

1.6.2 ESR OTT

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- ESR

EoGRE 1.4.1 ESR1200/1700, GRE . GRE, IPsec , ESR . IPsec VRF, , , GRE VRF IPsec, VRF ESR.
, te1/0/1, SoftWLC, OTT . IPsec OTT te1/0/1.4092, port-channel 2, VRF ipsec. po2 (te1/0/2 te1/0/6, te1/0/3 te1/0/7) port-channel 1, VRF. , GRE VRF ipsec connected .
ESR, .

- 1.6.2, BGP, ESR, EoGRE (ESR 1200/1700). :
- 1) te1/0/1.4092: 10.12.20.3/28 - , , IPsec, VRF ipsec;
 - 2) port-channel 2: 192.168.200.35./28 - , GRE ;
 - 3) te1/0/1.4081: 10.255.255.6/30 - , VRF backbone SoftWLC, DHCP DNS ;
 - 4) te1/0/1.4082: 10.255.255.10/30 - , VRF nat ;
 - 4) bridge 1: 192.168.200.33/28 192.168.200.34/28 - EoGRE , ;
 - 5) bridge 3: 10.255.244.0/22 - . 10.255.244.1 ESR SoftWLC;
 - 6) bridge 10: 10.255.244.0/22 - . - 10.255.244.1, DNS 100.123.0.2;
 - 7) 172.31.0.0/21 - , mode config, EoGRE ;
 - 8) 100.110.123.0/24 - . 100.123.0.2 - SoftWLC, DHCP, DNS.


```
    port-range 500
    port-range 4500
exit
object-group service snmp
    port-range 161-162
exit
object-group service dns
    port-range 53
exit
object-group service bgp
    port-range 179
exit

object-group network SoftWLC
    ip prefix 100.123.0.0/24
exit
object-group network ipsec_remote_address
    ip prefix 172.31.0.0/21
exit
object-group network gre_termination
    ip prefix 192.168.200.32/28
exit
object-group network mgmt_AP
    ip prefix 10.255.244.0/22
    ip prefix 10.255.248.0/22
exit
object-group network clients_AP
    ip prefix 10.255.244.0/22
    ip prefix 10.255.248.0/22
exit

ip vrf ipsec
exit

syslog console none

radius-server timeout 10
radius-server retransmit 5
radius-server host 100.123.0.2
    key ascii-text testing123
    timeout 11
    priority 20
    source-address 10.255.255.6
    auth-port 31812
    acct-port 31813
    retransmit 10
    dead-interval 10
exit
aaa radius-profile PCRF
    radius-server host 100.123.0.2
exit
das-server COA
    key ascii-text testing123
    port 3799
    clients object-group SoftWLC
exit
aaa das-profile COA
    das-server COA
exit

vlan 3
    force-up
exit
vlan 10
    force-up
exit
vlan 5
exit

security zone trusted
exit
```

```
security zone gre
exit
security zone ipsec
    ip vrf forwarding ipsec
exit
security zone untrusted
exit
security zone gre-ipsec
    ip vrf forwarding ipsec
exit
security zone users
exit

ip protocols bgp max-routes 256
route-map out_BGP_AP
    rule 10
        match ip address object-group mgmt_AP
        action permit
    exit
exit
route-map out_BGP_NAT
    rule 10
        match ip address object-group clients_AP
        action permit
    exit
exit
router bgp 64601
    address-family ipv4
        router-id 10.255.255.6
        redistribute connected
        neighbor 10.255.255.5
            remote-as 65001
            route-map out_BGP_AP out
            update-source 10.255.255.6
            enable
        exit
        neighbor 10.255.255.9
            remote-as 65001
            route-map out_BGP_NAT out
            update-source 10.255.255.10
            enable
        exit
    enable
exit
exit

snmp-server
snmp-server system-shutdown
snmp-server community "private1" rw
snmp-server community "public11" ro

snmp-server host 100.123.0.2
exit

snmp-server enable traps
snmp-server enable traps config
snmp-server enable traps config commit
snmp-server enable traps config confirm
snmp-server enable traps environment
snmp-server enable traps environment pwrin
snmp-server enable traps environment pwrin-insert
snmp-server enable traps environment fan
snmp-server enable traps environment fan-speed-changed
snmp-server enable traps environment fan-speed-high
snmp-server enable traps environment memory-flash-critical-low
snmp-server enable traps environment memory-flash-low
snmp-server enable traps environment memory-ram-critical-low
snmp-server enable traps environment memory-ram-low
snmp-server enable traps environment cpu-load
snmp-server enable traps environment cpu-critical-temp
```

```
snmp-server enable traps environment cpu-overheat-temp
snmp-server enable traps environment cpu-supercooling-temp
snmp-server enable traps environment board-overheat-temp
snmp-server enable traps environment board-supercooling-temp
snmp-server enable traps environment sfp-overheat-temp
snmp-server enable traps environment sfp-supercooling-temp
snmp-server enable traps environment switch-overheat-temp
snmp-server enable traps environment switch-supercooling-temp
snmp-server enable traps wifi
snmp-server enable traps wifi wifi-tunnels-number-in-bridge-high
snmp-server enable traps file-operations
snmp-server enable traps file-operations successful
snmp-server enable traps file-operations failed
snmp-server enable traps file-operations canceled
snmp-server enable traps interfaces
snmp-server enable traps interfaces rx-utilization-high
snmp-server enable traps interfaces tx-utilization-high
snmp-server enable traps interfaces number-high
snmp-server enable traps bras
snmp-server enable traps bras sessions-number-high
snmp-server enable traps screen
snmp-server enable traps screen dest-limit
snmp-server enable traps screen source-limit
snmp-server enable traps screen icmp-threshold
snmp-server enable traps screen udp-threshold
snmp-server enable traps screen syn-flood
snmp-server enable traps screen land
snmp-server enable traps screen winnuke
snmp-server enable traps screen icmp-frag
snmp-server enable traps screen udp-frag
snmp-server enable traps screen icmp-large
snmp-server enable traps screen syn-frag
snmp-server enable traps screen unknown-proto
snmp-server enable traps screen ip-frag
snmp-server enable traps screen port-scan
snmp-server enable traps screen ip-sweep
snmp-server enable traps screen syn-fin
snmp-server enable traps screen fin-no-ack
snmp-server enable traps screen no-flag
snmp-server enable traps screen spoofing
snmp-server enable traps screen reserved
snmp-server enable traps screen quench
snmp-server enable traps screen echo-request
snmp-server enable traps screen time-exceeded
snmp-server enable traps screen unreachable
snmp-server enable traps screen tcp-all-flags
snmp-server enable traps entity
snmp-server enable traps entity config-change
snmp-server enable traps entity-sensor
snmp-server enable traps entity-sensor threshold
snmp-server enable traps envmon
snmp-server enable traps envmon fan
snmp-server enable traps envmon shutdown
snmp-server enable traps envmon supply
snmp-server enable traps envmon temperature
snmp-server enable traps flash
snmp-server enable traps flash insertion
snmp-server enable traps flash removal
snmp-server enable traps snmp
snmp-server enable traps snmp authentication
snmp-server enable traps snmp coldstart
snmp-server enable traps snmp linkdown
snmp-server enable traps snmp linkup
snmp-server enable traps syslog
```

```
bridge 1
  vlan 5
  security-zone gre
  ip address 192.168.200.33/28
  ip address 192.168.200.34/28
  enable
```

```
exit
bridge 3
  vlan 3
    security-zone trusted
    ip address 10.255.244.1/22
    ip helper-address 100.123.0.2
    ip tcp adjust-mss 1312
    protected-ports
    protected-ports exclude vlan
    enable
exit
bridge 10
  vlan 10
    security-zone users
    ip address 10.255.248.1/22
    ip helper-address 100.123.0.2
    ip tcp adjust-mss 1312
    location AP1
    protected-ports
    protected-ports exclude vlan
    enable
exit

interface port-channel 1
  mode hybrid
  speed 10G
  switchport forbidden default-vlan
  switchport general pvid 5
  switchport general allowed vlan add 5 untagged
exit
interface port-channel 2
  ip vrf forwarding ipsec
  mode hybrid
  speed 10G
  security-zone gre-ipsec
  ip address 192.168.200.35/28
exit
interface tengigabitethernet 1/0/1
  description "UpLink"
exit
interface tengigabitethernet 1/0/1.4081
  description "VRF_backbone"
  security-zone trusted
  ip address 10.255.255.6/30
  ip tcp adjust-mss 1312
exit
interface tengigabitethernet 1/0/1.4082
  description "VRF_nat"
  security-zone untrusted
  ip address 10.255.255.10/30
exit
interface tengigabitethernet 1/0/1.4092
  ip vrf forwarding ipsec
  description "VRF_ipsec"
  security-zone ipsec
  ip address 10.12.20.3/28
exit
interface tengigabitethernet 1/0/2
  mode hybrid
  channel-group 1 mode auto
exit
interface tengigabitethernet 1/0/3
  mode hybrid
  channel-group 1 mode auto
exit
interface tengigabitethernet 1/0/6
  mode hybrid
  channel-group 2 mode auto
exit
interface tengigabitethernet 1/0/7
  mode hybrid
```

```
channel-group 2 mode auto
exit
interface service-port 1
service-policy dynamic
exit
tunnel softgre 1
description "managment_AP"
mode management
local address 192.168.200.33
default-profile
enable
exit
tunnel softgre 1.1
bridge-group 3
enable
exit
tunnel softgre 2
description "data_AP"
mode data
local address 192.168.200.34
default-profile
enable
exit

port-channel load-balance src-dst-ip

security zone-pair trusted self
rule 10
action permit
enable
exit
exit
security zone-pair users self
rule 10
action permit
match protocol udp
match source-port dhcp_client
match destination-port dhcp_server
enable
exit
rule 20
action permit
match protocol tcp
match destination-port redirect
enable
exit
exit
security zone-pair gre self
rule 10
action permit
match protocol gre
match source-address ipsec_remote_address
match destination-address gre_termination
enable
exit
rule 20
action permit
match protocol icmp
enable
exit
exit
security zone-pair users trusted
rule 10
action permit
match protocol udp
match source-port dhcp_client
match destination-port dhcp_server
enable
exit
rule 20
action permit
```

```
    match protocol udp
    match destination-port dns
    enable
  exit
exit
security zone-pair ipsec self
  rule 10
    action permit
    match protocol udp
    match destination-port ipsec_ports
    enable
  exit
  rule 20
    action permit
    match protocol esp
    enable
  exit
  rule 30
    action permit
    match protocol icmp
    enable
  exit
exit
security zone-pair trusted trusted
  rule 10
    action permit
    enable
  exit
exit
security zone-pair users untrusted
  rule 10
    action permit
    enable
  exit
exit
security zone-pair untrusted self
  rule 10
    action permit
    match protocol icmp
    enable
  exit
  rule 20
    action permit
    match protocol tcp
    match destination-port bgp
    enable
  exit
exit
security zone-pair ipsec gre-ipsec
  rule 10
    action permit
    match protocol gre
    match source-address ipsec_remote_address
    match destination-address gre_termination
    enable
  exit
exit
security zone-pair gre-ipsec ipsec
  rule 10
    action permit
    match protocol icmp
    enable
  exit
exit
security zone-pair gre-ipsec self
  rule 10
    action permit
    match protocol icmp
    enable
  exit
exit
```



```
address-assignment pool ipsec_pool_1
  ip prefix 172.31.0.0/21
  data-tunnel address 192.168.200.34
  management-tunnel address 192.168.200.33
exit
```

```
security ike proposal dh1_md5_aes128
  authentication algorithm md5
  encryption algorithm aes128
exit
```

```
security ike policy psk_xauth
  lifetime seconds 86400
  pre-shared-key ascii-text testing123
  authentication method xauth-psk-key
  authentication mode radius
  proposal dh1_md5_aes128
exit
```

```
security ike gateway xauth_ike
  ike-policy psk_xauth
  local address 10.12.20.3
  local network 192.168.200.32/28
  remote address any
  remote network dynamic pool ipsec_pool_1
  mode policy-based
  dead-peer-detection action clear
  dead-peer-detection interval 60
  dead-peer-detection timeout 180
exit
```

```
security ipsec proposal md5_aes128_esp
  authentication algorithm md5
  encryption algorithm aes128
exit
```

```
security ipsec policy ipsec_pol
  proposal md5_aes128_esp
exit
```

```
security ipsec vpn xauth_ipsec
  mode ike
  ip vrf forwarding ipsec
  ike establish-tunnel by-request
  ike gateway xauth_ike
  ike ipsec-policy ipsec_pol
  enable
exit
```

```
security passwords history 0
ip dhcp-relay
```

```
ip route 172.31.0.0/21 192.168.200.35
ip route vrf ipsec 0.0.0.0 10.12.20.2
```

```
wireless-controller
  nas-ip-address 10.255.255.6
  resp-time 3
  failure-count 3
  data-tunnel configuration radius
  aaa das-profile COA
  aaa radius-profile PCRF
  enable
exit
ip telnet server
ip ssh server
```

```
clock timezone gmt +7
```

```
ntp enable
```

```
ntp server 100.123.0.2  
exit
```