crypto_isakmp_process_block: src 192.168.1.3, dest 192.168.1.1
VPN Peer: ISAKMP: Added new peer: ip:192.168.1.3
Total VPN Peers:1
VPN Peer: ISAKMP: Peer ip:192.168.1.3 Ref cnt incremented to:1
Total VPN Peers:1
OAK_MM exchange
ISAKMP (0): processing SA payload. message ID = 0

ISAKMP (0): Checking ISAKMP transform 1 against priority 10 policy
      encryption DES-CBC
ISAKMP:      hash MD5
ISAKMP:      default group 1
ISAKMP:      auth pre-share
ISAKMP (0): atts are not acceptable. Next payload is 0
ISAKMP (0): Checking ISAKMP transform 1 against priority 20 policy
ISAKMP:      encryption DES-CBC
ISAKMP:      hash MD5
ISAKMP:      default group 1
ISAKMP:      auth pre-share
ISAKMP (0): atts are acceptable. Next payload is 0
ISAKMP (0): SA is doing pre-shared key authentication
using id type ID_IPV4_ADDR
return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 192.168.1.3, dest 192.168.1.1
OAK_MM exchange
ISAKMP (0): processing KE payload. message ID = 0

ISAKMP (0): processing NONCE payload. message ID = 0

ISAKMP (0): processing vendor id payload

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```
ISAKMP (0): processing vendor id payload

return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 192.168.1.3, dest 192.168.1.1
OAK_MM exchange
ISAKMP (0): processing ID payload. message ID = 0
ISAKMP (0): processing HASH payload. message ID = 0
ISAKMP (0): processing NOTIFY payload 24578 protocol 1
spi 0, message ID = 0
ISAKMP (0): SA has been authenticated

ISAKMP (0): ID payload
next-payload : 8
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 192.168.1.3, dest 192.168.1.1
ISAKMP: Created a peer node for 192.168.1.3
OAK_QM exchange
ISAKMP (0:0): Need XAUTH
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 192.168.1.3.
ID = 3196940891 (0xbe8d725b)
return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 192.168.1.3, dest 192.168.1.1
ISAKMP_TRANSACTION exchange
ISAKMP (0:0): processing transaction payload
from 192.168.1.3. message ID = 84
ISAKMP: Config payload CFG_REPLY
return status is IKMP_ERR_NO_RETRANS
ISAKMP (0:0): initiating peer config to 192.168.1.3.
ID = 3196940891 (0xbe8d725b)
crypto_isakmp_process_block: src 192.168.1.3, dest 192.168.1.1
ISAKMP_TRANSACTION exchange
ISAKMP (0:0): processing transaction payload
from 192.168.1.3. message ID = 60
ISAKMP: Config payload CFG_ACK
ISAKMP (0:0): initiating peer config to 192.168.1.3.
ID = 1647424595 (0x6231b453)
return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 192.168.1.3, dest 192.168.1.1
ISAKMP_TRANSACTION exchange
ISAKMP (0:0): processing transaction payload
from 192.168.1.3. message ID = 60
ISAKMP: Config payload CFG_ACK
ISAKMP (0:0): peer accepted the address!
return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 192.168.1.3, dest 192.168.1.1
OAK_QM exchange
oakley_process_quick_mode:
OAK_QM_IDLE
ISAKMP (0): processing SA payload. message ID = 802013669

ISAKMP : Checking IPsec proposal 1

ISAKMP: transform 1, ESP_DES
ISAKMP:  attributes in transform:
ISAKMP:      authenticator is HMAC-MD5
```

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ISAKMP:      encaps is 1
ISAKMP (0): atts are acceptable.IPSEC(validate_proposal_request)
:proposal part #1,
  (key eng. msg.) dest= 192.168.1.1, src = 192.168.1.3,
  dest_proxy= 10.89.129.128/255.255.255.128/0/0 (type=4),
  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 = 802013669

ISAKMP (0): processing ID payload. message ID = 802013669
ISAKMP (0): ID_IPV4_ADDR src 10.89.129.200 prot 0 port 0
ISAKMP (0): processing ID payload. message ID = 802013669
ISAKMP (0): ID_IPV4_ADDR_SUBNET dst 10.89.129.128/255.255.255.128
prot 0 port 0IPSEC(key_engine): got a queue event...
IPSEC(spi_response): getting spi 0xd7cef5ba(3620664762)for SA
  from 192.168.1.3 to 192.168.1.1 for prot 3

return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 192.168.1.3, dest 192.168.1.1
OAK_QM exchange
oakley_process_quick_mode:
OAK_QM_AUTH_AWAITmap_alloc_entry: allocating entry 1
map_alloc_entry: allocating entry 2

ISAKMP (0): Creating IPsec SAs
  inbound SA from 192.168.1.3 to 192.168.1.1
  (proxy 10.89.129.200 to 10.89.129.128)
  has spi 3620664762 and conn_id 1 and flags 4
  outbound SA from 192.168.1.1 to 192.168.1.3
  (proxy 10.89.129.128 to 10.89.129.200)
  has spi 541375266 and conn_id 2 and flags 4
IPSEC(key_engine): got a queue event...

IPSEC(initialize_sas): ,
  (key eng. msg.) dest= 192.168.1.1, src=192.168.1.3,
  dest_proxy= 10.89.129.128/255.255.255.128/0/0 (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= 0s and 0kb,
  spi= 0xd7cef5ba(3620664762),conn_id= 1, keysize= 0, flags= 0x4
IPSEC(initialize_sas): ,
  (key eng. msg.) src= 192.168.1.1, dest=192.168.1.3,
  src_proxy= 10.89.129.128/255.255.255.128/0/0 (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= 0s and 0kb,
  spi= 0x2044bb22(541375266),conn_id= 2, keysize= 0, flags= 0x4

VPN Peer: IPSEC: Peer ip:192.168.1.3 Ref cnt incremented
to:2 Total VPN Peers:1
VPN Peer: IPSEC: Peer ip:192.168.1.3 Ref cnt incremented
to:3 Total VPN Peers:1
return status is IKMP_NO_ERROR

```

[Informações Relacionadas](#)

- [Dispositivos de segurança PIX 500 Series](#)
- [Referências de comando PIX](#)
- [Negociação IPsec/Protocolos IKE](#)

- [Introdução ao IPSec](#)
- [Estabelecendo conectividade através de firewalls do Cisco PIX](#)
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