# PIX/ASA 7.x の NAT 機能付き PIX-to-PIX Dynamic-to-Static IPsec と VPN クライアントの設定例

## 内容

## 概要

ほとんどの場合、中央 PIX に接続するリモート PIX はネットワーク アドレス変換（NAT）を使用しません。 その代わりにリモート PIX はスタティック外部 IP アドレスを使用します。7.x 以降で動作する中央 PIX が、後で NAT を使用してリモート PIX に接続する場合、これは、Dynamic Host Control Protocol（DHCP）を使用してケーブル モデムまたは DSL モデムに接続する PIX 501 または 506 などのような、スモール ホーム オフィスと同じになります。PIX 7.x以降および Cisco Adaptive Security Device Manager(ASDM)は、PIX 501または506では動作しません。したがって、この例では、DHCPとNATを使用したリモートPIXは、6.xコードを実行するPIX 501または06と6と06と0006が000000000006です。この設定により、中央 PIX がダイナミック IPSec 接続を受け入れることができます。リモート PIX では、NAT を使用して、背後にあるプライベート アドレスの付けられたデバイスが、中央 PIX の背後にあるプライベート アドレスの付けられたネットワークに参加できるようにしています。リモート PIX は（エンドポイントを認識している）中央 PIX への接続を開始できますが、中央 PIX は（エンドポイントを認識していない）リモート PIX への接続を開始できません。

この設定例では、Tiger がリモート PIX、Lion が中央 PIX です。Tiger の IP アドレスが不明であるため、ワイルドカード、事前共有キーを認識し、どこからの接続でも動的に受け入れるように Lion を設定する必要があります。Tiger は、暗号化されるトラフィックを認識し（アクセスリストに指定されるため）、Lion のエンドポイントの位置を把握します。Tiger が接続を開始する必要があります。IPSec トラフィックで NAT をバイパスするため、両側で NAT および nat 0 が実行されます。

また、この設定のリモート ユーザは Cisco VPN Client 4.x を使用して中央 PIX（Lion）に接続します。リモート ユーザはリモート PIX（Tiger）に接続できません。これは、両側で IP アドレスが動的に割り当てられており、要求の送信元が認識されないためです。

PIX 6.x と Cisco VPN Client 3.x を使用した同じシナリオの詳細については、「NAT および Cisco VPN クライアントを使用した PIX 間のダイナミック/スタティック IP Sec の設定」を参照してください。

# 前提条件

## 要件

このドキュメントに特有の要件はありません。

## 使用するコンポーネント

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

- Cisco PIX Firewall Software リリース 7.x 以降（中央 PIX）
- Cisco PIX Firewall Software リリース 6.3.4（リモート PIX）
- Cisco VPN Client バージョン 4.x

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

## 表記法

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

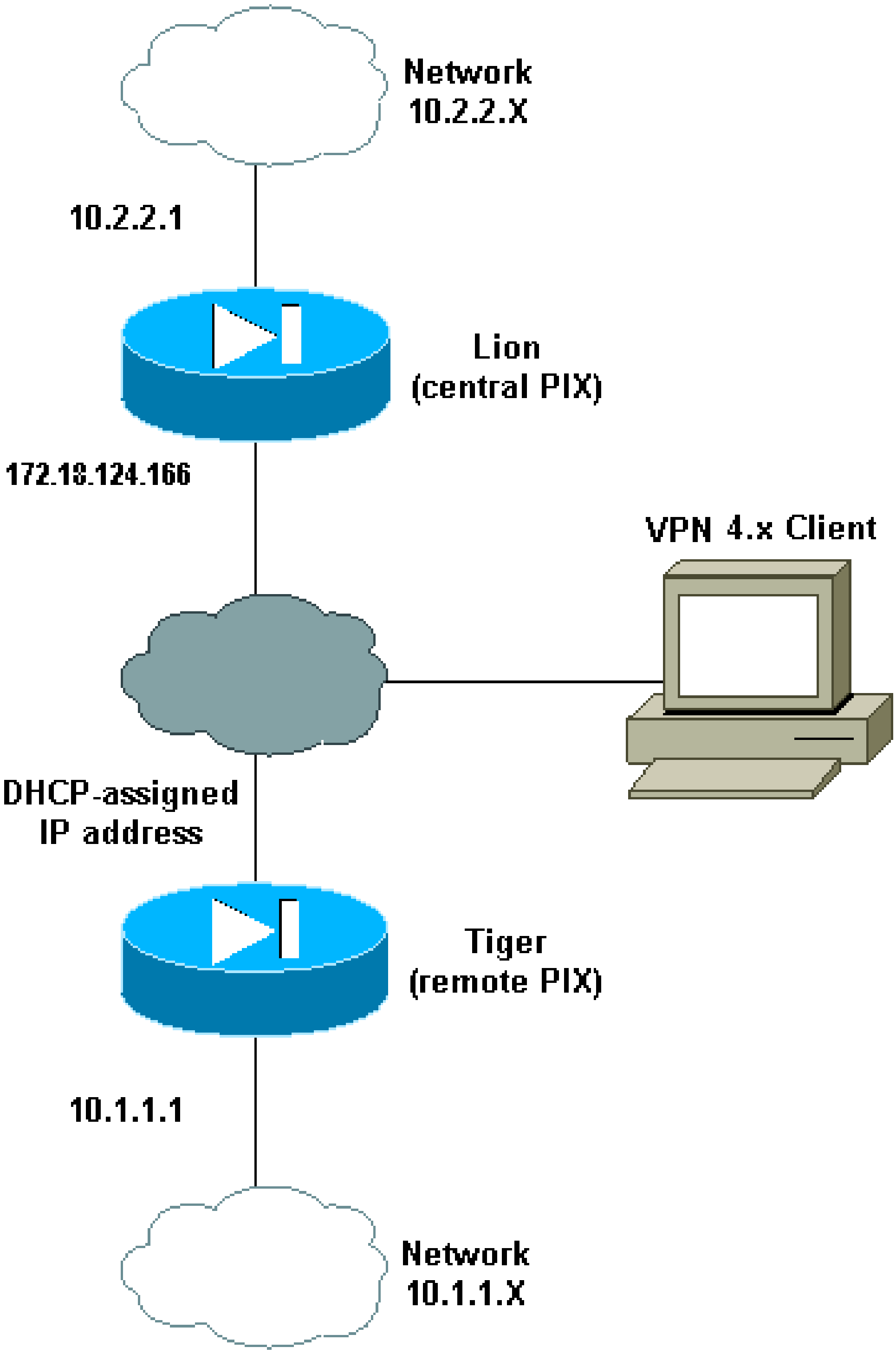
# 設定

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

**注：このセクションで使用されているコマンドの詳細を調べるには、Command Lookup Tool**（登録ユーザ専用）を参照してください。一部ツールについては、ゲスト登録のお客様にはアクセスできない場合がありますことをご了承ください。

## ネットワーク図

このドキュメントでは、次のネットワーク セットアップを使用します。



## 設定

このドキュメントでは、次の構成を使用します。

- Lion
- Tiger

| Lion |
|---|
| <br>PIX Version 7.0(0)<br>names<br>!<br>interface Ethernet0<br> nameif outside |

```
 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
```

## Tiger

```

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
```

# 確認

ここでは、設定が正常に機能しているかどうかを確認します。

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

**注：設定モード**でclearコマンド**を実行する**必要があります。

- **clear crypto ipsec sa：VPN トンネルのネゴシエーションが失敗した後で、IPSec アソシエーションをリセットします。**
- **clear crypto isakmp sa：VPN トンネルのネゴシエーションが失敗した後で、Internet Security Association and Key Management Protocol（ISAKMP）セキュリティ アソシエーションをリセットします。**
- **show crypto engine ipsec：暗号化されたセッションを表示します。**

# トラブルシュート

## 同一の事前共有キー

LAN-to-LAN（L2L）IPsec トンネルが確立されていない場合は、DefaultRAGroup の事前共有キー

と、DefaultL2LGroup の事前共有キーが同一であるかどうかを確認します。同一の場合は、PIX/ASA が DefaultRAGroup でトンネルを最初に終了し、その後 L2L トンネルが失敗する可能性があります。2 つのデフォルト トンネル グループの事前共有キーが異なることを確認してください。

## トラブルシューティングのためのコマンド

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

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

- **debug crypto ipsec：クライアントが VPN 接続の IPSec 部分をネゴシエートしているかどうかを確認するときに使用します。**
- **debug crypto isakmp *[level]：ピアが VPN の ISAKMP 部分をネゴシエートしているかどうかを確認するときに使用します。***

## 適切な debug 出力の例

適切な debug コマンド出力の例を次に示します。

- 中央 PIX（7.0.0）
- リモート PIX ダイナミック NAT（6.3.4）
- 中央 PIX 7.0 上の VPN クライアント 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_KE
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 = 0x7bb11ead
Apr 05 16:48:33 [IKEv1 DEBUG]: IKE got a KEY_ADD msg for SA: SPI = 0x7bb11ead
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)
```

### リモート PIX ダイナミック 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 0x7bb11ead(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= 0x7bb11ead(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 上の VPN クライアント 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 constucting 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
```

## 関連情報

- Cisco ASA 5500 シリーズ適応型セキュリティ アプライアンス製品のサポート
- Cisco PIX Firewall ソフトウェア
- Cisco Secure PIX ファイアウォール コマンド リファレンス
- セキュリティ製品に関する Field Notice（PIX を含む）
- Requests for Comments (RFCs)
- テクニカル サポートとドキュメント – Cisco Systems