

# Configuring PIX to PIX Dynamic-to-Static IPsec with NAT and Cisco VPN Client

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## Introduction

In this sample configuration, a remote PIX receives an IP address through Dynamic Host Configuration Protocol (DHCP) and connects to a central PIX. This configuration enables the central PIX to accept dynamic IPsec connections. The remote PIX uses network address translation (NAT) to "join" the privately addressed devices behind it to the privately addressed network behind the central PIX. The remote PIX can initiate connections to the central PIX (it knows the end point), but the central PIX cannot initiate connections to the remote PIX (it does not know the end point).

In this sample configuration, Tiger is the remote PIX and Lion is the central PIX. It is not known what Tiger's IP address is going to be, so you must configure Lion to dynamically accept connections from anywhere knowing the wild-card, pre-shared key. Tiger knows what traffic is to be encrypted (because it is specified by the access-list) and where the Lion end point is located. Tiger must initiate the connection. Both sides do NAT and nat 0 to bypass NAT for IPsec traffic.

In addition, the remote user in this configuration connects to the central PIX (Lion) using the Cisco VPN Client 3.x. The remote user cannot connect to the remote PIX (Tiger) since both sides would have dynamically assigned IP addresses and would not know where to send the request.

Refer to PIX/ASA 7.x PIX-to-PIX Dynamic-to-Static IPsec with NAT and VPN Client Configuration Example in order to learn more about the same scenario in PIX/ASA 7.x with Cisco VPN Client 4.x.

## Prerequisites

## Requirements

There are no specific requirements for this document.

## Components Used

The information in this document is based on these software and hardware versions:

- Cisco PIX Firewall Software Release 6.0(1) (or greater for the Cisco VPN Client 3.x)
- Cisco PIX Firewall Software Release 5.3.1 (remote PIX)
- Cisco VPN Client Version 3.x

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

## Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

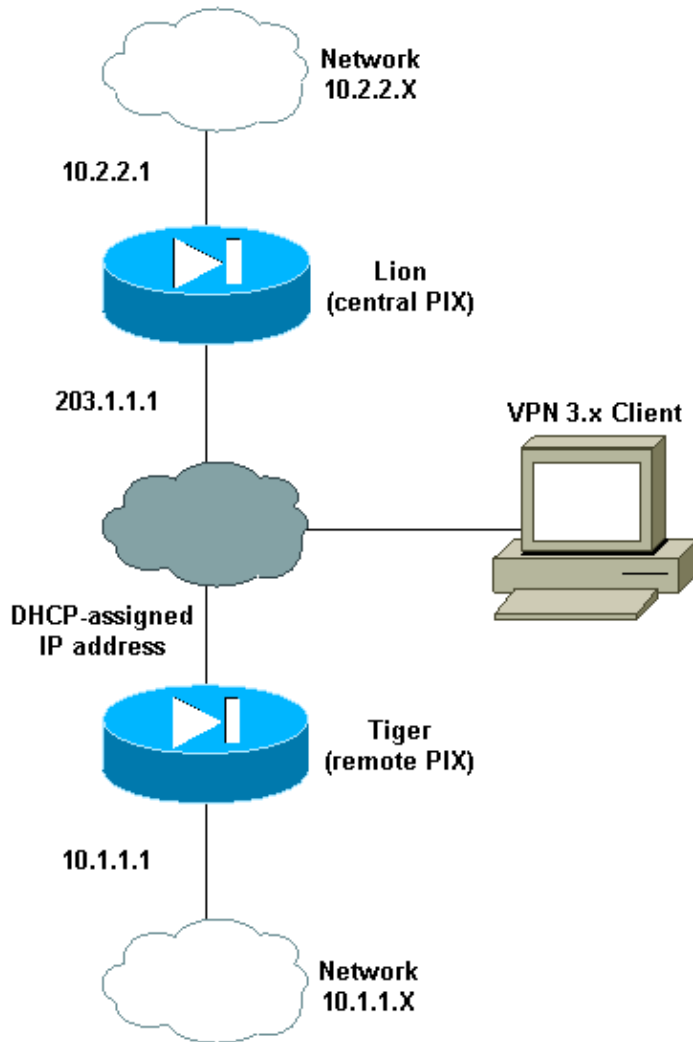
## Configure

In this section, you are presented with the information to configure the features described in this document.

**Note:** Use the Command Lookup Tool (registered customers only) to obtain more information on the commands used in this section.

## Network Diagram

This document uses this network setup:



## Configurations

### Lion Configuration

```

Building configuration...
: Saved
:
PIX Version 6.0(1)
nameif gb-ethernet0 spare1 security10
nameif gb-ethernet1 spare2 security15
nameif ethernet0 outside security0
nameif ethernet1 inside security100
enable password 8Ry2YjIyt7RRXU24 encrypted
passwd 2KFQnbNIdI.2KYOU encrypted
hostname lion
domain-name cisco.com
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
fixup protocol skinny 2000
names
!
!--- ACL to avoid Network Address Translation (NAT) on the IPsec packets.

```

```

access-list 100 permit ip 10.2.2.0 255.255.255.0 10.1.1.0 255.255.255.0
access-list 100 permit ip 10.2.2.0 255.255.255.0 10.3.3.0 255.255.255.0
!
pager lines 24
logging buffered debugging
interface gb-ethernet0 1000auto shutdown
interface gb-ethernet1 1000auto shutdown
interface ethernet0 10baset
interface ethernet1 10baset
mtu spare1 1500
mtu spare2 1500
mtu outside 1500
mtu inside 1500
ip address spare1 127.0.0.1 255.255.255.255
ip address spare2 127.0.0.1 255.255.255.255
!

!--- IP addresses on the interfaces

ip address outside 203.1.1.1 255.255.255.0
ip address inside 10.2.2.1 255.255.255.0
!
ip audit info action alarm
ip audit attack action alarm
ip local pool clientpool 10.3.3.1-10.3.3.10
no failover
failover timeout 0:00:00
failover poll 15
failover ip address spare1 0.0.0.0
failover ip address spare2 0.0.0.0
failover ip address outside 0.0.0.0
failover ip address inside 0.0.0.0
pdm history enable
arp timeout 14400

!--- global (outside) 1 203.1.1.10-203.1.1.15
!--- Change from NAT to PAT on the DHCP interface.

global (outside) 1 interface
!

!--- Binding ACL 100 to the NAT statement to avoid NAT on the IPsec packets.

nat (inside) 0 access-list 100
!
nat (inside) 1 0.0.0.0 0.0.0.0 0 0
conduit permit icmp any any
!

!--- Default route to the Internet

route outside 0.0.0.0 0.0.0.0 203.1.1.2 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
no snmp-server location
no snmp-server contact
snmp-server community public
no snmp-server enable traps
floodguard enable
!

```

```

!--- The sysopt command avoids conduit on the IPsec encrypted traffic.

sysopt connection permit-ipsec
!
no sysopt route dnat
!

!--- Phase 2 encryption type

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
!

!--- Binds the IPsec engine on the outside interface.

crypto map dyn-map interface outside
!

!--- Enables ISAKMP key-exchange.

isakmp enable outside
!

!--- ISAKMP policy for accepting dynamic connections from the remote PIX.

isakmp key ***** address 0.0.0.0 netmask 0.0.0.0

!--- ISAKMP policy for Cisco VPN Client 2.x

isakmp policy 10 authentication pre-share
isakmp policy 10 encryption des
isakmp policy 10 hash md5
isakmp policy 10 group 1
isakmp policy 10 lifetime 1000
!

!--- ISAKMP policy for Cisco VPN Client 3.x

isakmp policy 20 authentication pre-share
isakmp policy 20 encryption des
isakmp policy 20 hash sha
isakmp policy 20 group 2
isakmp policy 20 lifetime 86400
!

!--- IPsec group configuration for either client

vpngroup unityclient address-pool clientpool
vpngroup unityclient dns-server 10.1.1.3
vpngroup unityclient wins-server 10.1.1.3
vpngroup unityclient default-domain cisco.com
vpngroup unityclient idle-time 1800
vpngroup unityclient password *****
!
telnet timeout 5
ssh timeout 5
terminal width 80
Cryptochecksum:d6fe92db883a052c5765be21a74e7c8d
: end
[OK]

```

```
Building configuration...
: Saved
:
PIX Version 5.3(1)
nameif gb-ethernet0 spare1 security10
nameif gb-ethernet1 spare2 security15
nameif ethernet0 outside security0
nameif ethernet1 inside security100
enable password 8Ry2YjIyt7RRXU24 encrypted
passwd 2KFQnbNIdI.2KYOU encrypted
hostname tiger
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
!

!--- ACL to avoid NAT on the IPsec packets

access-list 101 permit ip 10.1.1.0 255.255.255.0 10.2.2.0 255.255.255.0
!
pager lines 24
logging on
no logging timestamp
no logging standby
no logging console
no logging monitor
logging buffered debugging
no logging trap
no logging history
logging facility 20
logging queue 512
interface gb-ethernet0 1000auto shutdown
interface gb-ethernet1 1000auto shutdown
interface ethernet0 10baset
interface ethernet1 10baset
mtu spare1 1500
mtu spare2 1500
mtu outside 1500
mtu inside 1500
ip address spare1 127.0.0.1 255.255.255.255
ip address spare2 127.0.0.1 255.255.255.255
!
ip address outside dhcp
ip address inside 10.1.1.1 255.255.255.0
!
ip audit info action alarm
ip audit attack action alarm
no failover
failover timeout 0:00:00
failover poll 15
failover ip address spare1 0.0.0.0
failover ip address spare2 0.0.0.0
failover ip address outside 0.0.0.0
failover ip address inside 0.0.0.0
arp timeout 14400
global (outside) 1 204.1.1.10-204.1.1.15
!

!--- Binds ACL 101 to the NAT statement to avoid NAT on the IPsec packets.

nat (inside) 0 access-list 101
```

```

!
nat (inside) 1 0.0.0.0 0.0.0.0 0 0
conduit permit icmp any any
route outside 0.0.0.0 0.0.0.0 204.1.1.2 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
no snmp-server location
no snmp-server contact
snmp-server community public
no snmp-server enable traps
floodguard enable
!

!--- The sysopt command avoids conduit on the IPsec encrypted traffic.

sysopt connection permit-ipsec
!
no sysopt route dnat
!

!--- Phase 2 encryption type

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 203.1.1.1
crypto map newmap 10 set transform-set myset
!

!--- Binds the IPsec engine on the outside interface.

crypto map newmap interface outside
!

!--- Enables ISAKMP key-exchange

isakmp enable outside
!

!--- ISAKMP policy for connecting to the central PIX.

isakmp key ***** address 203.1.1.1 netmask 255.255.255.255
isakmp identity hostname
isakmp policy 10 authentication pre-share
isakmp policy 10 encryption des
isakmp policy 10 hash md5
isakmp policy 10 group 1
isakmp policy 10 lifetime 1000
!
telnet timeout 5
ssh timeout 5
terminal width 80
Cryptochecksum:6743b7bf9476590ecd1a1a8c6d75245b
: end
[OK]

```

## Verify

This section provides information you can use to confirm your configuration works properly.

The Output Interpreter Tool (registered customers only) (OIT) supports certain **show** commands. Use the OIT to view an analysis of **show** command output.

**Note:** The **clear** commands must be performed in config mode.

- **clear crypto ipsec sa** Resets the IPsec associations after failed attempts to negotiate a VPN tunnel.
- **clear crypto isakmp sa** Resets the Internet Security Association and Key Management Protocol (ISAKMP) security associations after failed attempts to negotiate a VPN tunnel.
- **show crypto engine ipsec** Displays the encrypted sessions.

## Troubleshoot

This section provides information you can use to troubleshoot your configuration.

### Troubleshooting Commands

The Output Interpreter Tool (registered customers only) (OIT) supports certain **show** commands. Use the OIT to view an analysis of **show** command output.

**Note:** Refer to Important Information on Debug Commands before you use **debug** commands.

- **debug crypto ipsec** Used to see if a client negotiates the IPsec portion of the VPN connection.
- **debug crypto isakmp connection** Used to see if the peers are negotiating the ISAKMP portion of the VPN.

## Sample "Good" Debug Output

- Central PIX Debugs
- Remote PIX Debugs
- Client Debugs

### Central Pix Debugs

```
crypto_isakmp_process_block: src 204.1.1.1, dest 203.1.1.1
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:      life type in seconds
ISAKMP:      life duration (basic) of 1000
ISAKMP (0): atts are acceptable. Next payload is 0
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 204.1.1.1, dest 203.1.1.1
OAK_MM exchange
ISAKMP (0): processing KE payload. message ID = 0

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

ISAKMP (0): processing vendor id payload

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



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

ISAKMP (0): speaking to another IOS box!

return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 204.1.1.1, dest 203.1.1.1
OAK_MM exchange
ISAKMP (0): processing ID payload. message ID = 0
ISAKMP (0): processing HASH payload. message ID = 0
ISAKMP (0): SA has been authenticated

ISAKMP (0): ID payload
    next-payload : 8
    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 204.1.1.1, dest 203.1.1.1
OAK_QM exchange
oakley_process_quick_mode:
OAK_QM_IDLE
ISAKMP (0): processing SA payload. message ID = 1223411072

ISAKMP : Checking IPsec proposal 1

ISAKMP: transform 1, ESP_DES
ISAKMP:  attributes in transform:
ISAKMP:  encaps is 1
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:  authenticator is HMAC-MD5
ISAKMP (0): atts are acceptable.IPSEC(validate_proposal_request): proposal part #1,
    (key eng. msg.) dest= 203.1.1.1, src= 204.1.1.1,
    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= 0s and 0kb,
    spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x4

ISAKMP (0): processing NONCE payload. message ID = 1223411072

ISAKMP (0): processing ID payload. message ID = 1223411072
ISAKMP (0): ID_IPV4_ADDR_SUBNET src 10.2.2.0/255.255.255.0 prot 0 port 0
ISAKMP (0): processing ID payload. message ID = 1223411072
ISAKMP (0): ID_IPV4_ADDR_SUBNET dst 10.1.1.0/255.255.255.0 prot 0 port
    0IPSEC(key_engine): got a queue event...
IPSEC(spi_response): getting spi 0xd0e27cb6(3504503990) for SA from 204.1.1.1
    to 203.1.1.1 for prot 3

return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 204.1.1.1, dest 203.1.1.1
OAK_QM exchange
oakley_process_quick_mode:
OAK_QM_AUTH_AWAIT
ISAKMP (0): Creating IPsec SAs
    inbound SA from 204.1.1.1 to 203.1.1.1 proxy 10.2.2.0 to 10.1.1.0)
    has spi 3504503990 and conn_id 4 and flags 4
    lifetime of 28800 seconds
    lifetime of 4608000 kilobytes
    outbound SA from 203.1.1.1 to 204.1.1.1(proxy 10.1.1.0 to 10.2.2.0)
    has spi 2729504033 and conn_id 3 and flags 4
    lifetime of 28800 seconds
```

```

lifetime of 4608000 kilobytesIPSEC(key_engine): got a queue event...
IPSEC(initialize_sas): ,
  (key eng. msg.) dest= 203.1.1.1, src= 204.1.1.1,
  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= 0xd0e27cb6(3504503990), conn_id= 4, keysize= 0, flags= 0x4
IPSEC(initialize_sas): ,
  (key eng. msg.) src= 203.1.1.1, dest= 204.1.1.1,
  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= 0xa2b0ed21(2729504033), conn_id= 3, keysize= 0, flags= 0x4

return status is IKMP_NO_ERROR

```

## Remote PIX Debugs

```

ISAKMP (0): beginning Main Mode exchange

crypto_isakmp_process_block: src 203.1.1.1, dest 204.1.1.1
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:      life type in seconds
ISAKMP:      life duration (basic) of 1000
ISAKMP (0): atts are acceptable. Next payload is 0
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 203.1.1.1, dest 204.1.1.1
OAK_MM exchange
ISAKMP (0): processing KE payload. message ID = 0

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

ISAKMP (0): processing vendor id payload

ISAKMP (0): speaking to another IOS box!

ISAKMP (0): ID payload
  next-payload : 8
  type         : 2
  protocol     : 17
  port         : 500
  length      : 18
ISAKMP (0): Total payload length: 22
return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 203.1.1.1, dest 204.1.1.1
OAK_MM exchange
ISAKMP (0): processing ID payload. message ID = 0
ISAKMP (0): processing HASH payload. message ID = 0
ISAKMP (0): SA has been authenticated

ISAKMP (0): beginning Quick Mode exchange, M-ID of
  1223411072:48ebc580IPSEC(key_engine):got a queue event...
IPSEC(spi_response): getting spi 0xa2b0ed21(2729504033) for SA
  from          203.1.1.1 to          204.1.1.1 for prot 3

```

```

return status is IKMP_NO_ERROR
crypto_isakmp_process_block: src 203.1.1.1, dest 204.1.1.1
OAK_QM exchange
oakley_process_quick_mode:
OAK_QM_IDLE
ISAKMP (0): processing SA payload. message ID = 1223411072

ISAKMP : Checking IPsec proposal 1

ISAKMP: transform 1, ESP_DES
ISAKMP:  attributes in transform:
ISAKMP:  encaps is 1
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:  authenticator is HMAC-MD5
ISAKMP (0): atts are acceptable.IPSEC(validate_proposal_request): proposal part #1,
(key eng. msg.) dest= 203.1.1.1, src= 204.1.1.1,
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= 0s and 0kb,
spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x4

ISAKMP (0): processing NONCE payload. message ID = 1223411072

ISAKMP (0): processing ID payload. message ID = 1223411072
ISAKMP (0): processing ID payload. message ID = 1223411072
ISAKMP (0): Creating IPsec SAs
inbound SA from 203.1.1.1 to 204.1.1.1 (proxy 10.1.1.0 to 10.2.2.0)
has spi 2729504033 and conn_id 4 and flags 4
lifetime of 28800 seconds
lifetime of 4608000 kilobytes
outbound SA from 204.1.1.1 to 203.1.1.1 (proxy 10.2.2.0 to 10.1.1.0)
has spi 3504503990 and conn_id 3 and flags 4
lifetime of 28800 seconds
lifetime of 4608000 kilobytesIPSEC(key_engine): got a queue event...
IPSEC(initialize_sas): ,
(key eng. msg.) dest= 204.1.1.1, src= 203.1.1.1,
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= 28800s and 4608000kb,
spi= 0xa2b0ed21(2729504033), conn_id= 4, keysize= 0, flags= 0x4
IPSEC(initialize_sas): ,
(key eng. msg.) src= 204.1.1.1, dest= 203.1.1.1,
src_proxy= 10.2.2.0/255.255.255.0/0/0 (type=4),
dest_proxy= 10.1.1.0/255.255.255.0/0/0 (type=4),
protocol= ESP, transform= esp-des esp-md5-hmac ,
lifedur= 28800s and 4608000kb,
spi= 0xd0e27cb6(3504503990), conn_id= 3, keysize= 0, flags= 0x4

return status is IKMP_NO_ERROR

```

## Client Debugs

```

19      16:43:20.402 06/28/01 Sev=Info/4      CM/0x63100004
Establish secure connection using Ethernet

20      16:43:20.402 06/28/01 Sev=Info/4      CM/0x63100025
Attempt connection with server "203.1.1.1"

21      16:43:20.402 06/28/01 Sev=Info/6      IKE/0x6300003B
Attempting to establish a connection with 203.1.1.1.

```

22 16:43:20.442 06/28/01 Sev=Info/4 IKE/0x63000013  
SENDING >>> ISAKMP OAK AG (SA, KE, NON, ID, VID, VID, VID) to 203.1.1.1

23 16:43:20.452 06/28/01 Sev=Info/4 IPSEC/0x63700014  
Deleted all keys

24 16:43:20.492 06/28/01 Sev=Info/5 IKE/0x6300002F  
Received ISAKMP packet: peer = 203.1.1.1

25 16:43:20.492 06/28/01 Sev=Info/4 IKE/0x63000014  
RECEIVING <<< ISAKMP OAK AG (SA, VID, VID, VID, KE, ID, NON, HASH) from 203.1.1.1

26 16:43:20.492 06/28/01 Sev=Info/5 IKE/0x63000059  
Vendor ID payload = 12F5F28C457168A9702D9FE274CC0100

27 16:43:20.492 06/28/01 Sev=Info/5 IKE/0x63000001  
Peer is a Cisco-Unity compliant peer

28 16:43:20.492 06/28/01 Sev=Info/5 IKE/0x63000059  
Vendor ID payload = AFCAD71368A1F1C96B8696FC77570100

29 16:43:20.492 06/28/01 Sev=Info/5 IKE/0x63000001  
Peer supports DPD

30 16:43:20.492 06/28/01 Sev=Info/5 IKE/0x63000059  
Vendor ID payload = A0EB477E6627B406AA10F958254B3517

31 16:43:20.542 06/28/01 Sev=Info/4 IKE/0x63000013  
SENDING >>> ISAKMP OAK AG \*(HASH, NOTIFY:STATUS\_INITIAL\_CONTACT) to 203.1.1.1

32 16:43:20.542 06/28/01 Sev=Info/4 CM/0x6310000E  
Established Phase 1 SA. 1 Phase 1 SA in the system

33 16:43:21.143 06/28/01 Sev=Info/4 IKE/0x63000013  
SENDING >>> ISAKMP OAK TRANS \*(HASH, ATTR) to 203.1.1.1

34 16:43:24.067 06/28/01 Sev=Info/5 IKE/0x6300002F  
Received ISAKMP packet: peer = 203.1.1.1

35 16:43:24.067 06/28/01 Sev=Info/4 IKE/0x63000014  
RECEIVING <<< ISAKMP OAK TRANS \*(HASH, ATTR) from 203.1.1.1

36 16:43:24.067 06/28/01 Sev=Info/5 IKE/0x63000010  
MODE\_CFG\_REPLY: Attribute = INTERNAL\_IPV4\_ADDRESS: , value = 10.3.3.1

37 16:43:24.067 06/28/01 Sev=Info/5 IKE/0x63000010  
MODE\_CFG\_REPLY: Attribute = INTERNAL\_IPV4\_DNS(1): , value = 10.1.1.3

38 16:43:24.067 06/28/01 Sev=Info/5 IKE/0x63000010  
MODE\_CFG\_REPLY: Attribute = INTERNAL\_IPV4\_NBNS(1) (a.k.a. WINS) : , value = 10.1.1.3

39 16:43:24.067 06/28/01 Sev=Info/5 IKE/0x6300000E  
MODE\_CFG\_REPLY: Attribute = MODECFG\_UNITY\_DEFDOMAIN: , value = cisco.com

40 16:43:24.067 06/28/01 Sev=Info/4 CM/0x63100018  
Mode Config data received

41 16:43:24.668 06/28/01 Sev=Info/5 IKE/0x63000055

Received a key request from Driver for IP address 203.1.1.1, GW IP = 203.1.1.1

42 16:43:24.668 06/28/01 Sev=Info/4 IKE/0x63000013  
SENDING >>> ISAKMP OAK QM \*(HASH, SA, NON, ID, ID) to 203.1.1.1

43 16:43:24.668 06/28/01 Sev=Info/5 IKE/0x63000055  
Received a key request from Driver for IP address 10.10.10.255, GW IP = 203.1.1.1

44 16:43:24.668 06/28/01 Sev=Info/4 IKE/0x63000013  
SENDING >>> ISAKMP OAK QM \*(HASH, SA, NON, ID, ID) to 203.1.1.1

45 16:43:24.668 06/28/01 Sev=Info/4 IPSEC/0x63700014  
Deleted all keys

46 16:43:25.619 06/28/01 Sev=Info/5 IKE/0x6300002F  
Received ISAKMP packet: peer = 203.1.1.1

47 16:43:25.619 06/28/01 Sev=Info/4 IKE/0x63000014  
RECEIVING <<< ISAKMP OAK QM \*(HASH, SA, NON, ID, ID, NOTIFY:STATUS\_RESP\_LIFETIME) from 203

48 16:43:25.619 06/28/01 Sev=Info/5 IKE/0x63000044  
RESPONDER-LIFETIME notify has value of 28800 seconds

49 16:43:25.619 06/28/01 Sev=Info/5 IKE/0x63000045  
RESPONDER-LIFETIME notify has value of 4608000 kb

50 16:43:25.619 06/28/01 Sev=Info/4 IKE/0x63000013  
SENDING >>> ISAKMP OAK QM \*(HASH) to 203.1.1.1

51 16:43:25.619 06/28/01 Sev=Info/5 IKE/0x63000058  
Loading IPsec SA (Message ID = 0x59515364 OUTBOUND SPI = 0xB24CDB55 INBOUND SPI = 0x83AA00

52 16:43:25.619 06/28/01 Sev=Info/5 IKE/0x63000025  
Loaded OUTBOUND ESP SPI: 0xB24CDB55

53 16:43:25.619 06/28/01 Sev=Info/5 IKE/0x63000026  
Loaded INBOUND ESP SPI: 0x83AA0042

54 16:43:25.619 06/28/01 Sev=Info/4 CM/0x63100019  
One secure connection established

55 16:43:25.629 06/28/01 Sev=Info/6 DIALER/0x63300003  
Connection established.

56 16:43:25.669 06/28/01 Sev=Info/6 DIALER/0x63300008  
MAPI32 Information - Outlook not default mail client

57 16:43:25.960 06/28/01 Sev=Info/5 IKE/0x6300002F  
Received ISAKMP packet: peer = 203.1.1.1

58 16:43:25.960 06/28/01 Sev=Info/4 IKE/0x63000014  
RECEIVING <<< ISAKMP OAK QM \*(HASH, SA, NON, ID, ID, NOTIFY:STATUS\_RESP\_LIFETIME) from 203

59 16:43:25.960 06/28/01 Sev=Info/5 IKE/0x63000044  
RESPONDER-LIFETIME notify has value of 28800 seconds

60 16:43:25.960 06/28/01 Sev=Info/5 IKE/0x63000045  
RESPONDER-LIFETIME notify has value of 4608000 kb

61 16:43:25.960 06/28/01 Sev=Info/4 IKE/0x63000013  
SENDING >>> ISAKMP OAK QM \*(HASH) to 203.1.1.1

62 16:43:25.960 06/28/01 Sev=Info/5 IKE/0x63000058  
Loading IPsec SA (Message ID = 0x23A23005 OUTBOUND SPI = 0xAD0599DB INBOUND SPI = 0x2B74D4

```
63      16:43:25.960 06/28/01 Sev=Info/5      IKE/0x63000025
Loaded  OUTBOUND ESP SPI: 0xAD0599DB

64      16:43:25.960 06/28/01 Sev=Info/5      IKE/0x63000026
Loaded  INBOUND ESP SPI: 0x2B74D4A4

65      16:43:25.960 06/28/01 Sev=Info/4      CM/0x63100021
Additional Phase 2 SA established.

66      16:43:25.960 06/28/01 Sev=Info/4      IPSEC/0x63700010
Created a new key structure

67      16:43:25.960 06/28/01 Sev=Info/4      IPSEC/0x6370000F
Added key with SPI=0x55db4cb2 into key list

68      16:43:25.960 06/28/01 Sev=Info/4      IPSEC/0x63700010
Created a new key structure

69      16:43:25.960 06/28/01 Sev=Info/4      IPSEC/0x6370000F
Added key with SPI=0x4200aa83 into key list

70      16:43:25.960 06/28/01 Sev=Info/4      IPSEC/0x63700010
Created a new key structure

71      16:43:25.960 06/28/01 Sev=Info/4      IPSEC/0x6370000F
Added key with SPI=0xdb9905ad into key list

72      16:43:25.960 06/28/01 Sev=Info/4      IPSEC/0x63700010
Created a new key structure

73      16:43:25.960 06/28/01 Sev=Info/4      IPSEC/0x6370000F
Added key with SPI=0xa4d4742b into key list

74      16:43:35.173 06/28/01 Sev=Info/6      IKE/0x6300003D
Sending DPD request to 203.1.1.1, seq# = 1856135987

75      16:43:35.173 06/28/01 Sev=Info/4      IKE/0x63000013
SENDING >>> ISAKMP OAK INFO *(HASH, NOTIFY:DPD_REQUEST) to 203.1.1.1

76      16:43:35.173 06/28/01 Sev=Info/5      IKE/0x6300002F
Received ISAKMP packet: peer = 203.1.1.1

77      16:43:35.173 06/28/01 Sev=Info/4      IKE/0x63000014
RECEIVING <<< ISAKMP OAK INFO *(HASH, NOTIFY:DPD_ACK) from 203.1.1.1

78      16:43:35.173 06/28/01 Sev=Info/5      IKE/0x6300003F
Received DPD ACK from 203.1.1.1, seq# received = 1856135987, seq# expected = 1856135987
```

## Related Information

- [PIX Support Page](#)
- [PIX Command References](#)
- [Configuring IPsec Network Security](#)
- [IP Security \(IPsec\) Product Support Pages](#)
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