

# Hoe wordt AAA-verificatie (Xauth) toegevoegd aan PIX IPSec 5.2 en hoger

## Inhoud

[Inleiding](#)

[Voorwaarden](#)

[Vereisten](#)

[Gebruikte componenten](#)

[Conventies](#)

[Achtergrondinformatie](#)

[Debug Stappen](#)

[Debug Commissies op de PIX](#)

[Clientdebug](#)

[AAA-serverprofielen](#)

[Cisco Secure UNIX-TACACS+](#)

[Cisco Secure ACS voor Windows TACACS+](#)

[Cisco Secure UNIX-RADIUS](#)

[Cisco Secure ACS voor Windows RADIUS](#)

[Merit RADIUS \(ondersteuning voor Cisco AV-paren\)](#)

[Netwerkdiagram](#)

[Configureerbare RADIUS-poorten \(5.3 en later\)](#)

[Hoe u Verificeert met Xauth zonder VPN-groepen](#)

[Cisco Secure VPN-client 12.1 Setup - Xauth zonder VPN-groepen](#)

[VPN 3000 client 2.5 voor VPN-client 3.x Setup - Xauth zonder VPN-groepen](#)

[Xauth zonder VPN-groepen - PIX Setup](#)

[Verificatie met Xauth via VPN-groepen](#)

[VPN-client 2.5 of 3.0 instellen - Xauth met VPN-groepen](#)

[Xauth met VPN-groepen - PIX Setup](#)

[Xauth met VPN-groepen en downloadbare ACL's per gebruiker - ACS Setup](#)

[Xauth met VPN-groepen en downloadbare ACL's per gebruiker - PIX 6.x Setup](#)

[Xauth met VPN-groepen en downloadbare ACL's per gebruiker - ASA/PIX 7.x Setup](#)

[Local Xauth configureren voor VPN-clientverbinding](#)

[Hoe accounting toe te voegen](#)

[Voorbeeld van TACACS+ accounting](#)

[RADIUS-accounting voorbeeld](#)

[Debug en tonen - Xauth zonder VPN-groepen](#)

[Debug en tonen - Xauth met VPN-groepen](#)

[Debug en tonen - Xauth met downloadbare ACL's per gebruiker](#)

[Gerelateerde informatie](#)

## Inleiding

RADIUS- en TACACS+ verificatie en accounting, en tot op zekere hoogte autorisatie, wordt uitgevoerd voor Cisco Secure VPN-client 1.1 en Cisco VPN 3000 2.5 Hardware Client-tunnels die beëindigen in de PIX. Veranderingen in PIX 5.2 en later uitgebreide authenticatie (Xauth) ten opzichte van eerdere versies zoals verificatie, autorisatie en accounting (AAA) toegangstijst ondersteuning om te controleren tot welke geauthentiseerde gebruikers toegang en ondersteuning kunnen hebben voor Cisco VPN 3000 Client 2.5 Xauth-beëindiging. De opdracht **split-tunneling van de VPN-groep** maakt het mogelijk dat de VPN 3000-client tegelijkertijd wordt aangesloten op het netwerk in de PIX-modus en op andere netwerken (bijvoorbeeld het internet). In PIX 5.3 en hoger is de AAA-wijziging in vergelijking met eerdere versies van code dat de RADIUS-poorten configurerbaar zijn. In PIX 6.0 wordt ondersteuning voor VPN-client 3.x toegevoegd. Hiervoor is Diffie-Hellman groep 2 nodig.

## Voorwaarden

### Vereisten

Er zijn geen specifieke vereisten van toepassing op dit document.

### Gebruikte componenten

De informatie in dit document is gebaseerd op de volgende software- en hardware-versies:

- PIX-softwarerelease 5.2.1
- Cisco Secure VPN-client 12.1
- Cisco VPN 3000 2.5 client voor VPN-client 3.x  
**Opmerking:** De Cisco VPN-clientrelease 3.0.x werkt niet voor PIX-versies eerder dan 6.0. Raadpleeg [Cisco-hardware en VPN-clients voor ondersteuning van IPsec/PPTP/L2TP](#) voor meer informatie.

De informatie in dit document is gebaseerd op de apparaten in een specifieke laboratoriumomgeving. Alle apparaten die in dit document worden beschreven, hadden een opgeschoonde (standaard)configuratie. Als uw netwerk live is, moet u de potentiële impact van elke opdracht begrijpen.

### Conventies

Raadpleeg [Cisco Technical Tips Conventions \(Conventies voor technische tips van Cisco\)](#) voor meer informatie over documentconventies.

## Achtergrondinformatie

PIX-firewallsoftwarerelease 6.2 ondersteunt het downloaden van toegangscontrolelijsten (ACL's) naar de PIX-firewall vanaf een toegangscontroleserver (ACS). Dit stelt de configuratie van ACL's per gebruiker op een AAA-server in om ACL-toestemming voor elke gebruiker te geven. Het kan vervolgens via de ACS naar de PIX-firewall worden gedownload. Deze optie wordt alleen ondersteund voor RADIUS-servers. Het wordt niet ondersteund voor TACACS+ servers.

## Debug Stappen

Voltooи deze debug stappen:

1. Zorg ervoor dat de PIX Xauth-configuratie werkt voordat u AAA-verificatie toevoegt.Als u niet in staat bent om door het verkeer te gaan voordat u AAA toepast, kunt u dit achteraf niet meer doen.
2. Laat wat loggen in de PIX toe:Geef de **het debuggen** van de **houtkapconsole** niet op een zwaar geladen systeem.De **gebufferde** opdracht voor **het foutoptreden** kan worden verleend. Geef dan de opdracht **show logging logging logging**" uit.De vastlegging kan ook worden verzonden naar een System Message Log (SLOG)-server en worden onderzocht.
3. Zet de debugging aan op de TACACS+ of RADIUS servers. Alle servers hebben deze optie.

## Debug Commins op de PIX

- **debug crypto ipsec sa**— Dit debug-opdracht geeft IPsec gebeurtenissen weer.
- **debug crypto isakmp sa**— Dit debug commando toont berichten over de gebeurtenissen van Internet Key Exchange (IKE).
- **debug crypto isakmp engine** — Dit debug commando toont berichten over IKE gebeurtenissen.

## Clientdebug

Schakel het logvenster in om de knoppen aan de kant van de client te zien in Cisco Secure 1.1 of VPN 3000 Client 2.5.

## AAA-serverprofielen

### Cisco Secure UNIX-TACACS+

```
user = noacl{
password = clear "*****"
service=shell {
}
}
user = pixb{
password = clear "*****"
service=shell {
set acl=115
}
}
user = 3000full{
password = clear "*****"
service=shell {
}
}
user = 3000partial{
password = clear "*****"
service=shell {
}
}
```

## Cisco Secure ACS voor Windows TACACS+

De noACL, 3000full en 3000partiële gebruikers hebben alleen een gebruikersnaam en een wachtwoord nodig in Cisco Secure ACS voor Windows. De elf gebruiker heeft een gebruikersnaam, een wachtwoord, een shell/exec ingecheckt in groep, en ACL ingecheckt, en 115 in het vakje.

## Cisco Secure UNIX-RADIUS

```
user = noacl{
    password = clear "*****"
}
user = pixb{
    password = clear "*****"
    radius=Cisco {
        reply_attributes= {
            9,1="acl=115"
        }
    }
}
user = 3000full{
    password = clear "*****"
}
user = 3000partial{
    password = clear "*****"
}
```

## Cisco Secure ACS voor Windows RADIUS

RADIUS/Cisco is het apparaattype. De noACL, 3000full en 3000partiële gebruikers hebben alleen een gebruikersnaam en een wachtwoord nodig in Cisco Secure ACS voor Windows. De elf gebruiker heeft een gebruikersnaam, een wachtwoord en een controle en acl=115 nodig in het rechthoekige vakje Cisco/RADIUS waar het 009\001 AV-paar (leveranciersspecifiek) zegt.

**Opmerking:** je hebt de verkoper eigenschap nodig voor de ACL. Kenmerk 11, filter-id, is ongeldig. Dit probleem wordt toegewezen aan Cisco bug-ID [CSCdt50422](#) (alleen geregistreerde klanten). Het is vastgelegd in PIX-softwarerelease 6.0.1.

## Merit RADIUS (ondersteuning voor Cisco AV-paren)

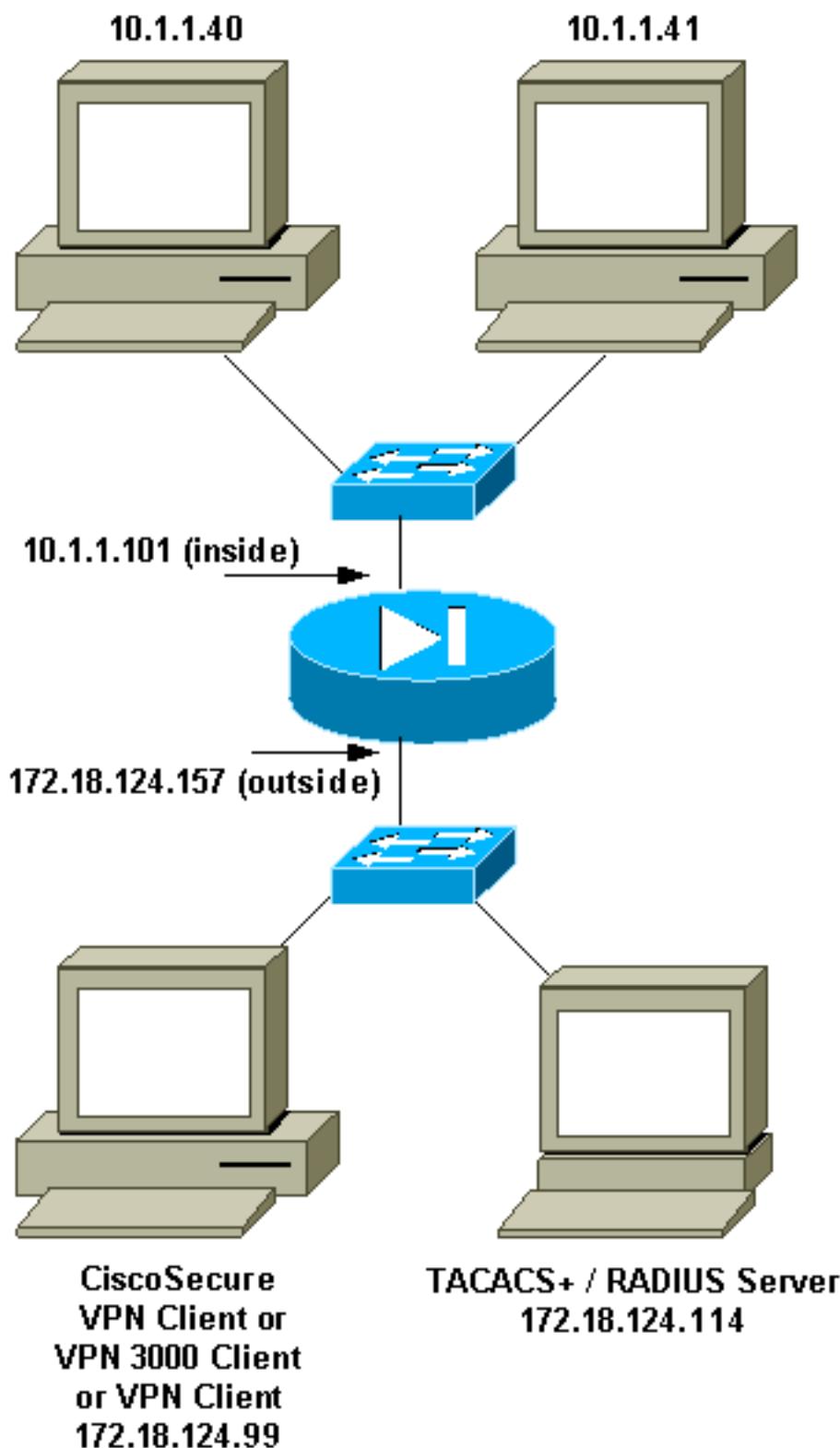
```
noacl Password= "noacl"

pixb Password= "pixb"
cisco-avpair = "acl=115"

3000full Password= "3000full"

3000partial Password= "3000partial"
```

## Netwerkdiagram



## Configureerbare RADIUS-poorten (5.3 en later)

Sommige RADIUS-servers gebruiken RADIUS-poorten anders dan 1645/1646 (gewoonlijk 1812/1813). In PIX 5.3 en hoger kunnen de RADIUS-verificatie en -accounting poorten worden gewijzigd in poorten anders dan standaard 1645/1646 met deze opdrachten:

- Straal autorisatie per server #
- Straal van een server #-ondersteuning

## Hoe u Verificeert met Xauth zonder VPN-groepen

In dit voorbeeld, worden alle drie de Clients van VPN authentiek met Xauth. Maar de VPN-clients kunnen alleen het netwerk binnen de PIX gebruiken, omdat er geen splitsen-tunneling is. Zie [Hoe u Xauth met VPN-groepen](#) voor meer informatie over split-tunneling kunt Verifiëren. ACL's die van de AAA-server zijn doorgegeven, zijn van toepassing op VPN-clients. In dit voorbeeld, is het doel voor gebruiker nobel om aan alle middelen binnen de PIX te verbinden en te krijgen. Gebruiker pixels verbinden, maar omdat ACL 115 tijdens het Xauth-proces van de AAA-server wordt doorgegeven, kan de gebruiker alleen 10.1.1.40 bereiken. Toegang tot 10.1.1.41 en alle andere IP-adressen erin worden geweigerd.

**Opmerking:** PIX-softwarerelease 6.0 is vereist voor ondersteuning van VPN-client 3.0.

## Cisco Secure VPN-client 12.1 Setup - Xauth zonder VPN-groepen

Name of connection:

Remote party address = IP\_Subnet = 10.1.1.0, Mask 255.255.255.0

Connect using Secure Gateway Tunnel to 172.18.124.157

My Identity:

Select certificate = None

ID\_Type = ip address, pre-shared key and fill in key

('cisco1234') - matches that of pix in 'isakmp key' command

Security policy = defaults

Proposal 1 (Authen) = DES, MD5

Proposal 2 (Key Exchange) = DES, MD5, Tunnel

Open een venster van de ontkenning van de service (doS) en geef het **pingt -t #.#.##**opdracht uit. Wanneer het Xauth-venster verschijnt, typt u de gebruikersnaam en het wachtwoord die overeenkomen met het wachtwoord op de AAA-server.

## VPN 3000 client 2.5 voor VPN-client 3.x Setup - Xauth zonder VPN-groepen

Voer de volgende stappen uit:

1. Selecteer Opties > Eigenschappen > Verificatie > Groepsnaam.
2. De groepsnaam is don't\_care en het wachtwoord is het eens met het wachtwoord op PIX in de opdracht **isakmp key**. De naam van de gastheer is 172.18.124.157.
3. Klik op **Connect**.
4. Wanneer het Xauth-venster verschijnt, typt u de gebruikersnaam en het wachtwoord die overeenkomen met het wachtwoord op de AAA-server.

## Xauth zonder VPN-groepen - PIX Setup

```
PIX Version 5.2(1)
nameif ethernet0 outside security0
nameif ethernet1 inside security100
enable password 8Ry2YjIyt7RRXU24 encrypted
passwd 2KFQnbNIdI.2KYOU encrypted
hostname goss-pixb
fixup protocol ftp 21
fixup protocol http 80
fixup protocol h323 1720
```

```
fixup protocol rsh 514
fixup protocol smtp 25
fixup protocol sqlnet 1521
fixup protocol sip 5060
names
access-list 108 permit ip 10.1.1.0 255.255.255.0
192.168.1.0 255.255.255.0
access-list 115 deny ip any host 10.1.1.41
access-list 115 permit ip any host 10.1.1.40
pager lines 24
logging on
no logging timestamp
no logging standby
logging console debugging
no logging monitor
no logging buffered
logging trap debugging
no logging history
logging facility 20
logging queue 512
interface ethernet0 auto
interface ethernet1 auto
mtu outside 1500
mtu inside 1500
ip address outside 172.18.124.157 255.255.255.0
ip address inside 10.1.1.101 255.255.255.0
ip audit info action alarm
ip audit attack action alarm
ip local pool test 192.168.1.1-192.168.1.5
no failover
failover timeout 0:00:00
failover poll 15
failover ip address outside 0.0.0.0
failover ip address inside 0.0.0.0
arp timeout 14400
global (outside) 1 172.18.124.154
nat (inside) 0 access-list 108
Nat (inside) 1 10.1.1.0 255.255.255.0 0 0
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00
rpc 0:10:00 h323 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 AuthInbound protocol tacacs+
AAA-server AuthInbound (outside) host 172.18.124.114 cisco timeout 5
no snmp-server location
no snmp-server contact
snmp-server community public
no snmp-server enable traps
floodguard enable
sysopt connection permit-ipsec
no sysopt route dnat
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
crypto map mymap client configuration address initiate
crypto map mymap client configuration address respond
crypto map mymap client authentication AuthInbound
crypto map mymap interface outside
isakmp enable outside
isakmp key ***** address 0.0.0.0 netmask 0.0.0.0
isakmp identity address
```

```

isakmp client configuration address-pool local test outside
!---- Internet Security Association and Key Management Protocol (ISAKMP) !---- Policy for Cisco
VPN Client 2.5 or !---- Cisco Secure VPN Client 1.1. isakmp policy 10 authentication pre-share
isakmp policy 10 encryption des
isakmp policy 10 hash md5
!---- The 1.1 and 2.5 VPN Clients use Diffie-Hellman (D-H) !--- group 1 policy (PIX default).
isakmp policy 10 group 1
isakmp policy 10 lifetime 86400
!
!---- ISAKMP Policy for VPN Client 3.0 isakmp policy 20 authentication pre-share
isakmp policy 20 encryption des
isakmp policy 20 hash md5
!---- The VPN 3.0 Clients use D-H group 2 policy !--- and PIX 6.0 code. isakmp policy 20 group 2
isakmp policy 20 lifetime 86400
telnet timeout 5
ssh timeout 5
terminal width 80
Cryptochecksum:05c6a2f3a7d187162c4408503b55affa
: end
[OK]

```

## Verificatie met Xauth via VPN-groepen

In dit voorbeeld kan VPN-client 2.5 of VPN-client 3.0 worden geauthenticeerd met Xauth, en is splitsingen-tunneling in werking. Door het lidmaatschap van VPN wordt een ACL van de PIX naar de VPN 3000 client doorgegeven. Het specificeert dat alleen het netwerk binnen de PIX een versleutelde tunnel heeft. Ander verkeer (wellicht via internet) is niet versleuteld.

In dit voorbeeld, heeft één VPN-client, met gebruikersnaam 3000full (op de AAA-server), in groep vpn3000-all (op de PIX) toegang tot het gehele 10.1.1.X-netwerk binnen de PIX tegelijk met internet. De VPN-client ontvangt informatie over windenergie, dns-server en domeinnamen. De andere VPN-client, met gebruikersnaam 3000gedeeltelijk (op de AAA-server), heeft in groep vpn3000-41 (op de PIX) op basis van het groepsprofiel slechts één IP-adres binnen het netwerk (10.1.1.40) toegang. Deze VPN-client ontvangt geen wins- en dns-serverinformatie, maar wel gesplitste tunneling.

**Opmerking:** PIX-softwarerelease 6.0 is vereist voor ondersteuning van VPN-client 3.0.

## VPN-client 2.5 of 3.0 instellen - Xauth met VPN-groepen

Voer de volgende stappen uit:

**N.B.:** De clientinstellingen van VPN 2.5 of 3.0 zijn afhankelijk van de betrokken gebruiker.

1. Selecteer Opties > Eigenschappen > Verificatie.
2. De naam van de groep en het groepswachtwoord komen overeen met de naam van de groep in PIX: vpn3000-all wachtwoord \*\*\*\*\* of vpngroep vpn3000-41 wachtwoord \*\*\*\*\* De naam van de gastheer is 172.18.124.157.
3. Klik op Connect.
4. Wanneer het Xauth-venster verschijnt, voert u de gebruikersnaam en het wachtwoord in die overeenkomen met het wachtwoord op de AAA-server.

In dit voorbeeld, wanneer gebruiker 3000full echt wordt verklaard, haalt het de informatie op van de vpn3000-all groep. Gebruiker 3000 maakt deel uit van de informatie van de vpn3000-41 groep. Het venster toont **onderhandelende veiligheidsprofielen en uw link is nu veilig.**

Gebruiker 3000 gebruikt het wachtwoord voor groep VPN3000-all. Toegangslijst 108 wordt met die groep geassocieerd voor splitsingen-tunneling doeleinden. De tunnel wordt gevormd tot het 10.1.1.x-netwerk. Het verkeer stroomt niet gecodeerd naar apparaten in toegangslijst 108 (bijvoorbeeld het internet). Dit is gespleten tunneling.

Dit is de uitvoer voor het venster van de VPN-clientverbindingssstatus voor gebruiker 3000full:

	Network	Mask
key	10.1.1.0	255.255.255.0
key	172.18.124.157	255.255.255.255

Gebruiker 3000 maakt gedeeltelijk gebruik van het wachtwoord voor groep vpn3000-41. Toegangslijst 125 is gekoppeld aan die groep voor splitsingen-tunneling. De tunnel wordt gevormd tot het 10.1.1.41-toestel. Het verkeer stroomt niet gecodeerd naar apparaten in toegangslijst 125 (bijvoorbeeld het internet). Het verkeer stroomt echter niet naar het 10.1.1.40-apparaat omdat dit verkeer niet routeerbaar is. Het wordt niet gespecificeerd in de lijst van encryptie tunnels.

Dit is de uitvoer voor het venster van de VPN-clientverbindingssstatus voor gebruiker 3000gedeeltelijk:

	Network	Mask
key	10.1.1.41	255.255.255.255
key	172.18.124.157	255.255.255.255

## Xauth met VPN-groepen - PIX Setup

**Opmerking:** Cisco Secure VPN-client 1.1 werkt niet met deze client, omdat er geen ISAKMP-toets (Internet Security Association en Key Management Protocol) is. Voeg de opdracht 0.0.0.0.0 toe aan de opdracht **isakmp-toets \*\*\*\*\*-adres** om alle VPN-clients te laten werken.

```
PIX Version 5.2(1)
nameif ethernet0 outside security0
nameif ethernet1 inside security100
enable password 8Ry2YjIyt7RRXU24 encrypted
passwd OnTrBUG1Tp0edmkr encrypted
hostname goss-pixb
fixup protocol ftp 21
fixup protocol http 80
fixup protocol h323 1720
fixup protocol rsh 514
fixup protocol smtp 25
fixup protocol sqlnet 1521
fixup protocol sip 5060
names
access-list 108 permit ip 10.1.1.0 255.255.255.0
192.168.1.0 255.255.255.0
access-list 125 permit ip host 10.1.1.41 any
pager lines 24
logging on
no logging timestamp
no logging standby
logging console debugging
no logging monitor
no logging buffered
logging trap debugging
no logging history
logging facility 20
```

```

logging queue 512
interface ethernet0 auto
interface ethernet1 auto
mtu outside 1500
mtu inside 1500
ip address outside 172.18.124.157 255.255.255.0
ip address inside 10.1.1.1 255.255.255.0
ip audit info action alarm
ip audit attack action alarm
ip local pool test 192.168.1.1-192.168.1.5
no failover
failover timeout 0:00:00
failover poll 15
failover ip address outside 0.0.0.0
failover ip address inside 0.0.0.0
arp timeout 14400
global (outside) 1 172.18.124.154
Nat (inside) 0 access-list 108
Nat (inside) 1 10.1.1.0 255.255.255.0 0 0
route outside 0.0.0.0 0.0.0.0 172.18.124.1 1
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00
rpc 0:10:00 h323 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 AuthInbound protocol tacacs+
AAA-server AuthInbound (outside) host 172.18.124.111
cisco timeout 5
no snmp-server location
no snmp-server contact
snmp-server community public
no snmp-server enable traps
floodguard enable
sysopt connection permit-ipsec
no sysopt route dnat
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
crypto map mymap client configuration address initiate
crypto map mymap client configuration address respond
crypto map mymap client authentication AuthInbound
crypto map mymap interface outside
isakmp enable outside
isakmp identity address
isakmp client configuration address-pool local test outside
!---- ISAKMP Policy for Cisco VPN Client 2.5 or !--- Cisco Secure VPN Client 1.1. isakmp policy
10 authentication pre-share
isakmp policy 10 encryption des
isakmp policy 10 hash md5
!---- The 1.1 and 2.5 VPN Clients use Diffie-Hellman (D-H) !--- group 1 policy (PIX default).
isakmp policy 10 group 1
isakmp policy 10 lifetime 86400
!
!---- ISAKMP Policy for VPN Client 3.0 isakmp policy 20 authentication pre-share
isakmp policy 20 encryption des
isakmp policy 20 hash md5
!---- The VPN 3.0 Clients use D-H group 2 policy !--- and PIX 6.0 code. isakmp policy 20 group 2
isakmp policy 20 lifetime 86400
vpngroup vpn3000-all address-pool test
vpngroup vpn3000-all dns-server 10.1.1.40
vpngroup vpn3000-all wins-server 10.1.1.40
vpngroup vpn3000-all default-domain rtp.cisco.com

```

```

vpngroup vpn3000-all split-tunnel 108
vpngroup vpn3000-all idle-time 1800
vpngroup vpn3000-all password *****
vpngroup vpn3000-41 address-pool test
vpngroup vpn3000-41 split-tunnel 125
vpngroup vpn3000-41 idle-time 1800
vpngroup vpn3000-41 password *****
telnet timeout 5
ssh timeout 5
terminal width 80
Cryptochecksum:429db0e7d20451fc28074f4d6f990d25
: end

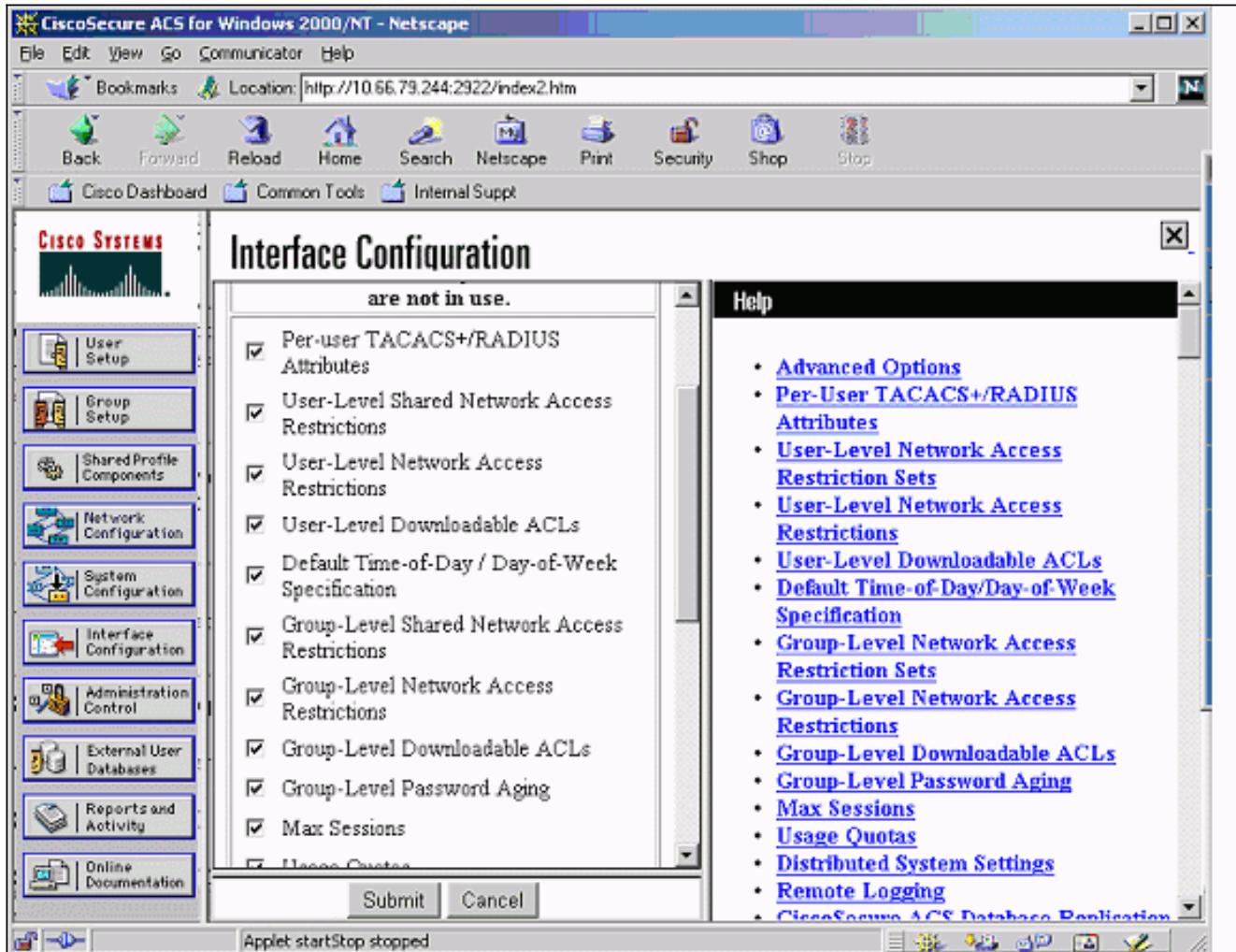
```

## Xauth met VPN-groepen en downloadbare ACL's per gebruiker - ACS Setup

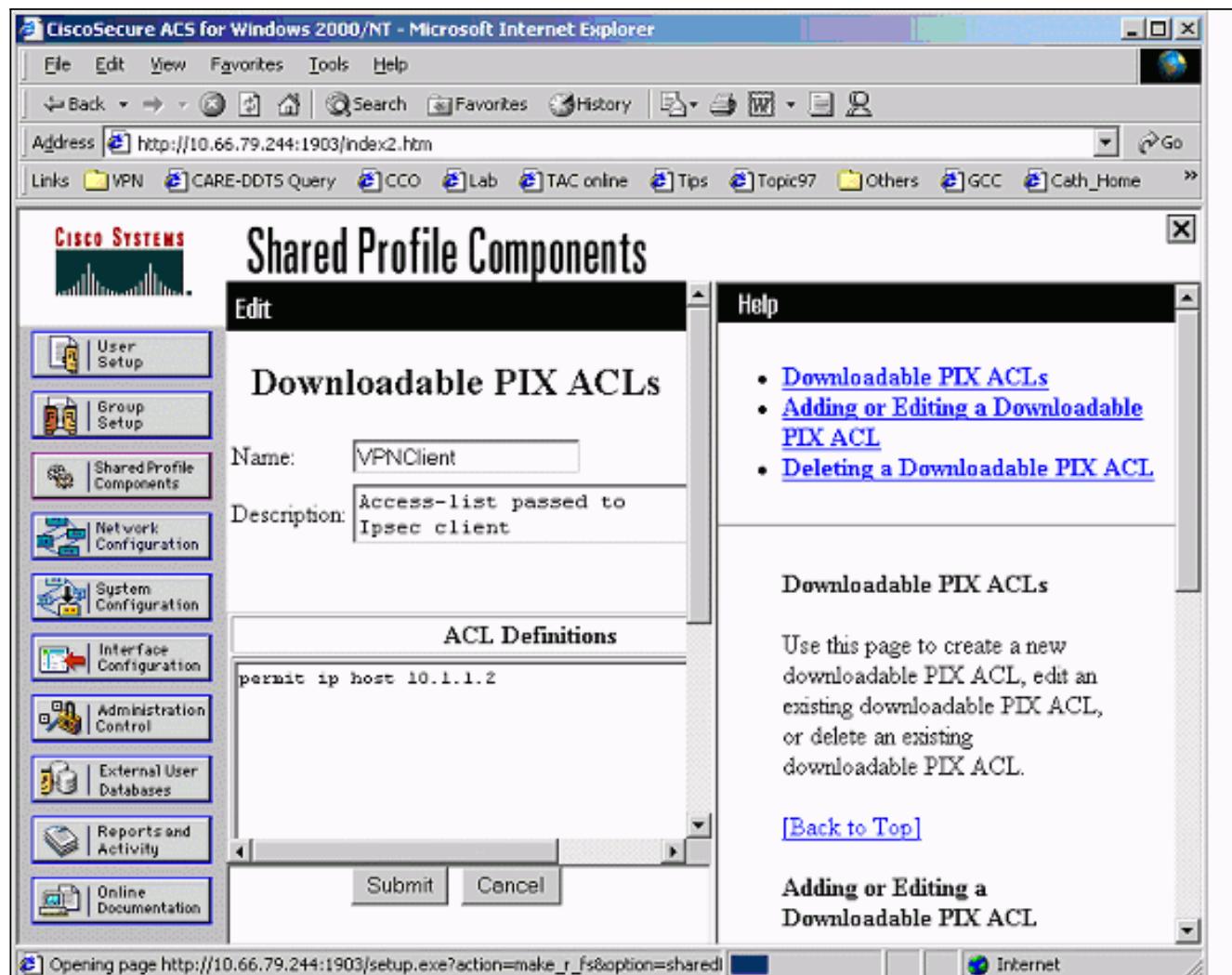
### Stel Cisco Secure ACS in

Voer de volgende stappen uit:

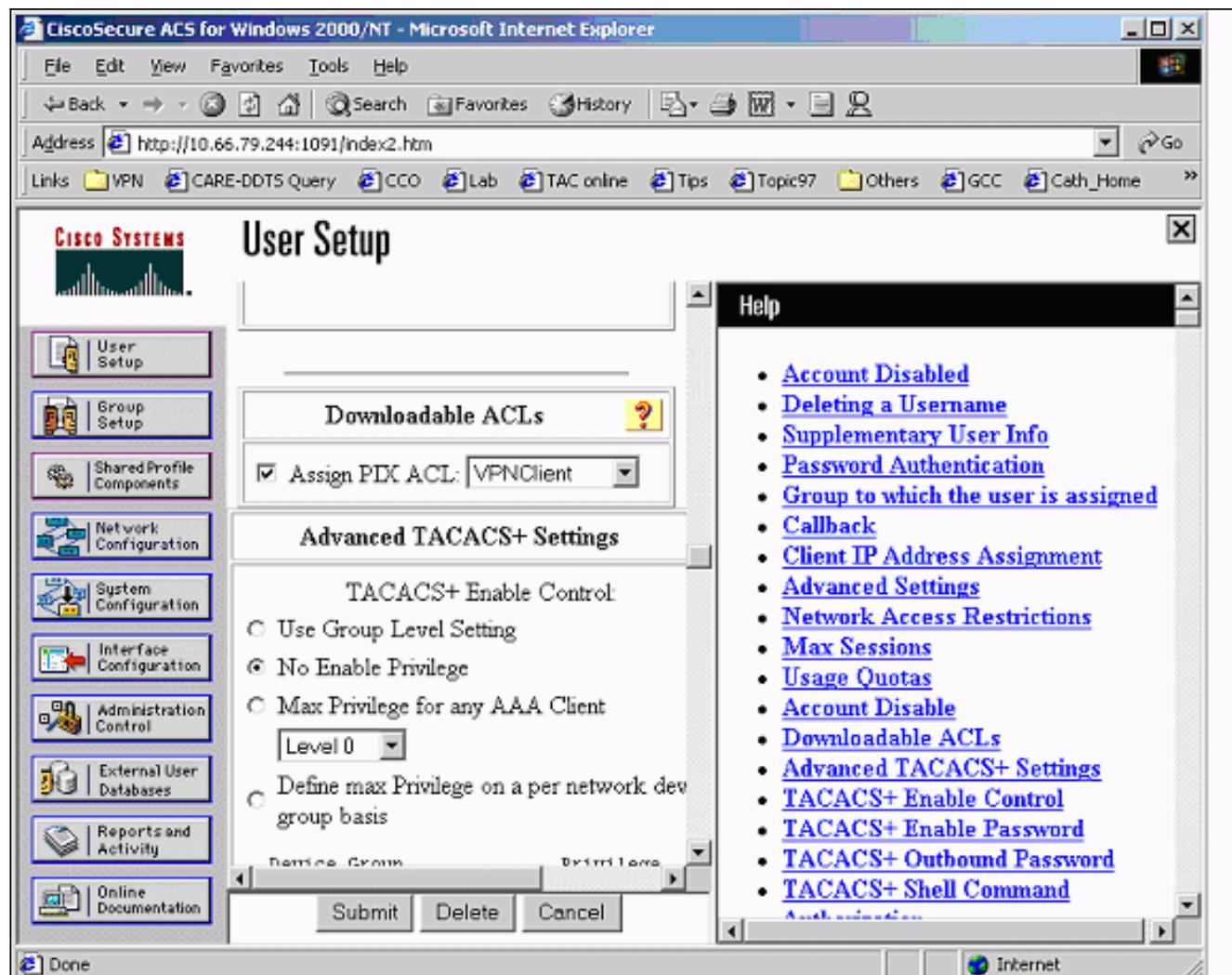
1. Klik op **Interface Configuration** en selecteer de optie voor **USER-Level Downloadable ACL's**.



2. Klik op **Shared Profile Componenten** en definieer een te downloaden ACL.



3. Klik op **Gebruikersinstelling**. Selecteer de optie om **PIX ACL toe te wijzen**. Kies de juiste ACL in de keuzelijst.



## Xauth met VPN-groepen en downloadbare ACL's per gebruiker - PIX 6.x Setup

Als u ACL-gebruiker per gebruiker wil downloaden voor autorisatie, gebruikt u PIX Firewall softwareversie 6.2(2). Raadpleeg Cisco bug-ID [CSCdx47975](#) (alleen geregistreerde klanten).

```
PIX Version 6.2(2)
nameif ethernet0 outside security0
nameif ethernet1 inside security100
enable password 8Ry2YjIyt7RRXU24 encrypted
passwd 2KFQnbNIdI.2KYOU encrypted
hostname sv2-4
fixup protocol ftp 21
fixup protocol http 80
fixup protocol h323 h225 1720
fixup protocol h323 ras 1718-1719
fixup protocol ils 389
fixup protocol rsh 514
fixup protocol rtsp 554
fixup protocol smtp 25
fixup protocol sqlnet 1521
fixup protocol sip 5060
fixup protocol skinny 2000
names
access-list 108 permit ip 10.1.1.0 255.255.255.0
192.168.1.0 255.255.255.0
pager lines 24
logging buffered debugging
```

```

interface ethernet0 auto
interface ethernet1 auto
mtu outside 1500
mtu inside 1500
ip address outside 10.66.79.69 255.255.255.224
ip address inside 10.1.1.1 255.255.255.0
ip audit info action alarm
ip audit attack action alarm
ip local pool test 192.168.1.1-192.168.1.5
pdm history enable
arp timeout 14400
nat (inside) 0 access-list 108
conduit permit icmp any any
route outside 0.0.0.0 0.0.0.0 10.66.79.65 1
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00
rpc 0:10:00 h323 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
aaa-server AuthInbound protocol radius
aaa-server AuthInbound (outside) host 10.66.79.244 cisco123 timeout 10
no snmp-server location
no snmp-server contact
snmp-server community public
no snmp-server enable traps
floodguard enable
sysopt connection permit-ipsec
no sysopt route dnat
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
!---- This commands the router to respond to the VPN 3.x Client. crypto map mymap client configuration address respond
!---- This tells the router to expect Xauth for the VPN 3.x Client. crypto map mymap client authentication AuthInbound
crypto map mymap interface outside
isakmp enable outside
isakmp policy 20 authentication pre-share
isakmp policy 20 encryption des
isakmp policy 20 hash md5
isakmp policy 20 group 2
isakmp policy 20 lifetime 86400
!
!---- This is the VPN group configuration. vpngroup vpn3000-all address-pool test
vpngroup vpn3000-all default-domain apt.cisco.com
!---- The split-tunnel mode-config is not used, !--- which enforces authorization on a per-user basis. vpngroup vpn3000-all idle-time 1800
vpngroup vpn3000-all password *****
!
telnet timeout 5
ssh timeout 5
terminal width 80
Cryptochecksum:7c3d067232f427e7522f4a679e963c58
end:

```

## Xauth met VPN-groepen en downloadbare ACL's per gebruiker - ASA/PIX 7.x Setup

```

hostname PIX
domain-name cisco.com
enable password 9jNfZuG3TC5tCVH0 encrypted
names
!
interface Ethernet0
 nameif outside
 security-level 0
 ip address 10.66.79.69 255.255.255.224
!
interface Ethernet1
 nameif inside
 security-level 100
 ip address 10.1.1.1 255.255.255.0
!
passwd 2KFQnbNIdI.2KYOU encrypted
ftp mode passive
dns domain-lookup inside
dns server-group DefaultDNS
timeout 30

access-list 108 permit ip 10.1.1.0 255.255.255.0 192.168.1.0 255.255.255.0
pager lines 24
logging buffer-size 500000
logging console debugging
logging monitor errors
mtu outside 1500
mtu inside 1500
ip local pool test 192.168.1.1-192.168.1.5
no failover
icmp permit any outside
icmp permit any inside
no asdm history enable
arp timeout 14400

nat (inside) 0 access-list 108
route outside 0.0.0.0 0.0.0.0 10.66.79.65 1
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00 icmp 0:00:02
timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp 0:05:00
timeout mgcp-pat 0:05:00 sip 0:30:00 sip_media 0:02:00
timeout uauth 0:05:00 absolute

aaa-server AuthInbound protocol radius
aaa-server AuthInbound host 10.66.79.244 key cisco123

group-policy vpn3000 internal
group-policy vpn3000 attributes
 dns-server value 172.16.1.1
 default-domain value cisco.com

username vpn3000 password nPtKy7KDCerzhKeX encrypted
no snmp-server location
no snmp-server contact
snmp-server enable traps snmp authentication linkup linkdown coldstart

crypto ipsec transform-set my-set esp-des esp-md5-hmac

crypto dynamic-map dynmap 10 set transform-set my-set

crypto dynamic-map dynmap 10 set reverse-route

crypto map mymap 10 ipsec-isakmp dynamic dynmap

```

```

crypto map mymap interface outside

isakmp enable outside
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 1000

isakmp policy 65535 authentication pre-share
isakmp policy 65535 encryption 3des
isakmp policy 65535 hash sha
isakmp policy 65535 group 2
isakmp policy 65535 lifetime 86400

tunnel-group DefaultRAGroup general-attributes
 authentication-server-group (outside) vpn

tunnel-group vpn3000 type ipsec-ra

tunnel-group vpn3000 general-attributes
 address-pool test
 authentication-server-group vpn

tunnel-group vpn3000 ipsec-attributes
 pre-shared-key *

telnet timeout 5
ssh timeout 5
console timeout 0
!
class-map inspection_default
 match default-inspection-traffic
!
!
policy-map global_policy
 class inspection_default
 inspect dns maximum-length 512
 inspect ftp
 inspect h323 h225
 inspect h323 ras
 inspect netbios
 inspect rsh
 inspect rtsp
 inspect skinny
 inspect esmtp
 inspect sqlnet
 inspect sunrpc
 inspect tftp
 inspect sip
 inspect xdmcp
!
service-policy global_policy global
Cryptochecksum:ecb58c5d8ce805b3610b198c73a3d0cf
: end

```

## Local Xauth configureren voor VPN-clientverbinding

Deze opdrachten moeten lokaal Xauth configureren voor een VPN-clientverbinding:

- AAA-server-tag protocol *lokaal*
- crypto kaart *map-naam* client-authenticatie *a-server-naam*

Geef de gebruikersnaam opdracht uit om lokale gebruikers op PIX te definiëren.

Om de lokale gebruikersverificatiedatabase van de PIX-firewall te gebruiken, voert u **LOCAL** in voor de **server-tag** parameter voor de opdracht **Aa-server**. De opdracht **AAA-server** wordt met de opdracht **crypto map** uitgegeven om een authenticatie in te stellen zodat VPN-clients worden geauthentificeerd als ze toegang hebben tot de PIX-firewall.

## Hoe accounting toe te voegen

Dit is de syntaxis van het opdracht om accounting toe te voegen:

- A accounting *acctg\_service|behalve inkomende ||/outbound|if\_name local\_ip foreign\_mask tacacs+|straal;*

of (nieuw in 5.2):

- Een accounting omvat *acctg\_service* inkomende |uitgaande match *server\_tag*

In de PIX-configuratie, wordt de opdracht toegevoegd:

- een boekhouding omvat alle inkomende 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 AuthInbound ;

of (nieuw in 5.2):

- toeganglijst 150 vergunningip om het even welke Aa accounting match 150 buiten AuthInbound

Opmerking: de opdracht voor de **systeemverbinding** en niet de voor de verwerking van Xauth compatibele opdracht **ipsec** is vereist. Xauth accounting werkt niet alleen met de computer ipsec pl-compatibele opdracht. Xauth accounting is geldig voor TCP verbindingen. Het is niet geldig voor Internet Control Message Protocol (ICMP) of User Datagram Protocol (UDP).

## Voorbeeld van TACACS+ accounting

```
Fri Sep 8 03:48:40 2000 172.18.124.157
pixc PIX 192.168.1.1 start task_id=0x17 foreign_ip=192.168.1.1
  local_ip=10.1.1.40 cmd=telnet
Fri Sep 8 03:48:44 2000 172.18.124.157 pixc PIX 192.168.1.1
  stop task_id=0x17 foreign_ip=192.168.1.1 local_ip=10.1.1.40
    cmd=telnet elapsed_time=4 bytes_in=42 bytes_out=103
Fri Sep 8 03:49:31 2000 172.18.124.157 pixc PIX 192.168.1.1
  start task_id=0x18
foreign_ip=192.168.1.1 local_ip=10.1.1.40 cmd=http
Fri Sep 8 03:49:35 2000 172.18.124.157 pixc PIX 192.168.1.1
  stop task_id=0x18 foreign_ip=192.168.1.1 local_ip=10.1.1.40
    cmd=http elapsed_time=4 bytes_in=242 bytes_out=338
```

## RADIUS-accounting voorbeeld

```
Acct-Status-Type = Start
NAS-IP-Address = 172.18.124.157
Login-IP-Host = 10.1.1.40
Login-TCP-Port = 23
```

```

Acct-Session-Id = 0x00000003
User-Name = noacl
Vendor-Specific = Source-IP=192.168.1.1
Vendor-Specific = Source-Port=1141
Vendor-Specific = Destination-IP=10.1.1.40
Vendor-Specific = Destination-Port=23

Acct-Status-Type = Start
NAS-IP-Address = 172.18.124.157
Login-IP-Host = 10.1.1.40
Login-TCP-Port = 80
Acct-Session-Id = 0x00000004
User-Name = noacl
Vendor-Specific = Source-IP=192.168.1.1
Vendor-Specific = Source-Port=1168
Vendor-Specific = Destination-IP=10.1.1.40
Vendor-Specific = Destination-Port=80

Acct-Status-Type = Stop
NAS-IP-Address = 172.18.124.157
Login-IP-Host = 10.1.1.41
Login-TCP-Port = 80
Acct-Session-Id = 0x00000008
User-Name = noacl
Acct-Session-Time = 4
Acct-Input-Octets = 242
Acct-Output-Octets = 338
Vendor-Specific = Source-IP=192.168.1.1
Vendor-Specific = Source-Port=1182
Vendor-Specific = Destination-IP=10.1.1.41
Vendor-Specific = Destination-Port=80

Acct-Status-Type = Stop
NAS-IP-Address = 172.18.124.157
Login-IP-Host = 10.1.1.40
Login-TCP-Port = 23
Acct-Session-Id = 0x00000015
User-Name = noacl
Acct-Session-Time = 33
Acct-Input-Octets = 43
Acct-Output-Octets = 103
Vendor-Specific = Source-IP=192.168.1.1
Vendor-Specific = Source-Port=1257
Vendor-Specific = Destination-IP=10.1.1.40
Vendor-Specific = Destination-Port=23

```

## Debug en tonen - Xauth zonder VPN-groepen

```

goss-pixb#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
goss-pixb#terminal monitor
goss-pixb#

crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
OAK_MM exchange
ISAKMP (0): processing SA payload. message ID = 0

ISAKMP (0): Checking ISAKMP transform 1 against priority 10 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 172.18.124.99, dest 172.18.124.157
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

ISAKMP (0): processing vendor id payload

return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
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): processing notify INITIAL_CONTACTIPSEC(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 172.18.124.99

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 172.18.124.99, dest 172.18.124.157
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 172.18.124.99.
ID = 2218162690 (0x84367a02)
return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
```

```
ISAKMP_TRANSACTION exchange
ISAKMP (0:0): processing transaction payload from 172.18.124.99.
Message ID = 2156074032
ISAKMP: Config payload CFG_REPLY
return status is IKMP_ERR_NO_RETRANS109005: Authentication succeeded
for user 'pixb' from 172.18.124.99/0 to 0.0.0.0/0 on
interface IKE-XAUTH
ISAKMP (0:0): initiating peer config to 172.18.124.99.
ID = 2218162690 (0x84367a02)
109005: Authentication succeeded for user 'pixb' from 172.18.124.157
crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
ISAKMP_TRANSACTION exchange
ISAKMP (0:0): processing transaction payload from 172.18.124.99.
Message ID = 2156497080
ISAKMP: Config payload CFG_ACK
ISAKMP (0:0): initiating peer config to 172.18.124.99.
ID = 393799466 (0x1778e72a)
return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
ISAKMP_TRANSACTION exchange
ISAKMP (0:0): processing transaction payload from 172.18.124.99.
Message ID = 2156156112
ISAKMP: Config payload CFG_ACK
ISAKMP (0:0): peer accepted the address!
return status is IKMP_NO_ERROR.99/0 to 0.0.0.0/0 on
interface IKE-XAUTH

crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
OAK_QM exchange
oakley_process_quick_mode:
OAK_QM_IDLE
ISAKMP (0): processing SA payload. Message ID = 2323118710

ISAKMP : Checking IPSec proposal 1

ISAKMP: transform 1, ESP_DES
ISAKMP: attributes in transform:
ISAKMP: authenticator is HMAC-MD5
ISAKMP: encaps is 1
ISAKMP (0): atts are acceptable.IPSEC(validate_proposal_request):
proposal part #1,
(key eng. msg.) dest= 172.18.124.157, src= 172.18.124.99,
dest_proxy= 10.1.1.0/255.255.255.0/0/0 (type=4),
src_proxy= 192.168.1.1/255.255.255.255/0/0 (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 = 2323118710

ISAKMP (0): processing ID payload. Message ID = 2323118710
ISAKMP (0): ID_IPV4_ADDR src 192.168.1.1 prot 0 port 0
ISAKMP (0): processing ID payload. Message ID = 2323118710
ISAKMP (0): ID_IPV4_ADDR_SUBNET dst 10.1.1.0/255.255.255.0
prot 0 port 0
IPSEC(key_engine): got a queue event...
IPSEC(spi_response): getting spi 0xeeaae8930(4004415792) for SA
from 172.18.124.99 to 172.18.124.157 for prot 3

return status is IKMP_NO_ERROR4
crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
OAK_QM exchange
oakley_process_quick_mode:
OAK_QM_AUTH_WAITmap_alloc_entry: allocating entry 1
```

```

map_alloc_entry: allocating entry 2

ISAKMP (0): Creating IPSec SAs
inbound SA from 172.18.124.99 to 172.18.124.157
(proxy 192.168.1.1 to 10.1.1.0)
has spi 4004415792 and conn_id 1 and flags 4
outbound SA from 172.18.124.157 to 172.18.124.99
(proxy 10.1.1.0 to 192.168.1.1)
has spi 1281287211 and conn_id 2 and flags 4
IPSEC(key_engine): got a queue event...
IPSEC(initialize_sas): ,
(key eng. msg.) dest= 172.18.124.157, src= 172.18.124.99,
dest_proxy= 10.1.1.0/255.255.255.0/0/0 (type=4),
src_proxy= 192.168.1.1/0.0.0.0/0/0 (type=1),
protocol= ESP, transform= esp-des esp-md5-hmac ,
lifedur= 0s and 0kb,
spi= 0xeeae8930(4004415792), conn_id= 1, keysize= 0, flags= 0x4
IPSEC(initialize_sas): ,
(key eng. msg.) src= 172.18.124.157, dest= 172.18.124.99,
src_proxy= 10.1.1.0/255.255.255.0/0/0 (type=4),
dest_proxy= 192.168.1.1/0.0.0.0/0/0 (type=1),
protocol= ESP, transform= esp-des esp-md5-hmac ,
lifedur= 0s and 0kb,
spi= 0x4c5ee42b(1281287211), conn_id= 2, keysize= 0, flags= 0x4

return status is IKMP_NO_ERROR02101: decaps: rec'd
IPSEC packet has invalid spi for destaddr=172.18.124.157,
prot=esp, spi=0xeeae8930(0)
602301: sa created, (sa) sa_dest= 172.18.124.157, sa_prot= 50,
sa_spi= 0xeeae8930(4004415792), sa_trans= esp-des esp-md5-hmac,
sa_conn_id= 1

602301: sa created, (sa) sa_dest= 172.18.124.99, sa_prot= 50,
sa_spi= 0x4c5ee42b(1281287211), sa_trans= esp-des esp-md5-hmac,
sa_conn_id= 2

109011: Authen Session Start: user 'pixb', sid 5
109015: Authorization denied (acl=115) for user 'pixb' from
192.168.1.1/0 to 10.1.1.40/8 on interface outside
109015: Authorization denied (acl=115) for user 'pixb' from
192.168.1.1/0 to 10.1.1.40/8 on interface outside
109015: Authorization denied (acl=115) for user 'pixb' from
192.168.1.1/0 to 10.1.1.40/8 on interface outside
109015: Authorization denied (acl=115) for user 'pixb' from
192.168.1.1/0 to 10.1.1.40/8 on interface outside

goss-pixb#
goss-pixb#show uauth
Current Most Seen
Authenticated Users 1 1
Authen In Progress 0 1
ipsec user 'pixb' at 192.168.1.1, authenticated
access-list 115
goss-pixb#show access-list
access-list 108 permit ip 10.1.1.0 255.255.255.0 192.168.1.0
255.255.255.0 (hitcnt=18)
access-list 125 permit ip host 10.1.1.41 any (hitcnt=0)
access-list dynacl4 permit ip 10.1.1.0 255.255.255.0 host
192.168.1.1 (hitcnt=0)
access-list 115 permit ip any host 10.1.1.41 (hitcnt=0)
access-list 115 deny ip any host 10.1.1.42 (hitcnt=0)

```

## Debug en tonen - Xauth met VPN-groepen

```
crypto_isakmp_process_block: src 172.18.124.96,
dest 172.18.124.157
goss-pixb#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
goss-pixb#
crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
OAK_AG exchange
ISAKMP (0): processing SA payload. message ID = 0

ISAKMP (0): Checking ISAKMP transform 1 against priority 10 policy
ISAKMP: encryption DES-CBC
ISAKMP: hash MD5
ISAKMP: default group 1
ISAKMP: auth pre-share
ISAKMP (0): atts are acceptable. Next payload is 3
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): speaking to a VPN3000 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 172.18.124.99, dest 172.18.124.157
OAK_AG exchange
ISAKMP (0): processing HASH payload. message ID = 0
ISAKMP (0): SA has been authenticated
return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
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 172.18.124.99.
```

```
ID = 1396280702 (0x53398d7e)
return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
ISAKMP_TRANSACTION exchange
ISAKMP (0:0): processing transaction payload from 172.18.124.99.
message ID = 2156608344
ISAKMP: Config payload CFG_REPLY
return status is IKMP_ERR_NO_RETRANS10
ISAKMP (0:0): initiating peer config to 172.18.124.99.
ID = 1396280702 (0x53398d7e)9
crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
ISAKMP_TRANSACTION exchange
ISAKMP (0:0): processing transaction payload from 172.18.124.99.
message ID = 2156115984
ISAKMP: Config payload CFG_ACK
ISAKMP (0:0): peer accepted the address!
ISAKMP (0:0): processing saved QM.
oakley_process_quick_mode:
OAK_QM_IDLE
ISAKMP (0): processing SA payload. message ID = 1697984837

ISAKMP : Checking IPSec proposal 1

ISAKMP: transform 1, ESP_DES
ISAKMP: attributes in transform:
ISAKMP: authenticator is HMAC-MD5
ISAKMP: encaps is 1
ISAKMP (0): atts are acceptable.
IPSEC(validate_proposal_request): proposal part #1,
(key eng. msg.) dest= 172.18.124.157, src= 172.18.124.99,
dest_proxy= 172.18.124.157/255.255.255.255/0/0 (type=1),
src_proxy= 192.168.1.1/255.255.255.255/0/0 (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 = 1697984837

ISAKMP (0): processing ID payload. message ID = 1697984837
ISAKMP (0): ID_IPV4_ADDR src 192.168.1.1 prot 0 port 0
ISAKMP (0): processing ID payload. message ID = 1697984837
ISAKMP (0): ID_IPV4_ADDR dst 172.18.124.157 prot 0 port 0
ISAKMP (0): processing NOTIFY payload 24578 protocol 1
spi 0, message ID = 1697984837
ISAKMP (0): processing notify INITIAL_CONTACTIPSEC(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 172.18.124.99
IPSEC(key_engine): got a queue event...
IPSEC(spi_response): getting spi 0x6a9d3f79(1788690297) for SA
from 172.18.124.99 to 172.18.124.157 for prot 3

return status is IKMP_NO_ERROR0
crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
OAK_QM exchange
oakley_process_quick_mode:
OAK_QM_AUTH_WAITmap_alloc_entry: allocating entry 1
map_alloc_entry: allocating entry 2

ISAKMP (0): Creating IPSec SAs
inbound SA from 172.18.124.99 to 172.18.124.157
(proxy 192.168.1.1 to 172.18.124.157)
has spi 1788690297 and conn_id 1 and flags 4
outbound SA from 172.18.124.157 to 172.18.124.99
```

```
(proxy 172.18.124.157 to 192.168.1.1)
has spi 2854452814 and conn_id 2 and flags 4
IPSEC(key_engine): got a queue event...
IPSEC(initialize_sas): ,
(key eng. msg.) dest= 172.18.124.157, src= 172.18.124.99,
dest_proxy= 172.18.124.157/0.0.0.0/0/0 (type=1),
src_proxy= 192.168.1.1/0.0.0.0/0/0 (type=1),
protocol= ESP, transform= esp-des esp-md5-hmac ,
lifedur= 0s and 0kb,
spi= 0x6a9d3f79(1788690297), conn_id= 1, keysize= 0, flags= 0x4
IPSEC(initialize_sas): ,
(key eng. msg.) src= 172.18.124.157, dest= 172.18.124.99,
src_proxy= 172.18.124.157/0.0.0.0/0/0 (type=1),
dest_proxy= 192.168.1.1/0.0.0.0/0/0 (type=1),
protocol= ESP, transform= esp-des esp-md5-hmac ,
lifedur= 0s and 0kb,
spi= 0xaa237e4e(2854452814), conn_id= 2, keysize= 0, flags= 0x4

return status is IKMP_NO_ERROR05: Authentication succeeded
for user 'pixc' from 172.18.124.99/0 to 0.0.0.0/0 on interface IKE-XAUTH
602301: sa created, (sa) sa_dest= 172.18.124.157, sa_prot= 50,
sa_spi= 0x6a9d3f79(1788690297), sa_trans= esp-des esp-md5-hmac ,
sa_conn_id= 1

602301: sa created, (sa) sa_dest= 172.18.124.99, sa_prot= 50,
sa_spi= 0xaa237e4e(2854452814), sa_trans= esp-des esp-md5-hmac ,
sa_conn_id= 2

109011: Authen Session Start: user 'pixc', sid 19

crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
OAK_QM exchange
oakley_process_quick_mode:
OAK_QM_IDLE
ISAKMP (0): processing SA payload. message ID = 3361949217

ISAKMP : Checking IPSec proposal 1

ISAKMP: transform 1, ESP_DES
ISAKMP: attributes in transform:
ISAKMP: authenticator is HMAC-MD5
ISAKMP: encaps is 1
ISAKMP (0): atts are acceptable.
IPSEC(validate_proposal_request): proposal part #1,
(key eng. msg.) dest= 172.18.124.157, src= 172.18.124.99,
dest_proxy= 10.1.1.0/255.255.255.0/0/0 (type=4),
src_proxy= 192.168.1.1/255.255.255.255/0/0 (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 = 3361949217

ISAKMP (0): processing ID payload. message ID = 3361949217
ISAKMP (0): ID_IPV4_ADDR src 192.168.1.1 prot 0 port 0
ISAKMP (0): processing ID payload. message ID = 3361949217
ISAKMP (0): ID_IPV4_ADDR_SUBNET dst 10.1.1.0/255.255.255.0 prot 0 port 0
IPSEC(key_engine): got a queue event...
IPSEC(spi_response): getting spi 0xfec4c3aa(4274308010) for SA
from 172.18.124.99 to 172.18.124.157 for prot 3

return status is IKMP_NO_ERROR4
crypto_isakmp_process_block: src 172.18.124.99, dest 172.18.124.157
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 172.18.124.99 to 172.18.124.157
(proxy 192.168.1.1 to 10.1.1.0)
has spi 4274308010 and conn_id 4 and flags 4
outbound SA from 172.18.124.157 to 172.18.124.99
(proxy 10.1.1.0 to 192.168.1.1)
has spi 798459812 and conn_id 3 and flags 4
IPSEC(key_engine): got a queue event...
IPSEC(initialize_sas): ,
(key eng. msg.) dest= 172.18.124.157, src= 172.18.124.99,
dest_proxy= 10.1.1.0/255.255.255.0/0/0 (type=4),
src_proxy= 192.168.1.1/0.0.0.0/0/0 (type=1),
protocol= ESP, transform= esp-des esp-md5-hmac ,
lifedur= 0s and 0kb,
spi= 0xfc4c3aa(4274308010), conn_id= 4, keysize= 0, flags= 0x4
IPSEC(initialize_sas): ,
(key eng. msg.) src= 172.18.124.157, dest= 172.18.124.99,
src_proxy= 10.1.1.0/255.255.255.0/0/0 (type=4),
dest_proxy= 192.168.1.1/0.0.0.0/0/0 (type=1),
protocol= ESP, transform= esp-des esp-md5-hmac ,
lifedur= 0s and 0kb,
spi= 0x2f9787a4(798459812), conn_id= 3, keysize= 0, flags= 0x4

return status is IKMP_NO_ERROR02101: decaps: rec'd IPSEC
packet has invalid spi for destaddr=172.18.124.157, prot=esp,
spi=0xfc4c3aa(0)
602301: sa created, (sa) sa_dest= 172.18.124.157, sa_prot= 50,
sa_spi= 0xfc4c3aa(4274308010), sa_trans= esp-des esp-md5-hmac ,
sa_conn_id= 4

602301: sa created, (sa) sa_dest= 172.18.124.99, sa_prot= 50,
sa_spi= 0x2f9787a4(798459812), sa_trans= esp-des esp-md5-hmac ,
sa_conn_id= 3

```

```

goss-pixb#show uauth
Current Most Seen
Authenticated Users 1 1
Authen In Progress 0 1
ipsec user 'pixc' at 192.168.1.1, authenticated
goss-pixb#show crypto ipsec sa

```

```

interface: outside
Crypto map tag: mymap, local addr. 172.18.124.157

local ident (addr/mask/prot/port): (172.18.124.157/255.255.255.255/0/0)
remote ident (addr/mask/prot/port): (192.168.1.1/255.255.255.255/0/0)
current_peer: 172.18.124.99
dynamic allocated peer ip: 192.168.1.1

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.: 172.18.124.157, remote crypto endpt.: 172.18.124.99

```

```
path mtu 1500, ipsec overhead 56, media mtu 1500
current outbound spi: aa237e4e

inbound esp sas:
spi: 0x6a9d3f79(1788690297)
transform: esp-des esp-md5-hmac ,
<--- More ---> in use settings ={Tunnel, }
slot: 0, conn id: 1, crypto map: mymap
sa timing: remaining key lifetime (k/sec): (4608000/28519)
IV size: 8 bytes
replay detection support: Y

inbound ah sas:

inbound pcp sas:

outbound esp sas:
spi: 0xaa237e4e(2854452814)
transform: esp-des esp-md5-hmac ,
in use settings ={Tunnel, }
slot: 0, conn id: 2, crypto map: mymap
sa timing: remaining key lifetime (k/sec): (4608000/28510)
IV size: 8 bytes
replay detection support: Y

outbound ah sas:
<--- More --->

outbound pcp sas:

local ident (addr/mask/prot/port): (10.1.1.0/255.255.255.0/0/0)
remote ident (addr/mask/prot/port): (192.168.1.1/255.255.255.255/0/0)
current_peer: 172.18.124.99
dynamic allocated peer ip: 192.168.1.1

PERMIT, flags={}
#pkts encaps: 4, #pkts encrypt: 4, #pkts digest 4
#pkts decaps: 4, #pkts decrypt: 4, #pkts verify 4
#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.: 172.18.124.157, remote crypto
endpt.:172.18.124.99
path mtu 1500, ipsec overhead 56, media mtu 1500
current outbound spi: 2f9787a4

inbound esp sas:
spi: 0xfc4c3aa(4274308010)
<--- More ---> transform: esp-des esp-md5-hmac ,
in use settings ={Tunnel, }
slot: 0, conn id: 4, crypto map: mymap
sa timing: remaining key lifetime (k/sec): (4607999/27820)
IV size: 8 bytes
replay detection support: Y
```

```
inbound ah sas:
```

```
inbound pcp sas:
```

```
outbound esp sas:  
spi: 0x2f9787a4(798459812)  
transform: esp-des esp-md5-hmac ,  
in use settings ={Tunnel, }  
slot: 0, conn id: 3, crypto map: mymap  
sa timing: remaining key lifetime (k/sec): (4607999/27820)  
IV size: 8 bytes  
replay detection support: Y
```

```
<--- More ---> outbound ah sas:
```

```
outbound pcp sas:
```

## Debug en tonen - Xauth met downloadbare ACL's per gebruiker

```
crypto_isakmp_process_block: src 10.66.79.229,  
dest 10.66.79.69  
VPN Peer: ISAKMP: Added new peer: ip:10.66.79.229  
Total VPN Peers:1  
VPN Peer: ISAKMP: Peer ip:10.66.79.229 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 20 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 20 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 20 policy  
ISAKMP: encryption 3DES-CBC  
ISAKMP: hash SHA  
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 4 against priority 20 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 20 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 20 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
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): received xauth v6 vendor id

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 : 2
protocol : 17
port : 500
length : 10
ISAKMP (0): Total payload length: 14
return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 10.66.79.229, dest 10.66.79.69
OAK_AG exchange
ISAKMP (0): processing HASH payload. message ID = 0
ISAKMP (0): processing NOTIFY payload 24578 protocol 1
spi 0, message ID = 0RADIUS_GET_PASS
RADIUS_REQUEST
radius.c: rad_mkpkt_authen
attribute:
type 1, length 10, content:
80917fb0: 74 65 73 74 75 73 65 72 | testuser
attribute:
type 4, length 6, content:
80917fb0: 0a 42 | .B
80917fc0: 4f 45 | OE
attribute:
type 5, length 6, content:
80917fd0: 00 00 00 01 | ....

ISAKMP (0): processing notify INITIAL_CONTACTrip 0x80791f00
: chall_state ''
: state 0x7
```

```
: timer 0x0
: info 0x5d5ba513
session_id 0x5d5ba513
request_id 0x2
user 'testuser'
app 0
reason 2
sip 10.66.79.244
type 1
rad_procpkt: ACCEPT
attribute:
type 8, length 6, content:
809186f0: ff ff | ..
80918700: ff ff | ..
RADIUS_RCVD
attribute:
type 26, length 67, content:
Vendor ID 0 0 0 9, type=1, len=61:
80918700: 41 43 53 3a 43 69 | ACS:Ci
80918710: 73 63 6f 53 65 63 75 72 65 2d 44 65 66 69 6e 65
| scoSecure-Define
80918720: 64 2d 41 43 4c 3d 23 41 43 53 41 43 4c 23 2d 50
| d-ACL=#ACSACL#-P
80918730: 49 58 2d 56 50 4e 43 6c 69 65 6e 74 2d 33 64 33
| IX-VPNClient-3d3
80918740: 32 37 38 31 35 | 27815
RADIUS_RCVD
RADIUS_REQUEST
radius.c: rad_mkpkt_authen
attribute:
type 1, length 33, content:
809186d0: 23 41 43 53 41 43 4c 23 2d 50 49 58 | #ACSACL#-PIX
809186e0: 2d 56 50 4e 43 6c 69 65 6e 74 2d 33 64 33 32 37
| -VPNClient-3d327
809186f0: 38 31 35 | 815
attribute:
type 4, length 6, content:
809186f0: 0a 42 4f 45 | .BOE
attribute:
type 5, length 6, content:
80918700: 00 00 00 | ...
80918710: 02 | .
IPSEC(key_engine): got a queue event...rip 0x80791f00
: chall_state ''
: state 0x7
: timer 0x0
: info 0x5d5ba513
session_id 0x5d5ba513
request_id 0x3
user '#ACSACL#-PIX-VPNClient-3d327815'
app 0
reason 2
sip 10.66.79.244
type 1
rad_procpkt: ACCEPT
attribute:
type 26, length 46, content:
Vendor ID 0 0 0 9, type=1, len=40:
80918e20: 69 70 3a 69 6e 61 63 6c 23 31 3d 70 | ip:inacl#1=p
80918e30: 65 72 6d 69 74 20 69 70 20 61 6e 79 20 68 6f 73
| ermit ip any hos
80918e40: 74 20 31 30 2e 31 2e 31 2e 32 | t 10.1.1.2
RADIUS_RCVD
RADIUS_RCVD
```

```
RADIUS_ACCESS_ACCEPT: normal termination
RADIUS_DELETE

IPSEC(key_engine_delete_sas): rec'd delete notify from ISAKMP
IPSEC(key_engine_delete_sas): delete all SAs shared with 10.66.79.229

ISAKMP (0): SA has been authenticated
return status is IKMP_NO_ERROR
ISAKMP (0): sending phase 1 RESPONDER_LIFETIME notify
ISAKMP (0): sending NOTIFY message 24576 protocol 1
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 10.66.79.229.
ID = 3250273953 (0xc1bb3ea1)
crypto_isakmp_process_block: src 10.66.79.229, dest 10.66.79.69
ISAKMP_TRANSACTION exchange
ISAKMP (0:0): processing transaction payload from 10.66.79.229.
message ID = 2167001532
ISAKMP: Config payload CFG_REPLY
return status is IKMP_ERR_NO_RETRANS
ISAKMP (0:0): initiating peer config to 10.66.79.229.
ID = 1530000247 (0x5b31f377)
crypto_isakmp_process_block: src 10.66.79.229, dest 10.66.79.69
ISAKMP_TRANSACTION exchange
ISAKMP (0:0): processing transaction payload from 10.66.79.229.
message ID = 2167001532
ISAKMP: Config payload CFG_ACK
return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 10.66.79.229, dest 10.66.79.69
ISAKMP_TRANSACTION exchange
ISAKMP (0:0): processing transaction payload from 10.66.79.229.
message ID = 2167001532
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 ALT_DEF_DOMAIN (28674)
ISAKMP: attribute ALT_SPLIT_INCLUDE (28676)
ISAKMP: attribute ALT_PFS (28679)
ISAKMP: attribute UNKNOWN (28680)
Unsupported Attr: 28680
ISAKMP: attribute UNKNOWN (28677)
Unsupported Attr: 28677
ISAKMP (0:0): responding to peer config from 10.66.79.229.
ID = 2397668523
return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 10.66.79.229, dest 10.66.79.69
OAK_QM exchange
oakley_process_quick_mode:
OAK_QM_IDLE
ISAKMP (0): processing SA payload. message ID = 2858414843

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:
crypto_isakmp_process_block: src 10.66.79.229, dest 10.66.79.69
```

```
OAK_QM exchange
crypto_isakmp_process_block: src 10.66.79.229, dest 10.66.79.69
OAK_QM exchange
oakley_process_quick_mode:
OAK_QM_AUTH_AWAIT
ISAKMP (0): Creating IPSec SAs
sv2-4(config)#
sv2-4(config)#
sv2-4(config)#
sv2-4(config)#
sv2-4(config)#show uauth
Current Most Seen
Authenticated Users 1 1
Authen In Progress 0 1
ipsec user 'testuser' at 192.168.1.1, authenticated
access-list #ACSAACL#-PIX-VPNClient-3d327815
sv2-4(config)#show access-list
access-list 108; 1 elements
access-list 108 permit ip 10.1.1.0 255.255.255.0 192.168.1.0
255.255.255.0 (hitcnt=38)
access-list #ACSAACL#-PIX-VPNClient-3d327815; 1 elements
access-list #ACSAACL#-PIX-VPNClient-3d327815 permit ip any host
10.1.1.2 (hitcnt=15)
access-list dynacl4; 1 elements
access-list dynacl4 permit ip host 10.66.79.69
host 192.168.1.1 (hitcnt=0)
access-list dynacl5; 1 elements
access-list dynacl5 permit ip any host 192.168.1.1 (hitcnt=15)
sv2-4(config)#show access-list
access-list 108; 1 elements
access-list 108 permit ip 10.1.1.0 255.255.255.0
192.168.1.0 255.255.255.0 (hitcnt=42)
access-list #ACSAACL#-PIX-VPNClient-3d327815; 1 elements
access-list #ACSAACL#-PIX-VPNClient-3d327815 permit ip any
host 10.1.1.2 (hitcnt=17)
access-list dynacl4; 1 elements
access-list dynacl4 permit ip host 10.66.79.69 host
192.168.1.1 (hitcnt=0)
access-list dynacl5; 1 elements
access-list dynacl5 permit ip any host 192.168.1.1 (hitcnt=17)
```

```
sv2-4(config)#show crypto map
```

```
Crypto Map: "mymap" interfaces: { outside }
client configuration address respond
client authentication AuthInbound

Crypto Map "mymap" 10 ipsec-isakmp
Dynamic map template tag: dynmap

Crypto Map "mymap" 20 ipsec-isakmp
Peer = 10.66.79.229
access-list dynacl6; 1 elements
access-list dynacl6 permit ip host 10.66.79.69
host 192.168.1.1 (hitcnt=0)
dynamic (created from dynamic map dynmap/10)
Current peer: 10.66.79.229
Security association lifetime: 4608000 kilobytes/28800 seconds
PFS (Y/N): N
Transform sets={ myset, }
```

```
Crypto Map "mymap" 30 ipsec-isakmp
```

```
Peer = 10.66.79.229
access-list dynacl7; 1 elements
access-list dynacl7 permit ip any host 192.168.1.1 (hitcnt=0)
dynamic (created from dynamic map dynmap/10)
Current peer: 10.66.79.229
Security association lifetime: 4608000 kilobytes/28800 seconds
PFS (Y/N): N
Transform sets={ myset, }
sv2-4(config)
```

## Gerelateerde informatie

- [PIX-ondersteuningspagina](#)
- [PIX-opdrachtreferenties](#)
- [Verzoeken om opmerkingen \(RFC's\)](#)
- [Cisco Secure ACS voor UNIX-ondersteuningspagina](#)
- [Cisco Secure ACS voor Windows-ondersteuningspagina](#)
- [Ondersteuningspagina voor TACACS/TACACS+](#)
- [TACACS+ in IOS-documentatie](#)
- [RADIUS-ondersteuningspagina](#)
- [Technische ondersteuning en documentatie – Cisco Systems](#)