

# Túnel de LAN a LAN entre ASA 5505 y ASA/PIX el ejemplo de configuración

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## [Introducción](#)

Este documento proporciona un ejemplo de configuración para el túnel IPsec de LAN a LAN (de sitio a sitio) entre los dispositivos Cisco Security Appliances (ASA/PIX) y el dispositivo Adaptive Security Appliance (ASA) 5505.

## [prerrequisitos](#)

### [Requisitos](#)

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.

- Cisco 5500 Series ASA que ejecuta la versión de software 7.x y posterior
- Cisco 5505 ASA que ejecuta la versión de software 7.x y posterior

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). Si la red está funcionando, asegúrese de haber comprendido el impacto que puede tener cualquier comando.

## Productos Relacionados

Esta configuración también se puede utilizar con las siguientes versiones de hardware y software:

- Cisco 500 Serie PIX Security Appliance que ejecuta la versión de software 7.x y posterior
- Cisco 5505 ASA que ejecuta la versión de software 7.x y posterior

## Convenciones

Consulte [Convenciones de Consejos Técnicos de Cisco](#) para obtener más información sobre las convenciones sobre documentos.

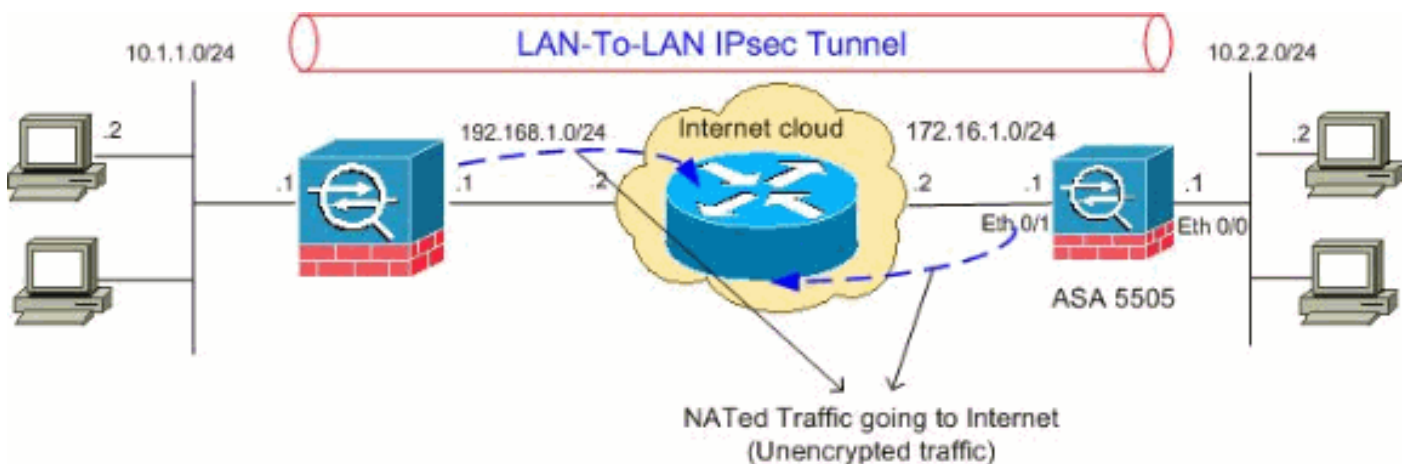
## Configurar

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

**Nota:** Utilice la herramienta [Command Lookup Tool](#) ([clientes registrados solamente](#)) para obtener más información sobre los comandos utilizados en esta sección.

## Diagrama de la red

En este documento, se utiliza esta configuración de red:



## Configuraciones

En este documento, se utilizan estas configuraciones:

- [Configuración de Cisco 5505 ASA](#)
- [Configuración de Cisco 5510 ASA](#)

### Configuración de Cisco 5505 ASA

```
ASA5505#show running-config
: Saved
:
ASA Version 8.0(2)
```

```
!  
hostname ASA5505  
enable password 8Ry2YjIyt7RRXU24 encrypted  
names  
!  
interface Vlan1  
  no nameif  
  no security-level  
  no ip address  
!  
interface Vlan2  
  nameif outside  
  security-level 0  
  ip address 172.16.1.1 255.255.255.0  
!  
interface Vlan3  
  nameif inside  
  security-level 100  
  ip address 10.2.2.1 255.255.255.0  
!  
interface Ethernet0/0  
  switchport access vlan 3  
!  
interface Ethernet0/1  
  switchport access vlan 2  
!  
interface Ethernet0/2  
  shutdown  
!  
interface Ethernet0/3  
  shutdown  
!  
interface Ethernet0/4  
  shutdown  
!  
interface Ethernet0/5  
  shutdown  
!  
interface Ethernet0/6  
  shutdown  
!  
interface Ethernet0/7  
  shutdown  
!  
passwd 2KFQnbNIdI.2KYOU encrypted  
boot system disk0:/asa802-k8.bin  
ftp mode passive  
access-list 100 extended permit ip 10.2.2.0  
255.255.255.0 10.1.1.0 255.255.255.0  
  
!--- Access-list for interesting traffic (Site to Site)  
to be !--- encrypted between ASA 5505 and ASA/PIX  
networks. access-list nonat extended permit ip 10.2.2.0  
255.255.255.0 10.1.1.0 255.255.255.0  
  
!--- Access-list for traffic to bypass the network  
address !--- translation (NAT) process. pager lines 24  
mtu inside 1500 mtu outside 1500 no failover icmp  
unreachable rate-limit 1 burst-size 1 asdm image  
disk0:/asdm-602.bin no asdm history enable arp timeout  
14400 nat-control global (outside) 1 interface  
nat (inside) 0 access-list nonat  
nat (inside) 1 0.0.0.0 0.0.0.0
```

```
!--- Specify the NAT configuration. !--- NAT 0 prevents NAT for the ACL defined in this configuration. !--- The nat 1 command specifies NAT for all other traffic.

route outside 10.1.1.0 255.255.255.0 172.16.1.2 1
route outside 192.168.1.0 255.255.255.0 172.16.1.2 1
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00
icmp 0:00:02
timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp
0:05:00 mgcp-pat 0:05:00
timeout sip 0:30:00 sip_media 0:02:00 sip-invite 0:03:00
sip-disconnect 0:02:0
timeout uauth 0:05:00 absolute
dynamic-access-policy-record DfltAccessPolicy
no snmp-server location
no snmp-server contact
snmp-server enable traps snmp authentication linkup
linkdown coldstart

!--- PHASE 2 CONFIGURATION !--- The encryption types for Phase 2 are defined here. crypto ipsec transform-set myset esp-3des esp-sha-hmac

!--- Define the transform set for Phase 2. crypto map outside_map 20 match address 100

!--- Define which traffic can be sent to the IPsec peer. crypto map outside_map 20 set peer 192.168.1.1

!--- Sets the IPsec peer. crypto map outside_map 20 set transform-set myset

!--- Sets the IPsec transform set "myset" !--- to be used with the crypto map entry "outside_map" crypto map outside_map interface outside

!--- Crypto map applied to the outside interface of the ASA crypto isakmp enable outside
crypto isakmp policy 10
 authentication pre-share
 encryption 3des
 hash sha
 group 2
 lifetime 86400

!--- PHASE 1 CONFIGURATION ---! !--- This configuration uses isakmp policy 10. !--- These configuration commands !--- define the Phase 1 policies that are used. telnet
timeout 5 ssh timeout 5 console timeout 0 threat-
detection basic-threat threat-detection statistics
access-list ! class-map inspection_default match
default-inspection-traffic ! ! policy-map type inspect
dns preset_dns_map parameters message-length maximum 512
policy-map global_policy class inspection_default
inspect dns preset_dns_map inspect ftp inspect h323 h225
inspect h323 ras inspect netbios inspect rsh inspect
rtsp inspect skinny inspect esmtp inspect sqlnet inspect
sunrpc inspect tftp inspect sip inspect xdmcp ! service-
policy global_policy global tunnel-group 192.168.1.1
type ipsec-l2l

!--- In order to create and manage the database of
```

*connection-specific records !--- for ipsec-l2l-IPsec (LAN-to-LAN) tunnels, use the tunnel-group !--- command in global configuration mode. !--- For L2L connections the name of the tunnel group MUST be the IP !--- address of the IPsec peer.*

```
tunnel-group 192.168.1.1 ipsec-attributes  
pre-shared-key *
```

*!--- Enter the pre-shared-key in order to configure the authentication method.* prompt hostname context  
Cryptochecksum:68eba159fd8e4c893f24185ffb40bb6f : end  
ASA5505#

## Configuración de Cisco 5510 ASA

```
ASA5510#show running-config  
: Saved  
:  
ASA Version 8.0(2)  
!  
hostname ASA5510  
enable password 8Ry2YjIyt7RRXU24 encrypted  
names  
!  
interface Ethernet0/0  
  nameif inside  
  security-level 100  
  ip address 10.1.1.1 255.255.255.0  
!  
interface Ethernet0/1  
  nameif outside  
  security-level 0  
  ip address 192.168.1.1 255.255.255.0  
!  
interface Ethernet0/2  
  shutdown  
  no nameif  
  no security-level  
  no ip address  
!  
interface Ethernet0/3  
  shutdown  
  no nameif  
  no security-level  
  no ip address  
!  
interface Management0/0  
  shutdown  
  no nameif  
  no security-level  
  no ip address  
!  
passwd 2KFQnbNIdI.2KYOU encrypted  
ftp mode passive  
access-list 100 extended permit ip 10.1.1.0  
255.255.255.0 10.2.2.0 255.255.255.0  
  
!--- Access-list for interesting traffic (Site to Site)  
to be !--- encrypted between ASA 5505 and ASA/PIX  
networks. access-list nonat extended permit ip 10.1.1.0
```

```
255.255.255.0 10.2.2.0 255.255.255.0

!--- Access-list for traffic to bypass the network
address !--- translation (NAT) process. pager lines 24
mtu inside 1500 mtu outside 1500 no failover icmp
unreachable rate-limit 1 burst-size 1 asdm image
disk0:/asdm-522.bin no asdm history enable arp timeout
14400 nat-control global (outside) 1 interface
nat (inside) 0 access-list nonat
nat (inside) 1 0.0.0.0 0.0.0.0

!--- Specify the NAT configuration. !--- NAT 0 prevents
NAT for the ACL defined in this configuration. !--- The
nat 1 command specifies NAT for all other traffic.

route outside 10.2.2.0 255.255.255.0 192.168.1.2 1
route outside 172.16.1.0 255.255.255.0 192.168.1.2 1
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00
icmp 0:00:02
timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp
0:05:00 mgcp-pat 0:05:00
timeout sip 0:30:00 sip_media 0:02:00 sip-invite 0:03:00
sip-disconnect 0:02:00
timeout uauth 0:05:00 absolute
dynamic-access-policy-record DfltAccessPolicy
no snmp-server location
no snmp-server contact
snmp-server enable traps snmp authentication linkup
linkdown coldstart

!--- PHASE 2 CONFIGURATION !--- The encryption types for
Phase 2 are defined here. crypto ipsec transform-set
myset esp-3des esp-sha-hmac

!--- Define the transform set for Phase 2. crypto map
outside_map 20 match address 100

!--- Define which traffic can be sent to the IPsec peer.
crypto map outside_map 20 set peer 172.16.1.1

!--- Sets the IPsec peer. crypto map outside_map 20 set
transform-set myset

!--- Sets the IPsec transform set "myset" !--- to be
used with the crypto map entry "outside_map" crypto map
outside_map interface outside

!--- Crypto map applied to the outside interface of the
ASA crypto isakmp enable outside
crypto isakmp policy 10
authentication pre-share
encryption 3des
hash sha
group 2
lifetime 86400

!--- PHASE 1 CONFIGURATION ---! !--- This configuration
uses isakmp policy 10. !--- These configuration commands
!--- define the Phase 1 policies that are used. crypto
isakmp policy 65535 authentication pre-share encryption
3des hash sha group 2 lifetime 86400 telnet timeout 5
ssh timeout 5 console timeout 0 threat-detection basic-
```

```

threat threat-detection statistics access-list ! class-
map inspection_default match default-inspection-traffic
! ! policy-map type inspect dns preset_dns_map
parameters message-length maximum 512 policy-map
global_policy class inspection_default inspect dns
preset_dns_map inspect ftp inspect h323 h225 inspect
h323 ras inspect netbios inspect rsh inspect rtsp
inspect skinny inspect esmtp inspect sqlnet inspect
sunrpc inspect tftp inspect sip inspect xdmcp ! service-
policy global_policy global tunnel-group 172.16.1.1 type
ipsec-l2l

!--- In order to create and manage the database of
connection-specific records !--- for ipsec-l2l-IPsec
(LAN-to-LAN) tunnels, use the tunnel-group !--- command
in global configuration mode. !--- For L2L connections
the name of the tunnel group MUST be the IP !--- address
of the IPsec peer.

tunnel-group 172.16.1.1 ipsec-attributes
pre-shared-key *
!--- Enter the pre-shared-key in order to configure the
authentication method. prompt hostname context
Cryptochecksum:d41d8cd98f00b204e9800998ecf8427e : end
ASA5510#

```

## Verificación

Use esta sección para confirmar que su configuración funciona correctamente.

[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.

- **show crypto isakmp sa** : muestra todas las asociaciones de seguridad actuales IKE (SA) en un par.
- **show crypto ipsec sa** : muestra todas las SA de IPsec actuales.

Esta sección muestra ejemplos de configuraciones de verificación para:

- [Cisco 5505 ASA](#)
- [Cisco 5510 ASA](#)

### Configuración de Cisco 5505 ASA

```

ASA5505#show crypto isakmp sa

Active SA: 1
Rekey SA: 0 (A tunnel will report 1 Active and 1
Rekey SA during rekey)
Total IKE SA: 1

1 IKE Peer: 192.168.1.1
Type : L2L Role : initiator
Rekey : no State : MM_ACTIVE

ASA5505#show crypto ipsec sa

```

```

interface: outside
  Crypto map tag: outside_map, seq num: 20, local
  addr: 172.16.1.1

  access-list 100 permit ip 10.2.2.0 255.255.255.0
  10.1.1.0 255.255.255.0
  local ident (addr/mask/prot/port):
  (10.2.2.0/255.255.255.0/0/0)
  remote ident (addr/mask/prot/port):
  (10.1.1.0/255.255.255.0/0/0)
  current_peer: 192.168.1.1

  #pkts encaps: 4, #pkts encrypt: 4, #pkts digest: 4
  #pkts decaps: 4, #pkts decrypt: 4, #pkts verify: 4
  #pkts compressed: 0, #pkts decompressed: 0
  #pkts not compressed: 4, #pkts comp failed: 0,
  #pkts decomp failed: 0
  #pre-frag successes: 0, #pre-frag failures: 0,
  #fragments created: 0
  #PMTUs sent: 0, #PMTUs rcvd: 0, #decapsulated frgs
  needing reassembly: 0
  #send errors: 0, #recv errors: 0

  local crypto endpt.: 172.16.1.1, remote crypto
  endpt.: 192.168.1.1

  path mtu 1500, ipsec overhead 58, media mtu 1500
  current outbound spi: A0411DE6

inbound esp sas:
  spi: 0x8312C39C (2199045020)
  transform: esp-3des esp-sha-hmac none
  in use settings ={L2L, Tunnel, }
  slot: 0, conn_id: 8192, crypto-map: outside_map
  sa timing: remaining key lifetime (kB/sec):
  (3824999/27807)
  IV size: 8 bytes
  replay detection support: Y
outbound esp sas:
  spi: 0xA0411DE6 (2688622054)
  transform: esp-3des esp-sha-hmac none
  in use settings ={L2L, Tunnel, }
  slot: 0, conn_id: 8192, crypto-map: outside_map
  sa timing: remaining key lifetime (kB/sec):
  (3824999/27807)
  IV size: 8 bytes
  replay detection support: Y

```

## Configuración de Cisco 5510 ASA

```

ASA5510#show crypto isakmp sa

Active SA: 1
Rekey SA: 0 (A tunnel will report 1 Active and 1
Rekey SA during rekey)
Total IKE SA: 1

1  IKE Peer: 172.16.1.1
   Type    : L2L                Role    : responder
   Rekey   : no                State   : MM_ACTIVE

ASA5510#show crypto ipsec sa
interface: outside

```



```

Crypto map tag: outside_map, seq num: 20, local
addr: 192.168.1.1

    access-list 100 permit ip 10.1.1.0 255.255.255.0
10.2.2.0 255.255.255.0
    local ident (addr/mask/prot/port):
(10.1.1.0/255.255.255.0/0/0)
    remote ident (addr/mask/prot/port):
(10.2.2.0/255.255.255.0/0/0)
    current_peer: 172.16.1.1

    #pkts encaps: 4, #pkts encrypt: 4, #pkts digest: 4
    #pkts decaps: 4, #pkts decrypt: 4, #pkts verify: 4
    #pkts compressed: 0, #pkts decompressed: 0
    #pkts not compressed: 4, #pkts comp failed: 0,
#pkts decomp failed: 0
    #pre-frag successes: 0, #pre-frag failures: 0,
#fragments created: 0
    #PMTUs sent: 0, #PMTUs rcvd: 0, #decapsulated frgs
needing reassembly: 0
    #send errors: 0, #recv errors: 0

    local crypto endpt.: 192.168.1.1, remote crypto
endpt.: 172.16.1.1

    path mtu 1500, ipsec overhead 58, media mtu 1500
    current outbound spi: 8312C39C

inbound esp sas:
    spi: 0xA0411DE6 (2688622054)
        transform: esp-3des esp-sha-hmac none
        in use settings ={L2L, Tunnel, }
        slot: 0, conn_id: 8192, crypto-map: outside_map
        sa timing: remaining key lifetime (kB/sec):
(4274999/27844)
        IV size: 8 bytes
        replay detection support: Y
outbound esp sas:
    spi: 0x8312C39C (2199045020)
        transform: esp-3des esp-sha-hmac none
        in use settings ={L2L, Tunnel, }
        slot: 0, conn_id: 8192, crypto-map: outside_map
        sa timing: remaining key lifetime (kB/sec):
(4274999/27844)
        IV size: 8 bytes
        replay detection support: Y

```

## Troubleshooting

En esta sección encontrará información que puede utilizar para solucionar problemas de configuración.

Utilice estos comandos como se muestra a continuación:

- **clear crypto isakmp sa** : borra las SA de la fase 1. **Precaución:** El comando **clear crypto isakmp sa** es intrusivo, y borrará todos los túneles activos VPN. Comenzando por la versión 8.0(3) del software PIX/ASA, unaSA de IKE individual puede borrarse con el comando **clear crypto isakmp sa <dirección del par ip>** . Antes de la versión del software 8.0(3), puede usarse el comando [vpn-sessiondb logoff tunnel-group <nombre-del grupo-de túneles>](#) para

## borrar las SA de IKE e IPsec para un solo túnel.

```
ASA5505#vpn-sessiondb logoff tunnel-group 192.168.1.1
```

```
Do you want to logoff the VPN session(s)? [confirm] Y
```

```
INFO: Number of sessions from TunnelGroup "192.168.1.1" logged off : 1
```

```
ASA5505# Jan 19 13:58:43 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, P  
itcher: received key delete msg, spi 0xaa157573
```

```
Jan 19 13:58:43 [IKEv1]: Group = 192.168.1.1, IP = 192.168.1.1, Connection termi  
nated for peer 192.168.1.1. Reason: Administrator Reset Remote Proxy 10.1.1.0,  
Local Proxy 10.2.2.0
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, IKE SA MM:  
116f1ccf rcv'd Terminate: state MM_ACTIVE flags 0x0021c042, refcnt 1, tuncnt 1
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, sending de  
lete/delete with reason message
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, constructi  
ng blank hash payload
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, constructi  
ng IPsec delete payload
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, constructi  
ng qm hash payload
```

```
Jan 19 13:58:43 [IKEv1]: IP = 192.168.1.1, IKE_DECODE SENDING Message (msgid=c17  
46fb4) with payloads : HDR + HASH (8) + DELETE (12) + NONE (0) total length : 68
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, Active uni  
t receives a delete event for remote peer 192.168.1.1.
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, IKE Deleti  
ng SA: Remote Proxy 10.1.1.0, Local Proxy 10.2.2.0
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, IKE SA MM:  
116f1ccf terminating: flags 0x0121c002, refcnt 0, tuncnt 0
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, sending de  
lete/delete with reason message
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, constructi  
ng blank hash payload
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, constructi  
ng IKE delete payload
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, constructi  
ng qm hash payload
```

```
Jan 19 13:58:43 [IKEv1]: IP = 192.168.1.1, IKE_DECODE SENDING Message (msgid=a7e  
78fac) with payloads : HDR + HASH (8) + DELETE (12) + NONE (0) total length : 80
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Pitcher: received key delete msg, spi 0xaa157573
```

```
Jan 19 13:58:43 [IKEv1 DEBUG]: Pitcher: received key delete msg, spi 0x746fe476
```

```
Jan 19 13:58:43 [IKEv1]: IP = 192.168.1.1, Received encrypted packet with no mat  
ching SA, dropping
```

## • clear crypto ipsec sa peer <dirección del par IP> : borra las SA necesarias de la fase 2.

```
ASA5505(config)#clear ipsec sa peer 192.168.1.1
```

```
ASA5505(config)# IPSEC: Deleted inbound decrypt rule, SPI 0x8030618F
```

```
Rule ID: 0xD4E56A18
```

```
IPSEC: Deleted inbound permit rule, SPI 0x8030618F
```

```
Rule ID: 0xD4DF4110
```

```
IPSEC: Deleted inbound tunnel flow rule, SPI 0x8030618F
```

```
Rule ID: 0xD4DAE1F0
```

```
IPSEC: Deleted inbound VPN context, SPI 0x8030618F
```

```
VPN handle: 0x00058FBC
```

```
IPSEC: Deleted outbound encrypt rule, SPI 0x0D6CDEEB
```

```
Rule ID: 0xD4DA4348
```

```
IPSEC: Deleted outbound permit rule, SPI 0x0D6CDEEB
```

```
Rule ID: 0xD4DAE7A8
```

```
IPSEC: Deleted outbound VPN context, SPI 0x0D6CDEEB
```

```
VPN handle: 0x0005633C
```

## • debug crypto isakmp sa <nivel de depuración> : Hace debug de las negociaciones ISAKMP SA.

ASA5505(config)#**debug crypto isakmp 7**

ASA5505(config)# Jan 19 13:39:49 [IKEv1]: IP = 192.168.1.1, IKE\_DECODE RECEIVED Message (msgid=0) with payloads : HDR + SA (1) + VENDOR (13) + VENDOR (13) + VENDOR (13) + NONE (0) total length : 188

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing SA payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, Oakley proposal is acceptable

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing VID payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, Received NAT-Traversal ver 02 V ID

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing VID payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, Received NAT-Traversal ver 03 V ID

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing VID payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, Received Fragmentation VID

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, IKE Peer included IKE fragmentation capability flags: Main Mode: True Aggressive Mode: True

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing IKE SA payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, IKE SA Proposal # 1, Transform # 1 acceptable Matches global IKE entry # 2

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, constructing ISAKMP SA payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, constructing NAT-Traversal VID ver 02 payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, constructing Fragmentation VID + extended capabilities payload

Jan 19 13:39:49 [IKEv1]: IP = 192.168.1.1, IKE\_DECODE SENDING Message (msgid=0) with payloads : HDR + SA (1) + VENDOR (13) + VENDOR (13) + NONE (0) total length : 128

Jan 19 13:39:49 [IKEv1]: IP = 192.168.1.1, IKE\_DECODE RECEIVED Message (msgid=0) with payloads : HDR + KE (4) + NONCE (10) + VENDOR (13) + VENDOR (13) + VENDOR (13) + VENDOR (13) + NAT-D (130) + NAT-D (130) + NONE (0) total length : 304

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing ke payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing ISA\_KE payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing nonce payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing VID payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, Received Cisco Unity client VID

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing VID payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, Received xauth V6 VID

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing VID payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, Processing VPN3000/ASA spoofing IOS Vendor ID payload (version: 1.0.0, capabilities: 20000001)

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing VID payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, Received Altiga/Cisco VPN3000/Cisco ASA GW VID

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing NAT-Discovery payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, computing NAT Discovery hash

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, processing NAT-Discovery payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, computing NAT Discovery hash

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, constructing ke payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, constructing nonce payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, constructing Cisco Unity VID payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, constructing xauth V6 VID payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, Send IOS VID

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, Constructing ASA spoofing IOS Vendor ID payload (version: 1.0.0, capabilities: 20000001)

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, constructing VID payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, Send Altiga/Cisco VPN3000/Cisco ASA GW VID

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, constructing NAT-Discovery payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, computing NAT Discovery hash

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, constructing NAT-Discovery payload

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, computing NAT Discovery hash

Jan 19 13:39:49 [IKEv1]: IP = 192.168.1.1, Connection landed on tunnel\_group 192.168.1.1

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, Generating keys for Responder...

Jan 19 13:39:49 [IKEv1]: IP = 192.168.1.1, IKE\_DECODE SENDING Message (msgid=0) with payloads : HDR + KE (4) + NONCE (10) + VENDOR (13) + VENDOR (13) + VENDOR (13) + VENDOR (13) + NAT-D (130) + NAT-D (130) + NONE (0) total length : 304

Jan 19 13:39:49 [IKEv1]: IP = 192.168.1.1, IKE\_DECODE RECEIVED Message (msgid=0) with payloads : HDR + ID (5) + HASH (8) + IOS KEEPALIVE (128) + VENDOR (13) + NONE (0) total length : 96

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, processing ID payload

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, processing hash payload

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, Computing hash for ISAKMP

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, Processing IOS keep alive payload: proposal=32767/32767 sec.

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, processing VID payload

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, Received DPD VID

Jan 19 13:39:49 [IKEv1]: Group = 192.168.1.1, IP = 192.168.1.1, Automatic NAT Detection Status: Remote end is NOT behind a NAT device This end is NOT behind a NAT device

Jan 19 13:39:49 [IKEv1]: IP = 192.168.1.1, Connection landed on tunnel\_group 192.168.1.1

Jan 19 13:39:49 [IKEv1]: Group = 192.168.1.1, IP = 192.168.1.1, Freeing previously allocated memory for authorization-dn-attributes

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, constructing ID payload

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, constructing hash payload

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, Computing hash for ISAKMP

Jan 19 13:39:49 [IKEv1 DEBUG]: IP = 192.168.1.1, Constructing IOS keep alive payload: proposal=32767/32767 sec.

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, constructing dpd vid payload

Jan 19 13:39:49 [IKEv1]: IP = 192.168.1.1, IKE\_DECODE SENDING Message (msgid=0) with payloads : HDR + ID (5) + HASH (8) + IOS KEEPALIVE (128) + VENDOR (13) + NONE (0) total length : 96

Jan 19 13:39:49 [IKEv1]: Group = 192.168.1.1, IP = 192.168.1.1, PHASE 1 COMPLETE

Jan 19 13:39:49 [IKEv1]: IP = 192.168.1.1, Keep-alive type for this connection: DPD

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, Starting P1 rekey timer: 73440 seconds.

Jan 19 13:39:49 [IKEv1]: IP = 192.168.1.1, IKE\_DECODE RECEIVED Message (msgid=9421905f) with payloads : HDR + HASH (8) + SA (1) + NONCE (10) + ID (5) + ID (5) + NOTIFY (11) + NONE (0) total length : 196

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, processing hash payload

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, processing SA payload

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, processing nonce payload

Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, processing ID payload

Jan 19 13:39:49 [IKEv1]: Group = 192.168.1.1, IP = 192.168.1.1, Received remote IP Proxy Subnet data in ID Payload: Address 10.1.1.0, Mask 255.255.255.0, Prot

```

ocol 0, Port 0
Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, processing
  ID payload
Jan 19 13:39:49 [IKEv1]: Group = 192.168.1.1, IP = 192.168.1.1, Received local I
P Proxy Subnet data in ID Payload:  Address 10.2.2.0, Mask 255.255.255.0, Proto
col 0, Port 0
Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, processing
  notify payload
Jan 19 13:39:49 [IKEv1]: Group = 192.168.1.1, IP = 192.168.1.1, QM IsRekeyed old
  sa not found by addr
Jan 19 13:39:49 [IKEv1]: Group = 192.168.1.1, IP = 192.168.1.1, Static Crypto Ma
p check, checking map = outside_map, seq = 20...
Jan 19 13:39:49 [IKEv1]: Group = 192.168.1.1, IP = 192.168.1.1, Static Crypto Ma
p check, map outside_map, seq = 20 is a successful match
Jan 19 13:39:49 [IKEv1]: Group = 192.168.1.1, IP = 192.168.1.1, IKE Remote Peer
configured for crypto map: outside_map
Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, processing
  IPsec SA payload
Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, IPsec SA P
roposal # 1, Transform # 1 acceptable  Matches global IPsec SA entry # 20
Jan 19 13:39:49 [IKEv1]: Group = 192.168.1.1, IP = 192.168.1.1, IKE: requesting
SPI!
Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, IKE got SP
I from key engine: SPI = 0x826ff027
Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, oakley con
structing quick mode
Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, constructi
ng blank hash payload
Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, constructi
ng IPsec SA payload
Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, constructi
ng IPsec nonce payload
Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, constructi
ng proxy ID
Jan 19 13:39:49 [IKEv1 DEBUG]: Group = 192.168.1.1, IP = 192.168.1.1, Transmitti

```

• **debug crypto ipsec sa <nivel de depuración> : Hace debug de las negociaciones IPsec SA.**

```

ASA5505(config)#debug crypto ipsec 7
ASA5505(config)# IPSEC: New embryonic SA created @ 0xD4E56E18,
  SCB: 0xD4E56CF8,
  Direction: inbound
  SPI      : 0x8030618F
  Session ID: 0x00006000
  VPIF num  : 0x00000001
  Tunnel type: 121
  Protocol  : esp
  Lifetime  : 240 seconds
IPSEC: New embryonic SA created @ 0xD4E57AD8,
  SCB: 0xD4DAE608,
  Direction: outbound
  SPI      : 0x0D6CDEEB
  Session ID: 0x00006000
  VPIF num  : 0x00000001
  Tunnel type: 121
  Protocol  : esp
  Lifetime  : 240 seconds
IPSEC: Completed host OBSA update, SPI 0x0D6CDEEB
IPSEC: Creating outbound VPN context, SPI 0x0D6CDEEB
  Flags: 0x00000005
  SA    : 0xD4E57AD8
  SPI   : 0x0D6CDEEB
  MTU   : 1500 bytes
  VCID  : 0x00000000
  Peer  : 0x00000000

```

SCB : 0x015E69CB  
Channel: 0xD3D60A98  
IPSEC: Completed outbound VPN context, SPI 0x0D6CDEEB  
VPN handle: 0x0005633C  
IPSEC: New outbound encrypt rule, SPI 0x0D6CDEEB  
Src addr: 10.2.2.0  
Src mask: 255.255.255.0  
Dst addr: 10.1.1.0  
Dst mask: 255.255.255.0  
Src ports  
Upper: 0  
Lower: 0  
Op : ignore  
Dst ports  
Upper: 0  
Lower: 0  
Op : ignore  
Protocol: 0  
Use protocol: false  
SPI: 0x00000000  
Use SPI: false  
IPSEC: Completed outbound encrypt rule, SPI 0x0D6CDEEB  
Rule ID: 0xD4DA4348  
IPSEC: New outbound permit rule, SPI 0x0D6CDEEB  
Src addr: 172.16.1.1  
Src mask: 255.255.255.255  
Dst addr: 192.168.1.1  
Dst mask: 255.255.255.255  
Src ports  
Upper: 0  
Lower: 0  
Op : ignore  
Dst ports  
Upper: 0  
Lower: 0  
Op : ignore  
Protocol: 50  
Use protocol: true  
SPI: 0x0D6CDEEB  
Use SPI: true  
IPSEC: Completed outbound permit rule, SPI 0x0D6CDEEB  
Rule ID: 0xD4DAE7A8  
IPSEC: Completed host IBSA update, SPI 0x8030618F  
IPSEC: Creating inbound VPN context, SPI 0x8030618F  
Flags: 0x00000006  
SA : 0xD4E56E18  
SPI : 0x8030618F  
MTU : 0 bytes  
VCID : 0x00000000  
Peer : 0x0005633C  
SCB : 0x015DD135  
Channel: 0xD3D60A98  
IPSEC: Completed inbound VPN context, SPI 0x8030618F  
VPN handle: 0x00058FBC  
IPSEC: Updating outbound VPN context 0x0005633C, SPI 0x0D6CDEEB  
Flags: 0x00000005  
SA : 0xD4E57AD8  
SPI : 0x0D6CDEEB  
MTU : 1500 bytes  
VCID : 0x00000000  
Peer : 0x00058FBC  
SCB : 0x015E69CB  
Channel: 0xD3D60A98  
IPSEC: Completed outbound VPN context, SPI 0x0D6CDEEB

```
VPN handle: 0x0005633C
IPSEC: Completed outbound inner rule, SPI 0x0D6CDEEB
Rule ID: 0xD4DA4348
IPSEC: Completed outbound outer SPD rule, SPI 0x0D6CDEEB
Rule ID: 0xD4DAE7A8
IPSEC: New inbound tunnel flow rule, SPI 0x8030618F
Src addr: 10.1.1.0
Src mask: 255.255.255.0
Dst addr: 10.2.2.0
Dst mask: 255.255.255.0
Src ports
  Upper: 0
  Lower: 0
  Op   : ignore
Dst ports
  Upper: 0
  Lower: 0
  Op   : ignore
Protocol: 0
Use protocol: false
SPI: 0x00000000
Use SPI: false
IPSEC: Completed inbound tunnel flow rule, SPI 0x8030618F
Rule ID: 0xD4DAE1F0
IPSEC: New inbound decrypt rule, SPI 0x8030618F
Src addr: 192.168.1.1
Src mask: 255.255.255.255
Dst addr: 172.16.1.1
Dst mask: 255.255.255.255
Src ports
  Upper: 0
  Lower: 0
  Op   : ignore
Dst ports
  Upper: 0
  Lower: 0
  Op   : ignore
Protocol: 50
Use protocol: true
SPI: 0x8030618F
Use SPI: true
IPSEC: Completed inbound decrypt rule, SPI 0x8030618F
Rule ID: 0xD4E56A18
IPSEC: New inbound permit rule, SPI 0x8030618F
Src addr: 192.168.1.1
```

## [Información Relacionada](#)

- [Página de Soporte de Cisco ASA 5500 Series Adaptive Security Appliances](#)
- [Página de Soporte de Cisco PIX 500 Series Security Appliances](#)
- [Soluciones y Troubleshooting para los Problemas más Comunes con VPN IPsec de Acceso Remoto y L2L](#)
- [Página de Soporte de IPsec Negotiation/IKE Protocols](#)