Exemplo de Configuração do IOS Router para Passar um Túnel IPSec LAN a LAN via PAT

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Introduction

Este documento fornece uma configuração de exemplo de Tradução de Endereço de Porta (PAT) para permitir que seja estabelecido um túnel IPSec LAN a LAN. Ele se aplica a cenários que têm apenas um endereço IP público (usado em um roteador Cisco IOS® para executar PAT em todo o tráfego) e que precisam passar um túnel IPSec por ele.

Para Gateways VPN que executam Cisco IOS Software Releases anteriores a 12.2(13)T, o recurso de passagem IPSec é necessário no roteador que executa PAT para permitir o Encapsulating Security Payload (ESP) através do .

Observação: esse recurso é conhecido como suporte IPSec através da Network Address Translation (NAT) no Software Advisory (somente clientes registrados) .

Para iniciar o túnel no correspondente local (PATed), não é necessária nenhuma configuração. A fim de iniciar o túnel em um correspondente remoto, estes comandos são necessários:

- **ip nat inside source static *esp inside_ip* interface *interface***
- **ip nat inside source static udp inside_ip 500 interface interface 500**

Com relação a VPN Gateways que funcionam em um Cisco IOS Software Release posterior a 12.2(13)T, o tráfego de IPSec é encapsulado nos pacotes 4500 da porta do Protocolo de dados

do usuário (UDP). Este recurso é conhecido como IPSec NAT Transparency . Para iniciar o túnel no correspondente local (PATed), não é necessária nenhuma configuração.

A fim de iniciar o túnel em um correspondente remoto, estes comandos são necessários:

- **ip nat inside source static udp inside_ip 4500 interface 4500**
- **ip nat inside source static udp inside_ip 500 interface interface 500**

Emita o comando no crypto ipsec nat-transparency udp-encaps para desativar o IPSec NAT Transparency.

Prerequisites

Requirements

Não existem requisitos específicos para este documento.

Componentes Utilizados

As informações neste documento são baseadas no Cisco IOS Software Release 12.3(7)T1.

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

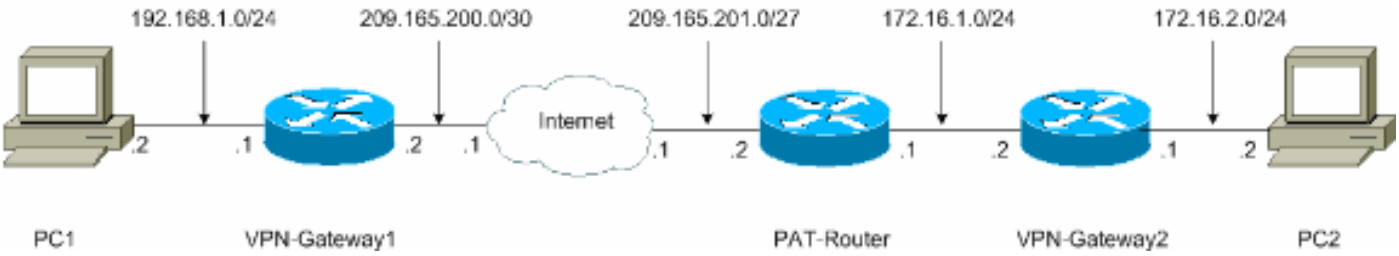
Para obter mais informações sobre convenções de documento, consulte as Convenções de dicas técnicas Cisco.

Configurar

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

Diagrama de Rede

Este documento utiliza a seguinte configuração de rede:



Configurações com NAT Transparency de IPSec

Este documento utiliza as seguintes configurações:

- VPN-Gateway1
- PAT-Router
- VPN-Gateway2

VPN-Gateway1

```
VPN-Gateway1#show running-config
Building configuration...

Current configuration : 1017 bytes
!
version 12.3
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname VPN-Gateway1
!

!--- VPN Gateway1 and VPN Gateway2 can be any devices
that !--- perform IPSec. For detailed information on
configuring IPSec !--- refer to IPSec Technology Support
Information. !--- IPSec configuration between VPN
Gateway1 and VPN Gateway2 !--- is beyond the scope of
this document. boot-start-marker boot-end-marker ! !
clock timezone EST 0 no aaa new-model ip subnet-zero ! !
ip audit po max-events 100 no ftp-server write-enable !
! ! ! ! !--- IKE policies (phase 1). crypto isakmp
policy 10
 authentication pre-share
crypto isakmp key cisco123 address 209.165.201.2
!
!
crypto ipsec transform-set basic esp-des esp-md5-hmac
!
!--- IPSec policies (phase 1). crypto map mymap 10
ipsec-isakmp
 set peer 209.165.201.2
 set transform-set basic
 match address 101
!
!
!
interface Ethernet0/0
 ip address 192.168.1.1 255.255.255.0
!
interface Serial1/0
 ip address 209.165.200.2 255.255.255.252
 serial restart-delay 0
 crypto map mymap
!
ip classless
ip route 0.0.0.0 0.0.0.0 209.165.200.1
no ip http server
no ip http secure-server
!
!
!
access-list 101 permit ip 192.168.1.0 0.0.0.255
172.16.2.0 0.0.0.255
access-list 101 remark Crypto ACL
!
```

```
!
!
control-plane
!
!
line con 0
line aux 0
line vty 0 4
!
!
end
```

PAT-Router

```
PAT-Router#show running-config
Building configuration...

Current configuration : 971 bytes
!
version 12.3
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname PAT-Router
!
boot-start-marker
boot-end-marker
!
!
clock timezone EST 0
no aaa new-model
ip subnet-zero
!
!
ip audit po max-events 100
no ftp-server write-enable
!
!
!
!
no crypto isakmp enable
!
!
!
interface Ethernet0/0
 ip address 172.16.1.1 255.255.255.0
!--- This declares the interface as inside for NAT
purposes. ip nat inside
!
interface Serial1/0
 ip address 209.165.201.2 255.255.255.224
!--- This declares the interface as !--- outside for NAT
purposes. ip nat outside
 serial restart-delay 0
!
ip classless
ip route 0.0.0.0 0.0.0.0 209.165.201.1
ip route 172.16.0.0 255.255.0.0 172.16.1.2
no ip http server
no ip http secure-server
!
ip nat inside source list 1 interface Serial1/0 overload
```

```
!--- This allows PAT to be used for regular Internet
traffic. ip nat inside source static udp 172.16.1.2 4500
interface Serial1/0 4500
!--- This permits IPSec traffic destined for the
Serial1/0 !--- interface to be sent to the inside IP
address 172.16.1.2. ip nat inside source static udp
172.16.1.2 500 interface Serial1/0 500
!--- This allows UDP traffic for the Serial1/0 interface
to be !--- statically mapped to the inside IP address
172.16.1.2. !--- This is required for the Internet
Security Association !--- and Key Management Protocol
(ISAKMP) negotiation to be !--- initiated from VPN-
Gateway1 to VPN-Gateway2. ! ! access-list 1 permit
172.16.0.0 0.0.255.255
!
!
!
control-plane
!
!
line con 0
line aux 0
line vty 0 4
!
!
end
```

VPN-Gateway2

```
VPN-Gateway2#show running-config
Building configuration...

Current configuration : 986 bytes
!
version 12.3
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname VPN-Gateway2
!

!--- VPN Gateway1 and VPN Gateway2 can be any devices !-
-- that perform IPSec. For detailed information on !---
IPSec configuration refer to IPSec Technology Support
Information. !--- IPSec configuration between VPN
Gateway1 and VPN Gateway2 !--- is beyond the scope of
this document. boot-start-marker boot-end-marker ! !
clock timezone EST 0 no aaa new-model ip subnet-zero ! !
ip audit po max-events 100 no ftp-server write-enable !
! ! ! ! !--- IKE policies (phase 1). crypto isakmp
policy 10
 authentication pre-share
crypto isakmp key cisco123 address 209.165.200.2
!
!
crypto ipsec transform-set basic esp-des esp-md5-hmac
!
!--- IPSec policies (phase 1). crypto map mymap 10
ipsec-isakmp
 set peer 209.165.200.2
 set transform-set basic
 match address 101
```

```
!
!
!
interface Ethernet0/0
 ip address 172.16.1.2 255.255.255.0
 crypto map mymap
!
interface Ethernet1/0
 ip address 172.16.2.1 255.255.255.0
!
ip classless
ip route 0.0.0.0 0.0.0.0 172.16.1.1
no ip http server
no ip http secure-server
!
!
!
access-list 101 permit ip 172.16.2.0 0.0.0.255
192.168.1.0 0.0.0.255
access-list 101 remark Crypto ACL
!
!
!
control-plane
!
!
line con 0
line aux 0
line vty 0 4
!
!
end
```

Configurações sem transparência de NAT de IPSec

- VPN-Gateway1
- PAT-Router
- VPN-Gateway2

VPN-Gateway1

```
VPN-Gateway1#show running-config
Building configuration...

Current configuration : 1017 bytes
!
version 12.3
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname VPN-Gateway1
!

!--- VPN Gateway1 and VPN Gateway2 can be any devices !--
-- that perform IPSec. For detailed information on !---
IPSec configuration refer to IPSec Technology Support
Information. !--- IPSec configuration between VPN
Gateway1 and VPN Gateway2 !--- is beyond the scope of
this document. boot-start-marker boot-end-marker ! !
```

```
clock timezone EST 0 no aaa new-model ip subnet-zero ! !
ip audit po max-events 100 no ftp-server write-enable !
! ! ! ! !--- IKE policies (phase 1). crypto isakmp
policy 10
 authentication pre-share
crypto isakmp key cisco123 address 209.165.201.2
!
!
crypto ipsec transform-set basic esp-des esp-md5-hmac
!
!--- IPSec policies (phase 1). crypto map mymap 10
ipsec-isakmp
 set peer 209.165.201.2
 set transform-set basic
 match address 101
!
!
!
interface Ethernet0/0
 ip address 192.168.1.1 255.255.255.0
!
interface Serial1/0
 ip address 209.165.200.2 255.255.255.252
 serial restart-delay 0
 crypto map mymap
!
ip classless
ip route 0.0.0.0 0.0.0.0 209.165.200.1
no ip http server
no ip http secure-server
!
!
!
access-list 101 permit ip 192.168.1.0 0.0.0.255
172.16.2.0 0.0.0.255
access-list 101 remark Crypto ACL
!
!
!
control-plane
!
!
line con 0
line aux 0
line vty 0 4
!
!
end
```

PAT-Router

```
PAT-Router#show running-config
Building configuration...

Current configuration : 971 bytes
!
version 12.3
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname PAT-Router
!
```

```
boot-start-marker
boot-end-marker
!
!
clock timezone EST 0
no aaa new-model
ip subnet-zero
!
!
ip audit po max-events 100
no ftp-server write-enable
!
!
!
!
no crypto isakmp enable
!
!
!
interface Ethernet0/0
 ip address 172.16.1.1 255.255.255.0
!--- This declares the interface as inside for NAT
purposes. ip nat inside
!
interface Serial1/0
 ip address 209.165.201.2 255.255.255.224
!--- This declares the interface as !--- outside for NAT
purposes. ip nat outside
 serial restart-delay 0
!
ip classless
ip route 0.0.0.0 0.0.0.0 209.165.201.1
ip route 172.16.0.0 255.255.0.0 172.16.1.2
no ip http server
no ip http secure-server
!
ip nat inside source list 1 interface Serial1/0 overload
!--- This allows PAT to be used for regular Internet
traffic. ip nat inside source static esp 172.16.1.2
interface Serial1/0
!--- This permits the IPSec ESP tunnel mode !---
destined for the Serial1/0 interface to be sent !--- to
the inside IP address 172.16.1.2. The "esp" !--- option
allows a single ESP tunnel-mode !--- VPN setup to be
possible. ip nat inside source static udp 172.16.1.2 500
interface Serial1/0 500
!--- This allows UDP traffic for the Serial1/0 !---
interface to be statically mapped to the inside !--- IP
address 172.16.1.2. This is required !--- for the ISAKMP
negotiation to be initiated !--- from VPN-Gateway1 to
VPN-Gateway2. ! ! access-list 1 permit 172.16.0.0
0.0.255.255
!
!
!
control-plane
!
!
line con 0
line aux 0
line vty 0 4
!
!
end
```

VPN-Gateway2

```
VPN-Gateway2#show running-config
Building configuration...

Current configuration : 986 bytes
!
version 12.3
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname VPN-Gateway2
!

!--- VPN Gateway1 and VPN Gateway2 can be any devices !-
-- that perform IPSec. For detailed information on !---
IPSec configuration refer to IPSec Technology Support
Information. !--- IPSec configuration between VPN
Gateway1 and VPN Gateway2 !--- is beyond the scope of
this document. boot-start-marker boot-end-marker ! !
clock timezone EST 0 no aaa new-model ip subnet-zero ! !
ip audit po max-events 100 no ftp-server write-enable !
! ! ! ! !--- IKE policies (phase 1). crypto isakmp
policy 10
 authentication pre-share
crypto isakmp key cisco123 address 209.165.200.2
!
!
crypto ipsec transform-set basic esp-des esp-md5-hmac
no crypto ipsec nat-transparency udp-encaps
!
!--- IPSec policies (phase 1). crypto map mymap 10
ipsec-isakmp
 set peer 209.165.200.2
 set transform-set basic
 match address 101
!
!
!
interface Ethernet0/0
 ip address 172.16.1.2 255.255.255.0
 crypto map mymap
!
interface Ethernet1/0
 ip address 172.16.2.1 255.255.255.0
!
ip classless
ip route 0.0.0.0 0.0.0.0 172.16.1.1
no ip http server
no ip http secure-server
!
!
!
access-list 101 permit ip 172.16.2.0 0.0.0.255
192.168.1.0 0.0.0.255
access-list 101 remark Crypto ACL
!
!
!
control-plane
!
!
```

```
line con 0
line aux 0
line vty 0 4
!
!
end
```

Verificar

Estas seções fornecem informações que podem ser utilizadas para confirmar se a configuração está funcionando adequadamente.

A Output Interpreter Tool (somente clientes registrados) oferece suporte a determinados comandos show, o que permite exibir uma análise da saída do comando show.

- Verificar com NAT Transparency de IPSec
- Verificar sem transparência de NAT de IPSec

Verificar com NAT Transparency de IPSec

- **show crypto isakmp sa** — Exibe todas as associações de segurança (SA) atuais do Internet Key Exchange (IKE) em um peer.

```
VPN-Gateway1#show crypto isakmp sa
dst             src             state          conn-id slot
209.165.200.2   209.165.201.2   QM_IDLE              1    0


VPN-Gateway2#show crypto isakmp sa
dst             src             state          conn-id slot
209.165.200.2   172.16.1.2      QM_IDLE              1    0
```

- **show crypto ipsec sa** — Exibe SAs IPSec criadas entre peers.

```
VPN-Gateway1#show crypto ipsec sa

 !--- This command is issued after a ping !--- is attempted from PC2 to PC1. interface:
Serial1/0 Crypto map tag: mymap, local addr. 209.165.200.2 protected vrf: local ident
(addr/mask/prot/port): (192.168.1.0/255.255.255.0/0/0) remote ident (addr/mask/prot/port):
(172.16.2.0/255.255.255.0/0/0) current_peer: 209.165.201.2:4500 PERMIT,
flags={origin_is_acl,} #pkts encaps: 6, #pkts encrypt: 6, #pkts digest: 6 #pkts decaps: 6,
#pkts decrypt: 6, #pkts verify: 6 #pkts compressed: 0, #pkts decompressed: 0 #pkts not
compressed: 0, #pkts compr. failed: 0 #pkts not decompressed: 0, #pkts decompress failed: 0
#send errors 0, #recv errors 0 local crypto endpt.: 209.165.200.2, remote crypto endpt.:
209.165.201.2 path mtu 1500, media mtu 1500 current outbound spi: 9CCA0619 inbound esp sas:
spi: 0x4E6B990F(1315674383) transform: esp-des esp-md5-hmac , in use settings ={Tunnel UDP-
Encaps, } slot: 0, conn id: 2000, flow_id: 5, crypto map: mymap crypto engine type:
Software, engine_id: 1 sa timing: remaining key lifetime (k/sec): (4602622/3489)
ike_cookies: 8973C578 9C7DEB45 5C9BE6DC 7F737D09 IV size: 8 bytes replay detection support:
Y inbound ah sas: inbound pcp sas: outbound esp sas: spi: 0x9CCA0619(2630485529) transform:
esp-des esp-md5-hmac , in use settings ={Tunnel UDP-Encaps, } slot: 0, conn id: 2001,
flow_id: 6, crypto map: mymap crypto engine type: Software, engine_id: 1 sa timing:
remaining key lifetime (k/sec): (4602622/3489) ike_cookies: 8973C578 9C7DEB45 5C9BE6DC
7F737D09 IV size: 8 bytes replay detection support: Y outbound ah sas: outbound pcp sas:
VPN-Gateway2#show crypto ipsec sa

 !--- This command is issued after a ping !--- is attempted from PC2 to PC1. interface:
Ethernet0/0 Crypto map tag: mymap, local addr. 172.16.1.2 protected vrf: local ident
(addr/mask/prot/port): (172.16.2.0/255.255.255.0/0/0) remote ident (addr/mask/prot/port):
(192.168.1.0/255.255.255.0/0/0) current_peer: 209.165.200.2:4500 PERMIT,
flags={origin_is_acl,} #pkts encaps: 23, #pkts encrypt: 23, #pkts digest: 23 #pkts decaps:
```

```
16, #pkts decrypt: 16, #pkts verify: 16 #pkts compressed: 0, #pkts decompressed: 0 #pkts not
compressed: 0, #pkts compr. failed: 0 #pkts not decompressed: 0, #pkts decompress failed: 0
#send errors 7, #recv errors 0 local crypto endpt.: 172.16.1.2, remote crypto endpt.:
209.165.200.2 path mtu 1500, media mtu 1500 current outbound spi: 4E6B990F inbound esp sas:
spi: 0x9CCA0619(2630485529) transform: esp-des esp-md5-hmac , in use settings ={Tunnel UDP-
Encaps, } slot: 0, conn id: 2000, flow_id: 1, crypto map: mymap crypto engine type:
Software, engine_id: 1 sa timing: remaining key lifetime (k/sec): (4384024/3481)
ike_cookies: 5C9BE6DC 7F737D09 8973C578 9C7DEB45 IV size: 8 bytes replay detection support:
Y inbound ah sas: inbound pcp sas: outbound esp sas: spi: 0x4E6B990F(1315674383) transform:
esp-des esp-md5-hmac , in use settings ={Tunnel UDP-Encaps, } slot: 0, conn id: 2001,
flow_id: 2, crypto map: mymap crypto engine type: Software, engine_id: 1 sa timing:
remaining key lifetime (k/sec): (4384024/3481) ike_cookies: 5C9BE6DC 7F737D09 8973C578
9C7DEB45 IV size: 8 bytes replay detection support: Y outbound ah sas: outbound pcp sas:
```

- **show ip nat translations** — Exibe as conversões NAT ativas.

```
PAT-Router#show ip nat translations
Pro Inside global      Inside local       Outside local      Outside global
udp 209.165.201.2:500  172.16.1.2:500     ---                ---
udp 209.165.201.2:4500 172.16.1.2:4500    ---                ---
```

Verificar sem transparência de NAT de IPSec

- **show crypto isakmp sa** — Exibe todas as SAs IKE atuais em um peer.

```
VPN-Gateway1#show crypto isakmp sa
dst             src             state          conn-id slot
209.165.200.2   209.165.201.2   QM_IDLE              1    0


VPN-Gateway2#show crypto isakmp sa
dst             src             state          conn-id slot
209.165.200.2   172.16.1.2      QM_IDLE              1    0
```

- **show crypto ipsec sa** — Exibe SAs IPSec criadas entre peers.

```
VPN-Gateway1#show crypto ipsec sa

 !--- This command is issued after a ping !--- is attempted from PC2 to PC1. interface:
Serial1/0 Crypto map tag: mymap, local addr. 209.165.200.2 protected vrf: local ident
(addr/mask/prot/port): (192.168.1.0/255.255.255.0/0/0) remote ident (addr/mask/prot/port):
(172.16.2.0/255.255.255.0/0/0) current_peer: 209.165.201.2:500 PERMIT,
flags={origin_is_acl,} #pkts encaps: 21, #pkts encrypt: 21, #pkts digest: 21 #pkts decaps:
15, #pkts decrypt: 15, #pkts verify: 15 #pkts compressed: 0, #pkts decompressed: 0 #pkts not
compressed: 0, #pkts compr. failed: 0 #pkts not decompressed: 0, #pkts decompress failed: 0
#send errors 4, #recv errors 0 local crypto endpt.: 209.165.200.2, remote crypto endpt.:
209.165.201.2 path mtu 1500, media mtu 1500 current outbound spi: E89A0245 inbound esp sas:
spi: 0xB5F867BC(3052955580) transform: esp-des esp-md5-hmac , in use settings ={Tunnel, }
slot: 0, conn id: 2000, flow_id: 7, crypto map: mymap crypto engine type: Software,
engine_id: 1 sa timing: remaining key lifetime (k/sec): (4538665/3553) ike_cookies: 8973C578
DD91CB42 5C9BE6DC 63813771 IV size: 8 bytes replay detection support: Y inbound ah sas:
inbound pcp sas: outbound esp sas: spi: 0xE89A0245(3902407237) transform: esp-des esp-md5-
hmac , in use settings ={Tunnel, } slot: 0, conn id: 2001, flow_id: 8, crypto map: mymap
crypto engine type: Software, engine_id: 1 sa timing: remaining key lifetime (k/sec):
(4538665/3553) ike_cookies: 8973C578 DD91CB42 5C9BE6DC 63813771 IV size: 8 bytes replay
detection support: Y outbound ah sas: outbound pcp sas: VPN-Gateway2#show crypto ipsec sa

 !--- This command is issued after a ping !--- is attempted from PC2 to PC1. interface:
Ethernet0/0 Crypto map tag: mymap, local addr. 172.16.1.2 protected vrf: local ident
(addr/mask/prot/port): (172.16.2.0/255.255.255.0/0/0) remote ident (addr/mask/prot/port):
(192.168.1.0/255.255.255.0/0/0) current_peer: 209.165.200.2:500 PERMIT,
flags={origin_is_acl,} #pkts encaps: 5, #pkts encrypt: 5, #pkts digest: 5 #pkts decaps: 5,
#pkts decrypt: 5, #pkts verify: 5 #pkts compressed: 0, #pkts decompressed: 0 #pkts not
compressed: 0, #pkts compr. failed: 0 #pkts not decompressed: 0, #pkts decompress failed: 0
#send errors 1, #recv errors 0 local crypto endpt.: 172.16.1.2, remote crypto endpt.:
209.165.200.2 path mtu 1500, media mtu 1500 current outbound spi: B5F867BC inbound esp sas:
spi: 0xE89A0245(3902407237) transform: esp-des esp-md5-hmac , in use settings ={Tunnel, }
```

```
slot: 0, conn id: 2000, flow_id: 3, crypto map: mymap crypto engine type: Software,
engine_id: 1 sa timing: remaining key lifetime (k/sec): (4572084/3561) ike_cookies: 5C9BE6DC
63813771 8973C578 DD91CB42 IV size: 8 bytes replay detection support: Y inbound ah sas:
inbound pcp sas: outbound esp sas: spi: 0xB5F867BC(3052955580) transform: esp-des esp-md5-
hmac , in use settings ={Tunnel, } slot: 0, conn id: 2001, flow_id: 4, crypto map: mymap
crypto engine type: Software, engine_id: 1 sa timing: remaining key lifetime (k/sec):
(4572084/3561) ike_cookies: 5C9BE6DC 63813771 8973C578 DD91CB42 IV size: 8 bytes replay
detection support: Y outbound ah sas: outbound pcp sas:
```

- **show ip nat translations** — Exibe as conversões NAT ativas.

```
PAT-Router#show ip nat translations
Pro Inside global      Inside local       Outside local      Outside global
udp 209.165.201.2:500  172.16.1.2:500     ---                ---
esp 209.165.201.2:0    172.16.1.2:0       ---                ---
```

Troubleshoot

Esta seção fornece informações que podem ser usadas para o troubleshooting da sua configuração.

Se você configurou um túnel de IPSec de LAN para LAN que envolve PAT (conforme descrito neste documento) e você continuar tendo problemas, reúna a saída **debug** de cada dispositivo e a saída dos comandos **show** para análise pelo Suporte Técnico da Cisco.

Essas são informações relevantes sobre Troubleshooting para essa configuração. Para obter informações adicionais sobre a solução de problemas, consulte Solução de problemas de segurança de IP - Entendendo e usando comandos debug e Verificando a Operação de NAT e Troubleshooting Básico de NAT.

comandos **debug** e saída de exemplo são mostrados nessas seções.

- Solucione os problemas com a transparência NAT de IPSec
- Solucionar problemas sem transparência de NAT de IPSec

Observação: antes de inserir o comando **debug**, consulte Informações importantes sobre os comandos debug.

Solucione os problemas com a transparência NAT de IPSec

- **debug crypto ipsec — Exibe as negociações de IPSec de fase 2**
- **debug crypto isakmp — Exibe as negociações ISAKMP da Fase 1.**
- **debug ip nat detail** —Examina a NAT sendo executada pelo roteador.

Esse é um exemplo da saída do comando.

```
VPN-Gateway1#debug crypto ipsec
Crypto IPSEC debugging is on
VPN-Gateway1#debug crypto isakmp
Crypto ISAKMP debugging is on
VPN-Gateway1#show debug
Cryptographic Subsystem:
  Crypto ISAKMP debugging is on
  Crypto IPSEC debugging is on

 !--- These debugs appeared after a ping !--- was attempted from PC2 to PC1. *Jun 27
09:31:36.159: ISAKMP (0:0): received packet from 209.165.201.2 dport 500 sport 500 Global (N)
```

NEW SA *Jun 27 09:31:36.159: ISAKMP: Created a peer struct for 209.165.201.2, peer port 500 *Jun 27 09:31:36.159: ISAKMP: Locking peer struct 0x2C50610, IKE refcount 1 for crypto_isakmp_process_block *Jun 27 09:31:36.159: ISAKMP: local port 500, remote port 500 *Jun 27 09:31:36.559: insert sa successfully sa = 290B720 *Jun 27 09:31:36.559: ISAKMP:(0:1:SW:1):Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH *Jun 27 09:31:36.559: ISAKMP:(0:1:SW:1):Old State = IKE_READY New State = IKE_R_MM1 *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): processing SA payload. message ID = 0 *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): vendor ID seems Unity/DPD but major 157 mismatch *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): vendor ID is NAT-T v3 *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): vendor ID seems Unity/DPD but major 123 mismatch *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): vendor ID is NAT-T v2 *Jun 27 09:31:36.619: ISAKMP: Looking for a matching key for 209.165.201.2 in default : success *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1):found peer pre-shared key matching 209.165.201.2 *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): local preshared key found *Jun 27 09:31:36.619: ISAKMP : Scanning profiles for xauth ... *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1):Checking ISAKMP transform 1 against priority 10 policy *Jun 27 09:31:36.619: ISAKMP: encryption DES-CBC *Jun 27 09:31:36.619: ISAKMP: hash SHA *Jun 27 09:31:36.619: ISAKMP: default group 1 *Jun 27 09:31:36.619: ISAKMP: auth pre-share *Jun 27 09:31:36.619: ISAKMP: life type in seconds *Jun 27 09:31:36.619: ISAKMP: life duration (VPI) of 0x0 0x1 0x51 0x80 *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1):atts are acceptable. Next payload is 0 *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): vendor ID seems Unity/DPD but major 157 mismatch *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): vendor ID is NAT-T v3 *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): vendor ID seems Unity/DPD but major 123 mismatch *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1): vendor ID is NAT-T v2 *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_MAIN_MODE *Jun 27 09:31:36.619: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM1 New State = IKE_R_MM1 *Jun 27 09:31:36.771: ISAKMP:(0:1:SW:1): constructed NAT-T vendor-03 ID *Jun 27 09:31:36.771: ISAKMP:(0:1:SW:1): sending packet to 209.165.201.2 my_port 500 peer_port 500 (R) MM_SA_SETUP *Jun 27 09:31:36.771: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_COMPLETE *Jun 27 09:31:36.771: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM1 New State = IKE_R_MM2 *Jun 27 09:31:37.179: ISAKMP (0:134217729): received packet from 209.165.201.2 dport 500 sport 500 Global (R) MM_SA_SETUP *Jun 27 09:31:37.179: ISAKMP:(0:1:SW:1):Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH *Jun 27 09:31:37.179: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM2 New State = IKE_R_MM3 *Jun 27 09:31:38.199: ISAKMP:(0:1:SW:1): processing KE payload. message ID = 0 *Jun 27 09:31:38.199: ISAKMP:(0:1:SW:1): processing NONCE payload. message ID = 0 *Jun 27 09:31:38.759: ISAKMP: Looking for a matching key for 209.165.201.2 in default : success *Jun 27 09:31:38.759: ISAKMP:(0:1:SW:1):found peer pre-shared key matching 209.165.201.2 *Jun 27 09:31:38.759: ISAKMP:(0:1:SW:1):SKEYID state generated *Jun 27 09:31:38.759: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:31:38.759: ISAKMP:(0:1:SW:1): vendor ID is Unity *Jun 27 09:31:38.759: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:31:38.759: ISAKMP:(0:1:SW:1): vendor ID is DPD *Jun 27 09:31:38.759: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:31:38.759: ISAKMP:(0:1:SW:1): speaking to another IOS box! *Jun 27 09:31:38.759: ISAKMP:received payload type 17 *Jun 27 09:31:38.759: ISAKMP:received payload type 17 *Jun 27 09:31:38.759: ISAKMP (0:134217729): NAT found, the node outside NAT *Jun 27 09:31:38.759: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_MAIN_MODE *Jun 27 09:31:38.759: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM3 New State = IKE_R_MM3 *Jun 27 09:31:38.891: ISAKMP:(0:1:SW:1): sending packet to 209.165.201.2 my_port 500 peer_port 500 (R) MM_KEY_EXCH *Jun 27 09:31:38.891: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_COMPLETE *Jun 27 09:31:38.891: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM3 New State = IKE_R_MM4 *Jun 27 09:31:40.071: ISAKMP (0:134217729): received packet from 209.165.201.2 dport 4500 sport 4500 Global (R) MM_KEY_EXCH *Jun 27 09:31:40.071: ISAKMP:(0:1:SW:1):Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH *Jun 27 09:31:40.071: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM4 New State = IKE_R_MM5 *Jun 27 09:31:40.199: ISAKMP:(0:1:SW:1): processing ID payload. message ID = 0 *Jun 27 09:31:40.199: ISAKMP (0:134217729): ID payload next-payload : 8 type : 1 address : 172.16.1.2 protocol : 17 port : 0 length : 12 *Jun 27 09:31:40.199: ISAKMP:(0:1:SW:1):: peer matches *none* of the profiles *Jun 27 09:31:40.199: ISAKMP:(0:1:SW:1): processing HASH payload. message ID = 0 *Jun 27 09:31:40.199: ISAKMP:(0:1:SW:1): processing NOTIFY INITIAL_CONTACT protocol 1 spi 0, message ID = 0, sa = 290B720 *Jun 27 09:31:40.199: ISAKMP:(0:1:SW:1):SA authentication status: authenticated *Jun 27 09:31:40.199: ISAKMP:(0:1:SW:1): Process initial contact, bring down existing phase 1 and 2 SA's with local 209.165.200.2 remote 209.165.201.2 remote port 4500 *Jun 27 09:31:40.231: IPSEC(key_engine): got a queue event with 1 kei messages *Jun 27 09:31:40.399: ISAKMP:(0:1:SW:1):SA authentication status: authenticated *Jun 27 09:31:40.399: ISAKMP:(0:1:SW:1):SA has been authenticated with 209.165.201.2 *Jun 27

09:31:40.399: ISAKMP:(0:1:SW:1):Detected port floating to port = 4500 *Jun 27 09:31:40.399: ISAKMP: Trying to insert a peer 209.165.200.2/209.165.201.2/4500/, and inserted successfully. *Jun 27 09:31:40.399: ISAKMP:(0:1:SW:1):: peer matches *none* of the profiles *Jun 27 09:31:40.399: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_MAIN_MODE *Jun 27 09:31:40.399: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM5 New State = IKE_R_MM5 *Jun 27 09:31:40.459: ISAKMP:(0:1:SW:1):SA is doing pre-shared key authentication using id type ID_IPV4_ADDR *Jun 27 09:31:40.459: ISAKMP (0:134217729): ID payload next-payload : 8 type : 1 address : 209.165.200.2 protocol : 17 port : 0 length : 12 *Jun 27 09:31:40.459: ISAKMP:(0:1:SW:1):Total payload length: 12 *Jun 27 09:31:40.459: ISAKMP:(0:1:SW:1): sending packet to 209.165.201.2 my_port 4500 peer_port 4500 (R) MM_KEY_EXCH *Jun 27 09:31:40.459: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_COMPLETE *Jun 27 09:31:40.459: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM5 New State = IKE_P1_COMPLETE *Jun 27 09:31:40.539: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PHASE1_COMPLETE *Jun 27 09:31:40.539: ISAKMP:(0:1:SW:1):Old State = IKE_P1_COMPLETE New State = IKE_P1_COMPLETE *Jun 27 09:31:40.999: ISAKMP (0:134217729): received packet from 209.165.201.2 dport 4500 sport 4500 Global (R) QM_IDLE *Jun 27 09:31:40.999: ISAKMP: set new node 1546295295 to QM_IDLE *Jun 27 09:31:40.999: ISAKMP:(0:1:SW:1): processing HASH payload. message ID = 1546295295 *Jun 27 09:31:40.999: ISAKMP:(0:1:SW:1): processing SA payload. message ID = 1546295295 *Jun 27 09:31:40.999: ISAKMP:(0:1:SW:1):Checking IPSec proposal 1 *Jun 27 09:31:40.999: ISAKMP: transform 1, ESP_DES *Jun 27 09:31:40.999: ISAKMP: attributes in transform: *Jun 27 09:31:40.999: ISAKMP: encaps is 61443 (Tunnel-UDP) *Jun 27 09:31:40.999: ISAKMP: SA life type in seconds *Jun 27 09:31:40.999: ISAKMP: SA life duration (basic) of 3600 *Jun 27 09:31:40.999: ISAKMP: SA life type in kilobytes *Jun 27 09:31:40.999: ISAKMP: SA life duration (VPI) of 0x0 0x46 0x50 0x0 *Jun 27 09:31:40.999: ISAKMP: authenticator is HMAC-MD5 *Jun 27 09:31:40.999: ISAKMP:(0:1:SW:1):atts are acceptable. *Jun 27 09:31:40.999: IPSEC(validate_proposal_request): proposal part #1, (key eng. msg.) INBOUND local= 209.165.200.2, remote= 209.165.201.2, local_proxy= 192.168.1.0/255.255.255.0/0/0 (type=4), remote_proxy= 172.16.2.0/255.255.255.0/0/0 (type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel-UDP), lifedur= 0s and 0kb, spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x400 *Jun 27 09:31:40.999: IPSEC(kei_proxy): head = mymap, map->ivrf = , kei->ivrf = *Jun 27 09:31:40.999: ISAKMP:(0:1:SW:1): processing NONCE payload. message ID = 1546295295 *Jun 27 09:31:40.999: ISAKMP:(0:1:SW:1): processing ID payload. message ID = 1546295295 *Jun 27 09:31:40.999: ISAKMP:(0:1:SW:1): processing ID payload. message ID = 1546295295 *Jun 27 09:31:40.999: ISAKMP:(0:1:SW:1): asking for 1 spis from ipsec *Jun 27 09:31:40.999: ISAKMP:(0:1:SW:1):Node 1546295295, Input = IKE_MESG_FROM_PEER, IKE_QM_EXCH *Jun 27 09:31:40.999: ISAKMP:(0:1:SW:1):Old State = IKE_QM_READY New State = IKE_QM_SPI_STARVE *Jun 27 09:31:41.031: IPSEC(key_engine): got a queue event with 1 kei messages *Jun 27 09:31:41.031: IPSEC(spi_response): getting spi 1315674383 for SA from 209.165.200.2 to 209.165.201.2 for prot 3 *Jun 27 09:31:41.079: ISAKMP: received ike message (2/1) *Jun 27 09:31:42.039: ISAKMP:(0:1:SW:1): sending packet to 209.165.201.2 my_port 4500 peer_port 4500 (R) QM_IDLE *Jun 27 09:31:42.039: ISAKMP:(0:1:SW:1):Node 1546295295, Input = IKE_MESG_FROM_IPSEC, IKE_SPI_REPLY *Jun 27 09:31:42.039: ISAKMP:(0:1:SW:1):Old State = IKE_QM_SPI_STARVE New State = IKE_QM_R_QM2 *Jun 27 09:31:42.311: ISAKMP (0:134217729): received packet from 209.165.201.2 dport 4500 sport 4500 Global (R) QM_IDLE *Jun 27 09:31:42.311: IPSec: Flow_switching Allocated flow for flow_id 134217733 *Jun 27 09:31:42.311: IPSec: Flow_switching Allocated flow for flow_id 134217734 *Jun 27 09:31:43.339: %CRYPTO-5-SESSION_STATUS: Crypto tunnel is UP . Peer 209.165.201.2:4500 Id: 172.16.1.2 *Jun 27 09:31:43.339: ISAKMP: Locking peer struct 0x2C50610, IPSEC refcount 1 for for stuff_ke *Jun 27 09:31:43.339: ISAKMP:(0:1:SW:1): Creating IPSec SAs *Jun 27 09:31:43.339: inbound SA from 209.165.201.2 to 209.165.200.2 (f/i) 0/ 0 (proxy 172.16.2.0 to 192.168.1.0) *Jun 27 09:31:43.339: has spi 0x4E6B990F and conn_id 2000 and flags 400 *Jun 27 09:31:43.339: lifetime of 3600 seconds *Jun 27 09:31:43.339: lifetime of 4608000 kilobytes *Jun 27 09:31:43.339: has client flags 0x10 *Jun 27 09:31:43.339: outbound SA from 209.165.200.2 to 209.165.201.2 (f/i) 0/0 (proxy 192.168.1.0 to 172.16.2.0) *Jun 27 09:31:43.339: has spi -1664481767 and conn_id 2001 and flags 408 *Jun 27 09:31:43.339: lifetime of 3600 seconds *Jun 27 09:31:43.339: lifetime of 4608000 kilobytes *Jun 27 09:31:43.339: has client flags 0x10 *Jun 27 09:31:43.339: ISAKMP:(0:1:SW:1):deleting node 1546295295 error FALSE reason "quick mode done (await)" *Jun 27 09:31:43.339: ISAKMP:(0:1:SW:1):Node 1546295295, Input = IKE_MESG_FROM_PEER, IKE_QM_EXCH *Jun 27 09:31:43.339: ISAKMP:(0:1:SW:1):Old State = IKE_QM_R_QM2 New State = IKE_QM_PHASE2_COMPLETE *Jun 27 09:31:43.359: IPSEC(key_engine): got a queue event with 2 kei messages *Jun 27 09:31:43.359: IPSEC(initialize_sas): , (key eng. msg.) INBOUND local= 209.165.200.2, remote= 209.165.201.2, local_proxy= 192.168.1.0/255.255.255.0/0/0 (type=4), remote_proxy= 172.16.2.0/255.255.255.0/0/0 (type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel-UDP), lifedur= 3600s and 4608000kb, spi= 0x4E6B990F(1315674383), conn_id= 134219728, keysize= 0, flags= 0x400 *Jun 27 09:31:43.359: IPSEC(initialize_sas): , (key eng. msg.) OUTBOUND local= 209.165.200.2, remote= 209.165.201.2, local_proxy=

192.168.1.0/255.255.255.0/0/0 (type=4), remote_proxy= 172.16.2.0/255.255.255.0/0/0 (type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel-UDP), lifedur= 3600s and 4608000kb, spi= 0x9CCA0619(2630485529), conn_id= 134219729, keysize= 0, flags= 0x408 *Jun 27 09:31:43.359: IPSEC(kei_proxy): head = mymap, map->ivrf = , kei->ivrf = *Jun 27 09:31:43.359: IPSEC(crypto_ipsec_sa_find_ident_head): reconnecting with the same proxies and 209.165.201.2 *Jun 27 09:31:43.359: IPSEC(mtree_add_ident): src 192.168.1.0, dest 172.16.2.0, dest_port 0 *Jun 27 09:31:43.359: IPSEC(create_sa): sa created, (sa) sa_dest= 209.165.200.2, sa_prot= 50, sa_spi= 0x4E6B990F(1315674383), sa_trans= esp-des esp-md5-hmac , sa_conn_id= 134219728 *Jun 27 09:31:43.359: IPSEC(create_sa): sa created, (sa) sa_dest= 209.165.201.2, sa_prot= 50, sa_spi= 0x9CCA0619(2630485529), sa_trans= esp-des esp-md5-hmac , sa_conn_id= 134219729 *Jun 27 09:32:33.359: ISAKMP:(0:1:SW:1):purging node 1546295295 VPN-Gateway2#**debug crypto ipsec**
Crypto IPSEC debugging is on
VPN-Gateway2#**debug crypto isakmp**
Crypto ISAKMP debugging is on
VPN-Gateway2#**show debug**
Cryptographic Subsystem:
  Crypto ISAKMP debugging is on
  Crypto IPSEC debugging is on
VPN-Gateway2#

!--- These debugs appeared after a ping !--- was attempted from PC2 to PC1. *Jun 27 09:31:35.447: IPSEC(sa_request): , (key eng. msg.) OUTBOUND local= 172.16.1.2, remote= 209.165.200.2, local_proxy= 172.16.2.0/255.255.255.0/0/0 (type=4), remote_proxy= 192.168.1.0/255.255.255.0/0/0 (type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel), lifedur= 3600s and 4608000kb, spi= 0x9CCA0619(2630485529), conn_id= 0, keysize= 0, flags= 0x400A *Jun 27 09:31:35.455: ISAKMP: received ke message (1/1) *Jun 27 09:31:35.455: ISAKMP:(0:0:N/A:0): SA request profile is (NULL) *Jun 27 09:31:35.455: ISAKMP: Created a peer struct for 209.165.200.2, peer port 500 *Jun 27 09:31:35.455: ISAKMP: Locking peer struct 0x2C42438, IKE refcount 1 for isakmp_initiator *Jun 27 09:31:35.455: ISAKMP: local port 500, remote port 500 *Jun 27 09:31:35.487: ISAKMP: set new node 0 to QM_IDLE *Jun 27 09:31:35.487: insert sa successfully sa = 2CB1E80 *Jun 27 09:31:35.487: ISAKMP:(0:1:SW:1):Can not start Aggressive mode, trying Main mode. *Jun 27 09:31:35.487: ISAKMP: Looking for a matching key for 209.165.200.2 in default : success *Jun 27 09:31:35.487: ISAKMP:(0:1:SW:1):found peer pre-shared key matching 209.165.200.2 *Jun 27 09:31:35.487: ISAKMP:(0:1:SW:1): constructed NAT-T vendor-03 ID *Jun 27 09:31:35.487: ISAKMP:(0:1:SW:1): constructed NAT-T vendor-02 ID *Jun 27 09:31:35.487: ISAKMP:(0:1:SW:1):Input = IKE_MESG_FROM_IPSEC, IKE_SA_REQ_MM *Jun 27 09:31:35.487: ISAKMP:(0:1:SW:1):Old State = IKE_READY New State = IKE_I_MM1 *Jun 27 09:31:35.487: ISAKMP:(0:1:SW:1): beginning Main Mode exchange *Jun 27 09:31:35.487: ISAKMP:(0:1:SW:1): sending packet to 209.165.200.2 my_port 500 peer_port 500 (I) MM_NO_STATE *Jun 27 09:31:36.607: ISAKMP (0:134217729): received packet from 209.165.200.2 dport 500 sport 500 Global (I) MM_NO_STATE *Jun 27 09:31:36.607: ISAKMP:(0:1:SW:1):Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH *Jun 27 09:31:36.607: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM1 New State = IKE_I_MM2 *Jun 27 09:31:36.687: ISAKMP:(0:1:SW:1): processing SA payload. message ID = 0 *Jun 27 09:31:36.687: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:31:36.687: ISAKMP:(0:1:SW:1): vendor ID seems Unity/DPD but major 157 mismatch *Jun 27 09:31:36.687: ISAKMP:(0:1:SW:1): vendor ID is NAT-T v3 *Jun 27 09:31:36.687: ISAKMP: Looking for a matching key for 209.165.200.2 in default : success *Jun 27 09:31:36.687: ISAKMP:(0:1:SW:1):found peer pre-shared key matching 209.165.200.2 *Jun 27 09:31:36.687: ISAKMP:(0:1:SW:1): local preshared key found *Jun 27 09:31:36.687: ISAKMP : Scanning profiles for xauth ... *Jun 27 09:31:36.687: ISAKMP:(0:1:SW:1):Checking ISAKMP transform 1 against priority 10 policy *Jun 27 09:31:36.687: ISAKMP: encryption DES-CBC *Jun 27 09:31:36.687: ISAKMP: hash SHA *Jun 27 09:31:36.687: ISAKMP: default group 1 *Jun 27 09:31:36.687: ISAKMP: auth pre-share *Jun 27 09:31:36.687: ISAKMP: life type in seconds *Jun 27 09:31:36.687: ISAKMP: life duration (VPI) of 0x0 0x1 0x51 0x80 *Jun 27 09:31:36.687: ISAKMP:(0:1:SW:1):atts are acceptable. Next payload is 0 *Jun 27 09:31:36.687: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:31:36.687: ISAKMP:(0:1:SW:1): vendor ID seems Unity/DPD but major 157 mismatch *Jun 27 09:31:36.687: ISAKMP:(0:1:SW:1): vendor ID is NAT-T v3 *Jun 27 09:31:36.687: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_MAIN_MODE *Jun 27 09:31:36.687: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM2 New State = IKE_I_MM2 *Jun 27 09:31:36.795: ISAKMP:(0:1:SW:1): sending packet to 209.165.200.2 my_port 500 peer_port 500 (I) MM_SA_SETUP *Jun 27 09:31:36.795: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_COMPLETE *Jun 27 09:31:36.795: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM2 New State = IKE_I_MM3 *Jun 27 09:31:38.727: ISAKMP (0:134217729): received packet from 209.165.200.2 dport 500 sport 500 Global (I) MM_SA_SETUP *Jun 27 09:31:38.727: ISAKMP:(0:1:SW:1):Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH *Jun 27 09:31:38.727: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM3

New State = IKE_I_MM4 *Jun 27 09:31:38.807: ISAKMP:(0:1:SW:1): processing KE payload. message ID = 0 *Jun 27 09:31:38.807: ISAKMP:(0:1:SW:1): processing NONCE payload. message ID = 0 *Jun 27 09:31:38.807: ISAKMP: Looking for a matching key for 209.165.200.2 in default : success *Jun 27 09:31:38.807: ISAKMP:(0:1:SW:1):found peer pre-shared key matching 209.165.200.2 *Jun 27 09:31:38.807: ISAKMP:(0:1:SW:1):SKEYID state generated *Jun 27 09:31:38.807: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:31:38.807: ISAKMP:(0:1:SW:1): vendor ID is Unity *Jun 27 09:31:38.807: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:31:38.807: ISAKMP:(0:1:SW:1): vendor ID is DPD *Jun 27 09:31:38.807: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:31:38.807: ISAKMP:(0:1:SW:1): speaking to another IOS box! *Jun 27 09:31:38.807: ISAKMP:received payload type 17 *Jun 27 09:31:38.807: ISAKMP (0:134217729): NAT found, the node inside NAT *Jun 27 09:31:38.807: ISAKMP:received payload type 17 *Jun 27 09:31:38.807: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_MAIN_MODE *Jun 27 09:31:38.807: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM4 New State = IKE_I_MM4 *Jun 27 09:31:38.935: ISAKMP:(0:1:SW:1):Send initial contact *Jun 27 09:31:38.935: ISAKMP:(0:1:SW:1):SA is doing pre-shared key authentication using id type ID_IPV4_ADDR *Jun 27 09:31:38.935: ISAKMP (0:134217729): ID payload next-payload : 8 type : 1 address : 172.16.1.2 protocol : 17 port : 0 length : 12 *Jun 27 09:31:38.935: ISAKMP:(0:1:SW:1):Total payload length: 12 *Jun 27 09:31:38.935: ISAKMP:(0:1:SW:1): sending packet to 209.165.200.2 my_port 4500 peer_port 4500 (I) MM_KEY_EXCH *Jun 27 09:31:38.935: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_COMPLETE *Jun 27 09:31:38.935: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM4 New State = IKE_I_MM5 *Jun 27 09:31:40.307: ISAKMP (0:134217729): received packet from 209.165.200.2 dport 4500 sport 4500 Global (I) MM_KEY_EXCH *Jun 27 09:31:40.307: ISAKMP:(0:1:SW:1):Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH *Jun 27 09:31:40.307: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM5 New State = IKE_I_MM6 *Jun 27 09:31:40.367: ISAKMP:(0:1:SW:1): processing ID payload. message ID = 0 *Jun 27 09:31:40.367: ISAKMP (0:134217729): ID payload next-payload : 8 type : 1 address : 209.165.200.2 protocol : 17 port : 0 length : 12 *Jun 27 09:31:40.367: ISAKMP:(0:1:SW:1): processing HASH payload. message ID = 0 *Jun 27 09:31:40.367: ISAKMP:(0:1:SW:1):SA authentication status: authenticated *Jun 27 09:31:40.367: ISAKMP:(0:1:SW:1):SA has been authenticated with 209.165.200.2 *Jun 27 09:31:40.367: ISAKMP:(0:1:SW:1):: peer matches *none* of the profiles *Jun 27 09:31:40.367: ISAKMP:(0:1:SW:1):Setting UDP ENC peer struct 0x2940710 sa= 0x2CB1E80 *Jun 27 09:31:40.367: ISAKMP: Trying to insert a peer 172.16.1.2/209.165.200.2/4500/, and inserted successfully. *Jun 27 09:31:40.367: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_MAIN_MODE *Jun 27 09:31:40.367: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM6 New State = IKE_I_MM6 *Jun 27 09:31:40.367: ISAKMP: sending nat keepalive packet to 209.165.200.2(4500) *Jun 27 09:31:40.395: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_COMPLETE *Jun 27 09:31:40.395: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM6 New State = IKE_P1_COMPLETE *Jun 27 09:31:40.475: ISAKMP:(0:1:SW:1):beginning Quick Mode exchange, M-ID of 1546295295 *Jun 27 09:31:40.507: ISAKMP:(0:1:SW:1): sending packet to 209.165.200.2 my_port 4500 peer_port 4500 (I) QM_IDLE *Jun 27 09:31:40.507: ISAKMP:(0:1:SW:1):Node 1546295295, Input = IKE_MESG_INTERNAL, IKE_INIT_QM *Jun 27 09:31:40.507: ISAKMP:(0:1:SW:1):Old State = IKE_QM_READY New State = IKE_QM_I_QM1 *Jun 27 09:31:40.507: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PHASE1_COMPLETE *Jun 27 09:31:40.507: ISAKMP:(0:1:SW:1):Old State = IKE_P1_COMPLETE New State = IKE_P1_COMPLETE *Jun 27 09:31:41.887: ISAKMP (0:134217729): received packet from 209.165.200.2 dport 4500 sport 4500 Global (I) QM_IDLE *Jun 27 09:31:41.887: ISAKMP:(0:1:SW:1): processing HASH payload. message ID = 1546295295 *Jun 27 09:31:41.887: ISAKMP:(0:1:SW:1): processing SA payload. message ID = 1546295295 *Jun 27 09:31:41.887: ISAKMP:(0:1:SW:1):Checking IPSec proposal 1 *Jun 27 09:31:41.887: ISAKMP: transform 1, ESP_DES *Jun 27 09:31:41.887: ISAKMP: attributes in transform: *Jun 27 09:31:41.887: ISAKMP: encaps is 61443 (Tunnel-UDP) *Jun 27 09:31:41.887: ISAKMP: SA life type in seconds *Jun 27 09:31:41.887: ISAKMP: SA life duration (basic) of 3600 *Jun 27 09:31:41.887: ISAKMP: SA life type in kilobytes *Jun 27 09:31:41.887: ISAKMP: SA life duration (VPI) of 0x0 0x46 0x50 0x0 *Jun 27 09:31:41.887: ISAKMP: authenticator is HMAC-MD5 *Jun 27 09:31:41.887: ISAKMP:(0:1:SW:1):atts are acceptable. *Jun 27 09:31:41.887: IPSEC(validate_proposal_request): proposal part #1, (key eng. msg.) INBOUND local= 172.16.1.2, remote= 209.165.200.2, local_proxy= 172.16.2.0/255.255.255.0/0/0 (type=4), remote_proxy= 192.168.1.0/255.255.255.0/0/0 (type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel-UDP), lifedur= 0s and 0kb, spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x400 *Jun 27 09:31:41.887: IPSEC(kei_proxy): head = mymap, map->ivrf = , kei->ivrf = *Jun 27 09:31:41.887: ISAKMP:(0:1:SW:1): processing NONCE payload. message ID = 1546295295 *Jun 27 09:31:41.887: ISAKMP:(0:1:SW:1): processing ID payload. message ID = 1546295295 *Jun 27 09:31:41.887: ISAKMP:(0:1:SW:1): processing ID payload. message ID = 1546295295 *Jun 27 09:31:41.887: IPSec: Flow_switching Allocated flow for flow_id 134217729 *Jun 27 09:31:41.887: IPSec: Flow_switching Allocated flow for flow_id 134217730 *Jun 27 09:31:41.947: %CRYPTO-5-SESSION_STATUS: Crypto tunnel is UP . Peer 209.165.200.2:4500 Id: 209.165.200.2 *Jun 27 09:31:41.947: ISAKMP: Locking

peer struct 0x2C42438, IPSEC refcount 1 for for stuff_ke *Jun 27 09:31:41.947: ISAKMP:(0:1:SW:1): Creating IPSec SAs *Jun 27 09:31:41.947: inbound SA from 209.165.200.2 to 172.16.1.2 (f/i) 0/ 0 (proxy 192.168.1.0 to 172.16.2.0) *Jun 27 09:31:41.947: has spi 0x9CCA0619 and conn_id 2000 and flags 400 *Jun 27 09:31:41.947: lifetime of 3600 seconds *Jun 27 09:31:41.947: lifetime of 4608000 kilobytes *Jun 27 09:31:41.947: has client flags 0x10 *Jun 27 09:31:41.947: outbound SA from 172.16.1.2 to 209.165.200.2 (f/i) 0/0 (proxy 172.16.2.0 to 192.168.1.0) *Jun 27 09:31:41.947: has spi 1315674383 and conn_id 2001 and flags 408 *Jun 27 09:31:41.947: lifetime of 3600 seconds *Jun 27 09:31:41.947: lifetime of 4608000 kilobytes *Jun 27 09:31:41.947: has client flags 0x10 *Jun 27 09:31:41.947: ISAKMP:(0:1:SW:1): sending packet to 209.165.200.2 my_port 4500 peer_port 4500 (I) QM_IDLE *Jun 27 09:31:41.947: ISAKMP:(0:1:SW:1):deleting node 1546295295 error FALSE reason "" *Jun 27 09:31:41.947: ISAKMP:(0:1:SW:1):Node 1546295295, Input = IKE_MESG_FROM_PEER, IKE_QM_EXCH *Jun 27 09:31:41.947: ISAKMP:(0:1:SW:1):Old State = IKE_QM_I_QM1 New State = IKE_QM_PHASE2_COMPLETE *Jun 27 09:31:41.955: IPSEC(key_engine): got a queue event with 2 kei messages *Jun 27 09:31:41.955: IPSEC(initialize_sas): , (key eng. msg.) INBOUND local= 172.16.1.2, remote= 209.165.200.2, local_proxy= 172.16.2.0/255.255.255.0/0/0 (type=4), remote_proxy= 192.168.1.0/255.255.255.0/0/0 (type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel-UDP), lifedur= 3600s and 4608000kb, spi= 0x9CCA0619(2630485529), conn_id= 134219728, keysize= 0, flags= 0x400 *Jun 27 09:31:41.955: IPSEC(initialize_sas): , (key eng. msg.) OUTBOUND local= 172.16.1.2, remote= 209.165.200.2, local_proxy= 172.16.2.0/255.255.255.0/0/0 (type=4), remote_proxy= 192.168.1.0/255.255.255.0/0/0 (type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel-UDP), lifedur= 3600s and 4608000kb, spi= 0x4E6B990F(1315674383), conn_id= 134219729, keysize= 0, flags= 0x408 *Jun 27 09:31:41.955: IPSEC(kei_proxy): head = mymap, map->ivrf = , kei->ivrf = *Jun 27 09:31:41.955: IPSEC(crypto_ipsec_sa_find_ident_head): reconnecting with the same proxies and 209.165.200.2 *Jun 27 09:31:41.955: IPSEC(mtree_add_ident): src 172.16.2.0, dest 192.168.1.0, dest_port 0 *Jun 27 09:31:41.955: IPSEC(create_sa): sa created, (sa) sa_dest= 172.16.1.2, sa_prot= 50, sa_spi= 0x9CCA0619(2630485529), sa_trans= esp-des esp-md5-hmac , sa_conn_id= 134219728 *Jun 27 09:31:41.955: IPSEC(create_sa): sa created, (sa) sa_dest= 209.165.200.2, sa_prot= 50, sa_spi= 0x4E6B990F(1315674383), sa_trans= esp-des esp-md5-hmac , sa_conn_id= 134219729 VPN-Gateway2# *Jun 27 09:32:31.979: ISAKMP:(0:1:SW:1):purging node 1546295295 PAT-Router#**debug ip nat detail**
IP NAT detailed debugging is on
PAT-Router#**show debug**
Generic IP:
  IP NAT detailed debugging is on
PAT-Router#
!--- The "i" in this line indicates the packet is traveling from the !--- inside to the outside (from a NAT perspective) interface. The number in !--- the brackets is the identification number in the IP packet. This is !--- useful when correlating information with sniffer traces taken with a !--- network analyzer while troubleshooting problems. *Jun 27 09:31:35.375: NAT*: i: udp (172.16.1.2, 500) -> (209.165.200.2, 500) [66] *!--- The "s" in this next line shows the source address of the packet and how it is !--- being translated.* *Jun 27 09:31:35.375: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [66] *Jun 27 09:31:36.475: NAT*: o: udp (209.165.200.2, 500) -> (209.165.201.2, 500) [66] *Jun 27 09:31:36.475: NAT*: s=209.165.200.2, d=209.165.201.2->172.16.1.2 [66] *Jun 27 09:31:36.683: NAT*: i: udp (172.16.1.2, 500) -> (209.165.200.2, 500) [67] *Jun 27 09:31:36.683: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [67] *Jun 27 09:31:38.595: NAT*: o: udp (209.165.200.2, 500) -> (209.165.201.2, 500) [67] *Jun 27 09:31:38.595: NAT*: s=209.165.200.2, d=209.165.201.2->172.16.1.2 [67] *Jun 27 09:31:38.823: NAT*: i: udp (172.16.1.2, 4500) -> (209.165.200.2, 4500) [68] *Jun 27 09:31:38.823: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [68] *Jun 27 09:31:40.163: NAT*: o: udp (209.165.200.2, 4500) -> (209.165.201.2, 4500) [68] *Jun 27 09:31:40.163: NAT*: s=209.165.200.2, d=209.165.201.2->172.16.1.2 [68] *Jun 27 09:31:40.255: NAT*: i: udp (172.16.1.2, 4500) -> (209.165.200.2, 4500) [69] *Jun 27 09:31:40.255: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [69] *Jun 27 09:31:40.395: NAT*: i: udp (172.16.1.2, 4500) -> (209.165.200.2, 4500) [70] *Jun 27 09:31:40.395: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [70] *Jun 27 09:31:41.747: NAT*: o: udp (209.165.200.2, 4500) -> (209.165.201.2, 4500) [69] *Jun 27 09:31:41.747: NAT*: s=209.165.200.2, d=209.165.201.2->172.16.1.2 [69] *Jun 27 09:31:41.839: NAT*: i: udp (172.16.1.2, 4500) -> (209.165.200.2, 4500) [71] *Jun 27 09:31:41.839: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [71] *Jun 27 09:31:43.463: NAT*: i: udp (172.16.1.2, 4500) -> (209.165.200.2, 4500) [72] *Jun 27 09:31:43.463: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [72] *Jun 27 09:31:43.523: NAT*: o: udp (209.165.200.2, 4500) -> (209.165.201.2, 4500) [70] *Jun 27 09:31:43.523: NAT*: s=209.165.200.2, d=209.165.201.2->172.16.1.2 [70] *Jun 27 09:33:27.975: NAT*: i: udp (172.16.1.2, 4500) -> (209.165.200.2, 4500) [73] *Jun 27 09:33:27.975: NAT*: s=172.16.1.2->209.165.201.2,

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d=209.165.200.2 [73] *Jun 27 09:33:28.067: NAT*: o: udp (209.165.200.2, 4500) -> (209.165.201.2,
4500) [71] *Jun 27 09:33:28.067: NAT*: s=209.165.200.2, d=209.165.201.2->172.16.1.2 [71] *Jun 27
09:33:28.115: NAT*: i: udp (172.16.1.2, 4500) -> (209.165.200.2, 4500) [74] *Jun 27
09:33:28.115: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [74] *Jun 27 09:33:28.167:
NAT*: o: udp (209.165.200.2, 4500) -> (209.165.201.2, 4500) [72] *Jun 27 09:33:28.167: NAT*:
s=209.165.200.2, d=209.165.201.2->172.16.1.2 [72] *Jun 27 09:33:28.227: NAT*: i: udp
(172.16.1.2, 4500) -> (209.165.200.2, 4500) [75] *Jun 27 09:33:28.227: NAT*: s=172.16.1.2-
>209.165.201.2, d=209.165.200.2 [75] *Jun 27 09:33:28.283: NAT*: o: udp (209.165.200.2, 4500) ->
(209.165.201.2, 4500) [73] *Jun 27 09:33:28.283: NAT*: s=209.165.200.2, d=209.165.201.2-
>172.16.1.2 [73] *Jun 27 09:33:28.355: NAT*: i: udp (172.16.1.2, 4500) -> (209.165.200.2, 4500)
[76] *Jun 27 09:33:28.355: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [76] *Jun 27
09:33:28.407: NAT*: o: udp (209.165.200.2, 4500) -> (209.165.201.2, 4500) [74] *Jun 27
09:33:28.407: NAT*: s=209.165.200.2, d=209.165.201.2->172.16.1.2 [74] *Jun 27 09:33:28.455:
NAT*: i: udp (172.16.1.2, 4500) -> (209.165.200.2, 4500) [77] *Jun 27 09:33:28.455: NAT*:
s=172.16.1.2->209.165.201.2, d=209.165.200.2 [77] *Jun 27 09:33:28.487: NAT*: o: udp
(209.165.200.2, 4500) -> (209.165.201.2, 4500) [75] *Jun 27 09:33:28.487: NAT*: s=209.165.200.2,
d=209.165.201.2->172.16.1.2 [75]
```

Troubleshooting sem IPSec NAT Transparency

- **debug crypto ipsec — Exibe as negociações de IPSec de fase 2**
- **debug crypto isakmp — Exibe as negociações ISAKMP da Fase 1.**
- **debug ip nat detail** —Examina a NAT sendo executada pelo roteador.

Esse é um exemplo da saída do comando.

```
VPN-Gateway1#debug crypto ipsec
Crypto IPSEC debugging is on
VPN-Gateway1#debug crypto isakmp
Crypto ISAKMP debugging is on
VPN-Gateway1#show debug
Cryptographic Subsystem:
  Crypto ISAKMP debugging is on
  Crypto IPSEC debugging is on

 !--- These debugs appeared after a ping !--- was attempted from PC2 to PC1. *Jun 27
09:49:58.351: ISAKMP (0:0): received packet from 209.165.201.2 dport 500 sport 500 Global (N)
NEW SA *Jun 27 09:49:58.351: ISAKMP: Created a peer struct for 209.165.201.2, peer port 500 *Jun
27 09:49:58.351: ISAKMP: Locking peer struct 0x2C50328, IKE refcount 1 for
crypto_isakmp_process_block *Jun 27 09:49:58.351: ISAKMP: local port 500, remote port 500 *Jun
27 09:49:58.991: insert sa successfully sa = 29D2E80 *Jun 27 09:49:58.991:
ISAKMP:(0:1:SW:1):Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH *Jun 27 09:49:58.991:
ISAKMP:(0:1:SW:1):Old State = IKE_READY New State = IKE_R_MM1 *Jun 27 09:49:59.151:
ISAKMP:(0:1:SW:1): processing SA payload. message ID = 0 *Jun 27 09:49:59.151: ISAKMP: Looking
for a matching key for 209.165.201.2 in default : success *Jun 27 09:49:59.151:
ISAKMP:(0:1:SW:1):found peer pre-shared key matching 209.165.201.2 *Jun 27 09:49:59.151:
ISAKMP:(0:1:SW:1): local preshared key found *Jun 27 09:49:59.151: ISAKMP : Scanning profiles
for xauth ... *Jun 27 09:49:59.151: ISAKMP:(0:1:SW:1):Checking ISAKMP transform 1 against
priority 10 policy *Jun 27 09:49:59.151: ISAKMP: encryption DES-CBC *Jun 27 09:49:59.151:
ISAKMP: hash SHA *Jun 27 09:49:59.151: ISAKMP: default group 1 *Jun 27 09:49:59.151: ISAKMP:
auth pre-share *Jun 27 09:49:59.151: ISAKMP: life type in seconds *Jun 27 09:49:59.151: ISAKMP:
life duration (VPI) of 0x0 0x1 0x51 0x80 *Jun 27 09:49:59.151: ISAKMP:(0:1:SW:1):atts are
acceptable. Next payload is 0 *Jun 27 09:49:59.151: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL,
IKE_PROCESS_MAIN_MODE *Jun 27 09:49:59.151: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM1 New State =
IKE_R_MM1 *Jun 27 09:49:59.223: ISAKMP:(0:1:SW:1): sending packet to 209.165.201.2 my_port 500
peer_port 500 (R) MM_SA_SETUP *Jun 27 09:49:59.223: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL,
IKE_PROCESS_COMPLETE *Jun 27 09:49:59.223: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM1 New State =
IKE_R_MM2 *Jun 27 09:49:59.711: ISAKMP (0:134217729): received packet from 209.165.201.2 dport
500 sport 500 Global (R) MM_SA_SETUP *Jun 27 09:49:59.711: ISAKMP:(0:1:SW:1):Input =
IKE_MESG_FROM_PEER, IKE_MM_EXCH *Jun 27 09:49:59.711: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM2
New State = IKE_R_MM3 *Jun 27 09:49:59.763: ISAKMP:(0:1:SW:1): processing KE payload. message ID
= 0 *Jun 27 09:49:59.763: ISAKMP:(0:1:SW:1): processing NONCE payload. message ID = 0 *Jun 27
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09:49:59.911: ISAKMP: Looking for a matching key for 209.165.201.2 in default : success *Jun 27 09:49:59.911: ISAKMP:(0:1:SW:1):found peer pre-shared key matching 209.165.201.2 *Jun 27 09:49:59.911: ISAKMP:(0:1:SW:1):SKEYID state generated *Jun 27 09:49:59.911: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:49:59.911: ISAKMP:(0:1:SW:1): vendor ID is Unity *Jun 27 09:49:59.911: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:49:59.911: ISAKMP:(0:1:SW:1): vendor ID is DPD *Jun 27 09:49:59.911: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:49:59.911: ISAKMP:(0:1:SW:1): speaking to another IOS box! *Jun 27 09:49:59.911: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_MAIN_MODE *Jun 27 09:49:59.911: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM3 New State = IKE_R_MM3 *Jun 27 09:50:00.051: ISAKMP:(0:1:SW:1): sending packet to 209.165.201.2 my_port 500 peer_port 500 (R) MM_KEY_EXCH *Jun 27 09:50:00.051: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_COMPLETE *Jun 27 09:50:00.051: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM3 New State = IKE_R_MM4 *Jun 27 09:50:00.743: ISAKMP (0:134217729): received packet from 209.165.201.2 dport 500 sport 500 Global (R) MM_KEY_EXCH *Jun 27 09:50:00.743: ISAKMP:(0:1:SW:1):Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH *Jun 27 09:50:00.743: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM4 New State = IKE_R_MM5 *Jun 27 09:50:00.811: ISAKMP:(0:1:SW:1): processing ID payload. message ID = 0 *Jun 27 09:50:00.811: ISAKMP (0:134217729): ID payload next-payload : 8 type : 1 address : 172.16.1.2 protocol : 17 port : 500 length : 12 *Jun 27 09:50:00.811: ISAKMP:(0:1:SW:1):: peer matches *none* of the profiles *Jun 27 09:50:00.811: ISAKMP:(0:1:SW:1): processing HASH payload. message ID = 0 *Jun 27 09:50:00.811: ISAKMP:(0:1:SW:1): processing NOTIFY INITIAL_CONTACT protocol 1 spi 0, message ID = 0, sa = 29D2E80 *Jun 27 09:50:00.811: ISAKMP:(0:1:SW:1):SA authentication status: authenticated *Jun 27 09:50:00.811: ISAKMP:(0:1:SW:1): Process initial contact, bring down existing phase 1 and 2 SA's with local 209.165.200.2 remote 209.165.201.2 remote port 500 *Jun 27 09:50:00.811: ISAKMP:(0:1:SW:1):SA authentication status: authenticated *Jun 27 09:50:00.811: ISAKMP:(0:1:SW:1):SA has been authenticated with 209.165.201.2 *Jun 27 09:50:00.811: ISAKMP: Trying to insert a peer 209.165.200.2/209.165.201.2/500/, and inserted successfully. *Jun 27 09:50:00.811: ISAKMP:(0:1:SW:1):: peer matches *none* of the profiles *Jun 27 09:50:00.811: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_MAIN_MODE *Jun 27 09:50:00.811: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM5 New State = IKE_R_MM5 *Jun 27 09:50:00.851: IPSEC(key_engine): got a queue event with 1 kei messages *Jun 27 09:50:00.963: ISAKMP:(0:1:SW:1):SA is doing pre-shared key authentication using id type ID_IPV4_ADDR *Jun 27 09:50:00.963: ISAKMP (0:134217729): ID payload next-payload : 8 type : 1 address : 209.165.200.2 protocol : 17 port : 500 length : 12 *Jun 27 09:50:00.963: ISAKMP:(0:1:SW:1):Total payload length: 12 *Jun 27 09:50:00.963: ISAKMP:(0:1:SW:1): sending packet to 209.165.201.2 my_port 500 peer_port 500 (R) MM_KEY_EXCH *Jun 27 09:50:00.963: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_COMPLETE *Jun 27 09:50:00.963: ISAKMP:(0:1:SW:1):Old State = IKE_R_MM5 New State = IKE_P1_COMPLETE *Jun 27 09:50:01.043: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PHASE1_COMPLETE *Jun 27 09:50:01.043: ISAKMP:(0:1:SW:1):Old State = IKE_P1_COMPLETE New State = IKE_P1_COMPLETE *Jun 27 09:50:01.403: ISAKMP (0:134217729): received packet from 209.165.201.2 dport 500 sport 500 Global (R) QM_IDLE *Jun 27 09:50:01.403: ISAKMP: set new node 1689610294 to QM_IDLE *Jun 27 09:50:01.403: ISAKMP:(0:1:SW:1): processing HASH payload. message ID = 1689610294 *Jun 27 09:50:01.403: ISAKMP:(0:1:SW:1): processing SA payload. message ID = 1689610294 *Jun 27 09:50:01.403: ISAKMP:(0:1:SW:1):Checking IPSec proposal 1 *Jun 27 09:50:01.403: ISAKMP: transform 1, ESP_DES *Jun 27 09:50:01.403: ISAKMP: attributes in transform: *Jun 27 09:50:01.403: ISAKMP: encaps is 1 (Tunnel) *Jun 27 09:50:01.403: ISAKMP: SA life type in seconds *Jun 27 09:50:01.403: ISAKMP: SA life duration (basic) of 3600 *Jun 27 09:50:01.403: ISAKMP: SA life type in kilobytes *Jun 27 09:50:01.403: ISAKMP: SA life duration (VPI) of 0x0 0x46 0x50 0x0 *Jun 27 09:50:01.403: ISAKMP: authenticator is HMAC-MD5 *Jun 27 09:50:01.403: ISAKMP:(0:1:SW:1):atts are acceptable. *Jun 27 09:50:01.403: IPSEC(validate_proposal_request): proposal part #1, (key eng. msg.) INBOUND local= 209.165.200.2, remote= 209.165.201.2, local_proxy= 192.168.1.0/255.255.255.0/0/0 (type=4), remote_proxy= 172.16.2.0/255.255.255.0/0/0 (type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel), lifedur= 0s and 0kb, spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x2 *Jun 27 09:50:01.403: IPSEC(kei_proxy): head = mymap, map->ivrf = , kei->ivrf = *Jun 27 09:50:01.403: ISAKMP:(0:1:SW:1): processing NONCE payload. message ID = 1689610294 *Jun 27 09:50:01.403: ISAKMP:(0:1:SW:1): processing ID payload. message ID = 1689610294 *Jun 27 09:50:01.403: ISAKMP:(0:1:SW:1): processing ID payload. message ID = 1689610294 *Jun 27 09:50:01.403: ISAKMP:(0:1:SW:1): asking for 1 spis from ipsec *Jun 27 09:50:01.403: ISAKMP:(0:1:SW:1):Node 1689610294, Input = IKE_MESG_FROM_PEER, IKE_QM_EXCH *Jun 27 09:50:01.403: ISAKMP:(0:1:SW:1):Old State = IKE_QM_READY New State = IKE_QM_SPI_STARVE *Jun 27 09:50:01.443: IPSEC(key_engine): got a queue event with 1 kei messages *Jun 27 09:50:01.443: IPSEC(spi_response): getting spi 3052955580 for SA from 209.165.200.2 to 209.165.201.2 for prot 3 *Jun 27 09:50:01.463: ISAKMP: received ke message (2/1) *Jun 27 09:50:01.971: ISAKMP:(0:1:SW:1): sending packet to 209.165.201.2 my_port 500 peer_port 500 (R) QM_IDLE *Jun 27 09:50:01.971: ISAKMP:(0:1:SW:1):Node

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1689610294, Input = IKE_MESG_FROM_IPSEC, IKE_SPI_REPLY *Jun 27 09:50:01.971:
ISAKMP:(0:1:SW:1):Old State = IKE_QM_SPI_STARVE New State = IKE_QM_R_QM2 *Jun 27 09:50:02.303:
ISAKMP (0:134217729): received packet from 209.165.201.2 dport 500 sport 500 Global (R) QM_IDLE
*Jun 27 09:50:02.303: IPSec: Flow_switching Allocated flow for flow_id 134217735 *Jun 27
09:50:02.303: IPSec: Flow_switching Allocated flow for flow_id 134217736 *Jun 27 09:50:03.203:
%CRYPTO-5-SESSION_STATUS: Crypto tunnel is UP . Peer 209.165.201.2:500 Id: 172.16.1.2 *Jun 27
09:50:03.203: ISAKMP: Locking peer struct 0x2C50328, IPSEC refcount 1 for for stuff_ke *Jun 27
09:50:03.203: ISAKMP:(0:1:SW:1): Creating IPSec SAs *Jun 27 09:50:03.203: inbound SA from
209.165.201.2 to 209.165.200.2 (f/i) 0/ 0 (proxy 172.16.2.0 to 192.168.1.0) *Jun 27
09:50:03.203: has spi 0xB5F867BC and conn_id 2000 and flags 2 *Jun 27 09:50:03.203: lifetime of
3600 seconds *Jun 27 09:50:03.203: lifetime of 4608000 kilobytes *Jun 27 09:50:03.203: has
client flags 0x0 *Jun 27 09:50:03.203: outbound SA from 209.165.200.2 to 209.165.201.2 (f/i) 0/0
(proxy 192.168.1.0 to 172.16.2.0) *Jun 27 09:50:03.203: has spi -392560059 and conn_id 2001 and
flags A *Jun 27 09:50:03.203: lifetime of 3600 seconds *Jun 27 09:50:03.203: lifetime of 4608000
kilobytes *Jun 27 09:50:03.203: has client flags 0x0 *Jun 27 09:50:03.203:
ISAKMP:(0:1:SW:1):deleting node 1689610294 error FALSE reason "quick mode done (await)" *Jun 27
09:50:03.203: ISAKMP:(0:1:SW:1):Node 1689610294, Input = IKE_MESG_FROM_PEER, IKE_QM_EXCH *Jun 27
09:50:03.203: ISAKMP:(0:1:SW:1):Old State = IKE_QM_R_QM2 New State = IKE_QM_PHASE2_COMPLETE *Jun
27 09:50:03.231: IPSEC(key_engine): got a queue event with 2 kei messages *Jun 27 09:50:03.231:
IPSEC(initialize_sas): , (key eng. msg.) INBOUND local= 209.165.200.2, remote= 209.165.201.2,
local_proxy= 192.168.1.0/255.255.255.0/0/0 (type=4), remote_proxy= 172.16.2.0/255.255.255.0/0/0
(type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel), lifedur= 3600s and 4608000kb,
spi= 0xB5F867BC(3052955580), conn_id= 134219728, keysize= 0, flags= 0x2 *Jun 27 09:50:03.231:
IPSEC(initialize_sas): , (key eng. msg.) OUTBOUND local= 209.165.200.2, remote= 209.165.201.2,
local_proxy= 192.168.1.0/255.255.255.0/0/0 (type=4), remote_proxy= 172.16.2.0/255.255.255.0/0/0
(type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel), lifedur= 3600s and 4608000kb,
spi= 0xE89A0245(3902407237), conn_id= 134219729, keysize= 0, flags= 0xA *Jun 27 09:50:03.231:
IPSEC(kei_proxy): head = mymap, map->ivrf = , kei->ivrf = *Jun 27 09:50:03.231:
IPSEC(crypto_ipsec_sa_find_ident_head): reconnecting with the same proxies and 209.165.201.2
*Jun 27 09:50:03.231: IPSEC(mtree_add_ident): src 192.168.1.0, dest 172.16.2.0, dest_port 0 *Jun
27 09:50:03.231: IPSEC(create_sa): sa created, (sa) sa_dest= 209.165.200.2, sa_prot= 50, sa_spi=
0xB5F867BC(3052955580), sa_trans= esp-des esp-md5-hmac , sa_conn_id= 134219728 *Jun 27
09:50:03.231: IPSEC(create_sa): sa created, (sa) sa_dest= 209.165.201.2, sa_prot= 50, sa_spi=
0xE89A0245(3902407237), sa_trans= esp-des esp-md5-hmac , sa_conn_id= 134219729 *Jun 27
09:50:53.231: ISAKMP:(0:1:SW:1):purging node 1689610294 VPN-Gateway2#debug crypto ipsec
Crypto IPSEC debugging is on
VPN-Gateway2#debug crypto isakmp
Crypto ISAKMP debugging is on
VPN-Gateway2#show debug
Cryptographic Subsystem:
  Crypto ISAKMP debugging is on
  Crypto IPSEC debugging is on
VPN-Gateway2#

 !--- These debugs appeared after a ping !--- was attempted from PC2 to PC1. *Jun 27
09:49:57.799: IPSEC(sa_request): , (key eng. msg.) OUTBOUND local= 172.16.1.2, remote=
209.165.200.2, local_proxy= 172.16.2.0/255.255.255.0/0/0 (type=4), remote_proxy=
192.168.1.0/255.255.255.0/0/0 (type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel),
lifedur= 3600s and 4608000kb, spi= 0xE89A0245(3902407237), conn_id= 0, keysize= 0, flags= 0x400A
*Jun 27 09:49:57.807: ISAKMP: received ke message (1/1) *Jun 27 09:49:57.807:
ISAKMP:(0:0:N/A:0): SA request profile is (NULL) *Jun 27 09:49:57.807: ISAKMP: Created a peer
struct for 209.165.200.2, peer port 500 *Jun 27 09:49:57.807: ISAKMP: Locking peer struct
0x2BEDC78, IKE refcount 1 for isakmp_initiator *Jun 27 09:49:57.807: ISAKMP: local port 500,
remote port 500 *Jun 27 09:49:57.839: ISAKMP: set new node 0 to QM_IDLE *Jun 27 09:49:57.839:
insert sa successfully sa = 2CB1E80 *Jun 27 09:49:57.839: ISAKMP:(0:1:SW:1):Can not start
Aggressive mode, trying Main mode. *Jun 27 09:49:57.839: ISAKMP: Looking for a matching key for
209.165.200.2 in default : success *Jun 27 09:49:57.839: ISAKMP:(0:1:SW:1):found peer pre-shared
key matching 209.165.200.2 *Jun 27 09:49:57.839: ISAKMP:(0:1:SW:1):Input = IKE_MESG_FROM_IPSEC,
IKE_SA_REQ_MM *Jun 27 09:49:57.839: ISAKMP:(0:1:SW:1):Old State = IKE_READY New State =
IKE_I_MM1 *Jun 27 09:49:57.839: ISAKMP:(0:1:SW:1): beginning Main Mode exchange *Jun 27
09:49:57.839: ISAKMP:(0:1:SW:1): sending packet to 209.165.200.2 my_port 500 peer_port 500 (I)
MM_NO_STATE *Jun 27 09:49:59.099: ISAKMP (0:134217729): received packet from 209.165.200.2 dport
500 sport 500 Global (I) MM_NO_STATE *Jun 27 09:49:59.099: ISAKMP:(0:1:SW:1):Input =
IKE_MESG_FROM_PEER, IKE_MM_EXCH *Jun 27 09:49:59.099: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM1
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New State = IKE_I_MM2 *Jun 27 09:49:59.139: ISAKMP:(0:1:SW:1): processing SA payload. message ID = 0 *Jun 27 09:49:59.139: ISAKMP: Looking for a matching key for 209.165.200.2 in default : success *Jun 27 09:49:59.139: ISAKMP:(0:1:SW:1):found peer pre-shared key matching 209.165.200.2 *Jun 27 09:49:59.139: ISAKMP:(0:1:SW:1): local preshared key found *Jun 27 09:49:59.139: ISAKMP : Scanning profiles for xauth ... *Jun 27 09:49:59.139: ISAKMP:(0:1:SW:1):Checking ISAKMP transform 1 against priority 10 policy *Jun 27 09:49:59.139: ISAKMP: encryption DES-CBC *Jun 27 09:49:59.139: ISAKMP: hash SHA *Jun 27 09:49:59.139: ISAKMP: default group 1 *Jun 27 09:49:59.139: ISAKMP: auth pre-share *Jun 27 09:49:59.139: ISAKMP: life type in seconds *Jun 27 09:49:59.139: ISAKMP: life duration (VPI) of 0x0 0x1 0x51 0x80 *Jun 27 09:49:59.139: ISAKMP:(0:1:SW:1):atts are acceptable. Next payload is 0 *Jun 27 09:49:59.139: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_MAIN_MODE *Jun 27 09:49:59.139: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM2 New State = IKE_I_MM2 *Jun 27 09:49:59.259: ISAKMP:(0:1:SW:1): sending packet to 209.165.200.2 my_port 500 peer_port 500 (I) MM_SA_SETUP *Jun 27 09:49:59.259: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_COMPLETE *Jun 27 09:49:59.259: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM2 New State = IKE_I_MM3 *Jun 27 09:49:59.919: ISAKMP (0:134217729): received packet from 209.165.200.2 dport 500 sport 500 Global (I) MM_SA_SETUP *Jun 27 09:49:59.919: ISAKMP:(0:1:SW:1):Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH *Jun 27 09:49:59.919: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM3 New State = IKE_I_MM4 *Jun 27 09:49:59.947: ISAKMP:(0:1:SW:1): processing KE payload. message ID = 0 *Jun 27 09:49:59.947: ISAKMP:(0:1:SW:1): processing NONCE payload. message ID = 0 *Jun 27 09:49:59.947: ISAKMP: Looking for a matching key for 209.165.200.2 in default : success *Jun 27 09:49:59.947: ISAKMP:(0:1:SW:1):found peer pre-shared key matching 209.165.200.2 *Jun 27 09:49:59.947: ISAKMP:(0:1:SW:1):SKEYID state generated *Jun 27 09:49:59.947: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:49:59.947: ISAKMP:(0:1:SW:1): vendor ID is Unity *Jun 27 09:49:59.947: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:49:59.947: ISAKMP:(0:1:SW:1): vendor ID is DPD *Jun 27 09:49:59.947: ISAKMP:(0:1:SW:1): processing vendor id payload *Jun 27 09:49:59.947: ISAKMP:(0:1:SW:1): speaking to another IOS box! *Jun 27 09:49:59.947: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_MAIN_MODE *Jun 27 09:49:59.947: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM4 New State = IKE_I_MM4 *Jun 27 09:50:00.059: ISAKMP:(0:1:SW:1):Send initial contact *Jun 27 09:50:00.059: ISAKMP:(0:1:SW:1):SA is doing pre-shared key authentication using id type ID_IPV4_ADDR *Jun 27 09:50:00.059: ISAKMP (0:134217729): ID payload next-payload : 8 type : 1 address : 172.16.1.2 protocol : 17 port : 500 length : 12 *Jun 27 09:50:00.059: ISAKMP:(0:1:SW:1):Total payload length: 12 *Jun 27 09:50:00.059: ISAKMP:(0:1:SW:1): sending packet to 209.165.200.2 my_port 500 peer_port 500 (I) MM_KEY_EXCH *Jun 27 09:50:00.059: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_COMPLETE *Jun 27 09:50:00.059: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM4 New State = IKE_I_MM5 *Jun 27 09:50:00.827: ISAKMP (0:134217729): received packet from 209.165.200.2 dport 500 sport 500 Global (I) MM_KEY_EXCH *Jun 27 09:50:00.827: ISAKMP:(0:1:SW:1):Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH *Jun 27 09:50:00.827: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM5 New State = IKE_I_MM6 *Jun 27 09:50:00.859: ISAKMP:(0:1:SW:1): processing ID payload. message ID = 0 *Jun 27 09:50:00.859: ISAKMP (0:134217729): ID payload next-payload : 8 type : 1 address : 209.165.200.2 protocol : 17 port : 500 length : 12 *Jun 27 09:50:00.859: ISAKMP:(0:1:SW:1): processing HASH payload. message ID = 0 *Jun 27 09:50:00.859: ISAKMP:(0:1:SW:1):SA authentication status: authenticated *Jun 27 09:50:00.859: ISAKMP:(0:1:SW:1):SA has been authenticated with 209.165.200.2 *Jun 27 09:50:00.859: ISAKMP:(0:1:SW:1):: peer matches *none* of the profiles *Jun 27 09:50:00.859: ISAKMP: Trying to insert a peer 172.16.1.2/209.165.200.2/500/, and inserted successfully. *Jun 27 09:50:00.859: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_MAIN_MODE *Jun 27 09:50:00.859: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM6 New State = IKE_I_MM6 *Jun 27 09:50:00.919: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_COMPLETE *Jun 27 09:50:00.919: ISAKMP:(0:1:SW:1):Old State = IKE_I_MM6 New State = IKE_P1_COMPLETE *Jun 27 09:50:00.959: ISAKMP:(0:1:SW:1):beginning Quick Mode exchange, M-ID of 1689610294 *Jun 27 09:50:01.007: ISAKMP:(0:1:SW:1): sending packet to 209.165.200.2 my_port 500 peer_port 500 (I) QM_IDLE *Jun 27 09:50:01.007: ISAKMP:(0:1:SW:1):Node 1689610294, Input = IKE_MESG_INTERNAL, IKE_INIT_QM *Jun 27 09:50:01.007: ISAKMP:(0:1:SW:1):Old State = IKE_QM_READY New State = IKE_QM_I_QM1 *Jun 27 09:50:01.007: ISAKMP:(0:1:SW:1):Input = IKE_MESG_INTERNAL, IKE_PHASE1_COMPLETE *Jun 27 09:50:01.007: ISAKMP:(0:1:SW:1):Old State = IKE_P1_COMPLETE New State = IKE_P1_COMPLETE *Jun 27 09:50:01.839: ISAKMP (0:134217729): received packet from 209.165.200.2 dport 500 sport 500 Global (I) QM_IDLE *Jun 27 09:50:01.839: ISAKMP:(0:1:SW:1): processing HASH payload. message ID = 1689610294 *Jun 27 09:50:01.839: ISAKMP:(0:1:SW:1): processing SA payload. message ID = 1689610294 *Jun 27 09:50:01.839: ISAKMP:(0:1:SW:1):Checking IPSec proposal 1 *Jun 27 09:50:01.839: ISAKMP: transform 1, ESP_DES *Jun 27 09:50:01.839: ISAKMP: attributes in transform: *Jun 27 09:50:01.839: ISAKMP: encaps is 1 (Tunnel) *Jun 27 09:50:01.839: ISAKMP: SA life type in seconds *Jun 27 09:50:01.839: ISAKMP: SA life duration (basic) of 3600 *Jun 27

09:50:01.839: ISAKMP: SA life type in kilobytes *Jun 27 09:50:01.839: ISAKMP: SA life duration (VPI) of 0x0 0x46 0x50 0x0 *Jun 27 09:50:01.839: ISAKMP: authenticator is HMAC-MD5 *Jun 27 09:50:01.839: ISAKMP:(0:1:SW:1):atts are acceptable. *Jun 27 09:50:01.839: IPSEC(validate_proposal_request): proposal part #1, (key eng. msg.) INBOUND local= 172.16.1.2, remote= 209.165.200.2, local_proxy= 172.16.2.0/255.255.255.0/0/0 (type=4), remote_proxy= 192.168.1.0/255.255.255.0/0/0 (type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel), lifedur= 0s and 0kb, spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x2 *Jun 27 09:50:01.839: IPSEC(kei_proxy): head = mymap, map->ivrf = , kei->ivrf = *Jun 27 09:50:01.839: ISAKMP:(0:1:SW:1): processing NONCE payload. message ID = 1689610294 *Jun 27 09:50:01.839: ISAKMP:(0:1:SW:1): processing ID payload. message ID = 1689610294 *Jun 27 09:50:01.839: ISAKMP:(0:1:SW:1): processing ID payload. message ID = 1689610294 *Jun 27 09:50:01.839: IPSec: Flow_switching Allocated flow for flow_id 134217731 *Jun 27 09:50:01.839: IPSec: Flow_switching Allocated flow for flow_id 134217732 *Jun 27 09:50:01.899: %CRYPTO-5-SESSION_STATUS: Crypto tunnel is UP . Peer 209.165.200.2:500 Id: 209.165.200.2 *Jun 27 09:50:01.899: ISAKMP: Locking peer struct 0x2BEDC78, IPSEC refcount 1 for for stuff_ke *Jun 27 09:50:01.899: ISAKMP:(0:1:SW:1): Creating IPSec SAs *Jun 27 09:50:01.899: inbound SA from 209.165.200.2 to 172.16.1.2 (f/i) 0/ 0 (proxy 192.168.1.0 to 172.16.2.0) *Jun 27 09:50:01.899: has spi 0xE89A0245 and conn_id 2000 and flags 2 *Jun 27 09:50:01.899: lifetime of 3600 seconds *Jun 27 09:50:01.899: lifetime of 4608000 kilobytes *Jun 27 09:50:01.899: has client flags 0x0 *Jun 27 09:50:01.899: outbound SA from 172.16.1.2 to 209.165.200.2 (f/i) 0/0 (proxy 172.16.2.0 to 192.168.1.0) *Jun 27 09:50:01.899: has spi -1242011716 and conn_id 2001 and flags A *Jun 27 09:50:01.899: lifetime of 3600 seconds *Jun 27 09:50:01.899: lifetime of 4608000 kilobytes *Jun 27 09:50:01.899: has client flags 0x0 *Jun 27 09:50:01.899: ISAKMP:(0:1:SW:1): sending packet to 209.165.200.2 my_port 500 peer_port 500 (I) QM_IDLE *Jun 27 09:50:01.899: ISAKMP:(0:1:SW:1):deleting node 1689610294 error FALSE reason "" *Jun 27 09:50:01.899: ISAKMP:(0:1:SW:1):Node 1689610294, Input = IKE_MESG_FROM_PEER, IKE_QM_EXCH *Jun 27 09:50:01.899: ISAKMP:(0:1:SW:1):Old State = IKE_QM_I_QM1 New State = IKE_QM_PHASE2_COMPLETE *Jun 27 09:50:01.907: IPSEC(key_engine): got a queue event with 2 kei messages *Jun 27 09:50:01.907: IPSEC(initialize_sas): , (key eng. msg.) INBOUND local= 172.16.1.2, remote= 209.165.200.2, local_proxy= 172.16.2.0/255.255.255.0/0/0 (type=4), remote_proxy= 192.168.1.0/255.255.255.0/0/0 (type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel), lifedur= 3600s and 4608000kb, spi= 0xE89A0245(3902407237), conn_id= 134219728, keysize= 0, flags= 0x2 *Jun 27 09:50:01.907: IPSEC(initialize_sas): , (key eng. msg.) OUTBOUND local= 172.16.1.2, remote= 209.165.200.2, local_proxy= 172.16.2.0/255.255.255.0/0/0 (type=4), remote_proxy= 192.168.1.0/255.255.255.0/0/0 (type=4), protocol= ESP, transform= esp-des esp-md5-hmac (Tunnel), lifedur= 3600s and 4608000kb, spi= 0xB5F867BC(3052955580), conn_id= 134219729, keysize= 0,flags= 0xA *Jun 27 09:50:01.907: IPSEC(kei_proxy): head = mymap, map->ivrf = , kei->ivrf = *Jun 27 09:50:01.907: IPSEC(crypto_ipsec_sa_find_ident_head): reconnecting with the same proxies and 209.165.200.2 *Jun 27 09:50:01.907: IPSEC(mtree_add_ident): src 172.16.2.0, dest 192.168.1.0, dest_port 0 *Jun 27 09:50:01.907: IPSEC(create_sa): sa created, (sa) sa_dest= 172.16.1.2, sa_prot= 50, sa_spi= 0xE89A0245(3902407237), sa_trans= esp-des esp-md5-hmac , sa_conn_id= 134219728 *Jun 27 09:50:01.907: IPSEC(create_sa): sa created, (sa) sa_dest= 209.165.200.2, sa_prot= 50, sa_spi= 0xB5F867BC(3052955580), sa_trans= esp-des esp-md5-hmac , sa_conn_id= 134219729 *Jun 27 09:50:51.927: ISAKMP:(0:1:SW:1):purging node 1689610294 PAT-Router#**debug ip nat detail**
IP NAT detailed debugging is on
PAT-Router#**show debug**
Generic IP:
  IP NAT detailed debugging is on
PAT-Router#
!--- The "i" in this line indicates the packet is traveling from the !--- inside to the outside (from a NAT perspective) interface. The number in !--- the brackets is the identification number in the IP packet. This is !--- useful when correlating information with sniffer traces taken with a !--- network analyzer while troubleshooting problems. *Jun 27 09:49:57.727: NAT*: i: udp (172.16.1.2, 500) -> (209.165.200.2, 500) [94] *!--- The "s" in this line shows the source address of the packet and how it is !--- being translated.* *Jun 27 09:49:57.727: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [94] *Jun 27 09:49:58.927: NAT*: o: udp (209.165.200.2, 500) -> (209.165.201.2, 500) [100] *Jun 27 09:49:58.927: NAT*: s=209.165.200.2, d=209.165.201.2->172.16.1.2 [100] *Jun 27 09:49:59.147: NAT*: i: udp (172.16.1.2, 500) -> (209.165.200.2, 500) [95] *Jun 27 09:49:59.147: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [95] *Jun 27 09:49:59.755: NAT*: o: udp (209.165.200.2, 500) -> (209.165.201.2, 500) [101] *Jun 27 09:49:59.755: NAT*: s=209.165.200.2, d=209.165.201.2->172.16.1.2 [101] *Jun 27 09:49:59.947: NAT*: i: udp (172.16.1.2, 500) -> (209.165.200.2, 500) [96] *Jun 27 09:49:59.947: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [96] *Jun 27 09:50:00.667: NAT*: o: udp (209.165.200.2, 500) -> (209.165.201.2, 500) [102] *Jun 27 09:50:00.667: NAT*:

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s=209.165.200.2, d=209.165.201.2->172.16.1.2 [102] *Jun 27 09:50:00.895: NAT*: i: udp
(172.16.1.2, 500) -> (209.165.200.2, 500) [97] *Jun 27 09:50:00.895: NAT*: s=172.16.1.2-
>209.165.201.2, d=209.165.200.2 [97] *Jun 27 09:50:01.679: NAT*: o: udp (209.165.200.2, 500) ->
(209.165.201.2, 500) [103] *Jun 27 09:50:01.679: NAT*: s=209.165.200.2, d=209.165.201.2-
>172.16.1.2 [103] *Jun 27 09:50:01.787: NAT*: i: udp (172.16.1.2, 500) -> (209.165.200.2, 500)
[98] *Jun 27 09:50:01.787: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [98] *Jun 27
09:50:23.667: NAT*: i: esp (172.16.1.2, 26556) -> (209.165.200.2, 0) [99] *Jun 27 09:50:23.667:
NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [99] *Jun 27 09:50:23.715: NAT*: o: esp
(209.165.200.2, -392560059) -> (209.165.201.2, 0) [104] *Jun 27 09:50:23.715: NAT*:
s=209.165.200.2, d=209.165.201.2->172.16.1.2 [104] *Jun 27 09:50:23.787: NAT*: i: esp
(172.16.1.2, 26556) -> (209.165.200.2, 0) [100] *Jun 27 09:50:23.787: NAT*: s=172.16.1.2-
>209.165.201.2, d=209.165.200.2 [100] *Jun 27 09:50:23.847: NAT*: o: esp (209.165.200.2, 581) ->
(209.165.201.2, 0) [105] *Jun 27 09:50:23.847: NAT*: s=209.165.200.2, d=209.165.201.2-
>172.16.1.2 [105] *Jun 27 09:50:23.915: NAT*: i: esp (172.16.1.2, 26556) -> (209.165.200.2, 0)
[101] *Jun 27 09:50:23.915: NAT*: s=172.16.1.2->209.165.201.2, d=209.165.200.2 [101] *Jun 27
09:50:23.967: NAT*: o: esp (209.165.200.2, 581) -> (209.165.201.2, 0) [106] *Jun 27
09:50:23.967: NAT*: s=209.165.200.2, d=209.165.201.2->172.16.1.2 [106] *Jun 27 09:50:24.047:
NAT*: i: esp (172.16.1.2, 26556) -> (209.165.200.2, 0) [102] *Jun 27 09:50:24.047: NAT*:
s=172.16.1.2->209.165.201.2, d=209.165.200.2 [102] *Jun 27 09:50:24.095: NAT*: o: esp
(209.165.200.2, 581) -> (209.165.201.2, 0) [107] *Jun 27 09:50:24.095: NAT*: s=209.165.200.2,
d=209.165.201.2->172.16.1.2 [107] *Jun 27 09:50:24.207: NAT*: i: esp (172.16.1.2, 26556) ->
(209.165.200.2, 0) [103] *Jun 27 09:50:24.207: NAT*: s=172.16.1.2->209.165.201.2,
d=209.165.200.2 [103] *Jun 27 09:50:24.267: NAT*: o: esp (209.165.200.2, 581) -> (209.165.201.2,
0) [108] *Jun 27 09:50:24.267: NAT*: s=209.165.200.2, d=209.165.201.2->172.16.1.2 [108]
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Informações Relacionadas

- Página de suporte do IPSec
- Suporte Técnico - Cisco Systems