在两个路由器之间的LAN到LAN IPSec隧道配置示例

目录

简介

本文档提供了一个配置范例，说明如何在通过 IPsec LAN 到 LAN (L2L) 隧道连接到另一个路由器的同时允许 VPN 用户访问 Internet。启用分割隧道后即可实现此配置。分割隧道允许 VPN 用户通过 IPsec 隧道访问公司资源，同时仍允许访问 Internet。

先决条件

要求

本文档没有任何特定的要求。

使用的组件

本文档中的信息是基于使用 Cisco IOS® 软件版本 12.4 的 Cisco 3640 路由器。

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

规则

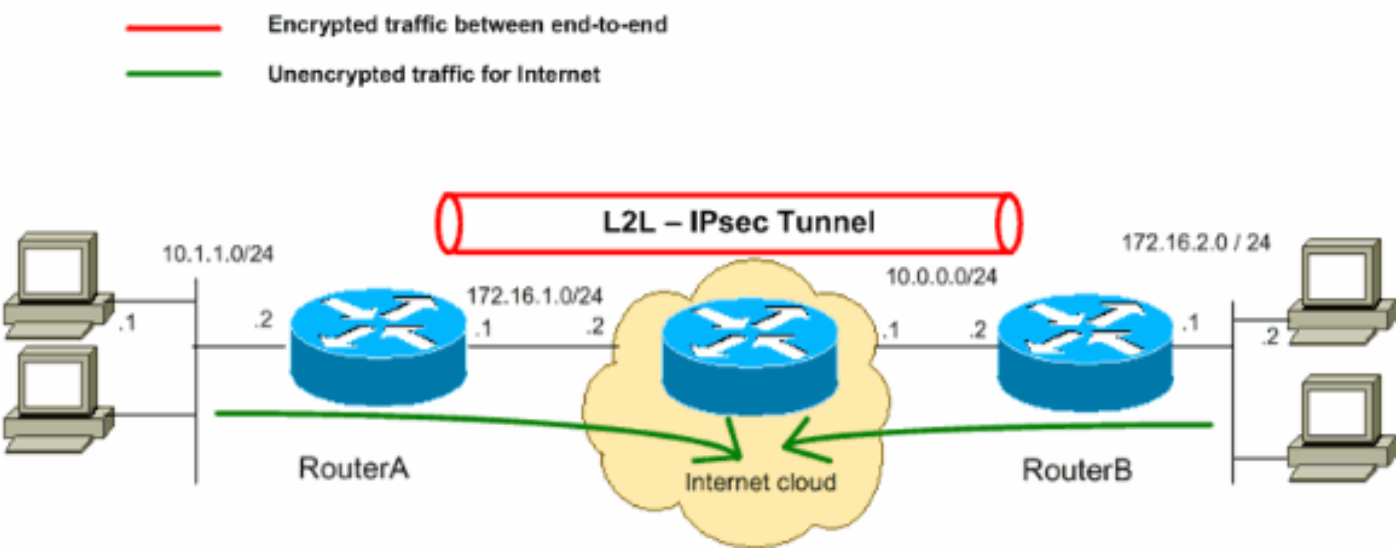
有关文档规则的详细信息，请参阅 Cisco 技术提示规则。

配置

本部分提供有关如何配置本文档所述功能的信息。

网络图

本文档使用以下网络设置：



注意： 此配置中使用的 IP 编址方案在 Internet 上不可合法路由。这些地址是在实验室环境中使用的 RFC 1918 地址。

配置

本文档使用以下配置：

- 路由器 A
- 路由器 B

路由器 A

```
RouterA#show running-config Building configuration... Current configuration : 1132 bytes ! version 12.4
service timestamps debug datetime msec service timestamps log datetime msec no service password-encrypt
hostname R9 ! boot-start-marker boot-end-marker ! ! no aaa new-model ! resource policy ! ! !--- Create
ISAKMP policy for Phase 1
!--- negotiations for the L2L tunnels. crypto isakmp policy 10 hash md5 authentication pre-share !--- S
the pre-shared key and the remote peer address
!--- to match for the L2L tunnel. crypto isakmp key vpnuser address 10.0.0.2 ! !--- Create the Phase 2
for actual data encryption. crypto ipsec transform-set myset esp-des esp-md5-hmac ! !--- Create the act
crypto map. Specify
!--- the peer IP address, transform
!--- set, and an access control list (ACL) for the split tunneling. crypto map mymap 10 ipsec-isakmp se
10.0.0.2 set transform-set myset match address 100 ! ! ! ! interface Ethernet0/0 ip address 10.1.1.2
255.255.255.0 half-duplex ! !--- Apply the crypto map on the outside interface. interface Serial2/0 ip
address 172.16.1.1 255.255.255.0 crypto map mymap ! ip http server no ip http secure-server ! ip route
0.0.0.0 0.0.0.0 172.16.1.2 ! !--- Create an ACL for the traffic to
!--- be encrypted. In this example,
!--- the traffic from 10.1.1.0/24 to 172.16.2.0/24
!--- is encrypted. The traffic which does not match the access list
!--- is unencrypted for the Internet. access-list 100 permit ip 10.1.1.0 0.0.0.255 172.16.2.0 0.0.0.255
control-plane ! line con 0 line aux 0 line vty 0 4 ! ! end
```

路由器 B

```
RouterB#show running-config Building configuration... Current configuration : 835 bytes ! version 12.4
```

```
service timestamps debug uptime service timestamps log uptime no service password-encryption ! hostname
! ip subnet-zero ! ! !--- Create an ISAKMP policy for Phase 1
!--- negotiations for the L2L tunnels. crypto isakmp policy 10 hash md5 authentication pre-share !--- S
the pre-shared key and the remote peer address
!--- to match for the L2L tunnel. crypto isakmp key vpnuser address 172.16.1.1 ! !--- Create the Phase
policy for actual data encryption. crypto ipsec transform-set myset esp-des esp-md5-hmac ! !--- Create
actual crypto map. Specify
!--- the peer IP address, transform
!--- set, and an ACL for the split tunneling. ! crypto map mymap 10 ipsec-isakmp set peer 172.16.1.1 se
transform-set myset match address 100 ! ! ! ! interface Ethernet0 ip address 172.16.2.1 255.255.255.0 !
Apply the crypto map on the outside interface. interface Ethernet1 ip address 10.0.0.2 255.255.255.0 cr
map mymap ! interface Serial0 no ip address shutdown no fair-queue ! interface Serial1 no ip address sh
! ip classless ip route 0.0.0.0 0.0.0.0 10.0.0.1 ip http server ! !--- Create an ACL for the traffic to
!--- be encrypted. In this example,
!--- the traffic from 172.16.2.0/24 to 10.1.1.0/24
!--- is encrypted. The traffic which does not match the access list
!--- is unencrypted for the Internet. access-list 100 permit ip 172.16.2.0 0.0.0.255 10.1.1.0 0.0.0.255
line con 0 line aux 0 line vty 0 4 ! end
```

验证

本部分所提供的信息可用于确认您的配置是否正常工作。

确定Cisco CLI分析器(仅限注册用户)支持**显示**命令。请使用Cisco CLI分析器查看show命令输出分析。

- **show crypto ipsec sa -**显示当前安全关联使用的设置(SAS)。`RouterA#`**`show crypto ipsec sa`**
  `interface: Serial2/0 Crypto map tag: mymap, local addr 172.16.1.1 protected vrf: (none) local ident (addr/mask/prot/port): (10.1.1.0/255.255.255.0/0/0) remote ident (addr/mask/prot/port): (172.16.2.0/255.255.255.0/0/0) current_peer 10.0.0.2 port 500 PERMIT, flags={origin_is_acl,}` **`#pkts encaps: 43, #pkts encrypt: 43, #pkts digest: 43 #pkts decaps: 43, #pkts decrypt: 43, #pkts verify: 43`** `#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.: 172.16.1.1, remote crypto endpt.: 10.0.0.2`** `path mtu 1500, ip mtu 1500, ip mtu idb Serial2/0 current outbound spi: 0x267BC43(40352835) inbound esp sas: spi: 0xD9F4BC76(3656694902) transform: esp-des esp-md5-hmac , in use settings ={Tunnel, } conn id: 2001, flow_id: SW:1, crypto map: mymap sa timing: remaining key lifetime (k/sec): (4558868/3550) IV size: 8 bytes replay detection support: Y Status: ACTIVE inbound ah sas: inbound pcp sas: outbound esp sas: spi: 0x267BC43(40352835) transform: esp-des esp-md5-hmac , in use settings ={Tunnel, } conn id: 2002, flow_id: SW:2, crypto map: mymap sa timing: remaining key lifetime (k/sec): (4558868/3548) IV size: 8 bytes replay detection support: Y Status: ACTIVE outbound ah sas: outbound pcp sas:`
- **show crypto isakmp sa** - 显示对等体上的所有当前 IKE SA。`RouterA#`**`show crypto isakmp sa`** `dst src state conn-id slot status 10.0.0.2 172.16.1.1 QM_IDLE 1 0 ACTIVE`

故障排除

本部分提供的信息可用于对配置进行故障排除。此外本部分还提供了 debug 输出示例。

故障排除命令

确定Cisco CLI分析器(仅限注册用户)支持**显示**命令。请使用Cisco CLI分析器查看show命令输出分析。

注意： 使用 **debug** 命令之前，请参阅有关 Debug 命令的重要信息。

- **debug crypto isakmp** - 显示第 1 阶段的 ISAKMP 协商。
- **debug crypto ipsec** - 显示第 2 阶段的 IPsec 协商。

调试输出示例

路由器

```
RouterA#debug crypto isakmp *Sep 29 22:50:35.511: ISAKMP: received ke message (1/1) *Sep 29
22:50:35.511: ISAKMP:(0:0:N/A:0): SA request profile is (NULL) *Sep 29 22:50:35.511: ISAKMP:
Created a peer struct for 10.0.0.2, peer port 500 *Sep 29 22:50:35.511: ISAKMP: New peer created
peer = 0x64C0EF54 peer_handle = 0 x8000000C *Sep 29 22:50:35.515: ISAKMP: Locking peer struct
0x64C0EF54, IKE refcount 1 for isakmp_initiator *Sep 29 22:50:35.515: ISAKMP: local port 500,
remote port 500 *Sep 29 22:50:35.515: ISAKMP: set new node 0 to QM_IDLE *Sep 29 22:50:35.515:
ISAKMP: Find a dup sa in the avl tree during calling isadb _insert sa = 64CDBF3C *Sep 29
22:50:35.515: ISAKMP:(0:0:N/A:0):Can not start Aggressive mode, trying M ain mode. *Sep 29
22:50:35.515: ISAKMP:(0:0:N/A:0):found peer pre-shared key matching 10.0 .0.2 *Sep 29
22:50:35.515: ISAKMP:(0:0:N/A:0): constructed NAT-T vendor-07 ID *Sep 29 22:50:35.519:
ISAKMP:(0:0:N/A:0): constructed NAT-T vendor-03 ID *Sep 29 22:50:35.519: ISAKMP:(0:0:N/A:0):
constructed NAT-T vendor-02 ID *Sep 29 22:50:35.519: ISAKMP:(0:0:N/A:0):Input =
IKE_MESG_FROM_IPSEC, IKE_SA_REQ _MM *Sep 29 22:50:35.519: ISAKMP:(0:0:N/A:0):Old State =
IKE_READY New State = IKE_ I_MM1 *Sep 29 22:50:35.519: ISAKMP:(0:0:N/A:0): beginning Main Mode
exchange *Sep 29 22:50:35.519: ISAKMP:(0:0:N/A:0): sending packet to 10.0.0.2 my_port 500
peer_port 500 (I) MM_NO_STATE *Sep 29 22:50:38.451: ISAKMP (0:0): received packet from 10.0.0.2
dport 500 spor t 500 Global (I) MM_NO_STATE *Sep 29 22:50:38.451: ISAKMP:(0:0:N/A:0):Input =
IKE_MESG_FROM_PEER, IKE_MM_EXCH *Sep 29 22:50:38.451: ISAKMP:(0:0:N/A:0):Old State = IKE_I_MM1
New State = IKE_ I_MM2 *Sep 29 22:50:38.455: ISAKMP:(0:0:N/A:0): processing SA payload. message
ID = 0 *Sep 29 22:50:38.455: ISAKMP:(0:0:N/A:0):found peer pre-shared key matching 10.0 .0.2
*Sep 29 22:50:38.455: ISAKMP:(0:0:N/A:0): local preshared key found *Sep 29 22:50:38.455: ISAKMP
: Scanning profiles for xauth ... *Sep 29 22:50:38.455: ISAKMP:(0:0:N/A:0):Checking ISAKMP
transform 1 against pri ority 10 policy *Sep 29 22:50:38.455: ISAKMP: encryption DES-CBC *Sep 29
22:50:38.455: ISAKMP: hash MD5 *Sep 29 22:50:38.455: ISAKMP: default group 1 *Sep 29
22:50:38.455: ISAKMP: auth pre-share *Sep 29 22:50:38.459: ISAKMP: life type in seconds *Sep 29
22:50:38.459: ISAKMP: life duration (VPI) of 0x0 0x1 0x51 0x80 *Sep 29 22:50:38.459:
ISAKMP:(0:0:N/A:0):atts are acceptable. Next payload is 0 *Sep 29 22:50:38.547:
ISAKMP:(0:4:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_M AIN_MODE *Sep 29 22:50:38.547:
ISAKMP:(0:4:SW:1):Old State = IKE_I_MM2 New State = IKE_I _MM2 *Sep 29 22:50:38.551:
ISAKMP:(0:4:SW:1): sending packet to 10.0.0.2 my_port 500 peer_port 500 (I) MM_SA_SETUP *Sep 29
22:50:38.551: ISAKMP:(0:4:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_C OMPLETE *Sep 29
22:50:38.551: ISAKMP:(0:4:SW:1):Old State = IKE_I_MM2 New State = IKE_I _MM3 *Sep 29
22:50:42.091: ISAKMP (0:134217732): received packet from 10.0.0.2 dport 500 sport 500 Global (I)
MM_SA_SETUP *Sep 29 22:50:42.095: ISAKMP:(0:4:SW:1):Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH *Sep
29 22:50:42.095: ISAKMP:(0:4:SW:1):Old State = IKE_I_MM3 New State = IKE_I _MM4 *Sep 29
22:50:42.095: ISAKMP:(0:4:SW:1): processing KE payload. message ID = 0 *Sep 29 22:50:42.203:
ISAKMP:(0:4:SW:1): processing NONCE payload. message ID = 0 *Sep 29 22:50:42.203:
ISAKMP:(0:4:SW:1):found peer pre-shared key matching 10.0. 0.2 *Sep 29 22:50:42.207:
ISAKMP:(0:4:SW:1):SKEYID state generated *Sep 29 22:50:42.207: ISAKMP:(0:4:SW:1): processing
vendor id payload *Sep 29 22:50:42.207: ISAKMP:(0:4:SW:1): speaking to another IOS box! *Sep 29
22:50:42.207: ISAKMP:(0:4:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_M AIN_MODE *Sep 29
22:50:42.207: ISAKMP:(0:4:SW:1):Old State = IKE_I_MM4 New State = IKE_I _MM4 *Sep 29
22:50:42.211: ISAKMP:(0:4:SW:1):Send initial contact *Sep 29 22:50:42.215: ISAKMP:(0:4:SW:1):SA
is doing pre-shared key authenticatio n using id type ID_IPV4_ADDR *Sep 29 22:50:42.215: ISAKMP
(0:134217732): ID payload next-payload : 8 type : 1 address : 172.16.1.1 protocol : 17 port :
500 length : 12 *Sep 29 22:50:42.215: ISAKMP:(0:4:SW:1):Total payload length: 12 *Sep 29
22:50:42.215: ISAKMP:(0:4:SW:1): sending packet to 10.0.0.2 my_port 500 peer_port 500 (I)
MM_KEY_EXCH *Sep 29 22:50:42.219: ISAKMP:(0:4:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_C
OMPLETE *Sep 29 22:50:42.219: ISAKMP:(0:4:SW:1):Old State = IKE_I_MM4 New State = IKE_I _MM5
*Sep 29 22:50:42.783: ISAKMP (0:134217732): received packet from 10.0.0.2 dport 500 sport 500
Global (I) MM_KEY_EXCH *Sep 29 22:50:42.783: ISAKMP:(0:4:SW:1): processing ID payload. message
ID = 0 *Sep 29 22:50:42.783: ISAKMP (0:134217732): ID payload next-payload : 8 type : 1 address
: 10.0.0.2 protocol : 17 port : 500 length : 12 *Sep 29 22:50:42.783: ISAKMP:(0:4:SW:1):: peer
matches *none* of the profiles *Sep 29 22:50:42.787: ISAKMP:(0:4:SW:1): processing HASH payload.
```

message ID = 0 *Sep 29 22:50:42.787: ISAKMP:(0:4:SW:1):SA authentication status: authenticated *Sep 29 22:50:42.787: ISAKMP:(0:4:SW:1):SA has been authenticated with 10.0.0.2 *Sep 29 22:50:42.787: ISAKMP: Trying to insert a peer 172.16.1.1/10.0.0.2/500/, and inserted successfully 64C0EF54. *Sep 29 22:50:42.787: ISAKMP:(0:4:SW:1):Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH *Sep 29 22:50:42.787: ISAKMP:(0:4:SW:1):Old State = IKE_I_MM5 New State = IKE_I _MM6 *Sep 29 22:50:42.791: ISAKMP:(0:4:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_M AIN_MODE *Sep 29 22:50:42.791: ISAKMP:(0:4:SW:1):Old State = IKE_I_MM6 New State = IKE_I _MM6 *Sep 29 22:50:42.795: ISAKMP:(0:4:SW:1):Input = IKE_MESG_INTERNAL, IKE_PROCESS_C OMPLETE *Sep 29 22:50:42.795: ISAKMP:(0:4:SW:1):Old State = IKE_I_MM6 New State = IKE_P 1_COMPLETE *Sep 29 22:50:42.799: ISAKMP:(0:4:SW:1):beginning Quick Mode exchange, M-ID of - 966196463 *Sep 29 22:50:42.803: ISAKMP:(0:4:SW:1): sending packet to 10.0.0.2 my_port 500 peer_port 500 (I) QM_IDLE *Sep 29 22:50:42.803: ISAKMP:(0:4:SW:1):Node -966196463, Input = IKE_MESG_INTERN AL, IKE_INIT_QM *Sep 29 22:50:42.803: ISAKMP:(0:4:SW:1):Old State = IKE_QM_READY New State = IK E_QM_I_QM1 *!--- IKE Phase 1 is completed successfully.* ***Sep 29 22:50:42.803: ISAKMP:(0:4:SW:1):Input = IKE_MESG_INTERNAL, IKE_PHASE1_CO MPLETE** *Sep 29 22:50:42.803: ISAKMP:(0:4:SW:1):Old State = IKE_P1_COMPLETE New State = IKE_P1_COMPLETE *Sep 29 22:50:43.907: ISAKMP (0:134217732): received packet from 10.0.0.2 dport 500 sport 500 Global (I) QM_IDLE *Sep 29 22:50:43.911: ISAKMP:(0:4:SW:1): processing HASH payload. message ID = - 966196463 *Sep 29 22:50:43.911: ISAKMP:(0:4:SW:1): processing SA payload. message ID = -96 6196463 *Sep 29 22:50:43.911: ISAKMP:(0:4:SW:1):Checking IPSec proposal 1 *Sep 29 22:50:43.911: ISAKMP: transform 1, ESP_DES *Sep 29 22:50:43.911: ISAKMP: attributes in transform: *Sep 29 22:50:43.915: ISAKMP: encaps is 1 (Tunnel) *Sep 29 22:50:43.915: ISAKMP: SA life type in seconds *Sep 29 22:50:43.915: ISAKMP: SA life duration (basic) of 3600 *Sep 29 22:50:43.915: ISAKMP: SA life type in kilobytes *Sep 29 22:50:43.915: ISAKMP: SA life duration (VPI) of 0x0 0x46 0x50 0x0 *Sep 29 22:50:43.915: ISAKMP: authenticator is HMAC-MD5 *Sep 29 22:50:43.915: ISAKMP:(0:4:SW:1):atts are acceptable. *Sep 29 22:50:43.915: ISAKMP:(0:4:SW:1): processing NONCE payload. message ID = -966196463 *Sep 29 22:50:43.919: ISAKMP:(0:4:SW:1): processing ID payload. message ID = -96 6196463 *Sep 29 22:50:43.919: ISAKMP:(0:4:SW:1): processing ID payload. message ID = -96 6196463 *Sep 29 22:50:43.923: ISAKMP: Locking peer struct 0x64C0EF54, IPSEC refcount 1 f or for stuff_ke *Sep 29 22:50:43.923: ISAKMP:(0:4:SW:1): Creating IPSec SAs *Sep 29 22:50:43.923: inbound SA from 10.0.0.2 to 172.16.1.1 (f/i) 0/ 0 (proxy 172.16.2.0 to 10.1.1.0) *Sep 29 22:50:43.923: has spi 0x84E11317 and conn_id 0 and flags 2 *Sep 29 22:50:43.923: lifetime of 3600 seconds *Sep 29 22:50:43.923: lifetime of 4608000 kilobytes *Sep 29 22:50:43.923: has client flags 0x0 *Sep 29 22:50:43.923: outbound SA from 172.16.1.1 to 10.0.0.2 (f/i) 0/0 (proxy 10.1.1.0 to 172.16.2.0) *Sep 29 22:50:43.923: has spi -65483228 and conn_id 0 and flags A *Sep 29 22:50:43.923: lifetime of 3600 seconds *Sep 29 22:50:43.923: lifetime of 4608000 kilobytes *Sep 29 22:50:43.923: has client flags 0x0 *Sep 29 22:50:43.927: ISAKMP:(0:4:SW:1): sending packet to 10.0.0.2 my_port 500 peer_port 500 (I) QM_IDLE *Sep 29 22:50:43.927: ISAKMP:(0:4:SW:1):deleting node -966196463 error FALSE rea son "No Error" *Sep 29 22:50:43.927: ISAKMP:(0:4:SW:1):Node -966196463, Input = IKE_MESG_FROM_P EER, IKE_QM_EXCH *!--- IKE Phase 2 is completed successfully.* ***Sep 29 22:50:43.927: ISAKMP:(0:4:SW:1):Old State = IKE_QM_I_QM1 New State = IK E_QM_PHASE2_COMPLETE** *Sep 29 22:50:43.931: ISAKMP: Locking peer struct 0x64C0EF54, IPSEC refcount 2 f or from create_transforms *Sep 29 22:50:43.931: ISAKMP: Unlocking IPSEC struct 0x64C0EF54 from create_tran sforms, count 1 RouterA#**debug crypto ipsec** *Sep 29 22:46:06.699: IPSEC(sa_request): , (key eng. msg.) OUTBOUND local= 172.16.1.1, remote= 10.0.0.2, local_proxy= 10.1.1.0/255.255.255.0/0/0 (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= 0xD9F4BC76(3656694902), conn_id= 0, keysize= 0, flags= 0x400A *Sep 29 22:46:12.631: IPSEC(validate_proposal_request): proposal part #1, (key eng. msg.) INBOUND local= 172.16.1.1, remote= 10.0.0.2, local_proxy= 10.1.1.0/255.255.255.0/0/0 (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 *Sep 29 22:46:12.631: Crypto mapdb : proxy_match src addr : 10.1.1.0 dst addr : 172.16.2.0 protocol : 0 src port : 0 dst port : 0 *Sep 29 22:46:12.639: IPSEC(key_engine): got a queue event with 2 kei messages *Sep 29 22:46:12.639: IPSEC(initialize_sas): , (key eng. msg.) INBOUND local= 172.16.1.1, remote= 10.0.0.2, local_proxy= 10.1.1.0/255.255.255.0/0/0 (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= 0xD9F4BC76(3656694902), conn_id= 0, keysize= 0, flags= 0x2 *Sep 29 22:46:12.639: IPSEC(initialize_sas): , (key eng. msg.) OUTBOUND local= 172.16.1.1, remote= 10.0.0.2, local_proxy= 10.1.1.0/255.255.255.0/0/0 (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= 0x267BC43(40352835), conn_id= 0, keysize= 0, flags= 0xA *Sep 29 22:46:12.639: Crypto mapdb : proxy_match src addr : 10.1.1.0 dst addr : 172.16.2.0 protocol : 0 src port : 0 dst port : 0 *Sep 29 22:46:12.643: IPSEC(crypto_ipsec_sa_find_ident_head):

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reconnecting with the same proxies and 10.0.0.2 *Sep 29 22:46:12.643: IPSec: Flow_switching
Allocated flow for sibling 80000006 *Sep 29 22:46:12.643: IPSEC(policy_db_add_ident): src
10.1.1.0, dest 172.16.2.0 dest_port 0 *Sep 29 22:46:12.643: IPSEC(create_sa): sa created, (sa)
sa_dest= 172.16.1.1, sa_proto= 50, sa_spi= 0xD9F4BC76(3656694902), sa_trans= esp-des esp-md5-
hmac , sa_conn_id= 2001 *Sep 29 22:46:12.643: IPSEC(create_sa): sa created, (sa) sa_dest=
10.0.0.2, sa_proto= 50, sa_spi= 0x267BC43(40352835), sa_trans= esp-des esp-md5-hmac ,
sa_conn_id= 2002
```

相关信息

- IPsec 协商/IKE 协议
- 技术支持和文档 - Cisco Systems