

DUAL HUB GETVPN
DUAL HUB DMVPN
IPV4 & IPV6 Implementation

Topology details are as below –

- R2 is DMVPN Primary Hub – 10.249.200.1
- R1 is DMVPN Spoke – 10.249.100.1
- R3 is DMVPN Spoke – 10.249.10.1
- R4 is DMVPN and GETVPN Secondary Hub – 10.249.1.7
- HOME-SYD-RTR02 is GETVPN Primary Hub – 10.249.1.5
- R3 is Certification Authority.
- HOME-SYD-RTR01 is NTP Server – 10.249.1.1
- R1/R2/R4 Authenticate / Enroll with CA Server 10.249.10.1

HOME-SYD-RTR02 GETVPN Primary Hub Configuration –

```
crypto isakmp policy 10
  encr 3des
  authentication pre-share
  group 2
!
crypto isakmp policy 20
  encr 3des
  group 5
!
crypto isakmp policy 40
  encr 3des
  authentication pre-share
  group 5
!
crypto ipsec transform-set GETVPN esp-3des esp-sha-hmac
!
crypto ipsec profile GETVPN
  set security-association lifetime seconds 86400
  set transform-set GETVPN
!
crypto gdoi group GETVPN
  identity number 1
  server local
  rekey address ipv4 102
  rekey retransmit 10 number 2
  rekey authentication mypubkey rsa MYKEYSR1
  sa ipsec 1
  profile GETVPN
  match address ipv4 101
  replay counter window-size 64
  address ipv4 10.249.1.5
  redundancy
  local priority 100
  peer address ipv4 10.249.1.7
!
access-list 101 permit ip 192.168.100.0 0.0.0.255 192.168.200.0 0.0.0.255
access-list 101 permit ip 192.168.200.0 0.0.0.255 192.168.100.0 0.0.0.255
access-list 101 permit ip 192.168.0.0 0.0.255.255 192.168.0.0 0.0.255.255
access-list 101 permit ip 172.18.0.0 0.0.255.255 172.18.0.0 0.0.255.255
access-list 101 permit gre any any
```

```
access-list 102 permit udp host 10.249.1.5 eq 848 host 239.0.1.2 eq 848
```

R4 GETVPN SECONDARY HUB Configuration –

```
crypto isakmp policy 10
  encr 3des
  authentication pre-share
  group 2
!
crypto isakmp policy 20
  encr 3des
  hash md5
  group 2
crypto isakmp key cisco address 0.0.0.0 0.0.0.0
!
crypto ipsec transform-set GETVPN esp-3des esp-sha-hmac
  mode transport
!
crypto ipsec profile GETVPN
  set security-association lifetime seconds 86400
  set transform-set GETVPN
!
crypto gdoi group GETVPN
  identity number 1
  server local
  rekey address ipv4 102
  rekey retransmit 10 number 2
  rekey authentication mypubkey rsa R4KEYS
  sa ipsec 1
  profile GETVPN
  match address ipv4 101
  replay counter window-size 64
  address ipv4 10.249.1.7
  redundancy
  local priority 200
  peer address ipv4 10.249.1.5
!
access-list 101 permit ip 192.168.100.0 0.0.0.255 192.168.200.0 0.0.0.255
access-list 101 permit ip 192.168.200.0 0.0.0.255 192.168.100.0 0.0.0.255
access-list 101 permit ip 192.168.0.0 0.0.255.255 192.168.0.0 0.0.255.255
access-list 101 permit ip 172.18.0.0 0.0.255.255 172.18.0.0 0.0.255.255
access-list 101 permit gre any any
access-list 102 permit udp host 10.249.1.5 eq 848 host 239.0.1.2 eq 848
```

R2 DMVPN PRIMARY HUB Configuration –

```
crypto keyring DMVPN
  pre-shared-key address 10.249.10.1 key cisco
  pre-shared-key address 10.249.1.7 key cisco
crypto keyring IPV6Kring
  pre-shared-key address ipv6 2001:DB8:23::2/64 key cisco123
!
crypto isakmp policy 10
```

```
encr 3des
authentication pre-share
group 2
!
crypto isakmp policy 20
encr 3des
hash md5
group 2
crypto isakmp key cisco address 0.0.0.0
crypto isakmp profile DMVPN
    keyring DMVPN
    match identity address 10.249.10.1 255.255.255.255
    match identity address 10.249.1.7 255.255.255.255
crypto isakmp profile IPV6PROF
    keyring IPV6Kring
    match identity address ipv6 2001:DB8:23::2/64
!
crypto ipsec transform-set GETVPN esp-3des esp-sha-hmac
mode transport
crypto ipsec transform-set DMVPN esp-3des esp-sha-hmac
mode tunnel
!
crypto ipsec profile DMVPN
set security-association lifetime seconds 86400
set transform-set GETVPN
set isakmp-profile DMVPN
!
crypto ipsec profile IPV6IPSECProfile
set security-association lifetime seconds 86400
set transform-set GETVPN
set isakmp-profile IPV6PROF
!
!
crypto gdoi group GETVPN
identity number 1
server address ipv4 10.249.1.5
server address ipv4 10.249.1.7
!
!
crypto map GETVPN 10 gdoi
set group GETVPN
!
interface Loopback6
no ip address
ipv6 address 2001:DB8:6::1/64
ipv6 enable
ipv6 eigrp 100
ipv6 ospf 100 area 2
!
interface Tunnel0
ip address 172.18.0.1 255.255.255.0
```

```

no ip redirects
ip mtu 1436
ip nhrp authentication cisco
ip nhrp map multicast dynamic
ip nhrp network-id 1234
ip nhrp shortcut
ip nhrp redirect
tunnel source Vlan200
tunnel mode gre multipoint
tunnel protection ipsec profile DMVPN
!
interface Tunnel300
no ip address
ipv6 address 2001:DB8:20::1/64
ipv6 enable
ipv6 eigrp 100
no ipv6 split-horizon eigrp 100
ipv6 nhrp authentication cisco123
ipv6 nhrp map multicast dynamic
ipv6 nhrp map 2001:DB8:20::2/64 2001:DB8:23::1
ipv6 nhrp network-id 250417
ipv6 nhrp nhs 2001:DB8:20::2
ipv6 nhrp shortcut
ipv6 nhrp redirect
ipv6 ospf 100 area 0
ipv6 ospf network broadcast
tunnel source GigabitEthernet0/0.300
tunnel mode gre ipv6
tunnel destination 2001:DB8:23::2
tunnel key 123456
tunnel protection ipsec profile IPV6IPSECProfile
!
interface GigabitEthernet0/0
description "Trunk Connected to SW01"
no ip address
duplex auto
speed auto
!
interface GigabitEthernet0/0.300
encapsulation dot1Q 300
ipv6 address 2001:DB8:23::1/64
ipv6 enable
!

```

R4 DMVPN SECONDARY HUB Configuration –

```

crypto keyring DMVPN
pre-shared-key address 10.249.10.1 key cisco
pre-shared-key address 10.249.200.1 key cisco
!
crypto isakmp profile DMVPN
keyring DMVPN

```

```

    match identity address 10.249.10.1 255.255.255.255
    match identity address 10.249.200.1 255.255.255.255
!
crypto ipsec profile DMVPN
set security-association lifetime seconds 86400
set transform-set GETVPN
set isakmp-profile DMVPN
!
interface Tunnel0
ip address 172.18.0.3 255.255.255.0
no ip redirects
ip mtu 1436
ip nhrp authentication cisco
ip nhrp map multicast dynamic
ip nhrp map multicast 10.249.200.1
ip nhrp map 172.18.0.1 10.249.200.1
ip nhrp network-id 1234
ip nhrp nhs 172.18.0.1
ip nhrp shortcut
ip nhrp redirect
tunnel source Vlan1
tunnel mode gre multipoint
tunnel protection ipsec profile DMVPN
!

```

R1 GETVPN AND DMVPN Configuration –

```

crypto keyring IPV6Kring
  pre-shared-key address ipv6 2001:DB8:23::1/64 key cisco123
!
crypto isakmp policy 10
  encr 3des
  authentication pre-share
  group 2
crypto isakmp key cisco address 0.0.0.0
crypto isakmp profile IPV6PROF
  keyring IPV6Kring
  match identity address ipv6 2001:DB8:23::1/64
!
!
crypto ipsec transform-set GETVPN esp-3des esp-sha-hmac
mode tunnel
!
crypto ipsec profile IPV6IPSECProfile
set security-association lifetime seconds 86400
set transform-set GETVPN
set isakmp-profile IPV6PROF
!
!
crypto gdoi group GETVPN
identity number 1
server address ipv4 10.249.1.5

```

```

!
!
crypto map GETVPN 10 gdoi
set group GETVPN
!
interface Loopback6
no ip address
ipv6 address 2001:DB8:66::2/64
ipv6 enable
ipv6 eigrp 100
ipv6 ospf 100 area 1
!
interface Loopback100
ip address 192.168.100.1 255.255.255.0
!
interface Tunnel0
no ip address
!
interface Tunnel300
no ip address
ipv6 address 2001:DB8:20::2/64
ipv6 enable
ipv6 eigrp 100
no ipv6 split-horizon eigrp 100
ipv6 nhrp authentication cisco123
ipv6 nhrp map multicast dynamic
ipv6 nhrp network-id 250417
ipv6 nhrp shortcut
ipv6 nhrp redirect
ipv6 ospf 100 area 0
ipv6 ospf network broadcast
tunnel source GigabitEthernet0/0.300
tunnel mode gre ipv6
tunnel destination 2001:DB8:23::1
tunnel key 123456
tunnel protection ipsec profile IPV6IPSECProfile
!
interface GigabitEthernet0/0
description "Connected to Trunk SW01"
no ip address
duplex auto
speed auto
!
interface GigabitEthernet0/0.300
encapsulation dot1Q 300
ipv6 address 2001:DB8:23::2/64
ipv6 enable
!

```

R3 DMVPN AND GETVPN Configuration –
crypto keyring DMVPN

```
pre-shared-key address 10.249.200.1 key cisco
pre-shared-key address 10.249.1.7 key cisco
!
crypto isakmp policy 10
encr 3des
authentication pre-share
group 2
!
crypto isakmp policy 20
encr 3des
hash md5
group 2
crypto isakmp key cisco address 0.0.0.0 0.0.0.0
crypto isakmp profile DMVPN
keyring DMVPN
match identity address 10.249.200.1 255.255.255.255
match identity address 10.249.1.7 255.255.255.255
!
!
crypto ipsec transform-set GETVPN esp-3des esp-sha-hmac
mode transport
!
crypto ipsec profile DMVPN
set security-association lifetime seconds 86400
set transform-set GETVPN
set isakmp-profile DMVPN
!
crypto gdoi group GETVPN
identity number 1
server address ipv4 10.249.1.5
server address ipv4 10.249.1.7
!
!
crypto map GETVPN 10 gdoi
set group GETVPN
!
!
!
interface Loopback170
ip address 192.168.170.1 255.255.255.0
!
!
interface Tunnel0
ip address 172.18.0.2 255.255.255.0
no ip redirects
ip mtu 1436
ip nhrp authentication cisco
ip nhrp map multicast dynamic
ip nhrp map multicast 10.249.1.7
ip nhrp map 172.18.0.3 10.249.1.7
ip nhrp map multicast 10.249.200.1
```



```
ip nhrp map 172.18.0.1 10.249.200.1
ip nhrp network-id 1234
ip nhrp nhs 172.18.0.1
ip nhrp nhs 172.18.0.3
ip nhrp shortcut
ip nhrp redirect
tunnel source GigabitEthernet0/0
tunnel mode gre multipoint
tunnel protection ipsec profile DMVPN
!
```

DMVPN VERIFICATION –

R3#show dmvpn

Legend: Attrb --> S - Static, D - Dynamic, I - Incomplete
N - NATed, L - Local, X - No Socket
Ent --> Number of NHRP entries with same NBMA peer
NHS Status: E --> Expecting Replies, R --> Responding
UpDn Time --> Up or Down Time for a Tunnel

=====
Interface: Tunnel0, IPv4 NHRP Details
Type:Spoke, NHRP Peers:2,

# Ent	Peer NBMA Addr	Peer Tunnel Add	State	UpDn Tm	Attrb
1	10.249.200.1	172.18.0.1	UP	04:21:31	S
1	10.249.1.7	172.18.0.3	UP	04:19:58	S

R1#show dmvpn

Legend: Attrb --> S - Static, D - Dynamic, I - Incomplete
N - NATed, L - Local, X - No Socket
Ent --> Number of NHRP entries with same NBMA peer
NHS Status: E --> Expecting Replies, R --> Responding, W --> Waiting
UpDn Time --> Up or Down Time for a Tunnel

=====
Interface: Tunnel300, IPv6 NHRP Details
Type:Hub, Total NBMA Peers (v4/v6): 1
1.Peer NBMA Address: 2001:DB8:23::1
Tunnel IPv6 Address: 2001:DB8:20::1
IPv6 Target Network: 2001:DB8:20::1/128
Ent: 1, Status: UP, UpDn Time: 12:20:57, Cache Attrb: D

R2#show dmvpn

Legend: Attrb --> S - Static, D - Dynamic, I - Incomplete
N - NATed, L - Local, X - No Socket
Ent --> Number of NHRP entries with same NBMA peer
NHS Status: E --> Expecting Replies, R --> Responding, W --> Waiting
UpDn Time --> Up or Down Time for a Tunnel

Interface: Tunnel0, IPv4 NHRP Details
Type:Hub, NHRP Peers:2,

```
# Ent Peer NBMA Addr Peer Tunnel Add State UpDn Tm Attrb
-----
 1 10.249.10.1    172.18.0.2  UP 04:22:06  D
 1 10.249.1.7     172.18.0.3  UP 00:42:06  D
```

Interface: Tunnel300, IPv6 NHRP Details
Type:Spoke, Total NBMA Peers (v4/v6): 1
1.Peer NBMA Address: 2001:DB8:23::1
Tunnel IPv6 Address: 2001:DB8:20::2
IPv6 Target Network: 2001:DB8:20::/64
Ent: 1, Status: IKE, UpDn Time: 12:21:20, Cache Attrib: S

R4#show dmvpn

Legend: Attrb --> S - Static, D - Dynamic, I - Incomplete
N - NATed, L - Local, X - No Socket
Ent --> Number of NHRP entries with same NBMA peer
NHS Status: E --> Expecting Replies, R --> Responding, W --> Waiting
UpDn Time --> Up or Down Time for a Tunnel

=====

Interface: Tunnel0, IPv4 NHRP Details
Type:Hub/Spoke, NHRP Peers:2,

```
# Ent Peer NBMA Addr Peer Tunnel Add State UpDn Tm Attrb
-----
 1 10.249.200.1   172.18.0.1  UP 00:42:34  S
 1 10.249.10.1    172.18.0.2  UP 04:21:02  D
```

R4#show interfaces tunnel 0

Tunnel0 is up, line protocol is up
Hardware is Tunnel
Internet address is 172.18.0.3/24
MTU 17882 bytes, BW 100 Kbit/sec, DLY 50000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation TUNNEL, loopback not set
Keepalive not set
Tunnel source 10.249.1.7 (Vlan1)
Tunnel Subblocks:
src-track:
Tunnel0 source tracking subblock associated with Vlan1
Set of tunnels with source Vlan1, 1 member (includes iterators), on interface <OK>
Tunnel protocol/transport multi-GRE/IP
Key disabled, sequencing disabled
Checksumming of packets disabled
Tunnel TTL 255, Fast tunneling enabled
Tunnel transport MTU 1442 bytes
Tunnel transmit bandwidth 8000 (kbps)
Tunnel receive bandwidth 8000 (kbps)

Tunnel protection via IPSec (profile "DMVPN")
Last input 00:00:02, output 05:06:25, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
696 packets input, 58572 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
40 packets output, 5175 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 output buffer failures, 0 output buffers swapped out

R3#show int tunnel 0

Tunnel0 is up, line protocol is up

Hardware is Tunnel

Internet address is 172.18.0.2/24

MTU 17916 bytes, BW 100 Kbit/sec, DLY 50000 usec,
reliability 255/255, txload 1/255, rxload 1/255

Encapsulation TUNNEL, loopback not set

Keepalive not set

Tunnel source 10.249.10.1 (GigabitEthernet0/0)

Tunnel Subblocks:

src-track:

Tunnel0 source tracking subblock associated with GigabitEthernet0/0

Set of tunnels with source GigabitEthernet0/0, 1 member (includes iterators), on interface <OK>

Tunnel protocol/transport multi-GRE/IP

Key disabled, sequencing disabled

Checksumming of packets disabled

Tunnel TTL 255, Fast tunneling enabled

Tunnel transport MTU 1476 bytes

Tunnel transmit bandwidth 8000 (kbps)

Tunnel receive bandwidth 8000 (kbps)

Tunnel protection via IPSec (profile "DMVPN")

Last input 00:00:00, output 04:25:03, output hang never

Last clearing of "show interface" counters never

Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 2

Queueing strategy: fifo

Output queue: 0/0 (size/max)

5 minute input rate 0 bits/sec, 0 packets/sec

5 minute output rate 0 bits/sec, 0 packets/sec

5640 packets input, 464477 bytes, 0 no buffer

Received 0 broadcasts, 0 runts, 0 giants, 0 throttles

0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort

1222 packets output, 157168 bytes, 0 underruns

0 output errors, 0 collisions, 0 interface resets

0 unknown protocol drops

0 output buffer failures, 0 output buffers swapped out

R2#show int tun 0

Tunnel0 is up, line protocol is up

Hardware is Tunnel

Internet address is 172.18.0.1/24

MTU 17882 bytes, BW 100 Kbit/sec, DLY 50000 usec,
reliability 255/255, txload 1/255, rxload 1/255

Encapsulation TUNNEL, loopback not set

Keepalive not set

Tunnel source 10.249.200.1 (Vlan200)

Tunnel Subblocks:

src-track:

Tunnel0 source tracking subblock associated with Vlan200

Set of tunnels with source Vlan200, 1 member (includes iterators), on interface <OK>

Tunnel protocol/transport multi-GRE/IP

Key disabled, sequencing disabled

Checksumming of packets disabled

Tunnel TTL 255, Fast tunneling enabled

Tunnel transport MTU 1442 bytes

Tunnel transmit bandwidth 8000 (kbps)

Tunnel receive bandwidth 8000 (kbps)

Tunnel protection via IPSec (profile "DMVPN")

Last input 00:28:01, output never, output hang never

Last clearing of "show interface" counters 12:26:25

Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 32

Queueing strategy: fifo

Output queue: 0/0 (size/max)

5 minute input rate 0 bits/sec, 0 packets/sec

5 minute output rate 0 bits/sec, 0 packets/sec

39 packets input, 4786 bytes, 0 no buffer

Received 0 broadcasts (0 IP multicasts)

0 runs, 0 giants, 0 throttles

0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort

4700 packets output, 388367 bytes, 0 underruns

0 output errors, 0 collisions, 0 interface resets

0 unknown protocol drops

0 output buffer failures, 0 output buffers swapped out

R2#show interfaces tunnel 300

Tunnel300 is up, line protocol is up

Hardware is Tunnel

MTU 1382 bytes, BW 100 Kbit/sec, DLY 50000 usec,
reliability 255/255, txload 1/255, rxload 1/255

Encapsulation TUNNEL, loopback not set

Keepalive not set

Tunnel source 2001:DB8:23::1 (GigabitEthernet0/0.300), destination 2001:DB8:23::2

Tunnel Subblocks:

src-track:

Tunnel300 source tracking subblock associated with GigabitEthernet0/0.300

Set of tunnels with source GigabitEthernet0/0.300, 1 member (includes iterators), on interface
<OK>
Tunnel protocol/transport GRE/IPv6
Key 0x1E240, sequencing disabled
Checksumming of packets disabled
Tunnel TTL 255
Tunnel transport MTU 1382 bytes
Tunnel transmit bandwidth 8000 (kbps)
Tunnel receive bandwidth 8000 (kbps)
Tunnel protection via IPSec (profile "IPV6IPSECProfile")
Last input 00:00:00, output 00:00:03, output hang never
Last clearing of "show interface" counters 12:27:36
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
14441 packets input, 1858178 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
0 runs, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
14464 packets output, 1858378 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 output buffer failures, 0 output buffers swapped out

R2# show int tun 300

Tunnel300 is up, line protocol is up
Hardware is Tunnel
MTU 1382 bytes, BW 100 Kbit/sec, DLY 50000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation TUNNEL, loopback not set
Keepalive not set
Tunnel source 2001:DB8:23::1 (GigabitEthernet0/0.300), destination 2001:DB8:23::2
Tunnel Subblocks:
src-track:
Tunnel300 source tracking subblock associated with GigabitEthernet0/0.300
Set of tunnels with source GigabitEthernet0/0.300, 1 member (includes iterators), on interface

<OK>
Tunnel protocol/transport GRE/IPv6
Key 0x1E240, sequencing disabled
Checksumming of packets disabled
Tunnel TTL 255
Tunnel transport MTU 1382 bytes
Tunnel transmit bandwidth 8000 (kbps)
Tunnel receive bandwidth 8000 (kbps)
Tunnel protection via IPSec (profile "IPV6IPSECProfile")
Last input 00:00:02, output 00:00:01, output hang never
Last clearing of "show interface" counters 12:27:52
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo

Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
14445 packets input, 1858690 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
0 runs, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
14470 packets output, 1859146 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 output buffer failures, 0 output buffers swapped out

GETVPN VERIFICATION –

R1#show crypto gdoi group GETVPN

Group Name : GETVPN
Group Identity : 1
Crypto Path : ipv4
Key Management Path : ipv4
Rekeys received : 0
IPSec SA Direction : Both

Group Server list : 10.249.1.5
10.249.1.7

Group member : 10.249.100.1 vrf: None
Version : 1.0.6
Registration status : Registered
Registered with : 10.249.1.5
Re-registers in : 38592 sec
Succeeded registration: 1
Attempted registration: 1
Last rekey from : 0.0.0.0
Last rekey seq num : 0
Multicast rekey rcvd : 0
allowable rekey cipher: any
allowable rekey hash : any
allowable transformtag: any ESP

Rekeys cumulative

Total received : 0
After latest register : 0
Rekey Received : never

ACL Downloaded From KS 10.249.1.5:

access-list permit ip 192.168.100.0 0.0.0.255 192.168.200.0 0.0.0.255
access-list permit ip 192.168.200.0 0.0.0.255 192.168.100.0 0.0.0.255
access-list permit ip 192.168.0.0 0.0.255.255 192.168.0.0 0.0.255.255
access-list permit ip 172.18.0.0 0.0.255.255 172.18.0.0 0.0.255.255
access-list permit gre any any

KEK POLICY:

Rekey Transport Type : Multicast
Lifetime (secs) : 41533
Encrypt Algorithm : 3DES
Key Size : 192
Sig Hash Algorithm : HMAC_AUTH_SHA
Sig Key Length (bits) : 1024

TEK POLICY for the current KS-Policy ACEs Downloaded:

Vlan100:

IPsec SA:

spi: 0xD1199491(3508114577)
transform: esp-3des esp-sha-hmac
sa timing:remaining key lifetime (sec): (41534)
Anti-Replay(Counter Based) : 64
tag method : disabled
alg key size: 24 (bytes)
sig key size: 20 (bytes)
encaps: ENCAPS_TUNNEL

R1#show crypto isakmp sa

IPv4 Crypto ISAKMP SA

dst	src	state	conn-id	status
239.0.1.2	10.249.1.5	GDOI_REKEY	1002	ACTIVE
10.249.1.5	10.249.100.1	GDOI_IDLE	1001	ACTIVE

IPv6 Crypto ISAKMP SA

dst: 2001:DB8:23::1
src: 2001:DB8:23::2
state: QM_IDLE conn-id: 1004 status: ACTIVE

dst: 2001:DB8:23::2
src: 2001:DB8:23::1
state: QM_IDLE conn-id: 1003 status: ACTIVE

R2# show crypto gdoi group GETVPN

Group Name : GETVPN
Group Identity : 1
Crypto Path : ipv4
Key Management Path : ipv4
Rekeys received : 0
IPSec SA Direction : Both

Group Server list : 10.249.1.5
10.249.1.7

Group member : 10.249.200.1 vrf: None
Version : 1.0.6
Registration status : Registered
Registered with : 10.249.1.5
Re-registers in : 38457 sec

Succeeded registration: 1
Attempted registration: 1
Last rekey from : 0.0.0.0
Last rekey seq num : 0
Multicast rekey rcvd : 0
allowable rekey cipher: any
allowable rekey hash : any
allowable transformtag: any ESP

Rekeys cumulative

Total received : 0
After latest register : 0
Rekey Received : never

ACL Downloaded From KS 10.249.1.5:

access-list permit ip 192.168.100.0 0.0.0.255 192.168.200.0 0.0.0.255
access-list permit ip 192.168.200.0 0.0.0.255 192.168.100.0 0.0.0.255
access-list permit ip 192.168.0.0 0.0.255.255 192.168.0.0 0.0.255.255
access-list permit ip 172.18.0.0 0.0.255.255 172.18.0.0 0.0.255.255
access-list permit gre any any

KEK POLICY:

Rekey Transport Type : Multicast
Lifetime (secs) : 41468
Encrypt Algorithm : 3DES
Key Size : 192
Sig Hash Algorithm : HMAC_AUTH_SHA
Sig Key Length (bits) : 1024

TEK POLICY for the current KS-Policy ACEs Downloaded:

Vlan200:

IPsec SA:

spi: 0xD1199491(3508114577)
transform: esp-3des esp-sha-hmac
sa timing:remaining key lifetime (sec): (41470)
Anti-Replay(Counter Based) : 64
tag method : disabled
alg key size: 24 (bytes)
sig key size: 20 (bytes)
encaps: ENCAPS_TUNNEL

R2# show crypto isa sa

IPv4 Crypto ISAKMP SA

dst	src	state	conn-id	status
10.249.1.5	10.249.200.1	GDOI_IDLE	1003	ACTIVE
239.0.1.2	10.249.1.5	GDOI_REKEY	1004	ACTIVE
10.249.200.1	10.249.10.1	QM_IDLE	1005	ACTIVE
10.249.200.1	10.249.1.7	QM_IDLE	1006	ACTIVE

IPv6 Crypto ISAKMP SA

dst: 2001:DB8:23::1
src: 2001:DB8:23::2
state: QM_IDLE conn-id: 1002 status: ACTIVE

dst: 2001:DB8:23::2
src: 2001:DB8:23::1
state: QM_IDLE conn-id: 1001 status: ACTIVE

R3#show crypto gdoi group GETVPN

Group Name : GETVPN
Group Identity : 1
Rekeys received : 0
IPSec SA Direction : Both

Group Server list : 10.249.1.5
10.249.1.7

Group member : 10.249.10.1 vrf: None
Registration status : Registered
Registered with : 10.249.1.5
Re-registers in : 2053 sec
Succeeded registration: 1
Attempted registration: 9
Last rekey from : 0.0.0.0
Last rekey seq num : 0
Multicast rekey rcvd : 0

Rekeys cumulative

Total received : 0
After latest register : 0
Rekey Received : never

ACL Downloaded From KS 10.249.1.5:

access-list permit ip 192.168.100.0 0.0.0.255 192.168.200.0 0.0.0.255
access-list permit ip 192.168.200.0 0.0.0.255 192.168.100.0 0.0.0.255
access-list permit ip 192.168.0.0 0.0.255.255 192.168.0.0 0.0.255.255
access-list permit ip 172.18.0.0 0.0.255.255 172.18.0.0 0.0.255.255
access-list permit gre any any

KEK POLICY:

Rekey Transport Type : Multicast
Lifetime (secs) : 86273
Encrypt Algorithm : 3DES
Key Size : 192
Sig Hash Algorithm : HMAC_AUTH_SHA
Sig Key Length (bits) : 1024

TEK POLICY for the current KS-Policy ACEs Downloaded:

GigabitEthernet0/0:

IPsec SA:

spi: 0x2B059AB(45111723)

transform: esp-3des esp-sha-hmac
sa timing:remaining key lifetime (sec): (5322)
Anti-Replay : Disabled

R3# show crypto isakmp sa

IPv4 Crypto ISAKMP SA

dst	src	state	conn-id	status
10.249.1.5	10.249.10.1	GDOI_IDLE	1001	ACTIVE
10.249.1.7	10.249.10.1	QM_IDLE	1004	ACTIVE
10.249.200.1	10.249.10.1	QM_IDLE	1003	ACTIVE
239.0.1.2	10.249.1.5	GDOI_REKEY	1002	ACTIVE

IPv6 Crypto ISAKMP SA

R4#show crypto gdoi group GETVPN

Group Name : GETVPN (Multicast)
Group Identity : 1
Group Members : 2
IPSec SA Direction : Both
Redundancy : Configured
Local Address : 10.249.1.7
Local Priority : 200
Local KS Status : Alive
Local KS Role : Secondary
Group Rekey Lifetime : 86400 secs
Group Rekey
Remaining Lifetime : 41384 secs
Rekey Retransmit Period : 10 secs
Rekey Retransmit Attempts: 2
Group Retransmit
Remaining Lifetime : 0 secs

IPSec SA Number : 1
IPSec SA Rekey Lifetime: 86400 secs
Profile Name : GETVPN
Replay method : Count Based
Replay Window Size : 64
SA Rekey
Remaining Lifetime : 41386 secs
ACL Configured : access-list 101

Group Server list : Local

HOME-SYD-RTR02#show crypto gdoi group GETVPN

Group Name : GETVPN (Multicast)
Group Identity : 1
Group Members : 2
IPSec SA Direction : Both
Redundancy : Configured
Local Address : 10.249.1.5
Local Priority : 100

Local KS Status : Alive
Local KS Role : Primary
Group Rekey Lifetime : 86400 secs
Group Rekey
Remaining Lifetime : 41357 secs
Rekey Retransmit Period : 10 secs
Rekey Retransmit Attempts: 2
Group Retransmit
Remaining Lifetime : 0 secs

IPSec SA Number : 1
IPSec SA Rekey Lifetime: 86400 secs
Profile Name : GETVPN
Replay method : Count Based
Replay Window Size : 64
SA Rekey
Remaining Lifetime : 41358 secs
ACL Configured : access-list 101

Group Server list : Local

HOME-SYD-RTR02#show crypto isakmp sa

IPv4 Crypto ISAKMP SA

dst	src	state	conn-id	status
10.249.1.5	10.249.100.1	GDOI_IDLE	2001	ACTIVE
10.249.1.5	10.249.200.1	GDOI_IDLE	2002	ACTIVE
10.249.1.5	10.249.1.7	GDOI_IDLE	2003	ACTIVE

IPv6 Crypto ISAKMP SA