Configuring IKEv2 VRF aware SVTI

Contents

Introduction

This document provides a configuration example to set up a Virtual Routing and Forwarding (VRF) aware Static Virtual Tunnel Interfaces (SVTI) between two Virtual Private Network (VPN) peers using Internet Key Exchange version 2 (IKEv2) protocol. This setup includes an IVRF of which the local subnet is part of and a Front Door VRF (FVRF) where tunnel establishment occurs.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics :

- Basic knowledge of IOS CLI configuration
- Fundamental knowledge of IKEv2 and IPSEC

Components Used

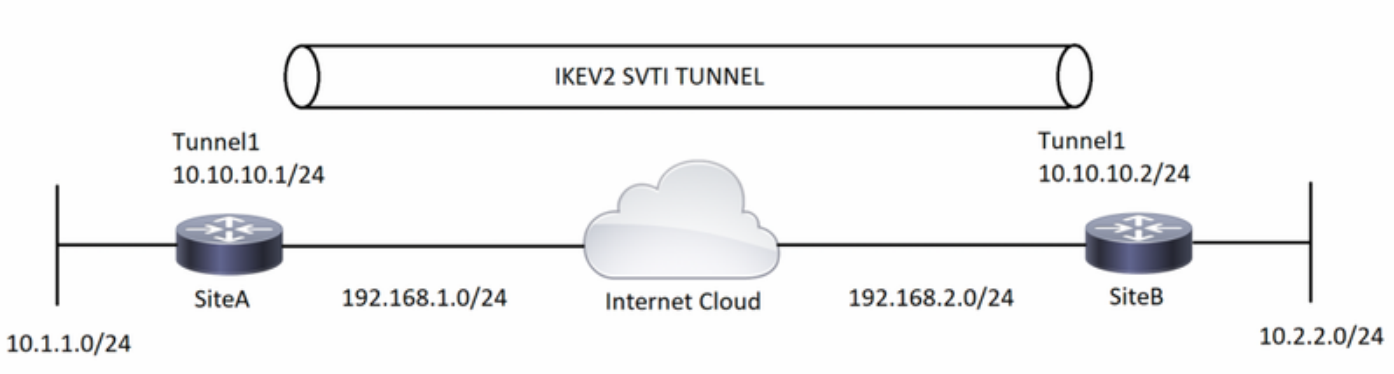
The information in this document is based on a Cisco IOS 2900 Series Router with Cisco IOS® Software Release 15.7.

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 in production, make sure that you understand the potential impact of any command.

Configure

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

Network Diagram



Background Information

VRF aware tunnels are used to connect customer networks separated by other untrusted core networks, or core networks with different infrastructures. With this setup, any source and destination of a tunnel can be configured to belong to any VRF table.

On a tunnel interface, “vrf forwarding” command is used to place the tunnel interface in that particular routing table. With the “tunnel vrf” command, the router is instructed to use the specified VRF’s routing table for the tunnel source and destination IP addresses.

In the example used for this document, the loopback interface VRF is like a LAN segment VRF. Packets entering through this interface are routed using this VRF. Packets exiting the tunnel are forwarded to this VRF.

The VRF configured on the tunnel using the “tunnel vrf” command is the transport VRF. It is the VRF that applies to the encapsulated payload and is used to look up the tunnel endpoints. This VRF is the same as the VRF associated with the physical interface over which the tunnel sends packets.

Configuration

Step 1. Define VRF's. In this example, two VRF's are defined named "local" and "internet" respectively for LAN and WAN interfaces.

SiteA :

```
! —— Defining vrf

vrf definition internet
 rd 2:2
 address-family ipv4
 exit-address-family

vrf definition local
 rd 1:1
 address-family ipv4
 exit-address-family
```

SiteB :

```
! —— Defining vrf
```

```
vrf definition internet
 rd 2:2
 address-family ipv4
 exit-address-family

vrf definition local
 rd 1:1
 address-family ipv4
 exit-address-family
```

Step 2. Configure the parameters required to bring up an IKEv2 tunnel, starting with the creation of the IKEv2 proposal and keyring. Then, the IKEv2 profile is configured where the crypto keyring is called and to conclude with the crypto configuration, configure IPSEC profile includes the IPSEC transform-set and IKEv2 profile.

SiteA :

```
! —— IKEv2 Proposal

crypto ikev2 proposal prop-1
 encryption aes-cbc-256
 integrity sha512
 group 5

! --- IKEv2 Policy

crypto ikev2 policy policy-1
match fvrf internet
match address local 192.168.1.1
proposal prop-1
! —— IKEv2 Keyring

crypto ikev2 keyring keyring-1
 peer ANY
  address 0.0.0.0 0.0.0.0
  pre-shared-key cisco123

! —— IKEv2 Profile

crypto ikev2 profile IKEv2-Profile-1
 match fvrf internet
 match identity remote address 0.0.0.0
 authentication remote pre-share
 authentication local pre-share
 keyring local keyring-1

! —— IPSEC Transform set

crypto ipsec transform-set transform-1 esp-aes 256 esp-sha-hmac
 mode transport

! —— IPSEC Profile

crypto ipsec profile IPSEC-Profile-1
 set transform-set transform-1
 set ikev2-profile IKEv2-Profile-1
```

SiteB :

```
! —— IKEv2 Proposal

crypto ikev2 proposal prop-1
 encryption aes-cbc-256
 integrity sha512
 group 5

! -- IKEv2 Policy

crypto ikev2 policy policy-1
match fvrf internet
match address local 192.168.2.1
proposal prop-1 ! —— IKEv2 Keyring

crypto ikev2 keyring keyring-1
 peer ANY
  address 0.0.0.0 0.0.0.0
  pre-shared-key cisco123

! —— IKEv2 Profile

crypto ikev2 profile IKEv2-Profile-1
 match fvrf internet
 match identity remote address 0.0.0.0
 authentication remote pre-share
 authentication local pre-share
 keyring local keyring-1

! —— IPSEC Transform set

crypto ipsec transform-set transform-1 esp-aes 256 esp-sha-hmac
 mode transport

! —— IPSEC Profile

crypto ipsec profile IPSEC-Profile-1
 set transform-set transform-1
 set ikev2-profile IKEv2-Profile-1
```

Step 3. Configure the necessary interfaces. In this example, the loopback interface is part of “local” VRF and is acting as interesting traffic. The physical interface, part of “internet” VRF, is the WAN interface connected to ISP. The tunnel interface is to trigger the GRE encapsulation encrypted with IPSEC.

```
SiteA :
! —— Interface Configuration

interface Loopback1
 vrf forwarding local
 ip address 10.1.1.1 255.255.255.0

interface Tunnel1
 vrf forwarding local
 ip address 10.10.10.1 255.255.255.0
 tunnel source 192.168.1.1
 tunnel destination 192.168.2.1
 tunnel key 777
 tunnel vrf internet
 tunnel protection ipsec profile IPSEC-Profile-1

interface GigabitEthernet0/0
```

```
 vrf forwarding internet
 ip address 192.168.1.1 255.255.255.0
```

SiteB :

```
! —— Interface Configuration

interface Loopback1
 vrf forwarding local
 ip address 10.2.2.2 255.255.255.0

interface Tunnel1
 vrf forwarding local
 ip address 10.10.10.2 255.255.255.0
 tunnel source 192.168.2.1
 tunnel destination 192.168.1.1
 tunnel key 777
 tunnel vrf internet
 tunnel protection ipsec profile IPSEC-Profile-1

interface GigabitEthernet0/0
 vrf forwarding internet
 ip address 192.168.2.1 255.255.255.0
```

Step 4: Configure the VRF specific routes. In this setup, a route in “internet” VRF is configured as a default route pointing to next hop of the physical interface (or ISP in real environments). The second route in “local” VRF is for the remote VPN subnet which is pointing to tunnel interface which eventually makes the traffic go through the tunnel interface and trigger the VPN.

SiteA :

```
! —— VRF specific routes

ip route vrf internet 0.0.0.0 0.0.0.0 192.168.1.2
ip route vrf local 10.2.2.0 255.255.255.0 Tunnel1
```

SiteB :

```
! —— VRF specific routes

ip route vrf internet 0.0.0.0 0.0.0.0 192.168.2.2
ip route vrf local 10.1.1.0 255.255.255.0 tunnel 1
```

Verify

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

The Cisco CLI Analyzer supports certain show commands. Use the Cisco CLI Analyzer to view an analysis of show command output.

SiteA :

```
SiteA#show crypto ikev2 sa
IPv4 Crypto IKEv2  SA

            Tunnel-id Local                 Remote                fvrf/ivrf            Status
1         192.168.1.1/500       192.168.2.1/500       internet/local       READY
      Encr: AES-CBC, keysize: 256, PRF: SHA512, Hash: SHA512, DH Grp:5, Auth sign: PSK, Auth
verify: PSK
```

```
      Life/Active Time: 86400/128 sec


SiteA#show crypto ipsec sa  detail

interface: Tunnel1
    Crypto map tag: Tunnel1-head-0, local addr 192.168.1.1

   protected vrf: local
   local  ident (addr/mask/prot/port): (192.168.1.1/255.255.255.255/47/0)
   remote ident (addr/mask/prot/port): (192.168.2.1/255.255.255.255/47/0)
   current_peer 192.168.2.1 port 500
     PERMIT, flags={origin_is_acl,}
    #pkts encaps: 25, #pkts encrypt: 25, #pkts digest: 25
    #pkts decaps: 25, #pkts decrypt: 25, #pkts verify: 25
    #pkts compressed: 0, #pkts decompressed: 0
    #pkts not compressed: 0, #pkts compr. failed: 0
    #pkts not decompressed: 0, #pkts decompress failed: 0
    #pkts no sa (send) 0, #pkts invalid sa (rcv) 0
    #pkts encaps failed (send) 0, #pkts decaps failed (rcv) 0
    #pkts invalid prot (recv) 0, #pkts verify failed: 0
    #pkts invalid identity (recv) 0, #pkts invalid len (rcv) 0
    #pkts replay rollover (send): 0, #pkts replay rollover (rcv) 0
    ##pkts replay failed (rcv): 0
    #pkts tagged (send): 0, #pkts untagged (rcv): 0
    #pkts not tagged (send): 0, #pkts not untagged (rcv): 0
    #pkts internal err (send): 0, #pkts internal err (recv) 0

     local crypto endpt.: 192.168.1.1, remote crypto endpt.: 192.168.2.1
     plaintext mtu 1458, path mtu 1500, ip mtu 1500, ip mtu idb GigabitEthernet0/0
     current outbound spi: 0xE0B1BF6B(3769745259)
     PFS (Y/N): N, DH group: none

     inbound esp sas:
      spi: 0xCA8E7D53(3398335827)
        transform: esp-256-aes esp-sha-hmac ,
        in use settings ={Transport, }
        conn id: 2010, flow_id: Onboard VPN:10, sibling_flags 80000000, crypto map: Tunnel1-
head-0
        sa timing: remaining key lifetime (k/sec): (4368363/3461)
        IV size: 16 bytes
        replay detection support: Y
        Status: ACTIVE(ACTIVE)

     inbound ah sas:

     inbound pcp sas:

     outbound esp sas:
      spi: 0xE0B1BF6B(3769745259)
        transform: esp-256-aes esp-sha-hmac ,
        in use settings ={Transport, }
        conn id: 2009, flow_id: Onboard VPN:9, sibling_flags 80000000, crypto map: Tunnel1-head-
0
        sa timing: remaining key lifetime (k/sec): (4368363/3461)
        IV size: 16 bytes
        replay detection support: Y
        Status: ACTIVE(ACTIVE)

     outbound ah sas:

     outbound pcp sas:

SiteA#show crypto session remote 192.168.2.1 detail
```

```
Crypto session current status

Code: C - IKE Configuration mode, D - Dead Peer Detection
K - Keepalives, N - NAT-traversal, T - cTCP encapsulation
X - IKE Extended Authentication, F - IKE Fragmentation
R - IKE Auto Reconnect, U - IKE Dynamic Route Update
S - SIP VPN

Interface: Tunnel1
Profile: IKEv2-Profile-1
Uptime: 00:02:35
Session status: UP-ACTIVE
Peer: 192.168.2.1 port 500 fvrf: internet ivrf: local
      Phase1_id: 192.168.2.1
      Desc: (none)
  Session ID: 3
  IKEv2 SA: local 192.168.1.1/500 remote 192.168.2.1/500 Active
          Capabilities:(none) connid:1 lifetime:23:57:25
  IPSEC FLOW: permit 47 host 192.168.1.1 host 192.168.2.1
        Active SAs: 2, origin: crypto map
        Inbound:  #pkts dec'ed 25 drop 0 life (KB/Sec) 4368363/3444
        Outbound: #pkts enc'ed 25 drop 0 life (KB/Sec) 4368363/3444
```

SiteB :

```
SiteB#show crypto ikev2 sa
IPv4 Crypto IKEv2  SA

           Tunnel-id Local                 Remote                fvrf/ivrf            Status
1         192.168.2.1/500       192.168.1.1/500       internet/local       READY
      Encr: AES-CBC, keysize: 256, PRF: SHA512, Hash: SHA512, DH Grp:5, Auth sign: PSK, Auth
verify: PSK
      Life/Active Time: 86400/90 sec


SiteB#show crypto ipsec sa detail

interface: Tunnel1
    Crypto map tag: Tunnel1-head-0, local addr 192.168.2.1

   protected vrf: local
   local  ident (addr/mask/prot/port): (192.168.2.1/255.255.255.255/47/0)
   remote ident (addr/mask/prot/port): (192.168.1.1/255.255.255.255/47/0)
   current_peer 192.168.1.1 port 500
     PERMIT, flags={origin_is_acl,}
    #pkts encaps: 25, #pkts encrypt: 25, #pkts digest: 25
    #pkts decaps: 25, #pkts decrypt: 25, #pkts verify: 25
    #pkts compressed: 0, #pkts decompressed: 0
    #pkts not compressed: 0, #pkts compr. failed: 0
    #pkts not decompressed: 0, #pkts decompress failed: 0
    #pkts no sa (send) 0, #pkts invalid sa (rcv) 0
    #pkts encaps failed (send) 0, #pkts decaps failed (rcv) 0
    #pkts invalid prot (recv) 0, #pkts verify failed: 0
    #pkts invalid identity (recv) 0, #pkts invalid len (rcv) 0
    #pkts replay rollover (send): 0, #pkts replay rollover (rcv) 0
    ##pkts replay failed (rcv): 0
    #pkts tagged (send): 0, #pkts untagged (rcv): 0
    #pkts not tagged (send): 0, #pkts not untagged (rcv): 0
    #pkts internal err (send): 0, #pkts internal err (recv) 0

     local crypto endpt.: 192.168.2.1, remote crypto endpt.: 192.168.1.1
     plaintext mtu 1458, path mtu 1500, ip mtu 1500, ip mtu idb GigabitEthernet0/0
     current outbound spi: 0xCA8E7D53(3398335827)
```

```
     PFS (Y/N): N, DH group: none

     inbound esp sas:
      spi: 0xE0B1BF6B(3769745259)
        transform: esp-256-aes esp-sha-hmac ,
        in use settings ={Transport, }
        conn id: 2009, flow_id: Onboard VPN:9, sibling_flags 80000000, crypto map: Tunnel1-head-
0
        sa timing: remaining key lifetime (k/sec): (4251213/3468)
        IV size: 16 bytes
        replay detection support: Y
        Status: ACTIVE(ACTIVE)

     inbound ah sas:

     inbound pcp sas:

     outbound esp sas:
      spi: 0xCA8E7D53(3398335827)
        transform: esp-256-aes esp-sha-hmac ,
        in use settings ={Transport, }
        conn id: 2010, flow_id: Onboard VPN:10, sibling_flags 80000000, crypto map: Tunnel1-
head-0
        sa timing: remaining key lifetime (k/sec): (4251213/3468)
        IV size: 16 bytes
        replay detection support: Y
        Status: ACTIVE(ACTIVE)

     outbound ah sas:

     outbound pcp sas:

SiteB#show crypto session remote 192.168.1.1 detail
Crypto session current status

Code: C - IKE Configuration mode, D - Dead Peer Detection
K - Keepalives, N - NAT-traversal, T - cTCP encapsulation
X - IKE Extended Authentication, F - IKE Fragmentation
R - IKE Auto Reconnect

Interface: Tunnel1
Profile: IKEv2-Profile-1
Uptime: 00:02:33
Session status: UP-ACTIVE
Peer: 192.168.1.1 port 500 fvrf: internet ivrf: local
      Phase1_id: 192.168.1.1
      Desc: (none)
  Session ID: 4
  IKEv2 SA: local 192.168.2.1/500 remote 192.168.1.1/500 Active
          Capabilities:(none) connid:1 lifetime:23:57:27
  IPSEC FLOW: permit 47 host 192.168.2.1 host 192.168.1.1
        Active SAs: 2, origin: crypto map
        Inbound:  #pkts dec'ed 25 drop 0 life (KB/Sec) 4251213/3447
        Outbound: #pkts enc'ed 25 drop 0 life (KB/Sec) 4251213/3447
```

Troubleshoot

This section provides information you can use to troubleshoot your configuration. Sample debug output is also shown.

Troubleshooting Commands

Note: Refer to Important Information on Debug Commands before you use debug commands.
If there are multiple tunnels configured on the router, you can use the following condition:

- **Debug crypto ikev2 internal**
- **Debug crypto ikev2 packet**

Sample Debug Output

SiteA Debugs :

```
*Jul 16 05:30:50.731: IKEv2: Got a packet from dispatcher
*Jul 16 05:30:50.731: IKEv2: Processing an item off the pak queue
*Jul 16 05:30:50.731: IKEv2-INTERNAL:% Getting preshared key by address 192.168.2.1
*Jul 16 05:30:50.731: IKEv2-INTERNAL:Adding Proposal default to toolkit policy
*Jul 16 05:30:50.731: IKEv2-INTERNAL:(1): Choosing IKE profile IKEv2-Profile-1
*Jul 16 05:30:50.731: IKEv2-INTERNAL:New ikev2 sa request admitted
*Jul 16 05:30:50.731: IKEv2-INTERNAL:Incrementing outgoing negotiating sa count by one

*Jul 16 05:30:50.731: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=0000000000000000 (I) MsgID = 0 CurState: IDLE Event: EV_INIT_SA
*Jul 16 05:30:50.731: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=0000000000000000 (I) MsgID = 0 CurState: I_BLD_INIT Event:
EV_GET_IKE_POLICY
*Jul 16 05:30:50.731: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=0000000000000000 (I) MsgID = 0 CurState: I_BLD_INIT Event:
EV_SET_POLICY
*Jul 16 05:30:50.731: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):Setting configured policies
*Jul 16 05:30:50.731: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=0000000000000000 (I) MsgID = 0 CurState: I_BLD_INIT Event:
EV_CHK_AUTH4PKI
*Jul 16 05:30:50.731: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=0000000000000000 (I) MsgID = 0 CurState: I_BLD_INIT Event:
EV_GEN_DH_KEY
*Jul 16 05:30:50.791: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=0000000000000000 (I) MsgID = 0 CurState: I_BLD_INIT Event:
EV_NO_EVENT
*Jul 16 05:30:50.791: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=0000000000000000 (I) MsgID = 0 CurState: I_BLD_INIT Event:
EV_OK_RECD_DH_PUBKEY_RESP
*Jul 16 05:30:50.791: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):Action: Action_Null
*Jul 16 05:30:50.791: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=0000000000000000 (I) MsgID = 0 CurState: I_BLD_INIT Event:
EV_GET_CONFIG_MODE
*Jul 16 05:30:50.791: IKEv2-INTERNAL:No config data to send to toolkit:
*Jul 16 05:30:50.791: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=0000000000000000 (I) MsgID = 0 CurState: I_BLD_INIT Event:
EV_BLD_MSG
*Jul 16 05:30:50.791: IKEv2-INTERNAL:Construct Vendor Specific Payload: DELETE-REASON
*Jul 16 05:30:50.791: IKEv2-INTERNAL:Construct Vendor Specific Payload: CISCOVPN-REV-02
*Jul 16 05:30:50.791: IKEv2-INTERNAL:Sending DRU Handshake
*Jul 16 05:30:50.791: IKEv2-INTERNAL:(1): Sending custom vendor id : CISCO-DYNAMIC-ROUTE
*Jul 16 05:30:50.791: IKEv2-INTERNAL:Construct Vendor Specific Payload: (CUSTOM)
*Jul 16 05:30:50.791: IKEv2-INTERNAL:Construct Vendor Specific Payload: (CUSTOM)
*Jul 16 05:30:50.791: IKEv2-INTERNAL:Construct Notify Payload: NAT_DETECTION_SOURCE_IP
*Jul 16 05:30:50.791: IKEv2-INTERNAL:Construct Notify Payload: NAT_DETECTION_DESTINATION_IP

*Jul 16 05:30:50.795: IKEv2-PAK:(SESSION ID = 3,SA ID = 1):Next payload: SA, version: 2.0
Exchange type: IKE_SA_INIT, flags: INITIATOR Message id: 0, length: 550
Payload contents:
SA  Next payload: KE, reserved: 0x0, length: 144
```

```
  last proposal: 0x0, reserved: 0x0, length: 140
  Proposal: 1, Protocol id: IKE, SPI size: 0, #trans: 15    last transform: 0x3, reserved: 0x0:
length: 12
    type: 1, reserved: 0x0, id: AES-CBC
    last transform: 0x3, reserved: 0x0: length: 12
    type: 1, reserved: 0x0, id: AES-CBC
    last transform: 0x3, reserved: 0x0: length: 12
    type: 1, reserved: 0x0, id: AES-CBC
    last transform: 0x3, reserved: 0x0: length: 8
    type: 2, reserved: 0x0, id: SHA512
    last transform: 0x3, reserved: 0x0: length: 8
    type: 2, reserved: 0x0, id: SHA384
    last transform: 0x3, reserved: 0x0: length: 8
    type: 2, reserved: 0x0, id: SHA256
    last transform: 0x3, reserved: 0x0: length: 8
    type: 2, reserved: 0x0, id: SHA1
    last transform: 0x3, reserved: 0x0: length: 8
    type: 2, reserved: 0x0, id: MD5
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA512
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA384
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA256
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA96
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: MD596
    last transform: 0x3, reserved: 0x0: length: 8
    type: 4, reserved: 0x0, id: DH_GROUP_1536_MODP/Group 5
    last transform: 0x0, reserved: 0x0: length: 8
    type: 4, reserved: 0x0, id: DH_GROUP_1024_MODP/Group 2
KE  Next payload: N, reserved: 0x0, length: 200
    DH group: 5, Reserved: 0x0
N  Next payload: VID, reserved: 0x0, length: 36
VID  Next payload: VID, reserved: 0x0, length: 23
VID  Next payload: VID, reserved: 0x0, length: 19
VID  Next payload: VID, reserved: 0x0, length: 23
VID  Next payload: NOTIFY, reserved: 0x0, length: 21
NOTIFY(NAT_DETECTION_SOURCE_IP)  Next payload: NOTIFY, reserved: 0x0, length: 28
    Security protocol id: Unknown - 0, spi size: 0, type: NAT_DETECTION_SOURCE_IP
NOTIFY(NAT_DETECTION_DESTINATION_IP)  Next payload: NONE, reserved: 0x0, length: 28
    Security protocol id: Unknown - 0, spi size: 0, type: NAT_DETECTION_DESTINATION_IP


*Jul 16 05:30:50.931: IKEv2-INTERNAL:Got a packet from dispatcher
*Jul 16 05:30:50.931: IKEv2-INTERNAL:Processing an item off the pak queue

*Jul 16 05:30:50.939: IKEv2-PAK:(SESSION ID = 3,SA ID = 1):Next payload: SA, version: 2.0
Exchange type: IKE_SA_INIT, flags: RESPONDER MSG-RESPONSE Message id: 0, length: 431
Payload contents:
SA  Next payload: KE, reserved: 0x0, length: 48
  last proposal: 0x0, reserved: 0x0, length: 44
  Proposal: 1, Protocol id: IKE, SPI size: 0, #trans: 4    last transform: 0x3, reserved: 0x0:
length: 12
    type: 1, reserved: 0x0, id: AES-CBC
    last transform: 0x3, reserved: 0x0: length: 8
    type: 2, reserved: 0x0, id: SHA512
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA512
    last transform: 0x0, reserved: 0x0: length: 8
    type: 4, reserved: 0x0, id: DH_GROUP_1536_MODP/Group 5
KE  Next payload: N, reserved: 0x0, length: 200
    DH group: 5, Reserved: 0x0
```

```
N  Next payload: VID, reserved: 0x0, length: 36

*Jul 16 05:30:50.939: IKEv2-INTERNAL:Parse Vendor Specific Payload: CISCO-DELETE-REASON
VID  Next payload: VID, reserved: 0x0, length: 23

*Jul 16 05:30:50.939: IKEv2-INTERNAL:Parse Vendor Specific Payload: CISCOVPN-REV VID  Next
payload: VID, reserved: 0x0, length: 19

*Jul 16 05:30:50.939: IKEv2-INTERNAL:Parse Vendor Specific Payload: (CUSTOM) VID  Next payload:
NOTIFY, reserved: 0x0, length: 21

*Jul 16 05:30:50.939: IKEv2-INTERNAL:Parse Notify Payload: NAT_DETECTION_SOURCE_IP
NOTIFY(NAT_DETECTION_SOURCE_IP)  Next payload: NOTIFY, reserved: 0x0, length: 28
    Security protocol id: Unknown - 0, spi size: 0, type: NAT_DETECTION_SOURCE_IP

*Jul 16 05:30:50.939: IKEv2-INTERNAL:Parse Notify Payload: NAT_DETECTION_DESTINATION_IP
NOTIFY(NAT_DETECTION_DESTINATION_IP)  Next payload: NONE, reserved: 0x0, length: 28
    Security protocol id: Unknown - 0, spi size: 0, type: NAT_DETECTION_DESTINATION_IP

*Jul 16 05:30:50.939: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: I_WAIT_INIT Event:
EV_RECV_INIT
*Jul 16 05:30:50.939: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):Processing IKE_SA_INIT message
*Jul 16 05:30:50.939: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: I_PROC_INIT Event:
EV_CHK4_NOTIFY
*Jul 16 05:30:50.939: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: I_PROC_INIT Event:
EV_VERIFY_MSG
*Jul 16 05:30:50.939: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: I_PROC_INIT Event:
EV_PROC_MSG
*Jul 16 05:30:50.939: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: I_PROC_INIT Event:
EV_DETECT_NAT
*Jul 16 05:30:50.943: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):Process NAT discovery notify
*Jul 16 05:30:50.943: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):Processing nat detect src notify
*Jul 16 05:30:50.943: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):Remote address matched
*Jul 16 05:30:50.943: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):Processing nat detect dst notify
*Jul 16 05:30:50.943: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):Local address matched
*Jul 16 05:30:50.943: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):No NAT found
*Jul 16 05:30:50.943: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: I_PROC_INIT Event:
EV_CHK_NAT_T
*Jul 16 05:30:50.943: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: I_PROC_INIT Event:
EV_CHK_CONFIG_MODE
*Jul 16 05:30:50.943: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: INIT_DONE Event:
EV_GEN_DH_SECRET
*Jul 16 05:30:51.019: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: INIT_DONE Event:
EV_NO_EVENT
*Jul 16 05:30:51.019: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: INIT_DONE Event:
EV_OK_RECD_DH_SECRET_RESP
*Jul 16 05:30:51.019: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):Action: Action_Null
*Jul 16 05:30:51.019: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: INIT_DONE Event:
EV_GEN_SKEYID
*Jul 16 05:30:51.019: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):Generate skeyid
*Jul 16 05:30:51.019: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: INIT_DONE Event: EV_DONE
*Jul 16 05:30:51.019: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):Cisco DeleteReason Notify is
```

```
enabled
*Jul 16 05:30:51.019: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: INIT_DONE Event:
EV_CHK4_ROLE
*Jul 16 05:30:51.019: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: I_BLD_AUTH Event:
EV_GET_CONFIG_MODE
*Jul 16 05:30:51.019: IKEv2-INTERNAL:Sending config data to toolkit
*Jul 16 05:30:51.019: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: I_BLD_AUTH Event:
EV_CHK_EAP
*Jul 16 05:30:51.019: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: I_BLD_AUTH Event:
EV_GEN_AUTH
*Jul 16 05:30:51.019: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: I_BLD_AUTH Event:
EV_CHK_AUTH_TYPE
*Jul 16 05:30:51.023: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: I_BLD_AUTH Event:
EV_OK_AUTH_GEN
*Jul 16 05:30:51.023: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 0 CurState: I_BLD_AUTH Event:
EV_SEND_AUTH
*Jul 16 05:30:51.023: IKEv2-INTERNAL:Construct Vendor Specific Payload: CISCO-GRANITE
*Jul 16 05:30:51.023: IKEv2-INTERNAL:Construct Notify Payload: INITIAL_CONTACT
*Jul 16 05:30:51.023: IKEv2-INTERNAL:Construct Notify Payload: USE_TRANSPORT_MODE
*Jul 16 05:30:51.023: IKEv2-INTERNAL:Construct Notify Payload: SET_WINDOW_SIZE
*Jul 16 05:30:51.023: IKEv2-INTERNAL:Construct Notify Payload: ESP_TFC_NO_SUPPORT
*Jul 16 05:30:51.023: IKEv2-INTERNAL:Construct Notify Payload: NON_FIRST_FRAGS
Payload contents:
VID  Next payload: IDi, reserved: 0x0, length: 20
IDi  Next payload: AUTH, reserved: 0x0, length: 12
    Id type: IPv4 address, Reserved: 0x0 0x0
AUTH  Next payload: CFG, reserved: 0x0, length: 72
    Auth method PSK, reserved: 0x0, reserved 0x0
CFG  Next payload: SA, reserved: 0x0, length: 304
    cfg type: CFG_REQUEST, reserved: 0x0, reserved: 0x0
*Jul 16 05:30:51.023:  SA  Next payload: TSi, reserved: 0x0, length: 44
  last proposal: 0x0, reserved: 0x0, length: 40
Proposal: 1, Protocol id: ESP, SPI size: 4, #trans: 3    last transform: 0x3, reserved: 0x0:
length: 12
    type: 1, reserved: 0x0, id: AES-CBC
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA96
    last transform: 0x0, reserved: 0x0: length: 8
    type: 5, reserved: 0x0, id: Don't use ESN
TSi  Next payload: TSr, reserved: 0x0, length: 24
    Num of TSs: 1, reserved 0x0, reserved 0x0
    TS type: TS_IPV4_ADDR_RANGE, proto id: 47, length: 16
    start port: 0, end port: 65535
    start addr: 192.168.1.1, end addr: 192.168.1.1
TSr  Next payload: NOTIFY, reserved: 0x0, length: 24
    Num of TSs: 1, reserved 0x0, reserved 0x0
    TS type: TS_IPV4_ADDR_RANGE, proto id: 47, length: 16
    start port: 0, end port: 65535
    start addr: 192.168.2.1, end addr: 192.168.2.1
NOTIFY(INITIAL_CONTACT)  Next payload: NOTIFY, reserved: 0x0, length: 8
    Security protocol id: Unknown - 0, spi size: 0, type: INITIAL_CONTACT
NOTIFY(USE_TRANSPORT_MODE)  Next payload: NOTIFY, reserved: 0x0, length: 8
    Security protocol id: Unknown - 0, spi size: 0, type: USE_TRANSPORT_MODE
NOTIFY(SET_WINDOW_SIZE)  Next payload: NOTIFY, reserved: 0x0, length: 12
    Security protocol id: Unknown - 0, spi size: 0, type: SET_WINDOW_SIZE
NOTIFY(ESP_TFC_NO_SUPPORT)  Next payload: NOTIFY, reserved: 0x0, length: 8
    Security protocol id: Unknown - 0, spi size: 0, type: ESP_TFC_NO_SUPPORT
```

```
NOTIFY(NON_FIRST_FRAGS)  Next payload: NONE, reserved: 0x0, length: 8
    Security protocol id: Unknown - 0, spi size: 0, type: NON_FIRST_FRAGS

*Jul 16 05:30:51.023: IKEv2-PAK:(SESSION ID = 3,SA ID = 1):Next payload: ENCR, version: 2.0
Exchange type: IKE_AUTH, flags: INITIATOR Message id: 1, length: 640
Payload contents:
ENCR  Next payload: VID, reserved: 0x0, length: 612

*Jul 16 05:30:51.023: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 1 CurState: I_WAIT_AUTH Event:
EV_NO_EVENT

*Jul 16 05:30:51.023: IKEv2-INTERNAL:Got a packet from dispatcher
*Jul 16 05:30:51.023: IKEv2-INTERNAL:Processing an item off the pak queue

*Jul 16 05:30:51.107: IKEv2-PAK:(SESSION ID = 3,SA ID = 1):Next payload: ENCR, version: 2.0
Exchange type: IKE_AUTH, flags: RESPONDER MSG-RESPONSE Message id: 1, length: 320
Payload contents:

*Jul 16 05:30:51.111: IKEv2-INTERNAL:Parse Vendor Specific Payload: (CUSTOM) VID  Next payload:
IDr, reserved: 0x0, length: 20
IDr  Next payload: AUTH, reserved: 0x0, length: 12
    Id type: IPv4 address, Reserved: 0x0 0x0
AUTH  Next payload: SA, reserved: 0x0, length: 72
    Auth method PSK, reserved: 0x0, reserved 0x0
SA  Next payload: TSi, reserved: 0x0, length: 44
  last proposal: 0x0, reserved: 0x0, length: 40
  Proposal: 1, Protocol id: ESP, SPI size: 4, #trans: 3    last transform: 0x3, reserved: 0x0:
length: 12
    type: 1, reserved: 0x0, id: AES-CBC
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA96
    last transform: 0x0, reserved: 0x0: length: 8
    type: 5, reserved: 0x0, id: Don't use ESN
TSi  Next payload: TSr, reserved: 0x0, length: 24
    Num of TSs: 1, reserved 0x0, reserved 0x0
    TS type: TS_IPV4_ADDR_RANGE, proto id: 47, length: 16
    start port: 0, end port: 65535
    start addr: 192.168.1.1, end addr: 192.168.1.1
TSr  Next payload: NOTIFY, reserved: 0x0, length: 24
    Num of TSs: 1, reserved 0x0, reserved 0x0
    TS type: TS_IPV4_ADDR_RANGE, proto id: 47, length: 16
    start port: 0, end port: 65535
    start addr: 192.168.2.1, end addr: 192.168.2.1

*Jul 16 05:30:51.111: IKEv2-INTERNAL:Parse Notify Payload: USE_TRANSPORT_MODE
NOTIFY(USE_TRANSPORT_MODE)  Next payload: NOTIFY, reserved: 0x0, length: 8
    Security protocol id: Unknown - 0, spi size: 0, type: USE_TRANSPORT_MODE

*Jul 16 05:30:51.111: IKEv2-INTERNAL:Parse Notify Payload: SET_WINDOW_SIZE
NOTIFY(SET_WINDOW_SIZE)  Next payload: NOTIFY, reserved: 0x0, length: 12
    Security protocol id: Unknown - 0, spi size: 0, type: SET_WINDOW_SIZE

*Jul 16 05:30:51.111: IKEv2-INTERNAL:Parse Notify Payload: ESP_TFC_NO_SUPPORT
NOTIFY(ESP_TFC_NO_SUPPORT)  Next payload: NOTIFY, reserved: 0x0, length: 8
    Security protocol id: Unknown - 0, spi size: 0, type: ESP_TFC_NO_SUPPORT

*Jul 16 05:30:51.111: IKEv2-INTERNAL:Parse Notify Payload: NON_FIRST_FRAGS
NOTIFY(NON_FIRST_FRAGS)  Next payload: NONE, reserved: 0x0, length: 8
    Security protocol id: Unknown - 0, spi size: 0, type: NON_FIRST_FRAGS

*Jul 16 05:30:51.111: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 1 CurState: I_WAIT_AUTH Event:
EV_RECV_AUTH
```

*Jul 16 05:30:51.111: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):Action: Action_Null
*Jul 16 05:30:51.123: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 1 CurState: READY Event:
EV_CHK_IKE_ONLY
*Jul 16 05:30:51.123: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (I) MsgID = 1 CurState: READY Event: EV_I_OK
*Jul 16 05:30:52.011: SM Trace-> SA: I_SPI=34CDD54C620910B0 R_SPI=F1A0F4AB68B75F00 (R) MsgID = 1
CurState: AUTH_DONE Event: EV_CHK4_ROLE
*Jul 16 05:30:52.027: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=34CDD54C620910B0 R_SPI=F1A0F4AB68B75F00 (R) MsgID = 1 CurState: READY Event: EV_R_OK
*Jul 16 05:30:52.027: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=34CDD54C620910B0 R_SPI=F1A0F4AB68B75F00 (R) MsgID = 1 CurState: READY Event: EV_NO_E
*Jul 16 05:30:52.027: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=34CDD54C620910B0 R_SPI=F1A0F4AB68B75F00 (R) MsgID = 1 CurState:I_PROC_AUTH: **EV_VERIFY_AUTH**
*Jul 16 05:30:52.027: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=34CDD54C620910B0 R_SPI=F1A0F4AB68B75F00 (R) MsgID = 1 CurState:I_PROC_AUTH
EVENT:**EV_NOTIFY_AUTH_DONE**
*Jul 16 05:30:52.027: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=34CDD54C620910B0 R_SPI=F1A0F4AB68B75F00 (R) MsgID = 1 CurState:**AUTH_DONE** Event
EV_CHK4_ROLE

*Jul 16 05:30:52.027: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=34CDD54C620910B0 R_SPI=F1A0F4AB68B75F00 (R) MsgID = 1 CurState: **READY**Event:
EV_CHK_IKE_ONLY
*Jul 16 05:30:52.027: IKEv2-INTERNAL:(SESSION ID = 3,SA ID = 1):SM Trace-> SA:
I_SPI=34CDD54C620910B0 R_SPI=F1A0F4AB68B75F00 (R) MsgID = 1 CurState: READYEvent: **EV_I_OK**

SiteB Debugs:

*Jul 16 06:01:45.231: **IKEv2-INTERNAL:Got a packet from dispatcher**
*Jul 16 06:01:45.231: **IKEv2-INTERNAL:Processing an item off the pak queue**

*Jul 16 06:01:45.231: **IKEv2-INTERNAL:New ikev2 sa request admitted**
*Jul 16 06:01:45.231: **IKEv2-INTERNAL:Incrementing incoming negotiating sa count by one**

*Jul 16 06:01:45.231: **IKEv2-PAK:Next payload: SA, version: 2.0 Exchange type: IKE_SA_INIT,
flags: INITIATOR** Message id: 0, length: 550
Payload contents:
SA Next payload: KE, reserved: 0x0, length: 144
  last proposal: 0x0, reserved: 0x0, length: 140
  Proposal: 1, Protocol id: IKE, SPI size: 0, #trans: 15   last transform: 0x3, reserved: 0x0:
length: 12
    type: 1, reserved: 0x0, id: AES-CBC
    last transform: 0x3, reserved: 0x0: length: 12
    type: 1, reserved: 0x0, id: AES-CBC
    last transform: 0x3, reserved: 0x0: length: 8
    type: 2, reserved: 0x0, id: SHA1
    last transform: 0x3, reserved: 0x0: length: 12
    type: 1, reserved: 0x0, id: AES-CBC
    last transform: 0x3, reserved: 0x0: l   last transform: 0x3, reserved: 0x0: length: 8
    type: 2, reserved: 0x0, id: MD5
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA512
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA384
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA256
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA96
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: MD596
    last transform: 0x3, reserved: 0x0: length: 8
    type: 4, reserved: 0x0, id: DH_GROUP_1536_MODP/Group 5

```
    type: 2, reserved: 0x0, id: SHA512
    last trans0x0, length: 23
KE  Next payload: N, reserved: 0x0, length: 200
    DH group: 5, Reserved: 0x0
N  Next payload: VID, reserved: 0x0, length: 36

*Jul 16 06:01:45.231: IKEv2-INTERNAL:Parse Vendor Specific Payload: CISCOVPN-REV VID  Next
payload: VID, reserved: 0x0, length: 19
*Jul 16 06:01:45.231: IKEv2-INTERNAL:Parse Vendor Specific Payload: (CUSTOM) VID  Next payload:
VID, reserved: 0x0, length: 23
*Jul 16 06:01:45.231: IKEv2-INTERNAL:form: 0x3, reserved: 0x0: length: 8

*Jul 16 06:01:45.231: IKEv2-INTERNAL:Parse Vendor Specific Payload: CISCO-DELETE-REASON
VID  Next payload: VID, reserved:

*Jul 16 06:01:45.231: IKEv2-INTERNAL:Parse Notify Payload: NAT_DETECTION_SOURCE_IP
NOTIFY(NAT_DETECTION_SOURCE_IP)  Next payload: NOTIFY, reserved: 0x0, length: 28
    Security protocol id: Unknown - 0, spi size: 0, type: NAT_DETECTION_SOURCE_IP

*Jul 16 06:01:45.231: IKEv2-INTERNAL:Parse Notify Payload: NAT_DETECTION_DESTINATION_IP
NOTIFY(NAT_DETECTION_DESTINATION_IP)  Next payload: NONE, reserved: 0x0, length: 28
    Security protocol id: Unknown - 0, spi size: 0, type: NAT_DETECTION_DESTINATION_IP

*Jul 16 06:01:45.231: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: IDLE Event: EV_RECV_INIT
*Jul 16 06:01:45.231: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_INIT Event:
EV_VERIFY_MSG
*Jul 16 06:01:45.231: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_INIT Event: EV_INSERT_SA
*Jul 16 06:01:45.231: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_INIT Event:
EV_GET_IKE_POLICY
*Jul 16 06:01:45.231: IKEv2-INTERNAL:Adding Proposal default to toolkit policy
*Jul 16 06:01:45.231: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_INIT Event: EV_PROC_MSG
*Jul 16 06:01:45.231: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_INIT Event:
EV_DETECT_NAT
*Jul 16 06:01:45.231: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Process NAT discovery notify
*Jul 16 06:01:45.231: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Processing nat detect src notify
*Jul 16 06:01:45.231: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Remote address matched
*Jul 16 06:01:45.231: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Processing nat detect dst notify
*Jul 16 06:01:45.231: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Local address matched
*Jul 16 06:01:45.231: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):No NAT found
*Jul 16 06:01:45.235: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_INIT Event:
EV_CHK_CONFIG_MODE
*Jul 16 06:01:45.235: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_BLD_INIT Event:
EV_SET_POLICY
*Jul 16 06:01:45.235: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Setting configured policies
*Jul 16 06:01:45.235: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_BLD_INIT Event:
EV_CHK_AUTH4PKI
*Jul 16 06:01:45.235: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI53457A4ACA42FD10 (R) MsgID = 0 CurState: R_BLD_INIT Event:
EV_GEN_DH_KEY
*Jul 16 06:01:45.295: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_BLD_INIT Event:
EV_NO_EVENT
*Jul 16 06:01:45.295: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_BLD_INIT Event:
EV_OK_RECD_DH_PUBKEY_RESP
```

```
*Jul 16 06:01:45.295: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Action: Action_Null
*Jul 16 06:01:45.295: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_BLD_INIT Event:
EV_GEN_DH_SECRET
*Jul 16 06:01:45.371: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_BLD_INIT Event:
EV_NO_EVENT
*Jul 16 06:01:45.371: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_BLD_INIT Event:
EV_OK_RECD_DH_SECRET_RESP
*Jul 16 06:01:45.371: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Action: Action_Null
*Jul 16 06:01:45.371: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_BLD_INIT Event:
EV_GEN_SKEYID
*Jul 16 06:01:45.371: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Generate skeyid
*Jul 16 06:01:45.371: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_BLD_INIT Event:
EV_GET_CONFIG_MODE
*Jul 16 06:01:45.371: IKEv2-INTERNAL:No config data to send to toolkit:
*Jul 16 06:01:45.371: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_BLD_INIT Event:
EV_BLD_MSG
*Jul 16 06:01:45.371: IKEv2-INTERNAL:Construct Vendor Specific Payload: DELETE-REASON
*Jul 16 06:01:45.371: IKEv2-INTERNAL:Construct Vendor Specific Payload: CISCOVPN-REV-02
*Jul 16 06:01:45.371: IKEv2-INTERNAL:Construct Vendor Specific Payload: (CUSTOM)
*Jul 16 06:01:45.371: IKEv2-INTERNAL:Construct Notify Payload: NAT_DETECTION_SOURCE_IP
*Jul 16 06:01:45.371: IKEv2-INTERNAL:Construct Notify Payload: NAT_DETECTION_DESTINATION_IP

*Jul 16 06:01:45.371: IKEv2-PAK:(SESSION ID = 4,SA ID = 1):Next payload: SA, version: 2.0
Exchange type: IKE_SA_INIT, flags: RESPONDER MSG-RESPONSE Message id: 0, length: 431
Payload contents:
SA  Next payload: KE, reserved: 0x0, length: 48
  last proposal: 0x0, reserved: 0x0, length: 44
  Proposal: 1, Protocol id: IKE, SPI size: 0, #trans: 4    last transform: 0x3, reserved: 0x0:
length: 12
    type: 1, reserved: 0x0, id: AES-CBC
    last transform: 0x3, reserved: 0x0: length: 8
    type: 2, reserved: 0x0, id: SHA512
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA512
    last transform: 0x0, reserved: 0x0: length: 8
    type: 4, reserved: 0x0, id: DH_GROUP_1536_MODP/Group 5
KE  Next payload: N, reserved: 0x0, length: 200
    DH group: 5, Reserved: 0x0
N  Next payload: VID, reserved: 0x0, length: 36
VID  Next payload: VID, reserved: 0x0, length: 23
VID  Next payload: VID, reserved: 0x0, length: 19
VID  Next payload: NOTIFY, reserved: 0x0, length: 21
NOTIFY(NAT_DETECTION_SOURCE_IP)  Next payload: NOTIFY, reserved: 0x0, length: 28
    Security protocol id: Unknown - 0, spi size: 0, type: NAT_DETECTION_SOURCE_IP
NOTIFY(NAT_DETECTION_DESTINATION_IP)  Next payload: NONE, reserved: 0x0, length: 28
    Security protocol id: Unknown - 0, spi size: 0, type: NAT_DETECTION_DESTINATION_IP

*Jul 16 06:01:45.375: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: INIT_DONE Event: EV_DONE
*Jul 16 06:01:45.375: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Cisco DeleteReason Notify is
enabled
*Jul 16 06:01:45.375: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: INIT_DONE Event:
EV_CHK4_ROLE
*Jul 16 06:01:45.375: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: INIT_DONE Event:
EV_START_TMR
*Jul 16 06:01:45.375: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
```

I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 0 CurState: R_WAIT_AUTH Event:
EV_NO_EVENT
*Jul 16 06:01:45.375: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):New ikev2 sa request admitted
*Jul 16 06:01:45.375: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Incrementing outgoing
negotiating sa count by one

*Jul 16 06:01:45.390: **IKEv2-INTERNAL:Got a packet from dispatcher**
*Jul 16 06:01:45.390: **IKEv2-INTERNAL:Processing an item off the pak queue**

*Jul 16 06:01:45.375: **IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Next payload: ENCR, version: 2.0**
Exchange type: IKE_AUTH, flags: INITIATOR Message id: 1, length: 556
Payload contents:
*Jul 16 06:01:45.375: IKEv2-INTERNAL:Parse Vendor Specific Payload: (CUSTOM) VID Next payload:
IDi, reserved: 0x0, length: 20
Payload contents:
IDi Next payload: AUTH, reserved: 0x0, length: 12
    Id type: IPv4 address, Reserved: 0x0 0x0
AUTH Next payload: CFG, reserved: 0x0, length: 72
    Auth method PSK, reserved: 0x0, reserved 0x0
CFG Next payload: SA, reserved: 0x0, length: 304
    cfg type: CFG_REQUEST, reserved: 0x0, reserved: 0x0
 SA Next payload: TSi, reserved: 0x0, length: 44
  last proposal: 0x0, reserved: 0x0, length: 40
Proposal: 1, Protocol id: ESP, SPI size: 4, #trans: 3   last transform: 0x3, reserved: 0x0:
length: 12
    type: 1, reserved: 0x0, id: AES-CBC
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA96
    last transform: 0x0, reserved: 0x0: length: 8
    type: 5, reserved: 0x0, id: Don't use ESN
TSi Next payload: TSr, reserved: 0x0, length: 24
    Num of TSs: 1, reserved 0x0, reserved 0x0
    TS type: TS_IPV4_ADDR_RANGE, proto id: 47, length: 16
    start port: 0, end port: 65535
    start addr: 192.168.1.1, end addr: 192.168.1.1
TSr Next payload: NOTIFY, reserved: 0x0, length: 24
    Num of TSs: 1, reserved 0x0, reserved 0x0
    TS type: TS_IPV4_ADDR_RANGE, proto id: 47, length: 16
    start port: 0, end port: 65535
    start addr: 192.168.2.1, end addr: 192.168.2.1

*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_WAIT_AUTH Event:
EV_RECV_AUTH
*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_WAIT_AUTH Event:
EV_CHK_NAT_T
*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_WAIT_AUTH Event:
EV_PROC_ID
*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Received valid parameteres in
process id
*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_WAIT_AUTH Event:
EV_CHK_IF_PEER_CERT_NEEDS_TO_BE_FETCHED_FOR_PROF_SEL
*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_WAIT_AUTH Event:
EV_GET_POLICY_BY_PEERID
*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_WAIT_AUTH Event:
EV_SET_POLICY
*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Setting configured policies
*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_WAIT_AUTH Event:

```
EV_VERIFY_POLICY_BY_PEERID
*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_WAIT_AUTH Event:
EV_CHK_AUTH4EAP
*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_WAIT_AUTH Event:
EV_CHK_POLREQEAP
*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_CHK_AUTH_TYPE
*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_GET_PRESHR_KEY
*Jul 16 06:01:45.463: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_VERIFY_AUTH
*Jul 16 06:01:45.467: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_CHK4_IC
*Jul 16 06:01:45.467: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace->SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_CHK_REDIRECT
*Jul 16 06:01:45.467: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Redirect check is not needed,
skipping it
*Jul 16 06:01:45.467: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_NOTIFY_AUTH_DONE
*Jul 16 06:01:45.467: IKEv2-INTERNAL:AAA group authorization is not configured
*Jul 16 06:01:45.467: IKEv2-INTERNAL:AAA user authorization is not configured
*Jul 16 06:01:45.467: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_CHK_CONFIG_MODE
*Jul 16 06:01:45.467: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_SET_RECD_CONFIG_MODE
*Jul 16 06:01:45.467: IKEv2-INTERNAL:Received config data from toolkit:
*Jul 16 06:01:45.467: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_CHK_GKM
*Jul 16 06:01:45.467: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_CHK_DIKE
*Jul 16 06:01:45.467: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_PROC_SA_TS
*Jul 16 06:01:45.467: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_NO_EVENT
*Jul 16 06:01:45.467: IPSEC(ipsec_get_crypto_session_id): Invalid Payload Id
*Jul 16 06:01:45.467: IKEv2-INTERNAL:IPSEC accepted group 0
*Jul 16 06:01:45.467: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_POLICY_NEGOTIATED
*Jul 16 06:01:45.467: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):Action: Action_Null
*Jul 16 06:01:45.467: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_VERIFY_AUTH Event:
EV_GET_CONFIG_MODE
*Jul 16 06:01:45.471: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_BLD_AUTH Event:
EV_MY_AUTH_METHOD
*Jul 16 06:01:45.471: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_BLD_AUTH Event:
EV_GET_PRESHR_KEY
*Jul 16 06:01:45.471: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
```

```
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_BLD_AUTH Event:
EV_GEN_AUTH
*Jul 16 06:01:45.471: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_BLD_AUTH Event:
EV_CHK4_SIGN
*Jul 16 06:01:45.471: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_BLD_AUTH Event:
EV_OK_AUTH_GEN
*Jul 16 06:01:45.471: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: R_BLD_AUTH Event:
EV_SEND_AUTH
*Jul 16 06:01:45.471: IKEv2-INTERNAL:Construct Vendor Specific Payload: CISCO-GRANITE
*Jul 16 06:01:45.471: IKEv2-INTERNAL:Construct Notify Payload: USE_TRANSPORT_MODE
*Jul 16 06:01:45.471: IKEv2-INTERNAL:Construct Notify Payload: SET_WINDOW_SIZE
*Jul 16 06:01:45.471: IKEv2-INTERNAL:Construct Notify Payload: ESP_TFC_NO_SUPPORT
*Jul 16 06:01:45.471: IKEv2-INTERNAL:Construct Notify Payload: NON_FIRST_FRAGS

*Jul 16 06:01:45.471: IKEv2-PAK:(SESSION ID = 4,SA ID = 1):Next payload: ENCR, version: 2.0
Exchange type: IKE_AUTH, flags: RESPONDER MSG-RESPONSE Message id: 1, length: 320
Payload contents:
VID  Next payload: IDr, reserved: 0x0, length: 20
IDr  Next payload: AUTH, reserved: 0x0, length: 12
    Id type: IPv4 address, Reserved: 0x0 0x0
AUTH  Next payload: SA, reserved: 0x0, length: 72
    Auth method PSK, reserved: 0x0, reserved 0x0
SA  Next payload: TSi, reserved: 0x0, length: 44
  last proposal: 0x0, reserved: 0x0, length: 40
  Proposal: 1, Protocol id: ESP, SPI size: 4, #trans: 3    last transform: 0x3, reserved: 0x0:
length: 12
    type: 1, reserved: 0x0, id: AES-CBC
    last transform: 0x3, reserved: 0x0: length: 8
    type: 3, reserved: 0x0, id: SHA96
    last transform: 0x0, reserved: 0x0: length: 8
    type: 5, reserved: 0x0, id: Don't use ESN
TSi  Next payload: TSr, reserved: 0x0, length: 24
    Num of TSs: 1, reserved 0x0, reserved 0x0
    TS type: TS_IPV4_ADDR_RANGE, proto id: 47, length: 16
    start port: 0, end port: 65535
    start addr: 192.168.1.1, end addr: 192.168.1.1
TSr  Next payload: NOTIFY, reserved: 0x0, length: 24
    Num of TSs: 1, reserved 0x0, reserved 0x0
    TS type: TS_IPV4_ADDR_RANGE, proto id: 47, length: 16
    start port: 0, end port: 65535
    start addr: 192.168.2.1, end addr: 192.168.2.1
NOTIFY(USE_TRANSPORT_MODE)  Next payload: NOTIFY, reserved: 0x0, length: 8
    Security protocol id: Unknown - 0, spi size: 0, type: USE_TRANSPORT_MODE
NOTIFY(SET_WINDOW_SIZE)  Next payload: NOTIFY, reserved: 0x0, length: 12
    Security protocol id: Unknown - 0, spi size: 0, type: SET_WINDOW_SIZE
NOTIFY(ESP_TFC_NO_SUPPORT)  Next payload: NOTIFY, reserved: 0x0, length: 8
    Security protocol id: Unknown - 0, spi size: 0, type: ESP_TFC_NO_SUPPORT
NOTIFY(NON_FIRST_FRAGS)  Next payload: NONE, reserved: 0x0, length: 8
    Security protocol id: Unknown - 0, spi size: 0, type: NON_FIRST_FRAGS

ENCR  Next payload: VID, reserved: 0x0, length: 292
*Jul 16 06:01:45.479: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: AUTH_DONE Event:
EV_CHECK_DUPE
*Jul 16 06:01:45.479: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: AUTH_DONE Event:
EV_CHK4_ROLE
*Jul 16 06:01:45.479: IKEv2-INTERNAL:(SESSION ID = 4,SA ID = 1):SM Trace-> SA:
I_SPI=AA81AF8C052B480F R_SPI=53457A4ACA42FD10 (R) MsgID = 1 CurState: READY Event: EV_R_OK
```

References

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/sec_conn_ikevpn/configuration/15-mt/sec-cfg-ikev2-rfc.html