IPsec VPN on IPv6 network
Configure IPv6 IPsec VPN (Main Mode)

- Router-A
  - PSK: secret
  - 1000::1/64

- PC1
  - 2000::/64

- PC2
  - 3000::/64

- Router-B
  - PSK: secret
  - 1000::2/64

- IPSec

PSK: secret
Configuration (1)

Sample: Router-A

1. Configure LAN1 IPv6 address
2. Set IPv6 prefix
3. Correspond prefix with RA on LAN1
4. Configure LAN2 IPv6 address
5. Create Tunnel Interface
6. Select IPsec Policy-ID
7. Create IPsec Policy
8. Enable use of keepalive
9. Disable keepalive log
10. Set IP address of local GW
11. Set IP address of remote GW
12. Set pre shared key
13. Enable Tunnel Interface
14. Enable Initiation of Key-Exchange
15. Set static routing
Configuration (2)

Sample: Router-B

1. Configure LAN1 IPv6 address
2. Set IPv6 prefix
3. Correspond prefix with RA on LAN1
4. Configure LAN2 IPv6 address
5. Create Tunnel Interface
6. Select IPsec Policy-ID
7. Create IPsec Policy
8. Enable use of keepalive
9. Disable keepalive log
10. Set IP address of local GW
11. Set IP address of remote GW
12. Set pre shared key
13. Enable Tunnel Interface
14. Enable Initiation of Key-Exchange
15. Set static routing

```
# ipv6 lan1 address 3000::1/64    //①
# ipv6 prefix 1 3000::/64        //②
# ipv6 lan1 rtadv send 1          //③
# ipv6 lan2 address 1000::2/64    //④
# tunnel select 1                //⑤
tunnel1# ipsec tunnel 101        //⑥
tunnel1# ipsec sa policy 101 1 esp aes-cbc sha-hmac //⑦
tunnel1# ipsec ike keepalive use 1 on  //⑧
tunnel1# ipsec ike keepalive log 1 off //⑨
tunnel1# ipsec ike local address 1 1000::2 //⑩
tunnel1# ipsec ike remote address 1 1000::1 //⑪
tunnel1# ipsec ike pre-shared-key 1 text secret //⑫
tunnel1# tunnel enable 1          //⑬
tunnel1#                   
tunnel1# tunnel select none

# ipv6 route 2000::/64 gateway tunnel 1 //⑭

save
Saving ... CONFIGO Done .
```
**Status**

**Sample:**

```
# show status tunnel 1
TUNNEL[1]:
Description:
Interface type: IPsec
Current status is Online.
from 2013/03/20 09:31:30.
52 seconds connection.
Received: (IPv4) 0 packet [0 octet]
          (IPv6) 3 packets [240 octets]
Transmitted: (IPv4) 0 packet [0 octet]
             (IPv6) 3 packets [268 octets]

# show ipsec sa
Total: isakmp:2 send:2 recv:2

sa  sgw  isakmp  connection  dir  life[s]  remote-id
---------------------------------------------------------
1  1   -     isakmp    -     28737   1000::2
2  1   1     tun[001]esp send 28736   1000::2
3  1   1     tun[001]esp recv 28738   1000::2
4  1   1     tun[001]esp send 28739   1000::2
5  1   1     tun[001]esp recv 28739   1000::2
6  1   -     isakmp    -     28744   1000::2
```

- "show status tunnel 1" shows the status of tunnel 1 interface.
- "show ipsec sa" shows the status of ISAKMP SA and IPsec SA.