Configuración del servidor DMVPN y Easy VPN con perfiles ISAKMP

Contenido

Introducción

Este documento describe cómo configurar Dynamic Multipoint VPN (DMVPN) y Easy VPN con Xauth en el mismo router. Esta configuración ofrece spokes DMVPN que se atienden dinámicamente. ISAKMP (Internet Security Association and Key Management Protocol) proporciona la capacidad de separar los métodos de autentificación de spokes atendidos DMVPN dinámicamente de Easy VPN Clients.

Prerequisites

Requirements

No hay requisitos específicos para este documento.

Componentes Utilizados

La información que contiene este documento se basa en las siguientes versiones de software y hardware.

- Routers Cisco 2691 y 3725 que ejecutan las versiones 12.3(3) y 12.3(3)a del software Cisco IOS®

La información que contiene este documento se creó a partir de los dispositivos en un ambiente de laboratorio específico. Todos los dispositivos que se utilizan en este documento se pusieron en funcionamiento con una configuración verificada (predeterminada). If your network is live, make

sure that you understand the potential impact of any command.

Convenciones

Consulte [Convenciones de Consejos TécnicosCisco para obtener más información sobre las convenciones del documento.](#)

Configurar

En esta sección encontrará la información para configurar las funciones descritas en este documento.

Nota: Utilice la [herramienta de búsqueda de comandos](#) (solo para clientes [registrados](#)) para obtener más información sobre los comandos utilizados en este documento.

Diagrama de la red

Este documento utiliza esta configuración de red:

Configuraciones

Este documento usa estas configuraciones.

- [Configuración del eje de conexión sv9-2](#)

- [Configuración radial sv9-3](#)

- [Configuración de Spoke sv9-4](#)

Configuración del eje de c

```
<#root>

sv9-2#

show run

Building configuration...

Current configuration : 2876 bytes
!
version 12.3
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname sv9-2
!
boot-start-marker
boot-end-marker
!
enable password cisco
```

```
!

username cisco password 0 cisco
aaa new-model

!
!
```

```
aaa authentication login userauthen local
aaa authorization network hw-client-groupname local

aaa session-id common
ip subnet-zero
!
!
no ip domain lookup
!
ip audit notify log
ip audit po max-events 100
ip ssh break-string
no ftp-server write-enable
!
!
```

```
crypto keyring dmvpnspokes
pre-shared-key address 0.0.0.0 0.0.0.0 key cisco123

!
```

```
crypto isakmp policy 10
hash md5
authentication pre-share

!
```

```
crypto isakmp policy 20
hash md5
authentication pre-share
group 2

!
```

```
crypto isakmp client configuration group hw-client-groupname
key hw-client-password
dns 1.1.11.10 1.1.11.11
wins 1.1.11.12 1.1.11.13
domain cisco.com
pool dynpool
```

!--- Profile for VPN Client connections, matches the !--- "hw-client-group" group and defines the XAut

```
crypto isakmp profile VPNclient
match identity group hw-client-groupname
client authentication list userauthen
isakmp authorization list hw-client-groupname
client configuration address respond
```

!--- Profile for LAN-to-LAN connection, references !--- the wildcard pre-shared key and a wildcard !--

```
crypto isakmp profile DMVPN
keyring dmvpnspokes
match identity address 0.0.0.0
```

!
!

!--- Create the Phase 2 policy for actual data encryption.

```
crypto ipsec transform-set strong esp-3des esp-md5-hmac
mode transport
```

!

!--- Create an IPsec profile to be applied dynamically to the !--- generic routing encapsulation (GRE)

```
crypto ipsec profile cisco
set security-association lifetime seconds 120
set transform-set strong
set isakmp-profile DMVPN
```

!
!

!--- This dynamic crypto map references the ISAKMP !--- Profile VPN Client above. !--- Reverse route i

```
crypto dynamic-map dynmap 10
set isakmp-profile VPNclient
reverse-route
```

```
set transform-set strong

!
!


!--- Crypto map only references the dynamic crypto map above.


crypto map dynmap 1 ipsec-isakmp dynamic dynmap


!
!
!
!
!
!
!
!
!
!
no voice hpi capture buffer
no voice hpi capture destination
!
!
!
!
!
!


!--- Create a GRE tunnel template which is applied to !--- all the dynamically created GRE tunnels.


interface Tunnel0
ip address 192.168.1.1 255.255.255.0
no ip redirects
ip mtu 1440
ip nhrp authentication cisco123
ip nhrp map multicast dynamic
ip nhrp network-id 1
ip nhrp holdtime 300
no ip split-horizon eigrp 90
tunnel source FastEthernet0/0
tunnel mode gre multipoint
tunnel key 0
tunnel protection ipsec profile cisco

!
interface FastEthernet0/0
ip address 209.168.202.225 255.255.255.0
duplex auto
speed auto

crypto map dynmap

!
interface FastEthernet0/1
ip address 1.1.1.1 255.255.255.0
duplex auto
speed auto
!
```

```
interface BRI1/0
no ip address
shutdown
!
interface BRI1/1
no ip address
shutdown
!
interface BRI1/2
no ip address
shutdown
!
interface BRI1/3
no ip address
shutdown
!


!--- Enable a routing protocol to send and receive !--- dynamic updates about the private networks.


router eigrp 90
redistribute static
network 1.1.1.0 0.0.0.255
network 192.168.1.0
no auto-summary

!

ip local pool dynpool 1.1.11.60 1.1.11.80

ip http server
no ip http secure-server
ip classless
!
!
!
!
!
!
!
!
!
!
!
line con 0
exec-timeout 0 0
transport preferred all
transport output all
escape-character 27
line aux 0
transport preferred all
transport output all
line vty 0 4
password cisco
transport preferred all
transport input all
transport output all
!
!
end
```

Configuración radial sv9-3

```
<#root>

sv9-3#

show run

Building configuration...

Current configuration : 2052 bytes
!
version 12.3
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname sv9-3
!
boot-start-marker
boot system flash:c3725-ik9o3s-mz.123-3.bin
boot-end-marker
!
!
no aaa new-model
ip subnet-zero
!
!
no ip domain lookup
!
ip audit notify log
ip audit po max-events 100
ip ssh break-string
no ftp-server write-enable
!
!
!
```

!--- Create an ISAKMP policy for Phase 1 negotiations.

```
crypto isakmp policy 10
hash md5
authentication pre-share
```

!--- Add dynamic pre-shared keys for all remote VPN routers.

```
crypto isakmp key cisco123 address 0.0.0.0 0.0.0.0

!
!
```

!--- Create the Phase 2 policy for actual data encryption.

```
crypto ipsec transform-set strong esp-3des esp-md5-hmac
mode transport

!
```

!--- Create an IPsec profile to be applied dynamically to the !--- GRE over IPsec tunnels.

```
crypto ipsec profile cisco
set security-association lifetime seconds 120
set transform-set strong

!
!
no voice hpi capture buffer
no voice hpi capture destination
!
!
```

!--- Create a GRE tunnel template which is applied to !--- all the dynamically created GRE tunnels.

```
interface Tunnel0

ip address 192.168.1.3 255.255.255.0
no ip redirects
ip mtu 1440
ip nhrp authentication cisco123
ip nhrp map multicast dynamic
ip nhrp map 192.168.1.1 209.168.202.225
ip nhrp map multicast 209.168.202.225
ip nhrp network-id 1
ip nhrp holdtime 300
ip nhrp nhs 192.168.1.1
no ip split-horizon eigrp 90
tunnel source FastEthernet0/0

tunnel mode gre multipoint

tunnel key 0

tunnel protection ipsec profile cisco

!
interface FastEthernet0/0
ip address 209.168.202.130 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
ip address 3.3.3.3 255.255.255.0
duplex auto
speed auto
!
interface BRI1/0
no ip address
shutdown
!
interface BRI1/1
no ip address
shutdown
!
interface BRI1/2
no ip address
shutdown
!
interface BRI1/3
no ip address
shutdown
!
```

```
!--- Enable a routing protocol to send and receive !--- dynamic updates about the private networks.


router eigrp 90

network 3.3.3.0 0.0.0.255
network 192.168.1.0
no auto-summary
!
ip http server
no ip http secure-server
ip classless
ip route 0.0.0.0 0.0.0.0 209.168.202.225
ip route 2.2.2.0 255.255.255.0 Tunnel0
!
!
line con 0
exec-timeout 0 0
transport preferred all
transport output all
escape-character 27
line aux 0
transport preferred all
transport output all
line vty 0 4
login
transport preferred all
transport input all
transport output all
!
!
end
```

Configuración de Spoke sv9-4

```
<#root>

sv9-4#

show run

Building configuration...

Current configuration : 1992 bytes
!
version 12.3
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname sv9-4
!
boot-start-marker
boot system flash:c2691-jk9o3s-mz.123-3a.bin
boot-end-marker
!
enable password cisco
```

```
!
no aaa new-model
ip subnet-zero
!
!
no ip domain lookup
!
ip audit notify log
ip audit po max-events 100
ip ssh break-string
no ftp-server write-enable
!
!
!

!--- Create an ISAKMP policy for Phase 1 negotiations.


crypto isakmp policy 10
hash md5
authentication pre-share


!--- Add dynamic pre-shared keys for all remote VPN routers.


crypto isakmp key cisco123 address 0.0.0.0 0.0.0.0

!
!

!--- Create the Phase 2 policy for actual data encryption.


crypto ipsec transform-set strong esp-3des esp-md5-hmac
mode transport

!

!--- Create an IPsec profile apply dynamically to the !--- GRE over IPsec tunnels.


crypto ipsec profile cisco
set security-association lifetime seconds 120
set transform-set strong

!
!
no voice hpi capture buffer
no voice hpi capture destination
!
!

!--- Create a GRE tunnel template which is applied to !--- all the dynamically created GRE tunnels.


interface Tunnel0

ip address 192.168.1.2 255.255.255.0
no ip redirects
ip mtu 1440
ip nhrp authentication cisco123
ip nhrp map multicast dynamic
ip nhrp map 192.168.1.1 209.168.202.225
```

```
ip nhrp map multicast 209.168.202.225
ip nhrp network-id 1
ip nhrp holdtime 300
ip nhrp nhs 192.168.1.1
no ip split-horizon eigrp 90
tunnel source FastEthernet0/0

tunnel mode gre multipoint
tunnel key 0
tunnel protection ipsec profile cisco

!
interface FastEthernet0/0
ip address 209.168.202.131 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
ip address 2.2.2.2 255.255.255.0
duplex auto
speed auto
!

!--- Enable a routing protocol to send and receive !--- dynamic updates about the private networks.

router eigrp 90

network 2.2.2.0 0.0.0.255
network 192.168.1.0
no auto-summary
!
ip http server
no ip http secure-server
ip classless
ip route 0.0.0.0 0.0.0.0 209.168.202.225
!
!
dial-peer cor custom
!
!
line con 0
exec-timeout 0 0
transport output lat pad v120 lapb-ta mop telnet rlogin udptn ssh
escape-character 27
line aux 0
transport output lat pad v120 lapb-ta mop telnet rlogin udptn ssh
line vty 0 4
login
transport input lat pad v120 lapb-ta mop telnet rlogin udptn ssh
transport output lat pad v120 lapb-ta mop telnet rlogin udptn ssh
!
!
end
```

Verificación

En esta sección encontrará información que puede utilizar para comprobar que su configuración

funcione correctamente.

Los comandos de depuración que se ejecutan en el router hub confirman que los parámetros correctos coinciden para las conexiones spoke y VPN Client. Ejecute estos comandos debug.

La herramienta Output Interpreter Tool (clientes registrados solamente) (OIT) soporta ciertos comandos show. Utilice la OIT para ver un análisis del resultado del comando show.

Nota: Consulte Información Importante sobre Comandos Debug antes de utilizar los comandos debug.

- debug crypto isakmp — Muestra mensajes acerca de eventos IKE.

- debug crypto ipsec—Muestra información acerca de eventos de IPSec.

```
sv9-2#
*Mar 13 04:38:21.187: ISAKMP (0:0): received packet from 209.168.202.130
                    dport 500 sport 500 Global (N) NEW SA
*Mar 13 04:38:21.187: ISAKMP: local port 500, remote port 500
*Mar 13 04:38:21.187: ISAKMP: insert sa successfully sa = 63F585CC
*Mar 13 04:38:21.187: ISAKMP (0:689): Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH
*Mar 13 04:38:21.187: ISAKMP (0:689): Old State = IKE_READY New State = IKE_R_MM1

*Mar 13 04:38:21.187: ISAKMP (0:689): processing SA payload. message ID = 0
*Mar 13 04:38:21.187: ISAKMP (0:689): processing vendor id payload
*Mar 13 04:38:21.187: ISAKMP (0:689): vendor ID seems Unity/DPD but
                     major 157 mismatch
*Mar 13 04:38:21.187: ISAKMP (0:689): vendor ID is NAT-T v3
*Mar 13 04:38:21.187: ISAKMP (0:689): processing vendor id payload
*Mar 13 04:38:21.191: ISAKMP (0:689): vendor ID seems Unity/DPD but
                     major 123 mismatch
*Mar 13 04:38:21.191: ISAKMP (0:689): vendor ID is NAT-T v2
*Mar 13 04:38:21.191: ISAKMP: Looking for a matching key for 209.168.202.130
                    in default
*Mar 13 04:38:21.191: ISAKMP: Looking for a matching key for 209.168.202.130
                    in dmvpnspokes : success
*Mar 13 04:38:21.191: ISAKMP (0:689): found peer pre-shared key matching
                    209.168.202.130
*Mar 13 04:38:21.191: ISAKMP (0:689) local preshared key found
*Mar 13 04:38:21.191: ISAKMP : Scanning profiles for xauth ... VPNclient
*Mar 13 04:38:21.191: ISAKMP (0:689) Authentication by xauth preshared
*Mar 13 04:38:21.191: ISAKMP (0:689): Checking ISAKMP transform 1 against
                     priority 10 policy
*Mar 13 04:38:21.191: ISAKMP: encryption DES-CBC
*Mar 13 04:38:21.191: ISAKMP: hash MD5
*Mar 13 04:38:21.191: ISAKMP: default group 1
*Mar 13 04:38:21.191: ISAKMP: auth pre-share
*Mar 13 04:38:21.191: ISAKMP: life type in seconds
*Mar 13 04:38:21.191: ISAKMP: life duration (VPI) of 0x0 0x1 0x51 0x80
*Mar 13 04:38:21.191: ISAKMP (0:689): atts are acceptable. Next payload is 0
*Mar 13 04:38:21.195: ISAKMP (0:689): processing vendor id payload
*Mar 13 04:38:21.195: ISAKMP (0:689): vendor ID seems Unity/DPD but major
                     157 mismatch
*Mar 13 04:38:21.195: ISAKMP (0:689): vendor ID is NAT-T v3
*Mar 13 04:38:21.195: ISAKMP (0:689): processing vendor id payload
*Mar 13 04:38:21.195: ISAKMP (0:689): vendor ID seems Unity/DPD but
                     major 123 mismatch
```

```
*Mar 13 04:38:21.195: ISAKMP (0:689): vendor ID is NAT-T v2
*Mar 13 04:38:21.195: ISAKMP (0:689): Input = IKE_MESG_INTERNAL,
                      IKE_PROCESS_MAIN_MODE
*Mar 13 04:38:21.195: ISAKMP (0:689): Old State = IKE_R_MM1 New State = IKE_R_MM1

*Mar 13 04:38:21.195: ISAKMP (0:689): constructed NAT-T vendor-03 ID
*Mar 13 04:38:21.195: ISAKMP (0:689): sending packet to 209.168.202.130
                      my_port 500 peer_port 500 (R) MM_SA_SETUP
*Mar 13 04:38:21.195: ISAKMP (0:689): Input = IKE_MESG_INTERNAL,
                      IKE_PROCESS_COMPLETE
*Mar 13 04:38:21.195: ISAKMP (0:689): Old State = IKE_R_MM1 New State = IKE_R_MM2

*Mar 13 04:38:21.203: ISAKMP (0:689): received packet from 209.168.202.130 dport
                      500 sport 500 Global (R) MM_SA_SETUP
*Mar 13 04:38:21.203: ISAKMP (0:689): Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH
*Mar 13 04:38:21.203: ISAKMP (0:689): Old State = IKE_R_MM2 New State = IKE_R_MM3

*Mar 13 04:38:21.203: ISAKMP (0:689): processing KE payload. message ID = 0
*Mar 13 04:38:21.211: ISAKMP (0:689): processing NONCE payload. message ID = 0
*Mar 13 04:38:21.211: ISAKMP: Looking for a matching key for 209.168.202.130
                      in default
*Mar 13 04:38:21.211: ISAKMP: Looking for a matching key for 209.168.202.130
                      in dmvpnspokes : success
*Mar 13 04:38:21.211: ISAKMP (0:689): found peer pre-shared key matching
                      209.168.202.130
*Mar 13 04:38:21.211: ISAKMP: Looking for a matching key for 209.168.202.130
                      in default
*Mar 13 04:38:21.211: ISAKMP: Looking for a matching key for 209.168.202.130
                      in dmvpnspokes : success
*Mar 13 04:38:21.211: ISAKMP (0:689): found peer pre-shared key matching
                      209.168.202.130
*Mar 13 04:38:21.215: ISAKMP (0:689): SKEYID state generated
*Mar 13 04:38:21.215: ISAKMP (0:689): processing vendor id payload
*Mar 13 04:38:21.215: ISAKMP (0:689): vendor ID is Unity
*Mar 13 04:38:21.215: ISAKMP (0:689): processing vendor id payload
*Mar 13 04:38:21.215: ISAKMP (0:689): vendor ID is DPD
*Mar 13 04:38:21.215: ISAKMP (0:689): processing vendor id payload
*Mar 13 04:38:21.215: ISAKMP (0:689): speaking to another IOS box!
*Mar 13 04:38:21.215: ISAKMP:received payload type 17
*Mar 13 04:38:21.215: ISAKMP:received payload type 17
*Mar 13 04:38:21.215: ISAKMP (0:689): Input = IKE_MESG_INTERNAL,
                      IKE_PROCESS_MAIN_MODE
*Mar 13 04:38:21.215: ISAKMP (0:689): Old State = IKE_R_MM3 New State = IKE_R_MM3

*Mar 13 04:38:21.215: ISAKMP (0:689): sending packet to 209.168.202.130
                      my_port 500 peer_port 500 (R) MM_KEY_EXCH
*Mar 13 04:38:21.215: ISAKMP (0:689): Input = IKE_MESG_INTERNAL,
                      IKE_PROCESS_COMPLETE
*Mar 13 04:38:21.215: ISAKMP (0:689): Old State = IKE_R_MM3 New State = IKE_R_MM4

*Mar 13 04:38:21.227: ISAKMP (0:689): received packet from 209.168.202.130
                      dport 500 sport 500 Global (R) MM_KEY_EXCH
*Mar 13 04:38:21.227: ISAKMP (0:689): Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH
*Mar 13 04:38:21.227: ISAKMP (0:689): Old State = IKE_R_MM4 New State = IKE_R_MM5

*Mar 13 04:38:21.227: ISAKMP (0:689): processing ID payload. message ID = 0
*Mar 13 04:38:21.227: ISAKMP (0:689): peer matches DMVPN profile
*Mar 13 04:38:21.227: ISAKMP: Looking for a matching key for 209.168.202.130
                      in default
*Mar 13 04:38:21.227: ISAKMP: Looking for a matching key for 209.168.202.130
                      in dmvpnspokes : success
*Mar 13 04:38:21.227: ISAKMP (0:689): Found ADDRESS key in keyring dmvpnspokes
```

```
*Mar 13 04:38:21.227: ISAKMP (0:689): processing HASH payload. message ID = 0
*Mar 13 04:38:21.227: ISAKMP (0:689): processing NOTIFY INITIAL_CONTACT protocol 1
spi 0, message ID = 0, sa = 63F585CC
*Mar 13 04:38:21.227: ISAKMP (0:689): Process initial contact,
                      bring down existing phase 1 and 2 SA's with local
                      209.168.202.225 remote
                      209.168.202.130 remote port 500
*Mar 13 04:38:21.227: IPSEC(key_engine): got a queue event...
*Mar 13 04:38:21.231: ISAKMP (0:689): SA has been authenticated
                      with 209.168.202.130
*Mar 13 04:38:21.231: ISAKMP (0:689): Input = IKE_MESG_INTERNAL,
                      IKE_PROCESS_MAIN_MODE
*Mar 13 04:38:21.231: ISAKMP (0:689): Old State = IKE_R_MM5 New State = IKE_R_MM5


*Mar 13 04:38:21.231: ISAKMP (0:689): SA is doing pre-shared key
                      authentication using id type ID_IPV4_ADDR
*Mar 13 04:38:21.231: ISAKMP (689): ID payload
next-payload : 8
type : 1
addr : 209.168.202.225
protocol : 17
port : 500
length : 8
*Mar 13 04:38:21.231: ISAKMP (689): Total payload length: 12
*Mar 13 04:38:21.231: ISAKMP (0:689): sending packet to 209.168.202.130
                      my_port 500 peer_port 500 (R) MM_KEY_EXCH
*Mar 13 04:38:21.231: ISAKMP (0:689): Input = IKE_MESG_INTERNAL,
                      IKE_PROCESS_COMPLETE
*Mar 13 04:38:21.231: ISAKMP (0:689): Old State = IKE_R_MM5 New State =
                      IKE_P1_COMPLETE


*Mar 13 04:38:21.231: ISAKMP (0:689): Input = IKE_MESG_INTERNAL,
                      IKE_PHASE1_COMPLETE
*Mar 13 04:38:21.231: ISAKMP (0:689): Old State = IKE_P1_COMPLETE
                      New State = IKE_P1_COMPLETE


*Mar 13 04:38:21.235: ISAKMP (0:689): received packet from
                      209.168.202.130 dport 500 sport 500 Global (R) QM_IDLE


*Mar 13 04:38:21.235: ISAKMP: set new node -1213418274 to QM_IDLE
*Mar 13 04:38:21.235: ISAKMP (0:689): processing HASH payload. message ID = -1213418274
*Mar 13 04:38:21.235: ISAKMP (0:689): processing SA payload. message ID = -1213418274
*Mar 13 04:38:21.235: ISAKMP (0:689): Checking IPSec proposal 1
*Mar 13 04:38:21.235: ISAKMP: transform 1, ESP_3DES
*Mar 13 04:38:21.235: ISAKMP: attributes in transform:
*Mar 13 04:38:21.235: ISAKMP: encaps is 2
*Mar 13 04:38:21.235: ISAKMP: SA life type in seconds
*Mar 13 04:38:21.235: ISAKMP: SA life duration (basic) of 120
*Mar 13 04:38:21.235: ISAKMP: SA life type in kilobytes
*Mar 13 04:38:21.235: ISAKMP: SA life duration (VPI) of 0x0 0x46 0x50 0x0
*Mar 13 04:38:21.235: ISAKMP: authenticator is HMAC-MD5
*Mar 13 04:38:21.235: ISAKMP (0:689): atts are acceptable.
*Mar 13 04:38:21.235: IPSEC(validate_proposal_request): proposal part #1,
(key eng. msg.) INBOUND local= 209.168.202.225, remote= 209.168.202.130,
local_proxy= 209.168.202.225/255.255.255.255/47/0 (type=1),
remote_proxy= 209.168.202.130/255.255.255.255/47/0 (type=1),
protocol= ESP, transform= esp-3des esp-md5-hmac ,
lifedur= 0s and 0kb,
spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x4
*Mar 13 04:38:21.239: IPSEC(kei_proxy): head = Tunnel0-head-0,
                      map->ivrf = , kei->ivrf =
*Mar 13 04:38:21.239: IPSEC(kei_proxy): head = Tunnel0-head-0,
```

```
                           map->ivrf = , kei->ivrf =
*Mar 13 04:38:21.239: ISAKMP (0:689): processing NONCE payload.
                       message ID = -1213418274
*Mar 13 04:38:21.239: ISAKMP (0:689): processing ID payload.
                       message ID = -1213418274
*Mar 13 04:38:21.239: ISAKMP (0:689): processing ID payload.
                       message ID = -1213418274
*Mar 13 04:38:21.239: ISAKMP (0:689): asking for 1 spis from ipsec
*Mar 13 04:38:21.239: ISAKMP (0:689): Node -1213418274, Input =
                       IKE_MESG_FROM_PEER, IKE_QM_EXCH
*Mar 13 04:38:21.239: ISAKMP (0:689): Old State = IKE_QM_READY
                       New State = IKE_QM_SPI_STARVE
*Mar 13 04:38:21.239: IPSEC(key_engine): got a queue event...
*Mar 13 04:38:21.239: IPSEC(spi_response): getting spi 3759277150 for SA
from 209.168.202.225 to 209.168.202.130 for prot 3
*Mar 13 04:38:21.239: ISAKMP (0:689): received packet from
                       209.168.202.130 dport 500 sport 500 Global (R) QM_IDLE

*Mar 13 04:38:21.239: ISAKMP: set new node -1392382616 to QM_IDLE
*Mar 13 04:38:21.239: ISAKMP (0:689): processing HASH payload.
                       message ID = -1392382616
*Mar 13 04:38:21.239: ISAKMP (0:689): processing SA payload.
                       message ID = -1392382616
*Mar 13 04:38:21.239: ISAKMP (0:689): Checking IPSec proposal 1
*Mar 13 04:38:21.239: ISAKMP: transform 1, ESP_3DES
*Mar 13 04:38:21.239: ISAKMP: attributes in transform:
*Mar 13 04:38:21.239: ISAKMP: encaps is 2
*Mar 13 04:38:21.239: ISAKMP: SA life type in seconds
*Mar 13 04:38:21.239: ISAKMP: SA life duration (basic) of 120
*Mar 13 04:38:21.239: ISAKMP: SA life type in kilobytes
*Mar 13 04:38:21.239: ISAKMP: SA life duration (VPI) of 0x0 0x46 0x50 0x0
*Mar 13 04:38:21.239: ISAKMP: authenticator is HMAC-MD5
*Mar 13 04:38:21.239: ISAKMP (0:689): atts are acceptable.
*Mar 13 04:38:21.243: IPSEC(validate_proposal_request): proposal part #1,
(key eng. msg.) INBOUND local= 209.168.202.225, remote= 209.168.202.130,
local_proxy= 209.168.202.225/255.255.255.255/47/0 (type=1),
remote_proxy= 209.168.202.130/255.255.255.255/47/0 (type=1),
protocol= ESP, transform= esp-3des esp-md5-hmac ,
lifedur= 0s and 0kb,
spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x4
*Mar 13 04:38:21.243: IPSEC(kei_proxy): head = Tunnel0-head-0,
                       map->ivrf = , kei->ivrf =
*Mar 13 04:38:21.243: IPSEC(kei_proxy): head = Tunnel0-head-0,
                        map->ivrf = , kei->ivrf =
*Mar 13 04:38:21.243: ISAKMP (0:689): processing NONCE payload.
                       message ID = -1392382616
*Mar 13 04:38:21.243: ISAKMP (0:689): processing ID payload.
                        message ID = -1392382616
*Mar 13 04:38:21.243: ISAKMP (0:689): processing ID payload.
                       message ID = -1392382616
*Mar 13 04:38:21.243: ISAKMP (0:689): asking for 1 spis from ipsec
*Mar 13 04:38:21.243: ISAKMP (0:689): Node -1392382616, Input =
                       IKE_MESG_FROM_PEER, IKE_QM_EXCH
*Mar 13 04:38:21.243: ISAKMP (0:689): Old State = IKE_QM_READY
                       New State = IKE_QM_SPI_STARVE
*Mar 13 04:38:21.243: ISAKMP: received ke message (2/1)
*Mar 13 04:38:21.243: IPSEC(key_engine): got a queue event...
*Mar 13 04:38:21.243: IPSEC(spi_response): getting spi 1258185233 for SA
from 209.168.202.225 to 209.168.202.130 for prot 3
*Mar 13 04:38:21.243: ISAKMP: received ke message (2/1)
*Mar 13 04:38:21.491: ISAKMP (0:689): sending packet to
                       209.168.202.130 my_port 500 peer_port 500 (R) QM_IDLE
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*Mar 13 04:38:21.491: ISAKMP (0:689): Node -1213418274, Input =
                      IKE_MESG_FROM_IPSEC, IKE_SPI_REPLY
*Mar 13 04:38:21.491: ISAKMP (0:689): Old State = IKE_QM_SPI_STARVE
                      New State = IKE_QM_R_QM2
*Mar 13 04:38:21.495: ISAKMP (0:689): sending packet to 209.168.202.130
                       my_port 500 peer_port 500 (R) QM_IDLE
*Mar 13 04:38:21.495: ISAKMP (0:689): Node -1392382616, Input =
                      IKE_MESG_FROM_IPSEC, IKE_SPI_REPLY
*Mar 13 04:38:21.495: ISAKMP (0:689): Old State = IKE_QM_SPI_STARVE
                       New State = IKE_QM_R_QM2
*Mar 13 04:38:21.503: ISAKMP (0:689): received packet from 209.168.202.130
                      dport 500 sport 500 Global (R) QM_IDLE


*Mar 13 04:38:21.511: ISAKMP (0:689): Creating IPSec SAs
*Mar 13 04:38:21.511: inbound SA from 209.168.202.130 to
                       209.168.202.225 (f/i) 0/ 0
                      (proxy 209.168.202.130 to 209.168.202.225)
*Mar 13 04:38:21.511: has spi 0xE012045E and conn_id 13777 and flags 4
*Mar 13 04:38:21.511: lifetime of 120 seconds
*Mar 13 04:38:21.511: lifetime of 4608000 kilobytes
*Mar 13 04:38:21.511: has client flags 0x0
*Mar 13 04:38:21.511: outbound SA from 209.168.202.225 to
                      209.168.202.130 (f/i) 0/ 0 (proxy 209.168.202.225
                      to 209.168.202.130)
*Mar 13 04:38:21.511: has spi 1398157896 and conn_id 13778 and flags C
*Mar 13 04:38:21.511: lifetime of 120 seconds
*Mar 13 04:38:21.511: lifetime of 4608000 kilobytes
*Mar 13 04:38:21.511: has client flags 0x0
*Mar 13 04:38:21.511: ISAKMP (0:689): deleting node -1213418274 error
                      FALSE reason "quick mode done (await)"
*Mar 13 04:38:21.511: ISAKMP (0:689): Node -1213418274, Input =
                      IKE_MESG_FROM_PEER, IKE_QM_EXCH
*Mar 13 04:38:21.511: ISAKMP (0:689): Old State = IKE_QM_R_QM2
                       New State = IKE_QM_PHASE2_COMPLETE
*Mar 13 04:38:21.511: IPSEC(key_engine): got a queue event...
*Mar 13 04:38:21.511: IPSEC(initialize_sas): ,
(key eng. msg.) INBOUND local= 209.168.202.225, remote= 209.168.202.130,
local_proxy= 209.168.202.225/0.0.0.0/47/0 (type=1),
remote_proxy= 209.168.202.130/0.0.0.0/47/0 (type=1),
protocol= ESP, transform= esp-3des esp-md5-hmac ,
lifedur= 120s and 4608000kb,
spi= 0xE012045E(3759277150), conn_id= 13777, keysize= 0, flags= 0x4
*Mar 13 04:38:21.511: IPSEC(initialize_sas): ,
(key eng. msg.) OUTBOUND local= 209.168.202.225, remote= 209.168.202.130,
local_proxy= 209.168.202.225/0.0.0.0/47/0 (type=1),
remote_proxy= 209.168.202.130/0.0.0.0/47/0 (type=1),
protocol= ESP, transform= esp-3des esp-md5-hmac ,
lifedur= 120s and 4608000kb,
spi= 0x53563248(1398157896), conn_id= 13778, keysize= 0, flags= 0xC
*Mar 13 04:38:21.511: IPSEC(kei_proxy): head = Tunnel0-head-0,
                      map->ivrf = , kei->ivrf =
*Mar 13 04:38:21.511: IPSEC(kei_proxy): head = Tunnel0-head-0,
                       map->ivrf = , kei->ivrf =
*Mar 13 04:38:21.511: IPSEC(add mtree): src 209.168.202.225, dest
                      209.168.202.130, dest_port 0


*Mar 13 04:38:21.511: IPSEC(create_sa): sa created,
(sa) sa_dest= 209.168.202.225, sa_prot= 50,
sa_spi= 0xE012045E(3759277150),
sa_trans= esp-3des esp-md5-hmac , sa_conn_id= 13777
*Mar 13 04:38:21.511: IPSEC(create_sa): sa created,
(sa) sa_dest= 209.168.202.130, sa_prot= 50,
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sa_spi= 0x53563248(1398157896),
sa_trans= esp-3des esp-md5-hmac , sa_conn_id= 13778
*Mar 13 04:38:21.511: ISAKMP (0:689): received packet from
                      209.168.202.130 dport 500 sport 500 Global (R) QM_IDLE

*Mar 13 04:38:21.519: ISAKMP (0:689): Creating IPSec SAs
*Mar 13 04:38:21.519: inbound SA from 209.168.202.130 to 209.168.202.225 (f/i) 0/ 0
(proxy 209.168.202.130 to 209.168.202.225)
*Mar 13 04:38:21.519: has spi 0x4AFE6211 and conn_id 13779 and flags 4
*Mar 13 04:38:21.519: lifetime of 120 seconds
*Mar 13 04:38:21.519: lifetime of 4608000 kilobytes
*Mar 13 04:38:21.519: has client flags 0x0
*Mar 13 04:38:21.519: outbound SA from 209.168.202.225 to 209.168.202.130
                      (f/i) 0/ 0 (proxy 209.168.202.225 to 209.168.202.130)
*Mar 13 04:38:21.523: has spi -1567576395 and conn_id 13780 and flags C
*Mar 13 04:38:21.523: lifetime of 120 seconds
*Mar 13 04:38:21.523: lifetime of 4608000 kilobytes
*Mar 13 04:38:21.523: has client flags 0x0
*Mar 13 04:38:21.523: ISAKMP (0:689): deleting node -1392382616 error
                      FALSE reason "quick mode done (await)"
*Mar 13 04:38:21.523: ISAKMP (0:689): Node -1392382616, Input = IKE_MESG_FROM_PEER,
                      IKE_QM_EXCH
*Mar 13 04:38:21.523: ISAKMP (0:689): Old State = IKE_QM_R_QM2 New State =
                      IKE_QM_PHASE2_COMPLETE
*Mar 13 04:38:21.523: IPSEC(key_engine): got a queue event...
*Mar 13 04:38:21.523: IPSEC(initialize_sas): ,
(key eng. msg.) INBOUND local= 209.168.202.225, remote= 209.168.202.130,
local_proxy= 209.168.202.225/0.0.0.0/47/0 (type=1),
remote_proxy= 209.168.202.130/0.0.0.0/47/0 (type=1),
protocol= ESP, transform= esp-3des esp-md5-hmac ,
lifedur= 120s and 4608000kb,
spi= 0x4AFE6211(1258185233), conn_id= 13779, keysize= 0, flags= 0x4
*Mar 13 04:38:21.523: IPSEC(initialize_sas): ,
(key eng. msg.) OUTBOUND local= 209.168.202.225, remote= 209.168.202.130,
local_proxy= 209.168.202.225/0.0.0.0/47/0 (type=1),
remote_proxy= 209.168.202.130/0.0.0.0/47/0 (type=1),
protocol= ESP, transform= esp-3des esp-md5-hmac ,
lifedur= 120s and 4608000kb,
spi= 0xA290AEB5(2727390901), conn_id= 13780, keysize= 0, flags= 0xC
*Mar 13 04:38:21.523: IPSEC(kei_proxy): head = Tunnel0-head-0,
                      map->ivrf = , kei->ivrf =
*Mar 13 04:38:21.523: IPSEC(kei_proxy): head = Tunnel0-head-0,
                      map->ivrf = , kei->ivrf =
*Mar 13 04:38:21.523: IPSEC(create_sa): sa created,
(sa) sa_dest= 209.168.202.225, sa_prot= 50,
sa_spi= 0x4AFE6211(1258185233),
sa_trans= esp-3des esp-md5-hmac , sa_conn_id= 13779
*Mar 13 04:38:21.523: IPSEC(create_sa): sa created,
(sa) sa_dest= 209.168.202.130, sa_prot= 50,
sa_spi= 0xA290AEB5(2727390901),
sa_trans= esp-3des esp-md5-hmac , sa_conn_id= 13780
*Mar 13 04:38:21.571: ISAKMP (0:687): purging node -114623302
*Mar 13 04:38:24.339: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 90: Neighbor
                      192.168.1.3 (Tunnel0) is up: new adjacency
```

Troubleshoot

Para obtener información adicional sobre la solución de problemas, consulte Solución de

[problemas de seguridad IP - Comprensión y uso de los comandos debug](#).

Información Relacionada

- [Descripción general del software DMVPN y Cisco IOS](#)
- [Negociación IPSec/Protocolos IKE](#)
- [Soporte Técnico y Documentación - Cisco Systems](#)