

# 使用NAT和VPN客户端的PIX/ASA 7.x PIX到PIX动态到静态IPSec的配置示例

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## 简介

在大多数情况下，连接到中央 PIX 的远程 PIX 不使用网络地址转换 (NAT)。相反，远程 PIX 使用静态外部 IP 地址。在运行 7.x 及更高版本的中央 PIX 使用 NAT 连接到远程 PIX 的情况下，它与小型家庭办公室（如使用动态主机控制协议 (DHCP) 连接到电缆或 DSL 调制解调器的 PIX 501 或 506）相同。PIX 7.x 及更高版本以及 Cisco 自适应安全设备管理器 (ASDM) 不在 PIX 501 或 506 上运行。因此，在本例中，使用 DHCP 和 NAT 的远程 PIX 被假定为运行 6.x 代码的 PIX 501 或 506。此配置使中央 PIX 可以接受动态 IPsec 连接。远程 PIX 使用 NAT 将它后面以特有方式编址的设备加入到中央 PIX 后面以特有方式编址的网络。远程 PIX 可以启动与中央 PIX 的连接（它知道端点），但是中央 PIX 不能启动与远程 PIX 的连接（它不知道端点）。

在此示例配置中，Tiger 是远程 PIX，Lion 是中央 PIX。由于 Tiger 的 IP 地址未知，因此必须将 Lion 配置为动态地接受从知道通配符预共享密钥的任意位置启动的连接。Tiger 知道什么数据流将被加密（因为它由访问列表指定），并知道 Lion 端点所在的位置。Tiger 必须启动连接。两端都执行 NAT 和 nat 0 以避免对 IPsec 数据流执行 NAT。

此外，此配置中的远程用户使用 Cisco VPN Client 4.x 连接到中央 PIX (Lion)。远程用户无法连接到远程 PIX (Tiger)，因为两端都已动态地分配 IP 地址，不知道向何处发送请求。

要了解有关使用 Cisco VPN Client 3.x 的 PIX 6.x 中相同方案的详细信息，请参阅[使用 NAT 和 Cisco VPN Client 配置 PIX 到 PIX 动态到静态 IPsec。](#)

## 先决条件

## [要求](#)

本文档没有任何特定的要求。

## [使用的组件](#)

本文档中的信息基于以下软件和硬件版本：

- Cisco PIX 防火墙软件版本 7.x 及更高版本 ( 中央 PIX )
- Cisco PIX 防火墙软件版本 6.3.4 ( 远程 PIX )
- Cisco VPN Client 版本 4.x

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始 ( 默认 ) 配置。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

## [规则](#)

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

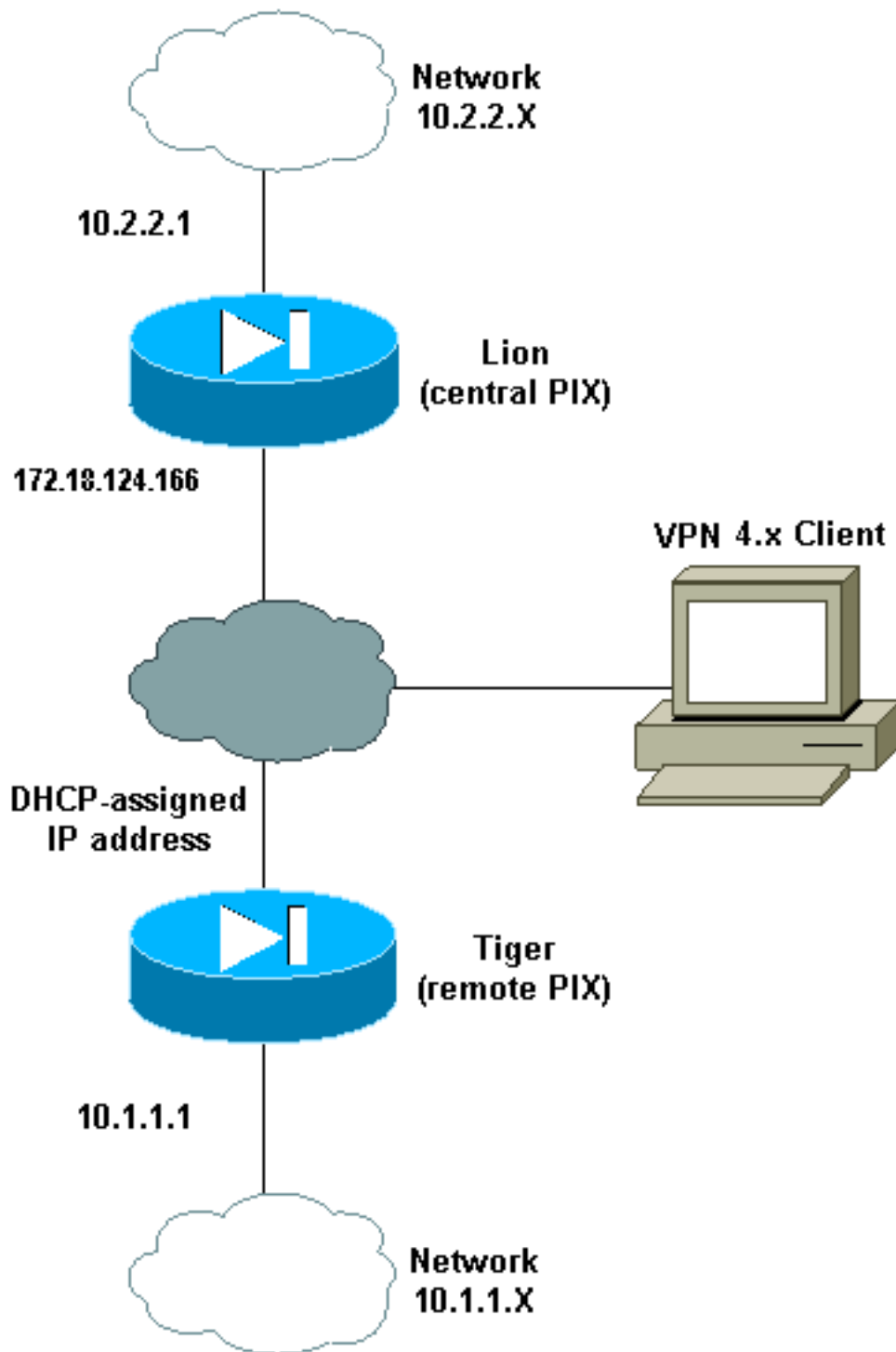
## [配置](#)

本部分提供有关如何配置本文档所述功能的信息。

**注意：**使用命令[查找工具](#)([仅限注册客户](#))可获取有关本节中使用的命令的详细信息。

## [网络图](#)

本文档使用以下网络设置：



## 配置

本文档使用以下配置：

- [Lion](#)
- [虎](#)

Lion
<pre> PIX Version 7.0(0) names ! interface Ethernet0  nameif outside </pre>

```
security-level 0
ip address 172.18.124.166 255.255.255.0
!
interface Ethernet1
 nameif inside
 security-level 100
 ip address 10.2.2.1 255.255.255.0
!
interface Ethernet2
 shutdown
 nameif intf2
 security-level 4
 no ip address
!
interface Ethernet3
 shutdown
 nameif intf3
 security-level 6
 no ip address
!
interface Ethernet4
 shutdown
 nameif intf4
 security-level 8
 no ip address
!
interface Ethernet5
 shutdown
 nameif intf5
 security-level 10
 no ip address
!
enable password 8Ry2YjIyt7RRXU24 encrypted
passwd 2KFQnbNIdI.2KYOU encrypted
hostname lion
domain-name cisco.com
boot system flash:/image.bin
ftp mode passive
access-list 100 extended permit ip 10.2.2.0
255.255.255.0 10.1.1.0 255.255.255.0
access-list 100 extended permit ip 10.2.2.0
255.255.255.0 10.3.3.0 255.255.255.0
pager lines 24
mtu outside 1500
mtu inside 1500
mtu intf2 1500
mtu intf3 1500
mtu intf4 1500
mtu intf5 1500
ip local pool clientpool 10.3.3.1-10.3.3.10
no failover
monitor-interface outside
monitor-interface inside
monitor-interface intf2
monitor-interface intf3
monitor-interface intf4
monitor-interface intf5
asdm image flash:/asdm-501.bin
asdm history enable
arp timeout 14400
nat-control
global (outside) 1 interface
nat (inside) 0 access-list 100
nat (inside) 1 0.0.0.0 0.0.0.0
```

```
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
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 TACACS+ protocol tacacs+
aaa-server RADIUS protocol radius
group-policy unityclient internal
group-policy unityclient attributes
  wins-server value 10.1.1.3
  dns-server value 10.1.1.3
  vpn-idle-timeout 30
  default-domain value cisco.com
  user-authentication disable
username cisco password 3USUcOPFUiMCO4Jk encrypted
http server enable
http 0.0.0.0 0.0.0.0 outside
http 0.0.0.0 0.0.0.0 inside
no snmp-server location
no snmp-server contact
snmp-server community public
snmp-server enable traps snmp
crypto ipsec transform-set myset esp-des esp-md5-hmac
crypto dynamic-map cisco 1 set transform-set myset
crypto map dyn-map 20 ipsec-isakmp dynamic cisco
crypto map dyn-map 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 3600
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
telnet timeout 5
ssh timeout 5
ssh version 1
console timeout 0
tunnel-group DefaultL2LGroup type ipsec-l2l
tunnel-group DefaultL2LGroup general-attributes
  authentication-server-group none
tunnel-group DefaultL2LGroup ipsec-attributes
  pre-shared-key *
tunnel-group unityclient type ipsec-ra
tunnel-group unityclient general-attributes
  address-pool clientpool
  authentication-server-group none
  default-group-policy unityclient
tunnel-group unityclient ipsec-attributes
  pre-shared-key *
!
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 http
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:4e20a2153437d60c7f01054808d41b42
: end
```

## 虎

```
PIX Version 6.3(4)
interface ethernet0 auto
interface ethernet1 auto
interface ethernet2 auto shutdown
interface ethernet3 auto shutdown
interface ethernet4 auto shutdown
interface ethernet5 auto shutdown
nameif ethernet0 outside security0
nameif ethernet1 inside security100
nameif ethernet2 intf2 security4
nameif ethernet3 intf3 security6
nameif ethernet4 intf4 security8
nameif ethernet5 intf5 security10
enable password 8Ry2YjIyt7RRXU24 encrypted
passwd 2KFQnbNIdI.2KYOU encrypted
hostname tiger
domain-name cisco.com
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
access-list 101 permit ip 10.1.1.0 255.255.255.0
10.2.2.0 255.255.255.0
pager lines 24
mtu outside 1500
mtu inside 1500
mtu intf2 1500
mtu intf3 1500
mtu intf4 1500
mtu intf5 1500
!--- This command configures the outside interface !---
as a DHCP client and it is assumed that the IP address
```

```
!--- 172.18.124.167 is assigned by the DHCP server. ip
address outside dhcp ip address inside 10.1.1.1
255.255.255.0 no ip address intf2 no ip address intf3 no
ip address intf4 no ip address intf5 ip audit info
action alarm ip audit attack action alarm no failover
failover timeout 0:00:00 failover poll 15 no failover ip
address outside no failover ip address inside no
failover ip address intf2 no failover ip address intf3
no failover ip address intf4 no failover ip address
intf5 pdm history enable arp timeout 14400 nat (inside)
0 access-list 101 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 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 TACACS+ max-
failed-attempts 3 aaa-server TACACS+ deadtime 10 aaa-
server RADIUS protocol radius aaa-server RADIUS max-
failed-attempts 3 aaa-server RADIUS deadtime 10 aaa-
server LOCAL protocol local no snmp-server location no
snmp-server contact snmp-server community public no
snmp-server enable traps floodguard enable sysopt
connection permit-ipsec crypto ipsec transform-set myset
esp-des esp-md5-hmac crypto map newmap 10 ipsec-isakmp
crypto map newmap 10 match address 101 crypto map newmap
10 set peer 172.18.124.166 crypto map newmap 10 set
transform-set myset crypto map newmap interface outside
isakmp enable outside isakmp key ***** address
172.18.124.166 netmask 255.255.255.255 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 3600 telnet timeout 5 ssh
timeout 5 console timeout 0 terminal width 80
Cryptochecksum:906331b1b1ca162ea53e951588efb070 : end
```

## 验证

使用本部分可确认配置能否正常运行。

[命令输出解释程序 \( 仅限注册用户 \) \(OIT\) 支持某些 show 命令。](#) 使用 OIT 可查看对 show 命令输出的分析。

**注意：**必须在配置模式下执行clear命令。

- clear crypto ipsec sa - 在尝试协商 VPN 隧道失败后重置 IPsec 关联。
- clear crypto isakmp sa - 在尝试协商 VPN 隧道失败后重置 Internet 安全连接和密钥管理协议 (ISAKMP) 安全关联。
- show crypto engine ipsec - 显示加密的会话。

## 故障排除

### 相同的预共享密钥

如果未建立 LAN 到 LAN (L2L) IPsec 隧道，请检查 DefaultRAGroup 的预共享密钥和 DefaultL2LGroup 的预共享密钥是否相同。如果相同，则 PIX/ASA 首先终止 DefaultRAGroup 上的隧道，然后 L2L 隧道可能发生故障。请确保两个默认隧道组的预共享密钥不同。

## 故障排除命令

[命令输出解释程序 \( 仅限注册用户 \) \(OIT\) 支持某些 show 命令。](#) 使用 OIT 可查看对 show 命令输出的分析。

**注意：** [在使用debug命令之前，请参阅有关Debug命令的重要信息。](#)

- **debug crypto ipsec** - 用于查看客户端是否协商 VPN 连接的 IPsec 部分。
- **debug crypto isakmp [level]** - 用于查看对等体是否协商 VPN 的 ISAKMP 部分。

## 正常的 Debug 命令输出示例

以下是一些正常 debug 命令输出的示例：

- [中央 PIX \(7.0.0\)](#)
- [远程 PIX 动态 NAT \(6.3.4\)](#)
- [中央 PIX 7.0 上的 VPN Client 4.0.5](#)

### 中央 PIX (7.0.0)

```
lion(config)# 2nd try, on central PIX from remote PIXApr 05 16:48:31 [IKEv1 DEBUG]:
IP = 172.18.124.167, processing SA payload
Apr 05 16:48:31 [IKEv1 DEBUG]: IP = 172.18.124.167, Oakley proposal is acceptable
Apr 05 16:48:31 [IKEv1 DEBUG]: IP = 172.18.124.167, processing IKE SA
Apr 05 16:48:31 [IKEv1 DEBUG]: IP = 172.18.124.167, IKE SA Proposal # 1, Transform
# 1 acceptable Matches global IKE entry # 3
Apr 05 16:48:31 [IKEv1 DEBUG]: IP = 172.18.124.167, constructing ISA_SA for isakmp
Apr 05 16:48:31 [IKEv1 DEBUG]: IP = 172.18.124.167, constructing Fragmentation VID
+ extended capabilities payload
Apr 05 16:48:31 [IKEv1]: IP = 172.18.124.167, IKE DECODE SENDING Message (msgid=0)
with payloads : HDR + SA (1) + VENDOR (13) + NONE (0) total length : 104
Apr 05 16:48:32 [IKEv1]: IP = 172.18.124.167, IKE DECODE RECEIVED Message (msgid=0)
with payloads : HDR + KE (4) + NONCE (10) + VENDOR (13) + VENDOR (13) +VENDOR (13)
+ VENDOR (13) + NONE (0) total length : 256
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, processing ke payload
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, processing ISA_KEY
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, processing nonce payload
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, processing VID payload
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, Received xauth V6 VID
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, processing VID payload
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, Received DPD VID
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, processing VID payload
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, Received Cisco Unity client VID
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, processing VID payload
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, Processing IOS/PIX Vendor ID
payload (version: 1.0.0, capabilities: 00000025)
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, constructing ke payload
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, constructing nonce payload
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, constructing Cisco Unity VID payload
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, constructing xauth V6 VID payload
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, Send IOS VID
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, Constructing ASA spoofing IOS
Vendor ID payload (version: 1.0.0, capabilities: 20000001)
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, constructing VID payload
Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, Send Altiga/Cisco VPN3000/Cisco
ASA GW VID
```



Apr 05 16:48:32 [IKEv1]: IP = 172.18.124.167, Connection landed on tunnel\_group  
DefaultL2LGroup

Apr 05 16:48:32 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
Generating keys for Responder...

Apr 05 16:48:32 [IKEv1]: IP = 172.18.124.167, IKE DECODE SENDING Message  
(msgid=0) with payloads : HDR + KE (4) + NONCE (10) + VENDOR (13) + VENDOR (13)  
+ VENDOR (13) + VENDOR (13) + NONE (0) total length : 256

Apr 05 16:48:32 [IKEv1]: IP = 172.18.124.167, IKE DECODE RECEIVED Message (msg  
id=0) with payloads : HDR + ID (5) + HASH (8) + NONE (0) total length : 71

Apr 05 16:48:32 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
Processing ID

Apr 05 16:48:32 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
processing hash

Apr 05 16:48:32 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
computing hash

Apr 05 16:48:32 [IKEv1]: IP = 172.18.124.167, Connection landed on tunnel\_group  
DefaultL2LGroup

Apr 05 16:48:32 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
constructing ID

Apr 05 16:48:32 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
construct hash payload

Apr 05 16:48:32 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
computing hash

Apr 05 16:48:32 [IKEv1 DEBUG]: IP = 172.18.124.167, Constructing IOS keep  
alive payload: proposal=32767/32767 sec.

Apr 05 16:48:32 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
constructing dpd vid payload

Apr 05 16:48:32 [IKEv1]: IP = 172.18.124.167, IKE DECODE SENDING Message  
(msgid=0) with payloads : HDR + ID (5) + HASH (8) + IOS KEEPALIVE (14)  
+ VENDOR (13) + NONE (0) total length : 102

Apr 05 16:48:33 [IKEv1]: IP = 172.18.124.167, IKE DECODE RECEIVED Message  
(msgid=ba80c56e) with payloads : HDR + HASH (8) + NOTIFY (11) + NONE (0)  
total length : 76

Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
processing hash

Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
Processing Notify payload

Apr 05 16:48:33 [IKEv1]: Received unexpected event EV\_ACTIVATE\_NEW\_SA in  
state MM\_TM\_INIT\_MODECFG\_H

Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
Delay Quick Mode processing, Cert/Trans Exch/RM DSID in progress

Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
Resume Quick Mode processing, Cert/Trans Exch/RM DSID completed

Apr 05 16:48:33 [IKEv1]: Group = DefaultL2LGroup, IP = 172.18.124.167, PHASE 1COMPLETED

Apr 05 16:48:33 [IKEv1]: IP = 172.18.124.167, Keep-alive type for this connection: DPD

Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
Starting phase 1 rekey timer: 3420000 (ms)

Apr 05 16:48:33 [IKEv1]: IP = 172.18.124.167, IKE DECODE RECEIVED Message  
(msgid=20c2120e) with payloads : HDR + HASH (8) + SA (1) + NONCE (10) + ID  
(5) + ID (5) + NONE (0) total length : 164

Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
processing hash

Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
processing SA payload

Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
processing nonce payload

Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
Processing ID

Apr 05 16:48:33 [IKEv1]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
Received remote IP Proxy Subnet data in ID Payload: Address 10.1.1.0,  
Mask 255.255.255.0, Protocol 0, Port 0

Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,  
Processing ID

Apr 05 16:48:33 [IKEv1]: Group = DefaultL2LGroup, IP = 172.18.124.167,

```
Received local IP Proxy Subnet data in ID Payload:   Address 10.2.2.0,
Mask 255.255.255.0, Protocol 0, Port 0
Apr 05 16:48:33 [IKEv1]: QM IsRekeyed old sa not found by addr
Apr 05 16:48:33 [IKEv1]: Group = DefaultL2LGroup, IP = 172.18.124.167,
IKE Remote Peer configured for SA: cisco
Apr 05 16:48:33 [IKEv1]: Group = DefaultL2LGroup, IP = 172.18.124.167,
processing IPSEC SA
Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,
IPSec SA Proposal # 1, Transform # 1 acceptable Matches global IPsec SA entry # 1
Apr 05 16:48:33 [IKEv1]: Group = DefaultL2LGroup, IP = 172.18.124.167,
IKE: requesting SPI!
Apr 05 16:48:33 [IKEv1 DEBUG]: IKE got SPI from key engine: SPI = 0xd5243861
Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,
oakley constucting quick mode
Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,
constructing blank hash
Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,
constructing ISA_SA for ipsec
Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,
constructing ipsec nonce payload
Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,
constructing proxy ID
Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,
Transmitting Proxy Id:
Remote subnet: 10.1.1.0 Mask 255.255.255.0 Protocol 0 Port 0
Local subnet: 10.2.2.0 mask 255.255.255.0 Protocol 0 Port 0
Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,
constructing qm hash
Apr 05 16:48:33 [IKEv1]: IP = 172.18.124.167, IKE DECODE SENDING Message
(msgid=20c2120e) with payloads : HDR + HASH (8) + SA (1) + NONCE (10) +
ID (5) + ID (5) + NONE (0) total length : 164
Apr 05 16:48:33 [IKEv1]: IP = 172.18.124.167, IKE DECODE RECEIVED Message
(msgid=20c2120e) with payloads : HDR + HASH (8) + NONE (0) total length : 48
Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,
processing hash
Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,
loading all IPSEC SAs
Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,
Generating Quick Mode Key!
Apr 05 16:48:33 [IKEv1 DEBUG]: Group = DefaultL2LGroup, IP = 172.18.124.167,
Generating Quick Mode Key!
Apr 05 16:48:33 [IKEv1]: Group = DefaultL2LGroup, IP = 172.18.124.167,
Security negotiation complete for User (DefaultL2LGroup) Responder,
Inbound SPI = 0xd5243861, Outbound SPI = 0x7bb1lead
Apr 05 16:48:33 [IKEv1 DEBUG]: IKE got a KEY_ADD msg for SA: SPI = 0x7bb1lead
Apr 05 16:48:33 [IKEv1 DEBUG]: pitcher: rcv KEY_UPDATE, spi 0xd5243861
Apr 05 16:48:33 [IKEv1]: Group = DefaultL2LGroup, IP = 172.18.124.167,
PHASE 2 COMPLETED (msgid=20c2120e)
```

### 远程 PIX 动态 NAT (6.3.4)

```
tiger(config)#
ISAKMP (0): beginning Main Mode exchange

crypto_isakmp_process_block:src:172.18.124.166, dest:172.18.124.167 spt:500
dpt:500 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 2
ISAKMP:      auth pre-share
```

```
ISAKMP:      life type in seconds
ISAKMP:      life duration (basic) of 3600
ISAKMP (0):  atts are acceptable. Next payload is 0
ISAKMP (0):  processing vendor id payload

ISAKMP (0):  SA is doing pre-shared key authentication using id type
ID_FQDN return status is IKMP_NO_ERROR
crypto_isakmp_process_block:src:172.18.124.166, dest:172.18.124.167
spt:500 dpt:500 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
ISAKMP (0):  received xauth v6 vendor id
ISAKMP (0):  processing vendor id payload
ISAKMP (0):  speaking to another IOS box!
ISAKMP (0):  processing vendor id payload
ISAKMP (0):  speaking to a VPN3000 concentrator
ISAKMP (0):  ID payload
      next-payload : 8
      type          : 2
      protocol      : 17
      port          : 500
      length        : 19
ISAKMP (0):  Total payload length: 23
return status is IKMP_NO_ERROR
crypto_isakmp_process_block:src:172.18.124.166, dest:172.18.124.167 spt:500 dpt:500
OAK_MM exchange
ISAKMP (0):  processing ID payload. message ID = 0
ISAKMP (0):  processing HASH payload. message ID = 0
ISAKMP (0):  processing vendor id payload

ISAKMP (0):  remote peer supports dead peer detection

ISAKMP (0):  SA has been authenticated

ISAKMP (0):  beginning Quick Mode exchange, M-ID of 549589518:20c2120eIPSEC(key_engine):
got a queue event...
IPSEC(spi_response): getting spi 0x7bb1lead(2075205293) for SA
      from 172.18.124.166 to 172.18.124.167 for prot 3

return status is IKMP_NO_ERROR
ISAKMP (0):  sending INITIAL_CONTACT notify
ISAKMP (0):  sending NOTIFY message 24578 protocol 1
VPN Peer: ISAKMP: Added new peer: ip:172.18.124.166/500 Total VPN Peers:1
VPN Peer: ISAKMP: Peer ip:172.18.124.166/500 Ref cnt incremented to:1 Total VPN Peers:1
crypto_isakmp_process_block:src:172.18.124.166, dest:172.18.124.167 spt:500 dpt:500
OAK_QM exchange
oakley_process_quick_mode:
OAK_QM_IDLE
ISAKMP (0):  processing SA payload. message ID = 549589518

ISAKMP : Checking IPsec proposal 1

ISAKMP: transform 1, ESP_DES
ISAKMP:  attributes in transform:
ISAKMP:      SA life type in seconds
ISAKMP:      SA life duration (basic) of 28800
ISAKMP:      SA life type in kilobytes
ISAKMP:      SA life duration (VPI) of  0x0 0x46 0x50 0x0
ISAKMP:      encaps is 1
ISAKMP:      authenticator is HMAC-MD5
ISAKMP (0):  atts are acceptable.IPSEC(validate_proposal_request): proposal part #1,
(key eng. msg.) dest= 172.18.124.166, src= 172.18.124.167,
```

```
dest_proxy= 10.2.2.0/255.255.255.0/0/0 (type=4),
src_proxy= 10.1.1.0/255.255.255.0/0/0 (type=4),
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 = 549589518

ISAKMP (0): processing ID payload. message ID = 549589518

ISAKMP (0): processing ID payload. message ID = 549589518

ISAKMP (0): Creating IPsec SAs

```
inbound SA from 172.18.124.166 to 172.18.124.167 (proxy 10.2.2.0 to 10.1.1.0)
has spi 2075205293 and conn_id 1 and flags 4
```

```
lifetime of 28800 seconds
```

```
lifetime of 4608000 kilobytes
```

```
outbound SA from 172.18.124.167 to 172.18.124.166 (proxy 10.1.1.0 to 10.2.2.0)
has spi 3575920737 and conn_id 2 and flags 4
```

```
lifetime of 28800 seconds
```

```
lifetime of 4608000 kilobytesIPSEC(key_engine): got a queue event...
```

IPSEC(initialize\_sas): ,

```
(key eng. msg.) dest= 172.18.124.167, src= 172.18.124.166,
```

```
dest_proxy= 10.1.1.0/255.255.255.0/0/0 (type=4),
```

```
src_proxy= 10.2.2.0/255.255.255.0/0/0 (type=4),
```

```
protocol= ESP, transform= esp-des esp-md5-hmac ,
```

```
lifedur= 28800s and 4608000kb,
```

```
spi= 0x7bb1lead(2075205293), conn_id= 1, keysize= 0, flags= 0x4IPSEC(initialize_sas): ,
```

```
(key eng. msg.) src= 172.18.124.167, dest= 172.18.124.166,
```

```
src_proxy= 10.1.1.0/255.255.255.0/0/0 (type=4),
```

```
dest_proxy= 10.2.2.0/255.255.255.0/0/0 (type=4),
```

```
protocol= ESP, transform= esp-des esp-md5-hmac ,
```

```
lifedur= 28800s and 4608000kb,
```

```
spi= 0xd5243861(3575920737), conn_id= 2, keysize= 0, flags= 0x4
```

VPN Peer: IPSEC: Peer ip:172.18.124.166/500 Ref cnt incremented to:2 Total VPN Peers:1

VPN Peer: IPSEC: Peer ip:172.18.124.166/500 Ref cnt incremented to:3 Total VPN Peers:1

return status is IKMP\_NO\_ERROR

## [中央 PIX 7.0 上的 VPN Client 4.0.5](#)

```
lion(config)# Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, processing SA payload
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, processing ke payload
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, processing ISA_KE
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, processing nonce payload
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, Processing ID
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, processing VID payload
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, Received xauth V6 VID
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, processing VID payload
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, Received DPD VID
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, processing VID payload
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, Received NAT-Traversal ver02 VID
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, processing VID payload
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, Received Fragmentation VID
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, IKE Peer included IKE fragmentation
```

```
capability flags: Main Mode: True Aggressive Mode: False
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, processing VID payload
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: IP = 64.102.51.191, Received Cisco Unity client VID
```

```
Apr 05 16:49:56 [IKEv1]: IP = 64.102.51.191, Connection landed on tunnel_group unityclient
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191, processing IKE SA
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191, IKE SA Proposal # 1,
```

```
Transform # 14 acceptable Matches global IKE entry # 3
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191, constructing ISA_SA
```

```
for isakmp
```

```
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
```

```
constructing ke payload
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
constructing nonce payload
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
Generating keys for Responder...
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
constructing ID
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
construct hash payload
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
computing hash
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
constructing Cisco Unity VID payload
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
constructing xauth V6 VID payload
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
constructing dpd vid payload
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
constructing Fragmentation VID + extended capabilities payload
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
constructing VID payload
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
Send Altiga/Cisco VPN3000/Cisco ASA GW VID
Apr 05 16:49:56 [IKEv1]: IP = 64.102.51.191, IKE DECODE SENDING Message
(msgid=0) with payloads : HDR + SA (1) + KE (4) + NONCE (10) + ID (5) +
HASH (8) + VENDOR (13) + VENDOR (13) + VENDOR (13) + VENDOR (13) + VENDOR
(13) + NONE (0) total length : 378
Apr 05 16:49:56 [IKEv1]: IP = 64.102.51.191, IKE DECODE RECEIVED Message
(msgid=0) with payloads : HDR + HASH (8) + NOTIFY (11) + VENDOR (13) +
VENDOR (13) + NONE (0) total length : 116
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191, processing hash
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191, computing hash
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
Processing Notify payload
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
processing VID payload
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
Processing IOS/PIX Vendor ID payload (version: 1.0.0, capabilities: 00000408)
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
processing VID payload
Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,
Received Cisco Unity client VID
Apr 05 16:49:56 [IKEv1]: IP = 64.102.51.191, IKE DECODE RECEIVED Message
(msgid=a0bb428) with payloads : HDR + HASH (8) + ATTR (14) + NONE (0)
total length: 196
Apr 05 16:49:56 [IKEv1 DEBUG]: process_attr(): Enter!
Apr 05 16:49:56 [IKEv1 DEBUG]: Processing cfg Request attributes
Apr 05 16:49:56 [IKEv1 DEBUG]: MODE_CFG: Received request for IPV4 address!
Apr 05 16:49:56 [IKEv1 DEBUG]: MODE_CFG: Received request for IPV4 net mask!
Apr 05 16:49:56 [IKEv1 DEBUG]: MODE_CFG: Received request for DNS server address!
Apr 05 16:49:56 [IKEv1 DEBUG]: MODE_CFG: Received request for WINS server address!
Apr 05 16:49:56 [IKEv1]: Group = unityclient, IP = 64.102.51.191, Received
unsupported transaction mode attribute: 5
Apr 05 16:49:56 [IKEv1 DEBUG]: MODE_CFG: Received request for Banner!
Apr 05 16:49:56 [IKEv1 DEBUG]: MODE_CFG: Received request for Save PW setting!
Apr 05 16:49:56 [IKEv1 DEBUG]: MODE_CFG: Received request for Default Domain Name!
Apr 05 16:49:56 [IKEv1 DEBUG]: MODE_CFG: Received request for Split Tunnel List!
Apr 05 16:49:56 [IKEv1 DEBUG]: MODE_CFG: Received request for Split DNS!
Apr 05 16:49:56 [IKEv1 DEBUG]: MODE_CFG: Received request for PFS setting!
Apr 05 16:49:56 [IKEv1 DEBUG]: MODE_CFG: Received request for backup ip-sec peer list!
Apr 05 16:49:56 [IKEv1 DEBUG]: MODE_CFG: Received request for Application Version!
Apr 05 16:49:56 [IKEv1]: Group = unityclient, IP = 64.102.51.191, Client Type: WinNT
Client Application Version: 4.0.5 (Rel)
Apr 05 16:49:56 [IKEv1 DEBUG]: MODE_CFG: Received request for FWTYPE!
```

Apr 05 16:49:56 [IKEv1 DEBUG]: MODE\_CFG: Received request for DHCP hostname  
for DDNS is: tthotus-xp!

Apr 05 16:49:56 [IKEv1 DEBUG]: MODE\_CFG: Received request for UDP Port!

Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
constructing blank hash

Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
constructing qm hash

Apr 05 16:49:56 [IKEv1]: IP = 64.102.51.191, IKE DECODE SENDING Message  
(msgid=a0bb428) with payloads : HDR + HASH (8) + ATTR (14) + NONE (0)  
total length : 157

Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
Delay Quick Mode processing, Cert/Trans Exch/RM DSID in progress

Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
Resume Quick Mode processing, Cert/Trans Exch/RM DSID completed

Apr 05 16:49:56 [IKEv1]: Group = unityclient, IP = 64.102.51.191, PHASE 1 COMPLETED

Apr 05 16:49:56 [IKEv1]: IP = 64.102.51.191, Keep-alive type for this connection: DPD

Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
Starting phase 1 rekey timer: 3420000 (ms)

Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
sending notify message

Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
constructing blank hash

Apr 05 16:49:56 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
constructing qm hash

Apr 05 16:49:56 [IKEv1]: IP = 64.102.51.191, IKE DECODE SENDING Message  
(msgid=9be7674c) with payloads : HDR + HASH (8) + NOTIFY (11) + NONE  
(0) total length : 84

Apr 05 16:49:57 [IKEv1]: IP = 64.102.51.191, IKE DECODE RECEIVED Message  
(msgid=833e7945) with payloads : HDR + HASH (8) + SA (1) + NONCE (10)  
+ ID (5) + ID (5) + NONE (0) total length : 1022

Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191, processing hash

Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
processing SA payload

Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
processing nonce payload

Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191, Processing ID

Apr 05 16:49:57 [IKEv1]: Group = unityclient, IP = 64.102.51.191,  
Received remote Proxy Host data in ID Payload: Address 10.3.3.1, Protocol 0, Port 0

Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191, Processing ID

Apr 05 16:49:57 [IKEv1]: Group = unityclient, IP = 64.102.51.191,  
Received local IP Proxy Subnet data in ID Payload: Address 0.0.0.0,  
Mask 0.0.0.0, Protocol 0, Port 0

Apr 05 16:49:57 [IKEv1]: QM IsRekeyed old sa not found by addr

Apr 05 16:49:57 [IKEv1]: Group = unityclient, IP = 64.102.51.191,  
IKE Remote Peer configured for SA: cisco

Apr 05 16:49:57 [IKEv1]: Group = unityclient, IP = 64.102.51.191,  
processing IPSEC SA

Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
IPSecSA Proposal # 14, Transform # 1 acceptable Matches global IPsec SA entry # 1

Apr 05 16:49:57 [IKEv1]: Group = unityclient, IP = 64.102.51.191, IKE: requesting SPI!

Apr 05 16:49:57 [IKEv1 DEBUG]: IKE got SPI from key engine: SPI = 0x05953824

Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
oakley constructing quick mode

Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
constructing blank hash

Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
constructing ISA\_SA for ipsec

Apr 05 16:49:57 [IKEv1]: Group = unityclient, IP = 64.102.51.191,  
Overriding Initiator's IPsec rekeying duration from 2147483 to 28800 seconds

Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
constructing ipsec nonce payload

Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
constructing proxy ID

Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,

Transmitting Proxy Id:  
Remote host: 10.3.3.1 Protocol 0 Port 0  
Local subnet: 0.0.0.0 mask 0.0.0.0 Protocol 0 Port 0  
Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
Sending RESPONDER LIFETIME notification to Initiator  
Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
constructing qm hash  
Apr 05 16:49:57 [IKEv1]: IP = 64.102.51.191, IKE DECODE SENDING Message  
(msgid=833e7945) with payloads : HDR + HASH (8) + SA (1) + NONCE (10)  
+ ID (5) + ID (5) + NOTIFY (11) + NONE (0) total length : 176  
Apr 05 16:49:57 [IKEv1]: IP = 64.102.51.191, IKE DECODE RECEIVED Message  
(msgid=833e7945) with payloads : HDR + HASH (8) + NONE (0) total length : 48  
Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
processing hash  
Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
loading all IPSEC SAs  
Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
Generating Quick Mode Key!  
Apr 05 16:49:57 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
Generating Quick Mode Key!  
Apr 05 16:49:57 [IKEv1]: Group = unityclient, IP = 64.102.51.191,  
Security negotiation complete for User (unityclient) Responder,  
Inbound SPI = 0x05953824, Outbound SPI = 0xd08c6486  
Apr 05 16:49:57 [IKEv1 DEBUG]: IKE got a KEY\_ADD msg for SA: SPI = 0xd08c6486  
Apr 05 16:49:57 [IKEv1 DEBUG]: pitcher: rcv KEY\_UPDATE, spi 0x5953824  
Apr 05 16:49:57 [IKEv1]: Group = unityclient, IP = 64.102.51.191,  
Adding static route for client address: 10.3.3.1  
Apr 05 16:49:57 [IKEv1]: Group = unityclient, IP = 64.102.51.191, PHASE 2 COMP  
LETED (msgid=833e7945)  
Apr 05 16:50:07 [IKEv1]: IP = 64.102.51.191, IKE DECODE RECEIVED Message  
(msgid=403ee701) with payloads : HDR + HASH (8) + NOTIFY (11) + NONE  
(0) total length : 80  
Apr 05 16:50:07 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
processing hash  
Apr 05 16:50:07 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
Processing Notify payload  
Apr 05 16:50:07 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
Received keep-alive of type DPD R-U-THERE (seq number 0x4b55b6e4)  
Apr 05 16:50:07 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
Sending keep-alive of type DPD R-U-THERE-ACK (seq number 0x4b55b6e4)  
Apr 05 16:50:07 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
constructing blank hash  
Apr 05 16:50:07 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
constructing qm hash  
Apr 05 16:50:07 [IKEv1]: IP = 64.102.51.191, IKE DECODE SENDING Message  
(msgid=78998a29) with payloads : HDR + HASH (8) + NOTIFY (11) + NONE  
(0) total length : 80  
Apr 05 16:50:17 [IKEv1]: IP = 64.102.51.191, IKE DECODE RECEIVED Message  
(msgid=dba719e9) with payloads : HDR + HASH (8) + NOTIFY (11) + NONE (0)  
total length : 80  
Apr 05 16:50:17 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191, processing hash  
Apr 05 16:50:17 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
Processing Notify payload  
Apr 05 16:50:17 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
Received keep-alive of type DPD R-U-THERE (seq number 0x4b55b6e5)  
Apr 05 16:50:17 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
Sending keep-alive of type DPD R-U-THERE-ACK (seq number 0x4b55b6e5)  
Apr 05 16:50:17 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
constructing blank hash  
Apr 05 16:50:17 [IKEv1 DEBUG]: Group = unityclient, IP = 64.102.51.191,  
constructing qm hash  
Apr 05 16:50:17 [IKEv1]: IP = 64.102.51.191, IKE DECODE SENDING Message  
(msgid=40456779) with payloads : HDR + HASH (8) + NOTIFY (11) + NONE  
(0) total length : 80

## 相关信息

- [Cisco ASA 5500 系列自适应安全设备产品支持](#)
- [Cisco PIX 防火墙软件](#)
- [Cisco Secure PIX 防火墙命令参考](#)
- [安全产品 Field Notices \( 包括 PIX \)](#)
- [请求注解 \(RFC\)](#)
- [技术支持和文档 - Cisco Systems](#)