



Sample L3 Interchassis HA Configuration

This chapter provides a sample interchassis wsg-service High Availability (HA) configuration for SecGW functionality between four VPC-VSM instances (StarOS VMs) running on VSMs in separate ASR 9000 chassis.

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Configuration Overview

Interchassis Layer 3 redundancy supports hot standby redundancy between two VPC-VSM instances in different ASR 9000 chassis. The standby instance is ready to become active once a switchover is triggered. SA re-negotiation is not required and traffic loss is minimal.

- The route database on the standby VSM must contain only the routes that were successfully injected by the active VSM.
- L3-based HA SecGW deployment uses the onePK Routing Service Set (RSS) infrastructure to support geo-redundancy. It does this by inserting the necessary routes on the ASR 9000 RSP. The RSP then distributes the relevant routes outwardly such that external traffic would reach the active VSM instead of the standby VSM.
- For Layer 3 redundancy, the routes are injected via IOS-XR as two legs. Only the first leg of the routes is injected to IOS-XR running on the chassis with the standby VSM. The small set of secondary leg routes are reconfigured to point to the newly active VSM after the switchover.

Because of the asymmetric assignment of VSM resources among StarOS VMs, an operator should configure one-to-one mapping between StarOS VMs across active/standby VSMs in different ASR 9000 chassis. See the table below.

Table 1: Recommended Mapping of Interchassis StarOS VMs

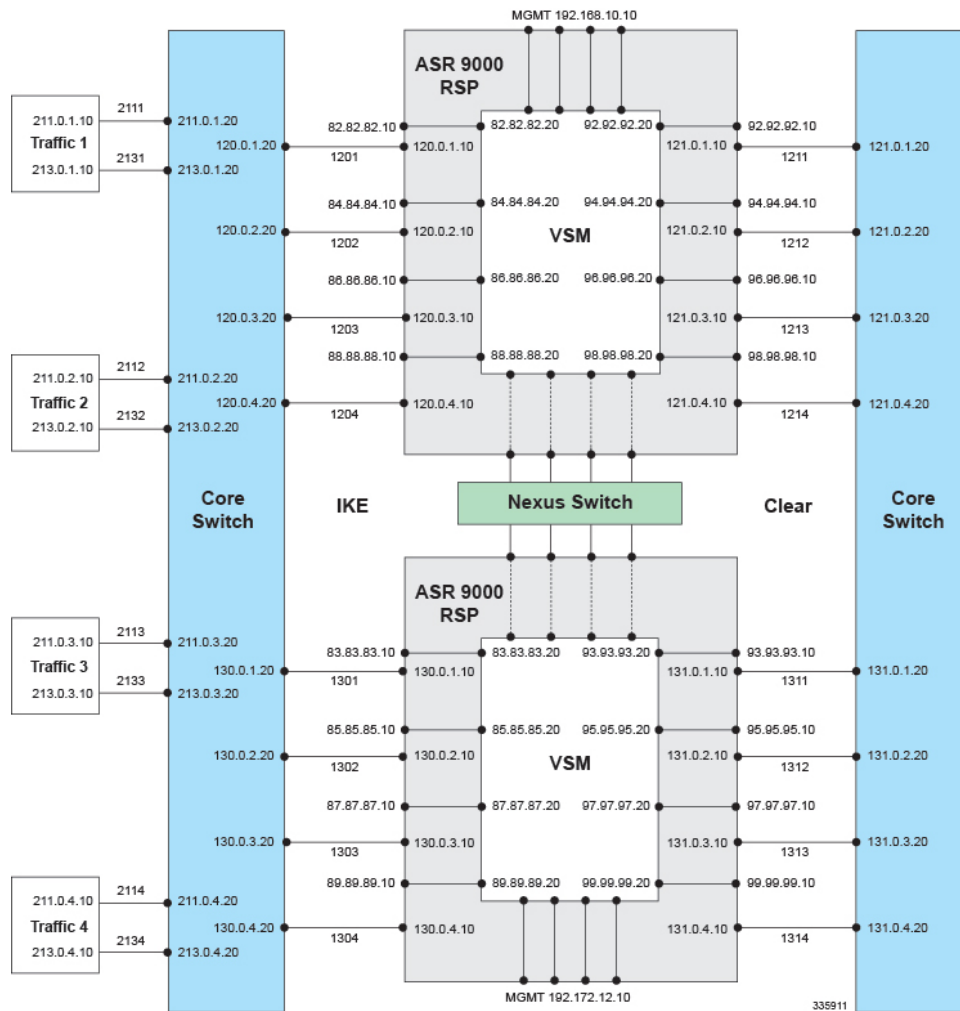
Active VSM	Standby VSM
VM1 – SecGW1	VM1 – SecGW1
VM2 – SecGW2	VM2 – SecGW2
VM3 – SecGW3	VM3 – SecGW3
VM4 – SecGW4	VM4 – SecGW4

Each VM will be monitored via separate HSRP configurations and connected to separate oneP (CA) sessions so that switchover of one VM will not affect the other VMs.

Sample ASR 9000 chassis RSP configurations are provided for primary and standby chassis.

The sample configurations provided for an SecGW VM (Virtual Machine) configuration must be replicated on each CPU-VM complex on both the active and standby VSMs. Each VSM supports four CPU-VM complexes (SecGWs).

Figure 1: Network Diagram for Sample L3 HA Configuration



ASR 9000 Chassis RSP Configuration (IOS-XR)



Important

Primary and standby ASR 9000 chassis must be configured to handle the SecGWs (CPU-VM complexes) running on ASR 9000 VSMs. There are four CPU-VM complexes per VSM.

The sample configurations must be applied to the primary and backup ASR 9000 chassis. Each chassis will have unique and shared IP addresses to assure high availability across chassis.

Notes:

- Set basic chassis parameters
- Enable virtual services and assign virtual interfaces for each CPU-VM complex.
- Configure physical Gigabit Ethernet (GigE) ASR 9000 interfaces. Shutdown unused ports.
- Configure a GigE public interface (with VLANs) for IKE and ESP traffic on each CPU-VM complex.
- Configure a GigE private interface (with VLANs) for clear traffic on each CPU-VM complex.
- Configure a 10 Gigabit Ethernet (10GigE) interface for IKE and ESP traffic on each CPU-VM complex. Shut down unused ports.
 - Configure a VLAN on this interface for clear and SRP traffic.
 - Configure a VLAN on this interface for SRP traffic.
 - Configure a VLAN on this interface for clear traffic
- Configure a Bridged Virtual Interface (BVI) for the chassis. A BVI interface configured on the RSP is used as the sess-ip-address in all four SecGW(s) for bringing up the oneP session between the RSP and SecGW.
- Configure routing policies for pass and block traffic.
- Configure static IPv4 and IPV6 addresses.
- Configure BGP routing.
- Configure an L2 VPN.
- Configure HSRP tracking for each CPU-VM complex (shared parameters across ASR 9000 chassis).
- Configure IP Service Level Agreement (SLA) operations.

ASR 9000 Primary Chassis

```

IOS XR Configuration 5.2.2
Last configuration change at <timestamp> by root

hostname <ASR9K_primary_hostname>
tftp vrf default ipv4 server homedir disk0:
telnet vrf default ipv4 server max-servers 100
domain name <domain_name>
line console
  exec-timeout 0 0
  length 50
  absolute-timeout 10000
  session-timeout 35791

line default
  exec-timeout 0 0
  length 50

vty-pool default 0 50 line-template default
onep
  transport type tls localcert onep-tp disable-remotecert-validation

virtual-service enable

```

```
virtual-service secgw1
  vnic interface TenGigE0/3/1/0
  vnic interface TenGigE0/3/1/1
  vnic interface TenGigE0/3/1/2
  activate

virtual-service secgw2
  vnic interface TenGigE0/3/1/3
  vnic interface TenGigE0/3/1/4
  vnic interface TenGigE0/3/1/5
  activate

virtual-service secgw3
  vnic interface TenGigE0/3/1/6
  vnic interface TenGigE0/3/1/7
  vnic interface TenGigE0/3/1/8
  activate

virtual-service secgw4
  vnic interface TenGigE0/3/1/9
  vnic interface TenGigE0/3/1/10
  vnic interface TenGigE0/3/1/11
  activate

ntp
  server 10.78.1.30
  server 64.104.193.12

interface Loopback1
  ipv4 address 65.65.65.1 255.255.255.255

interface MgmtEth0/RSP0/CPU0/0
  ipv4 address 10.78.1.20 255.255.255.0

interface MgmtEth0/RSP0/CPU0/1
  ipv4 address 8.40.2.10 255.255.0.0

interface GigabitEthernet0/2/0/0
  description "Public Interface: IKE and ESP Traffic"
  transceiver permit pid all
  dot1q tunneling ethertype 0x9200

interface GigabitEthernet0/2/0/0.1201
  description "Public Interface: IKE and ESP Traffic - VM1"
  ipv4 address 120.0.1.10 255.255.255.0
  ipv6 address 1201::10/64
  ipv6 enable
  encapsulation dot1q 1201

interface GigabitEthernet0/2/0/0.1202
  description "Public Interface: IKE and ESP Traffic - VM2"
  ipv4 address 120.0.2.10 255.255.255.0
  ipv6 address 1202::10/64
```

```
    ipv6 enable
    encapsulation dot1q 1202

interface GigabitEthernet0/2/0/0.1203
    description "Public Interface: IKE and ESP Traffic - VM3"
    ipv4 address 120.0.3.10 255.255.255.0
    ipv6 address 1203::10/64
    ipv6 enable
    encapsulation dot1q 1203

interface GigabitEthernet0/2/0/0.1204
    description "Public Interface: IKE and ESP Traffic - VM4"
    ipv4 address 120.0.4.10 255.255.255.0
    ipv6 address 1204::10/64
    ipv6 enable
    encapsulation dot1q 1204

interface GigabitEthernet0/2/0/1
    speed 1000
    transceiver permit pid all
    l2transport

interface GigabitEthernet0/2/0/2
    shutdown

interface GigabitEthernet0/2/0/3
    description "Private Interface, Clear Traffic"
    transceiver permit pid all
    dot1q tunneling ethertype 0x9200

interface GigabitEthernet0/2/0/3.1211
    description "Private Interface, Clear Traffic - VM1"
    ipv4 address 121.0.1.10 255.255.255.0
    ipv6 address 1211::10/64
    ipv6 enable
    encapsulation dot1q 1211

interface GigabitEthernet0/2/0/3.1212
    description "Private Interface, Clear Traffic - VM2"
    ipv4 address 121.0.2.10 255.255.255.0
    ipv6 address 1212::10/64
    ipv6 enable
    encapsulation dot1q 1212

interface GigabitEthernet0/2/0/3.1213
    description "Private Interface, Clear Traffic - VM3"
    ipv4 address 121.0.3.10 255.255.255.0
    ipv6 address 1213::10/64
    ipv6 enable
    encapsulation dot1q 1213

interface GigabitEthernet0/2/0/3.1214
```

```
description "Private Interface, Clear Traffic - VM4"
ipv4 address 121.0.4.10 255.255.255.0
ipv6 address 1214::10/64
ipv6 enable
encapsulation dot1q 1214

interface GigabitEthernet0/2/0/4
shutdown

interface GigabitEthernet0/2/0/5
shutdown

interface GigabitEthernet0/2/0/6
shutdown

interface GigabitEthernet0/2/0/7
shutdown

interface GigabitEthernet0/2/0/8
shutdown

interface GigabitEthernet0/2/0/9
shutdown

interface GigabitEthernet0/2/0/10
shutdown

interface GigabitEthernet0/2/0/11
shutdown

interface GigabitEthernet0/2/0/12
shutdown

interface GigabitEthernet0/2/0/13
shutdown

interface GigabitEthernet0/2/0/14
shutdown

interface GigabitEthernet0/2/0/15
shutdown

interface GigabitEthernet0/2/0/16
shutdown

interface GigabitEthernet0/2/0/17
shutdown

interface GigabitEthernet0/2/0/18
speed 1000
transceiver permit pid all
dot1q tunneling ethertype 0x9200

interface GigabitEthernet0/2/0/18.2061
ipv4 address 206.0.1.20 255.255.255.0
```

```
    ipv6 address 2026::20/64
    ipv6 enable
    encapsulation dot1q 2061

interface GigabitEthernet0/2/0/18.2062
    ipv4 address 206.0.2.20 255.255.255.0
    ipv6 address 2022::20/64
    ipv6 enable
    encapsulation dot1q 2062

interface GigabitEthernet0/2/0/18.2063
    ipv4 address 206.0.3.20 255.255.255.0
    ipv6 address 2023::20/64
    ipv6 enable
    encapsulation dot1q 2063

interface GigabitEthernet0/2/0/18.2064
    ipv4 address 206.0.4.20 255.255.255.0
    ipv6 address 2024::20/64
    ipv6 enable
    encapsulation dot1q 2064

interface GigabitEthernet0/2/0/18.2065
    ipv4 address 206.0.5.20 255.255.255.0
    ipv6 address 2025::20/64
    ipv6 enable
    encapsulation dot1q 2065

interface GigabitEthernet0/2/0/19
    shutdown

interface TenGigE0/1/1/0
    shutdown

interface TenGigE0/1/1/1
    shutdown

interface TenGigE0/1/1/2
    shutdown

interface TenGigE0/1/1/3
    shutdown

interface TenGigE0/1/1/4
    shutdown

interface TenGigE0/1/1/5
    shutdown

interface TenGigE0/1/1/6
    shutdown

interface TenGigE0/1/1/7
    shutdown
```

```
interface TenGigE0/1/1/8
  shutdown

interface TenGigE0/1/1/9
  shutdown

interface TenGigE0/1/1/10
  shutdown

interface TenGigE0/1/1/11
  shutdown

interface TenGigE0/3/1/0
  description "IKE traffic VM1"
  transceiver permit pid all
  dot1q tunneling ethertype 0x9200

interface TenGigE0/3/1/0.1201
  description "IKE traffic for VM1"
  ipv4 address 82.82.82.10 255.255.255.0
  ipv6 address 2082::10/64
  encapsulation dot1q 1201

interface TenGigE0/3/1/1
  description "Clear and srp traffic VM1"
  transceiver permit pid all
  dot1q tunneling ethertype 0x9200

interface TenGigE0/3/1/1.1211
  description "clear traffic VM1"
  ipv4 address 92.92.92.10 255.255.255.0
  ipv6 address 2092::10/64
  encapsulation dot1q 1211

interface TenGigE0/3/1/1.1221
  description "srp traffic VM1"
  ipv4 address 72.72.72.10 255.255.255.0
  ipv6 address 2071::10/64
  encapsulation dot1q 1221

interface TenGigE0/3/1/2
  transceiver permit pid all
  l2transport

interface TenGigE0/3/1/3
  description "IKE traffic VM2"
  transceiver permit pid all
  dot1q tunneling ethertype 0x9200

interface TenGigE0/3/1/3.1202
  description "IKE traffic for VM2"
  ipv4 address 84.84.84.10 255.255.255.0
```



```
    ipv6 address 2084::10/64
    encapsulation dot1q 1202

interface TenGigE0/3/1/4
    description "Clear and srp traffic VM2"
    transceiver permit pid all
    dot1q tunneling ethertype 0x9200

interface TenGigE0/3/1/4.1212
    description "clear traffic VM2"
    ipv4 address 94.94.94.10 255.255.255.0
    ipv6 address 2094::10/64
    encapsulation dot1q 1212

interface TenGigE0/3/1/4.1222
    description "srp traffic VM2"
    ipv4 address 74.74.74.10 255.255.255.0
    ipv6 address 2074::10/64
    encapsulation dot1q 1222

interface TenGigE0/3/1/5
    transceiver permit pid all
    l2transport

interface TenGigE0/3/1/6
    description "IKE traffic VM3"
    transceiver permit pid all
    dot1q tunneling ethertype 0x9200

interface TenGigE0/3/1/6.1203
    description "IKE traffic for VM3"
    ipv4 address 86.86.86.10 255.255.255.0
    ipv6 address 2086::10/64
    encapsulation dot1q 1203

interface TenGigE0/3/1/7
    description "Clear and srp traffic VM3"
    transceiver permit pid all
    dot1q tunneling ethertype 0x9200

interface TenGigE0/3/1/7.1213
    description "clear traffic VM3"
    ipv4 address 96.96.96.10 255.255.255.0
    ipv6 address 2096::10/64
    encapsulation dot1q 1213

interface TenGigE0/3/1/7.1223
    description "srp traffic VM3"
    ipv4 address 76.76.76.10 255.255.255.0
    ipv6 address 2076::10/64
    encapsulation dot1q 1223

interface TenGigE0/3/1/8
```

```
transceiver permit pid all
l2transport

interface TenGigE0/3/1/9
  description "IKE traffic VM4"
  transceiver permit pid all
  dot1q tunneling ethertype 0x9200

interface TenGigE0/3/1/9.1204
  description "IKE traffic for VM4"
  ipv4 address 88.88.88.10 255.255.255.0
  ipv6 address 2088::10/64
  encapsulation dot1q 1204

interface TenGigE0/3/1/10
  description "Clear and srp traffic VM4"
  transceiver permit pid all
  dot1q tunneling ethertype 0x9200

interface TenGigE0/3/1/10.1214
  description "clear traffic VM4"
  ipv4 address 98.98.98.10 255.255.255.0
  ipv6 address 2098::10/64
  encapsulation dot1q 1214

interface TenGigE0/3/1/10.1224
  description "srp traffic VM4"
  ipv4 address 78.78.78.10 255.255.255.0
  ipv6 address 2078::10/64
  encapsulation dot1q 1224

interface TenGigE0/3/1/11
  transceiver permit pid all
  l2transport

interface BVI1
  ipv4 address 192.168.10.10 255.255.255.0

interface preconfigure TenGigE0/0/1/0
  shutdown

interface preconfigure TenGigE0/0/1/1
  shutdown

interface preconfigure TenGigE0/0/1/2
  shutdown

interface preconfigure TenGigE0/0/1/3
  shutdown

interface preconfigure TenGigE0/0/1/4
  shutdown
```

```
interface preconfigure TenGigE0/0/1/5
  shutdown

interface preconfigure TenGigE0/0/1/6
  shutdown

interface preconfigure TenGigE0/0/1/7
  shutdown

interface preconfigure TenGigE0/0/1/8
  shutdown

interface preconfigure TenGigE0/0/1/9
  shutdown

interface preconfigure TenGigE0/0/1/10
  shutdown

interface preconfigure TenGigE0/0/1/11
  shutdown

route-policy pass-all
  pass
end-policy

route-policy block-ike-01
  if destination in (23.23.23.23/32 le 32) then
    drop
  endif
  if destination in (2023::23/128 le 128) then
    drop
  endif
  pass
end-policy

route-policy block-ike-02
  if destination in (33.33.33.33/32 le 32) then
    drop
  endif
  if destination in (2033::33/128 le 128) then
    drop
  endif
  pass
end-policy

route-policy block-ike-03
  if destination in (43.43.43.43/32 le 32) then
    drop
  endif
  if destination in (2043::43/128 le 128) then
    drop
  endif
  pass
```

```
end-policy

route-policy block-ike-04
  if destination in (53.53.53.53/32 le 32) then
    drop
  endif
  if destination in (2053::53/128 le 128) then
    drop
  endif
  pass
end-policy

route-policy pass-only-ike-01
  if destination in (23.23.23.23/32 le 32) then
    pass
  endif
  if destination in (2023::23/128 le 128) then
    pass
  endif
end-policy

route-policy pass-only-ike-02
  if destination in (33.33.33.33/32 le 32) then
    pass
  endif
  if destination in (2033::33/128 le 128) then
    pass
  endif
end-policy

route-policy pass-only-ike-03
  if destination in (43.43.43.43/32 le 32) then
    pass
  endif
  if destination in (2043::43/128 le 128) then
    pass
  endif
end-policy

route-policy pass-only-ike-04
  if destination in (53.53.53.53/32 le 32) then
    pass
  endif
  if destination in (2053::53/128 le 128) then
    pass
  endif
end-policy

router static
  address-family ipv4 unicast
    10.0.0.0/8 10.78.1.1
    10.78.27.0/24 10.78.1.1
    11.0.0.0/8 120.0.1.20
```

```
15.0.0.0/8 120.0.2.20
17.0.0.0/8 120.0.3.20
19.0.0.0/8 120.0.4.20
64.0.0.0/8 10.78.1.1
65.65.0.0/16 121.0.1.20
66.66.0.0/16 121.0.2.20
67.67.0.0/16 121.0.3.20
68.68.0.0/16 121.0.4.20
73.73.73.0/24 206.0.1.30
75.75.75.0/24 206.0.1.30
77.77.77.0/24 206.0.1.30
79.79.79.0/24 206.0.1.30
202.153.144.25/32 8.40.0.1
211.0.1.0/24 120.0.1.20
211.0.2.0/24 120.0.2.20
211.0.3.0/24 120.0.3.20
211.0.4.0/24 120.0.4.20
213.0.1.0/24 121.0.1.20
213.0.2.0/24 121.0.2.20
213.0.3.0/24 121.0.3.20
213.0.4.0/24 121.0.4.20
```

```
router bgp 2000
  bgp router-id 2.2.2.2
  address-family ipv4 unicast
    redistribute application hsrp
    redistribute application hsrp-2-1
    redistribute application hsrp-2-2
    redistribute application hsrp-2-3
    redistribute application hsrp-2-4
    allocate-label all

  address-family ipv6 unicast
    redistribute application hsrp
    allocate-label all

  neighbor 120.0.1.20
    remote-as 6000
    address-family ipv4 unicast
      route-policy pass-only-ike-01 out

  neighbor 120.0.2.20
    remote-as 6000
    address-family ipv4 unicast
      route-policy pass-only-ike-02 out

  neighbor 120.0.3.20
    remote-as 6000
    address-family ipv4 unicast
      route-policy pass-only-ike-03 out
```

```
neighbor 120.0.4.20
  remote-as 6000
  address-family ipv4 unicast
    route-policy pass-only-ike-04 out

neighbor 121.0.1.20
  remote-as 6000
  address-family ipv4 unicast
    route-policy block-ike-01 out

neighbor 121.0.2.20
  remote-as 6000
  address-family ipv4 unicast
    route-policy block-ike-02 out

neighbor 121.0.3.20
  remote-as 6000
  address-family ipv4 unicast
    route-policy block-ike-03 out

neighbor 121.0.4.20
  remote-as 6000
  address-family ipv4 unicast
    route-policy block-ike-04 out

l2vpn
  xconnect group wsg

  bridge group wsg
    bridge-domain mgmt
      interface TenGigE0/3/1/2

      interface TenGigE0/3/1/5

      interface TenGigE0/3/1/8

      interface TenGigE0/3/1/11

      interface GigabitEthernet0/2/0/1

      routed interface BVI1

router hsrp
  interface GigabitEthernet0/2/0/18.2062
    address-family ipv4
      hsrp 401
```

```
timers msec 300 msec 900
preempt
priority 101
address 206.0.2.110
track object PublicHsrp
track object WsgIPsla-1
track object PrivateHsrp

interface GigabitEthernet0/2/0/18.2063
address-family ipv4
hsrp 402
timers msec 300 msec 900
preempt
priority 101
address 206.0.3.120
track object PublicHsrp
track object WsgIPsla-2
track object PrivateHsrp

interface GigabitEthernet0/2/0/18.2064
address-family ipv4
hsrp 403
timers msec 300 msec 900
preempt
priority 101
address 206.0.4.130
track object PublicHsrp
track object WsgIPsla-3
track object PrivateHsrp

interface GigabitEthernet0/2/0/18.2065
address-family ipv4
hsrp 404
timers msec 300 msec 900
preempt
priority 101
address 206.0.5.140
track object PublicHsrp
track object WsgIPsla-4
track object PrivateHsrp

crypto ca trustpoint onep-tp
crl optional
subject-name CN=<ASR9K_primary_hostname>.<domain_name>
enrollment url terminal
```

```
ipsla
  operation 100
    type icmp echo
    destination address 82.82.82.100
    timeout 300
  frequency 1

  operation 200
    type icmp echo
    destination address 84.84.84.100
    timeout 300
  frequency 1

  operation 300
    type icmp echo
    destination address 86.86.86.100
    timeout 300
  frequency 1

  operation 400
    type icmp echo
    destination address 88.88.88.100
    timeout 300
  frequency 1

  schedule operation 100
    start-time now
    life forever

  schedule operation 200
    start-time now
    life forever

  schedule operation 300
    start-time now
    life forever

  schedule operation 400
    start-time now
    life forever

track PublicHsrp
  type line-protocol state
  interface GigabitEthernet0/2/0/0

  delay up 1
  delay down 1

track WsgIPsla-1
```



```
        type rtr 100 reachability
        delay up 1
        delay down 1

track WsgIPsla-2
    type rtr 200 reachability
    delay up 1
    delay down 1

track WsgIPsla-3
    type rtr 300 reachability
    delay up 1
    delay down 1

track WsgIPsla-4
    type rtr 400 reachability
    delay up 1
    delay down 1

track PrivateHsrp
    type line-protocol state
        interface GigabitEthernet0/2/0/3

    delay up 1
    delay down 1

end
```

ASR 9000 Backup Chassis

```
IOS XR Configuration 5.2.2
Last configuration change at<timestamp> by root

hostname <ASR9K_backup_hostname>
logging events level informational
tftp vrf default ipv4 server homedir disk0: max-servers 10
telnet vrf default ipv4 server max-servers 100
domain name <domain_name>
cdp advertise v1
vrf clear

line console
    exec-timeout 0 0
    length 50
    session-timeout 35791

line default
    exec-timeout 0 0
    length 50
    absolute-timeout 10000
    session-timeout 35791
```

```

vty-pool default 0 50 line-template default
onep
  transport type tls localcert onep-tp disable-remotecert-validation

virtual-service enable
virtual-service secgw1
  vnic interface TenGigE0/1/1/0
  vnic interface TenGigE0/1/1/1
  vnic interface TenGigE0/1/1/2
  activate

virtual-service secgw2
  vnic interface TenGigE0/1/1/3
  vnic interface TenGigE0/1/1/4
  vnic interface TenGigE0/1/1/5
  activate

virtual-service secgw3
  vnic interface TenGigE0/1/1/6
  vnic interface TenGigE0/1/1/7
  vnic interface TenGigE0/1/1/8
  activate

virtual-service secgw4
  vnic interface TenGigE0/1/1/9
  vnic interface TenGigE0/1/1/10
  vnic interface TenGigE0/1/1/11
  activate

interface Loopback1
  ipv4 address 65.65.65.1 255.255.255.255

interface MgmtEth0/RSP0/CPU0/0
  ipv4 address 10.78.1.30 255.255.255.0

interface MgmtEth0/RSP0/CPU0/1
  ipv4 address 8.40.4.100 255.255.0.0

interface GigabitEthernet0/2/0/0
  description "Private Interface: IKE and ESP Traffic"
  transceiver permit pid all
  dot1q tunneling ethertype 0x9200

interface GigabitEthernet0/2/0/0.1301
  description "Private Interface: IKE and ESP Traffic - VM1"
  ipv4 address 130.0.1.10 255.255.255.0
  ipv6 address 1301::10/64
  ipv6 enable
  encapsulation dot1q 1301

interface GigabitEthernet0/2/0/0.1302
  description "Private Interface: IKE and ESP Traffic - VM2"
  ipv4 address 130.0.2.10 255.255.255.0

```

```
    ipv6 address 1302::10/64
    ipv6 enable
    encapsulation dot1q 1302

interface GigabitEthernet0/2/0/0.1303
    description "Private Interface: IKE and ESP Traffic - VM3"
    ipv4 address 130.0.3.10 255.255.255.0
    ipv6 address 1303::10/64
    ipv6 enable
    encapsulation dot1q 1303

interface GigabitEthernet0/2/0/0.1304
    description "Private Interface: IKE and ESP Traffic - VM4"
    ipv4 address 130.0.4.10 255.255.255.0
    ipv6 address 1304::10/64
    ipv6 enable
    encapsulation dot1q 1304

interface GigabitEthernet0/2/0/1
    description "Public Interface, Clear Traffic"
    transceiver permit pid all
    dot1q tunneling ethertype 0x9200

interface GigabitEthernet0/2/0/1.1311
    description "Public Interface, Clear Traffic - VM1"
    ipv4 address 131.0.1.10 255.255.255.0
    ipv6 address 1311::10/64
    ipv6 enable
    encapsulation dot1q 1311

interface GigabitEthernet0/2/0/1.1312
    description "Public Interface, Clear Traffic - VM2"
    ipv4 address 131.0.2.10 255.255.255.0
    ipv6 address 1312::10/64
    ipv6 enable
    encapsulation dot1q 1312

interface GigabitEthernet0/2/0/1.1313
    description "Public Interface, Clear Traffic - VM3"
    ipv4 address 131.0.3.10 255.255.255.0
    ipv6 address 1313::10/64
    ipv6 enable
    encapsulation dot1q 1313

interface GigabitEthernet0/2/0/1.1314
    description "Public Interface, Clear Traffic - VM4"
    ipv4 address 131.0.4.10 255.255.255.0
    ipv6 address 1314::10/64
    ipv6 enable
    encapsulation dot1q 1314

interface GigabitEthernet0/2/0/2
    speed 1000
```

```
transceiver permit pid all
l2transport

interface GigabitEthernet0/2/0/3
shutdown

interface GigabitEthernet0/2/0/4
shutdown

interface GigabitEthernet0/2/0/5
shutdown

interface GigabitEthernet0/2/0/6
shutdown

interface GigabitEthernet0/2/0/7
shutdown

interface GigabitEthernet0/2/0/8
shutdown

interface GigabitEthernet0/2/0/9
shutdown

interface GigabitEthernet0/2/0/10
shutdown

interface GigabitEthernet0/2/0/11
shutdown

interface GigabitEthernet0/2/0/12
shutdown

interface GigabitEthernet0/2/0/13
shutdown

interface GigabitEthernet0/2/0/14
shutdown

interface GigabitEthernet0/2/0/15
shutdown

interface GigabitEthernet0/2/0/16
shutdown

interface GigabitEthernet0/2/0/17
shutdown

interface GigabitEthernet0/2/0/18
speed 1000
transceiver permit pid all
dot1q tunneling ethertype 0x9200

interface GigabitEthernet0/2/0/18.2061
```

```
    ipv4 address 206.0.1.30 255.255.255.0
    ipv6 address 2026::30/64
    encapsulation dot1q 2061

interface GigabitEthernet0/2/0/18.2062
    ipv4 address 206.0.2.30 255.255.255.0
    ipv6 address 2022::30/64
    ipv6 enable
    encapsulation dot1q 2062

interface GigabitEthernet0/2/0/18.2063
    ipv4 address 206.0.3.30 255.255.255.0
    ipv6 address 2023::30/64
    ipv6 enable
    encapsulation dot1q 2063

interface GigabitEthernet0/2/0/18.2064
    ipv4 address 206.0.4.30 255.255.255.0
    ipv6 address 2024::30/64
    ipv6 enable
    encapsulation dot1q 2064

interface GigabitEthernet0/2/0/18.2065
    ipv4 address 206.0.5.30 255.255.255.0
    ipv6 address 2025::30/64
    ipv6 enable
    encapsulation dot1q 2065

interface GigabitEthernet0/2/0/19
    shutdown

interface TenGigE0/1/1/0
    description "IKE traffic VM1"
    transceiver permit pid all
    dot1q tunneling ethertype 0x9200

interface TenGigE0/1/1/0.1301
    description "IKE traffic for VM1"
    ipv4 address 83.83.83.10 255.255.255.0
    ipv6 address 2083::10/64
    encapsulation dot1q 1301

interface TenGigE0/1/1/1
    description "Clear and srp traffic VM1"
    transceiver permit pid all
    dot1q tunneling ethertype 0x9200

interface TenGigE0/1/1/1.1311
    description "clear traffic VM1"
    ipv4 address 93.93.93.10 255.255.255.0
    ipv6 address 2093::10/64
    encapsulation dot1q 1311
```

```
interface TenGigE0/1/1/1.1321
  description "srp traffic VM1"
  ipv4 address 73.73.73.10 255.255.255.0
  ipv6 address 2071::10/64
  encapsulation dot1q 1321

interface TenGigE0/1/1/2
  transceiver permit pid all
  l2transport

interface TenGigE0/1/1/3
  description "IKE traffic VM2"
  transceiver permit pid all
  dot1q tunneling ethertype 0x9200

interface TenGigE0/1/1/3.1302
  description "IKE traffic for VM2"
  ipv4 address 85.85.85.10 255.255.255.0
  ipv6 address 2085::10/64
  encapsulation dot1q 1302

interface TenGigE0/1/1/4
  description "Clear and srp traffic VM2"
  transceiver permit pid all
  dot1q tunneling ethertype 0x9200

interface TenGigE0/1/1/4.1312
  description "clear traffic VM2"
  ipv4 address 95.95.95.10 255.255.255.0
  ipv6 address 2095::10/64
  encapsulation dot1q 1312

interface TenGigE0/1/1/4.1322
  description "srp traffic VM2"
  ipv4 address 75.75.75.10 255.255.255.0
  ipv6 address 2075::10/64
  encapsulation dot1q 1322

interface TenGigE0/1/1/5
  transceiver permit pid all
  l2transport

interface TenGigE0/1/1/6
  description "IKE traffic VM3"
  transceiver permit pid all
  dot1q tunneling ethertype 0x9200

interface TenGigE0/1/1/6.1303
  description "IKE traffic for VM3"
  ipv4 address 87.87.87.10 255.255.255.0
  ipv6 address 2087::10/64
  encapsulation dot1q 1303
```

```
interface TenGigE0/1/1/7
  description "Clear and srp traffic VM3"
  transceiver permit pid all
  dot1q tunneling ethertype 0x9200

interface TenGigE0/1/1/7.1313
  description "clear traffic VM3"
  ipv4 address 97.97.97.10 255.255.255.0
  ipv6 address 2097::10/64
  encapsulation dot1q 1313

interface TenGigE0/1/1/7.1323
  description "srp traffic VM3"
  ipv4 address 77.77.77.10 255.255.255.0
  ipv6 address 2077::10/64
  encapsulation dot1q 1323

interface TenGigE0/1/1/8
  transceiver permit pid all
  l2transport

interface TenGigE0/1/1/9
  description "IKE traffic VM4"
  transceiver permit pid all
  dot1q tunneling ethertype 0x9200

interface TenGigE0/1/1/9.1304
  description "IKE traffic for VM4"
  ipv4 address 89.89.89.10 255.255.255.0
  ipv6 address 2089::10/64
  encapsulation dot1q 1304

interface TenGigE0/1/1/10
  description "Clear and srp traffic VM4"
  transceiver permit pid all
  dot1q tunneling ethertype 0x9200

interface TenGigE0/1/1/10.1314
  description "clear traffic VM4"
  ipv4 address 99.99.99.10 255.255.255.0
  ipv6 address 2099::10/64
  encapsulation dot1q 1314

interface TenGigE0/1/1/10.1324
  description "srp traffic VM4"
  ipv4 address 79.79.79.10 255.255.255.0
  ipv6 address 2079::10/64
  encapsulation dot1q 1324

interface TenGigE0/1/1/11
  transceiver permit pid all
  l2transport
```

```
interface BVI1
  ipv4 address 192.172.12.10 255.255.255.0

interface preconfigure TenGigE0/3/1/0

interface preconfigure TenGigE0/3/1/1
  shutdown

interface preconfigure TenGigE0/3/1/2
  shutdown

interface preconfigure TenGigE0/3/1/3
  shutdown

interface preconfigure TenGigE0/3/1/4

interface preconfigure TenGigE0/3/1/5

interface preconfigure TenGigE0/3/1/6

interface preconfigure TenGigE0/3/1/7
  shutdown

interface preconfigure TenGigE0/3/1/8
  shutdown

interface preconfigure TenGigE0/3/1/9
  shutdown

interface preconfigure TenGigE0/3/1/10
  shutdown

interface preconfigure TenGigE0/3/1/11
  shutdown

prefix-set test
  1.1.1.1/32
end-set

route-policy test
  if rib-has-route in (1.1.1.1/32 ge 32 le 32) then
    pass
  endif
end-policy

route-policy pass-all
  pass
end-policy

route-policy test-rib
  if rib-has-route in (1.1.1.1/32) then
    pass
  endif
```



```
end-policy

route-policy block-clear
  if destination in (80.80.80.80/32 le 32) then
    drop
  endif
  pass
end-policy

route-policy block-ike-01
  if destination in (23.23.23.23/32 le 32) then
    drop
  endif
  if destination in (2023::23/128 le 128) then
    drop
  endif
  pass
end-policy

route-policy block-ike-02
  if destination in (33.33.33.33/32 le 32) then
    drop
  endif
  if destination in (2033::33/128 le 128) then
    drop
  endif
  pass
end-policy

route-policy block-ike-03
  if destination in (43.43.43.43/32 le 32) then
    drop
  endif
  if destination in (2043::43/128 le 128) then
    drop
  endif
  pass
end-policy

route-policy block-ike-04
  if destination in (53.53.53.53/32 le 32) then
    drop
  endif
  if destination in (2053::53/128 le 128) then
    drop
  endif
  pass
end-policy

route-policy pass-only-ike-01
  if destination in (23.23.23.23/32 le 32) then
    pass
  endif
```

```
    if destination in (2023::23/128 le 128) then
        pass
    endif
end-policy

route-policy pass-only-ike-02
    if destination in (33.33.33.33/32 le 32) then
        pass
    endif
    if destination in (2033::33/128 le 128) then
        pass
    endif
end-policy

route-policy pass-only-ike-03
    if destination in (43.43.43.43/32 le 32) then
        pass
    endif
    if destination in (2043::43/128 le 128) then
        pass
    endif
end-policy

route-policy pass-only-ike-04
    if destination in (53.53.53.53/32 le 32) then
        pass
    endif
    if destination in (2053::53/128 le 128) then
        pass
    endif
end-policy

router static
    address-family ipv4 unicast
        10.0.0.0/8 10.78.1.1
        11.0.0.0/8 130.0.1.20
        15.0.0.0/8 130.0.2.20
        17.0.0.0/8 130.0.3.20
        19.0.0.0/8 130.0.4.20
        64.0.0.0/8 10.78.1.1
        65.65.0.0/16 131.0.1.20
        66.66.0.0/16 131.0.2.20
        67.67.0.0/16 131.0.3.20
        68.68.0.0/16 131.0.4.20
        72.72.72.0/24 206.0.1.20
        74.74.74.0/24 206.0.1.20
        76.76.76.0/24 206.0.1.20
        78.78.78.0/24 206.0.1.20
        202.153.144.25/32 8.40.0.1
        211.0.1.0/24 130.0.1.20
        211.0.2.0/24 130.0.2.20
        211.0.3.0/24 130.0.3.20
```

```
211.0.4.0/24 130.0.4.20
213.0.1.0/24 131.0.1.20
213.0.2.0/24 131.0.2.20
213.0.3.0/24 131.0.3.20
213.0.4.0/24 131.0.4.20
```

```
router bgp 3000
  bgp router-id 3.3.3.3
  address-family ipv4 unicast
    redistribute application hsrp
    redistribute application hsrp-3-1
    redistribute application hsrp-3-2
    redistribute application hsrp-3-3
    redistribute application hsrp-3-4
    allocate-label all

  neighbor 130.0.1.20
    remote-as 6000
    address-family ipv4 unicast
      route-policy pass-only-ike-01 out

  neighbor 130.0.2.20
    remote-as 6000
    address-family ipv4 unicast
      route-policy pass-only-ike-02 out

  neighbor 130.0.3.20
    remote-as 6000
    address-family ipv4 unicast
      route-policy pass-only-ike-03 out

  neighbor 130.0.4.20
    remote-as 6000
    address-family ipv4 unicast
      route-policy pass-only-ike-04 out

  neighbor 131.0.1.20
    remote-as 6000
    address-family ipv4 unicast
      route-policy block-ike-01 out

  neighbor 131.0.2.20
    remote-as 6000
    address-family ipv4 unicast
      route-policy block-ike-02 out

  neighbor 131.0.3.20
```

```

remote-as 6000
address-family ipv4 unicast
    route-policy block-ike-03 out

neighbor 131.0.4.20
remote-as 6000
address-family ipv4 unicast
    route-policy block-ike-04 out

l2vpn
xconnect group wsg

bridge group wsg
    bridge-domain mgmt
        interface TenGigE0/1/1/2

        interface TenGigE0/1/1/5

        interface TenGigE0/1/1/8

        interface TenGigE0/1/1/11

        interface GigabitEthernet0/2/0/2

    routed interface BVI1

router hsrp
interface GigabitEthernet0/2/0/18.2062
    address-family ipv4
        hsrp 401
            timers msec 300 msec 900
            preempt
            priority 101
            address 206.0.2.110
            track object PublicHsrp
            track object WsgIPsla-1
            track object PrivateHsrp

interface GigabitEthernet0/2/0/18.2063
    address-family ipv4
        hsrp 402
            timers msec 300 msec 900
            preempt
            priority 101
            address 206.0.3.120
            track object PublicHsrp
            track object WsgIPsla-2
            track object PrivateHsrp

```

```
interface GigabitEthernet0/2/0/18.2064
  address-family ipv4
    hsrp 403
      timers msec 300 msec 900
      preempt
      priority 101
      address 206.0.4.130
      track object PublicHsrp
      track object WsgIPsla-3
      track object PrivateHsrp
```

```
interface GigabitEthernet0/2/0/18.2065
  address-family ipv4
    hsrp 404
      timers msec 300 msec 900
      preempt
      priority 101
      address 206.0.5.140
      track object PublicHsrp
      track object WsgIPsla-4
      track object PrivateHsrp
```

```
crypto ca trustpoint onep-tp
  crl optional
  subject-name CN=<ASR9K_backup_hostname>.<domain_name>
  enrollment url terminal
```

```
ipsla
  operation 100
    type icmp echo
    destination address 83.83.83.100
    timeout 300
    frequency 1

  operation 200
    type icmp echo
    destination address 85.85.85.100
    timeout 300
    frequency 1

  operation 300
    type icmp echo
    destination address 87.87.87.100
    timeout 300
```

```
frequency 1

operation 400
  type icmp echo
  destination address 89.89.89.100
  timeout 300
  frequency 1

schedule operation 100
  start-time now
  life forever

schedule operation 200
  start-time now
  life forever

schedule operation 300
  start-time now
  life forever

schedule operation 400
  start-time now
  life forever

track PublicHsrp
  type line-protocol state
  interface GigabitEthernet0/2/0/0

track WsgIPsla-1
  type rtr 100 reachability
  delay up 1
  delay down 1

track WsgIPsla-2
  type rtr 200 reachability
  delay up 1
  delay down 1

track WsgIPsla-3
  type rtr 300 reachability
  delay up 1
  delay down 1

track WsgIPsla-4
  type rtr 400 reachability
  delay up 1
  delay down 1

track PrivateHsrp
  type line-protocol state
```

```
interface GigabitEthernet0/2/0/1
```

```
end
```

SecGW VM Configuration (StarOS)



Important

Each SecGW (CPU-VM complex) must be separately configured as described below for corresponding VSMs in both the primary and backup ASR 9000 chassis. There are four CPU-VM complexes per ASR 9000 VSM.

The unique parameters for each CPU-VM complex must correspond with interface settings configured for the primary and backup ASR 9000 chassis.

Notes:

- Enable hidden CLI test-commands.
- Install SecGW License.
- Assign unique host name per CPU-VM complex.
- Set crash log size to 2048 with compression.
- Require Session Recovery.
- Create local context with unique parameters per CPU-VM complex.
- Enable wsg-service with unique parameters per CPU-VM complex. Add SRI and RRI parameters.
- Create SRP context with unique parameters per CPU-VM complex.
- Enable Connected Apps session with unique password and session name per CPU-VM complex.
- Set wsg-lookup priorities.
- Appropriately configure ethernet ports with unique parameters per CPU-VM complex. Refer to the tables below for mapping of sample IP addresses for each SecGW.

Table 2: StarOS IP Address Mapping - SecGW1

Variable	Primary ASR 9000	Backup ASR 9000
<interface_LOCAL1_IPv4-address_mask>	10.78.1.115 255.255.255.0	10.78.1.111 255.255.255.0
<interface_LOCAL1_IPv4-address_mask_secondary>	192.172.12.11 255.255.255.0	192.168.10.11 255.255.255.0
<iproute_.LOCAL1_IPv4-address_mask>	0.0.0.0 0.0.0.0 10.78.1.1	0.0.0.0 0.0.0.0 10.78.1.1
<wsg_acl1_permit1_IPv4-address_mask>	65.65.0.0 0.0.255.255 45.45.0.0 0.0.255.255	65.65.0.0 0.0.255.255 45.45.0.0 0.0.255.255
<wsg_acl1_permit2_IPv4-address_mask>	66.66.0.0 0.0.255.25 46.46.0.0 0.0.255.255	66.66.0.0 0.0.255.25 46.46.0.0 0.0.255.255
<wsg_acl1_permit3_IPv4-address_mask>	67.67.0.0 0.0.255.255 47.47.0.0 0.0.255.255	67.67.0.0 0.0.255.255 47.47.0.0 0.0.255.255

Variable	Primary ASR 9000	Backup ASR 9000
<wsg_acl1_permit4_IPv4-address_mask>	68.68.0.0 0.0.255.255 48.48.0.0 0.0.255.255	68.68.0.0 0.0.255.255 48.48.0.0 0.0.255.255
<wsg_acl1_permit5_IPv4-address_mask>	69.69.0.0 0.0.255.255 49.49.0.0 0.0.255.255	69.69.0.0 0.0.255.255 49.49.0.0 0.0.255.255
<wsg_acl1_permit1_IPv6-address_mask>	2065:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2045:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2065:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2045:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit2_IPv6-address_mask>	2066: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2046:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2066: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2046:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit3_IPv6-address_mask>	2067:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2047:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2067:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2047:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit4_IPv6-address_mask>	2068:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2048:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2068:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2048:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit5_IPv6-address_mask>	2069:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2049:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2069:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2049:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_pool1_IPv4-address_mask>	—	20.13.0.1 20.13.255.255
<wsg_pool2_IPv4-address_mask>	45.45.0.1 45.45.255.254	20.14.0.1 20.14.255.255
<wsg_pool2_IPv6-address/mask>	2013::/56	2013::/56
<crypto_ike-ts-1_local_IPv6-address>	2023::23	2023::33
<wsg_interface_clear_IPv4-address_mask>	93.93.93.20 255.255.255.0	92.92.92.20 255.255.255.0
<wsg_interface_clear_IPv6-address/mask>	2093::23/64	2092::23/64
<wsg_interface_clear-loopback_IPv4-address_mask>	93.93.93.100 255.255.255.255	92.92.92.100 255.255.255.255
<wsg_interface_ike_IPv4-address_mask>	83.83.83.20 255.255.255.0	82.82.82.20 255.255.255.0
<wsg_interface_ike_IPv6-address/mask>	2083::23/64	2082::23/64
<wsg_interface_ike-loop_IPv4-address_mask>	83.83.83.100 255.255.255.255	82.82.82.100 255.255.255.255
<wsg_interface_wsg-service_loop_IPv4-address_mask>	23.23.23.23 255.255.255.255	23.23.23.23 255.255.255.255
<wsg_interface_wsg-service_loop_IPv6-address_mask>	2023::23/128	2023::33/128
<wsg-service_bind_ras_IPv4-address>	23.23.23.23	—
<wsg-service_bind_s2s_IPv4-address>	—	23.23.23.23
<wsg-service_bind_s2s_IPv6-address>	2023::23	2023::23
<wsg_iproute_ike1_IPv4-address_mask>	181.8.0.0 255.255.255.0	181.8.0.0 255.255.255.0
<wsg_iproute_ike1_IPv4-address>	83.83.83.10	82.82.82.10

Variable	Primary ASR 9000	Backup ASR 9000
<wsg_iproute_ike2_IPv4-address_mask>	186.0.0.0 255.0.0.0	186.0.0.0 255.0.0.0
<wsg_iproute_ike2_IPv4-address>	83.83.83.10	82.82.82.10
<wsg_iproute_ike3_IPv4-address_mask>	120.0.1.0 255.255.255.0	120.0.1.0 255.255.255.0
<wsg_iproute_ike3_IPv4-address>	83.83.83.10	82.82.82.10
<wsg_iproute_ike4_IPv4-address_mask>	—	211.0.1.0 255.255.255.0
<wsg_iproute_ike4_IPv4-address>	—	82.82.82.10
<wsg_iproute_ike5_IPv4-address_mask>	11.0.0.0 255.0.0.0	11.0.0.0 255.0.0.0
<wsg_iproute_ike5_IPv4-address>	83.83.83.10	82.82.82.10
<wsg_iproute_clear1_IPv4-address_mask>	65.65.0.0 255.255.0.0	65.65.0.0 255.255.0.0
<wsg_iproute_clear1_IPv4-address>	93.93.93.10	92.92.92.10
<wsg_iproute_clear2_IPv4-address_mask>	66.66.0.0 255.255.0.0	66.66.0.0 255.255.0.0
<wsg_iproute_clear2_IPv4-address>	93.93.93.10	92.92.92.10
<wsg_iproute_clear3_IPv4-address_mask>	67.67.0.0 255.255.0.0	67.67.0.0 255.255.0.0
<wsg_iproute_clear3_IPv4-address>	93.93.93.10	92.92.92.10
<wsg_iproute_clear4_IPv4-address_mask>	68.68.0.0 255.255.0.0	68.68.0.0 255.255.0.0
<wsg_iproute_clear4_IPv4-address>	93.93.93.10	92.92.92.10
<wsg_iproute_clear5_IPv4-address_mask>	69.69.0.0 255.255.0.0	69.69.0.0 255.255.0.0
<wsg_iproute_clear5_IPv4-address>	93.93.93.10	92.92.92.10
<wsg_iproute_ike1_IPv6-address/mask>	2061::/16	2061::/16
<wsg_iproute_ike1_nextthop_IPv6-address>	2083::10	2082::10
<wsg_iproute_ike2_IPv6-address/mask>	2186::/16	2186::/16
<wsg_iproute_ike2_nextthop_IPv6-address>	2083::10	2082::10
<wsg_iproute_clear1_IPv6-address/mask>	2065::/16	2065::/16
<wsg_iproute_clear1_nextthop_IPv6-address>	2093::10	2092::10
<wsg_iproute_clear2_IPv6-address/mask>	2066::/16	2066::/16
<wsg_iproute_clear2_nextthop_IPv6-address>	2093::10	2092::10
<wsg_iproute_clear3_IPv6-address/mask>	2068::/16	2068::/16
<wsg_iproute_clear3_nextthop_IPv6-address>	2093::10	2092::10
<wsg_iproute_clear4_IPv6-address/mask>	2067::/16	2067::/16
<wsg_iproute_clear4_nextthop_IPv6-address>	2093::10	2092::10
<wsg_iproute_clear5_IPv6-address/mask>	2069::/16	2069::/16
<wsg_iproute_clear5_nextthop_IPv6-address>	2093::10	2092::10

Variable	Primary ASR 9000	Backup ASR 9000
<wsg_sri-route_IPv4-address>	23.23.23.23	23.23.23.23
<wsg_sri-route_nexthop_IPv4-address>	83.83.83.20	82.82.82.2
<wsg_rri_nexthop_IPv4-address>	93.93.93.20	—
<wsg_rri_network-mode_IPv4-address>	185.186.187.188	135.135.135.85
<wsg_rri_network-mode_nexthop_IPv4-address>	93.93.93.20	92.92.92.20
<srp_monitor_hsrp_vlan_id>	2062	2062
<srp_hsrp-group_number>	401	401
<srp_peer_IPv4-address>	72.72.72.20	73.73.73.20
<srp_bind_IPv4-address>	73.73.73.20	72.72.72.20
<srp_interface_icsr_IPv4-address_mask>	73.73.73.20 255.255.255.0	72.72.72.20 255.255.255.0
<srp_iproute_icsr_IPv4-address_mask>	0.0.0.0 0.0.0.0 73.73.73.10	0.0.0.0 0.0.0.0 72.72.72.10
<connectedapps_session_IPv4-address>	192.172.12.10	192.168.10.10
<port_1/10_vlan_id>	1301	1201
<port_1/11_vlan_id_wsg>	1311	1211
<port_1/11_vlan_id_srp>	1321	1221

Table 3: StarOS IP Address Mapping - SecGW2

Variable	Primary ASR 9000	Backup ASR 9000
<interface_LOCAL1_IPv4-address_mask>	10.78.1.116 255.255.255.0	10.78.1.112 255.255.255.0
<interface_LOCAL1_IPv4-address_mask_secondary>	192.172.12.13 255.255.255.0	192.168.10.2 255.255.255.0
<iproute_LOCAL1_IPv4-address_mask>	0.0.0.0 0.0.0.0 10.78.1.1	0.0.0.0 0.0.0.0 10.78.1.1
<wsg_acl1_permit1_IPv4-address_mask>	65.65.0.0 0.0.255.255 45.45.0.0 0.0.255.255	65.65.0.0 0.0.255.255 45.45.0.0 0.0.255.255
<wsg_acl1_permit2_IPv4-address_mask>	66.66.0.0 0.0.255.25 46.46.0.0 0.0.255.255	66.66.0.0 0.0.255.25 46.46.0.0 0.0.255.255
<wsg_acl1_permit3_IPv4-address_mask>	67.67.0.0 0.0.255.255 47.47.0.0 0.0.255.255	67.67.0.0 0.0.255.255 47.47.0.0 0.0.255.255
<wsg_acl1_permit4_IPv4-address_mask>	68.68.0.0 0.0.255.255 48.48.0.0 0.0.255.255	68.68.0.0 0.0.255.255 48.48.0.0 0.0.255.255
<wsg_acl1_permit5_IPv4-address_mask>	69.69.0.0 0.0.255.255 49.49.0.0 0.0.255.255	69.69.0.0 0.0.255.255 49.49.0.0 0.0.255.255

Variable	Primary ASR 9000	Backup ASR 9000
<wsg_acl1_permit1_IPv6-address_mask>	2065:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2045:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2065:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2045:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit2_IPv6-address_mask>	2066: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2046:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2066: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2046:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit3_IPv6-address_mask>	2067:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2047:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2067:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2047:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit4_IPv6-address_mask>	2068:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2048:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2068:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2048:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit5_IPv6-address_mask>	2069:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2049:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2069:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2049:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_pool1_IPv4-address_mask>	20.13.0.1 20.13.255.255	20.13.0.1 20.13.255.255
<wsg_pool2_IPv4-address_mask>	20.14.0.1 20.14.255.255	20.14.0.1 20.14.255.255
<wsg_pool2_IPv6-address/mask>	2013::/56	2013::/56
<crypto_ike-ts-1_local_IPv6-address>	2033::33	2033::23
<wsg_interface_clear_IPv4-address_mask>	95.95.95.20 255.255.255.0	94.94.94.20 255.255.255.0
<wsg_interface_clear_IPv6-address/mask>	2095::23/64	2094::23/64
<wsg_interface_clear-loopback_IPv4-address_mask>	95.95.95.100 255.255.255.255	94.94.94.100 255.255.255.255
<wsg_interface_ike_IPv4-address_mask>	85.85.85.20 255.255.255.0	84.84.84.20 255.255.255.0
<wsg_interface_ike_IPv6-address/mask>	2085::23/64	2084::23/64
<wsg_interface_ike-loop_IPv4-address_mask>	85.85.85.100 255.255.255.255	84.84.84.100 255.255.255.255
<wsg_interface_wsg-service_loop_IPv4-address_mask>	33.33.33.33 255.255.255.255	33.33.33.33 255.255.255.255
<wsg_interface_wsg-service_loop_IPv6-address_mask>	2033::33/128	2033::23/128
<wsg-service_bind_ras_IPv4-address>	33.33.33.33	—
<wsg-service_bind_s2s_IPv4-address>	—	33.33.33.33
<wsg-service_bind_s2s_IPv6-address>	2033::33	2033::23
<wsg_iproute_ike1_IPv4-address_mask>	181.8.0.0 255.255.255.0	181.8.0.0 255.255.255.0
<wsg_iproute_ike1_IPv4-address>	85.85.85.10	84.84.84.10
<wsg_iproute_ike2_IPv4-address_mask>	186.0.0.0 255.0.0.0	186.0.0.0 255.0.0.0
<wsg_iproute_ike2_IPv4-address>	85.85.85.10	84.84.84.10
<wsg_iproute_ike3_IPv4-address_mask>	120.0.1.0 255.255.255.0	120.0.1.0 255.255.255.0
<wsg_iproute_ike3_IPv4-address>	85.85.85.10	84.84.84.10
<wsg_iproute_ike4_IPv4-address_mask>	211.0.1.0 255.255.255.0	211.0.1.0 255.255.255.0

Variable	Primary ASR 9000	Backup ASR 9000
<wsg_iproute_ike4_IPv4-address>	85.85.85.10	84.84.84.10
<wsg_iproute_ike5_IPv4-address_mask>	15.0.0.0 255.0.0.0	15.0.0.0 255.0.0.0
<wsg_iproute_ike5_IPv4-address>	85.85.85.10	84.84.84.10
<wsg_iproute_clear1_IPv4-address_mask>	65.65.0.0 255.255.0.0	65.65.0.0 255.255.0.0
<wsg_iproute_clear1_IPv4-address>	95.95.95.10	94.94.94.10
<wsg_iproute_clear2_IPv4-address_mask>	66.66.0.0 255.255.0.0	66.66.0.0 255.255.0.0
<wsg_iproute_clear2_IPv4-address>	95.95.95.10	94.94.94.10
<wsg_iproute_clear3_IPv4-address_mask>	67.67.0.0 255.255.0.0	67.67.0.0 255.255.0.0
<wsg_iproute_clear3_IPv4-address>	95.95.95.10	94.94.94.10
<wsg_iproute_clear4_IPv4-address_mask>	68.68.0.0 255.255.0.0	68.68.0.0 255.255.0.0
<wsg_iproute_clear4_IPv4-address>	95.95.95.10	94.94.94.10
<wsg_iproute_clear5_IPv4-address_mask>	69.69.0.0 255.255.0.0	69.69.0.0 255.255.0.0
<wsg_iproute_clear5_IPv4-address>	95.95.95.10	94.94.94.10
<wsg_iproute_ike1_IPv6-address/mask>	2061::/16	2061::/16
<wsg_iproute_ike1_nextthop_IPv6-address>	2085::10	2084::10
<wsg_iproute_ike2_IPv6-address/mask>	2186::/16	2186::/16
<wsg_iproute_ike2_nextthop_IPv6-address>	2085::10	2084::10
<wsg_iproute_clear1_IPv6-address/mask>	2065::/16	2065::/16
<wsg_iproute_clear1_nextthop_IPv6-address>	2095::10	2094::10
<wsg_iproute_clear2_IPv6-address/mask>	2066::/16	2066::/16
<wsg_iproute_clear2_nextthop_IPv6-address>	2095::10	2094::10
<wsg_iproute_clear3_IPv6-address/mask>	2068::/16	2068::/16
<wsg_iproute_clear3_nextthop_IPv6-address>	2095::10	2094::10
<wsg_iproute_clear4_IPv6-address/mask>	2067::/16	2067::/16
<wsg_iproute_clear4_nextthop_IPv6-address>	2095::10	2094::10
<wsg_iproute_clear5_IPv6-address/mask>	2069::/16	2069::/16
<wsg_iproute_clear5_nextthop_IPv6-address>	2095::10	2094::10
<wsg_sri-route_IPv4-address>	33.33.33.33	33.33.33.33
<wsg_sri-route_nextthop_IPv4-address>	85.85.85.20	84.84.84.20
<wsg_rri_nextthop_IPv4-address>	—	—
<wsg_rri_network-mode_IPv4-address>	86.86.86.86	86.86.86.86
<wsg_mi_network-mode_nextthop_IPv4-address>	95.95.95.20	94.94.94.20

Variable	Primary ASR 9000	Backup ASR 9000
<srp_monitor_hsrp_vlan_id>	2063	2063
<srp_hsrp-group_number>	402	402
<srp_peer_IPv4-address>	74.74.74.20	75.75.75.20
<srp_bind_IPv4-address>	75.75.75.20	74.74.74.20
<srp_interface_icsr_IPv4-address_mask>	75.75.75.20 255.255.255.0	74.74.74.20 255.255.255.0
<srp_iproute_icsr_IPv4-address_mask>	0.0.0.0 0.0.0.0 75.75.75.10	0.0.0.0 0.0.0.0 74.74.74.10
<connectedapps_session_IPv4-address>	192.172.12.10	192.168.10.10
<port_1/10_vlan_id>	1302	1202
<port_1/11_vlan_id_wsg>	1312	1212
<port_1/11_vlan_id_srp>	1322	1222

Table 4: StarOS IP Address Mapping - SecGW3

Variable	Primary ASR 9000	Backup ASR 9000
<interface_LOCAL1_IPv4-address_mask>	10.78.1.117 255.255.255.0	10.78.1.113 255.255.255.0
<interface_LOCAL1_IPv4-address_mask_secondary>	192.172.12.13 255.255.255.0	192.168.10.13 255.255.255.0
<iproute_LOCAL1_IPv4-address_mask>	0.0.0.0 0.0.0.0 10.78.1.1	0.0.0.0 0.0.0.0 10.78.1.1
<wsg_acl1_permit1_IPv4-address_mask>	65.65.0.0 0.0.255.255 45.45.0.0 0.0.255.255	65.65.0.0 0.0.255.255 45.45.0.0 0.0.255.255
<wsg_acl1_permit2_IPv4-address_mask>	66.66.0.0 0.0.255.25 46.46.0.0 0.0.255.255	66.66.0.0 0.0.255.25 46.46.0.0 0.0.255.255
<wsg_acl1_permit3_IPv4-address_mask>	67.67.0.0 0.0.255.255 47.47.0.0 0.0.255.255	67.67.0.0 0.0.255.255 47.47.0.0 0.0.255.255
<wsg_acl1_permit4_IPv4-address_mask>	68.68.0.0 0.0.255.255 48.48.0.0 0.0.255.255	68.68.0.0 0.0.255.255 48.48.0.0 0.0.255.255
<wsg_acl1_permit5_IPv4-address_mask>	69.69.0.0 0.0.255.255 49.49.0.0 0.0.255.255	69.69.0.0 0.0.255.255 49.49.0.0 0.0.255.255
<wsg_acl1_permit1_IPv6-address_mask>	2065:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2045:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2065:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2045:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit2_IPv6-address_mask>	2066: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2046:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2066: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2046:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff

Variable	Primary ASR 9000	Backup ASR 9000
<wsg_acl1_permit3_IPv6-address_mask>	2067:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2047:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2067:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2047:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit4_IPv6-address_mask>	2068:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2048:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2068:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2048:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit5_IPv6-address_mask>	2069:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2049:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2069:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2049:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_pool1_IPv4-address_mask>	20.13.0.1 20.13.255.255	20.13.0.1 20.13.255.255
<wsg_pool2_IPv4-address_mask>	20.14.0.1 20.14.255.255	20.14.0.1 20.14.255.255
<wsg_pool2_IPv6-address/mask>	2013::/56	2013::/56
<crypto_ike-ts-1_local_IPv6-address>	2043::33	2043::23
<wsg_interface_clear_IPv4-address_mask>	97.97.97.20 255.255.255.0	96.96.96.100 255.255.255.255
<wsg_interface_clear_IPv6-address/mask>	2096::23/64	2096::23/64
<wsg_interface_clear-loopback_IPv4-address_mask>	97.97.97.100 255.255.255.255	96.96.96.100 255.255.255.25
<wsg_interface_ike_IPv4-address_mask>	87.87.87.20 255.255.255.0	86.86.86.20 255.255.255.0
<wsg_interface_ike_IPv6-address/mask>	2086::23/64	2086::23/64
<wsg_interface_ike-loop_IPv4-address_mask>	87.87.87.100 255.255.255.255	86.86.86.100 255.255.255.255
<wsg_interface_wsg-service_loop_IPv4-address_mask>	43.43.43.43 255.255.255.255	43.43.43.43 255.255.255.255
<wsg_interface_wsg-service_loop_IPv6-address_mask>	2043::43/128	2043::43/128
<wsg-service_bind_ras_IPv4-address>	—	—
<wsg-service_bind_s2s_IPv4-address>	43.43.43.43	43.43.43.43
<wsg-service_bind_s2s_IPv6-address>	2043::43	2043::43
<wsg_iproute_ike1_IPv4-address_mask>	181.8.0.0 255.255.255.0	181.8.0.0 255.255.255.0
<wsg_iproute_ike1_IPv4-address>	87.87.87.10	84.84.84.10
<wsg_iproute_ike2_IPv4-address_mask>	186.0.0.0 255.0.0.0	186.0.0.0 255.0.0.0
<wsg_iproute_ike2_IPv4-address>	87.87.87.10	86.86.86.10
<wsg_iproute_ike3_IPv4-address_mask>	120.0.1.0 255.255.255.0	120.0.1.0 255.255.255.0
<wsg_iproute_ike3_IPv4-address>	87.87.87.10	86.86.86.10
<wsg_iproute_ike4_IPv4-address_mask>	—	211.0.1.0 255.255.255.0
<wsg_iproute_ike4_IPv4-address>	—	86.86.86.10
<wsg_iproute_ike5_IPv4-address_mask>	17.0.0.0 255.0.0.0	17.0.0.0 255.0.0.0
<wsg_iproute_ike5_IPv4-address>	87.87.87.10	86.86.86.10
<wsg_iproute_clear1_IPv4-address_mask>	65.65.0.0 255.255.0.0	65.65.0.0 255.255.0.0

Variable	Primary ASR 9000	Backup ASR 9000
<wsg_iproute_clear1_IPv4-address>	97.97.97.10	96.96.96.10
<wsg_iproute_clear2_IPv4-address_mask>	66.66.0.0 255.255.0.0	66.66.0.0 255.255.0.0
<wsg_iproute_clear2_IPv4-address>	97.97.97.10	96.96.96.10
<wsg_iproute_clear3_IPv4-address_mask>	67.67.0.0 255.255.0.0	67.67.0.0 255.255.0.0
<wsg_iproute_clear3_IPv4-address>	97.97.97.10	96.96.96.10
<wsg_iproute_clear4_IPv4-address_mask>	68.68.0.0 255.255.0.0	68.68.0.0 255.255.0.0
<wsg_iproute_clear4_IPv4-address>	97.97.97.10	96.96.96.10
<wsg_iproute_clear5_IPv4-address_mask>	69.69.0.0 255.255.0.0	69.69.0.0 255.255.0.0
<wsg_iproute_clear5_IPv4-address>	97.97.97.10	96.96.96.10
<wsg_iproute_ike1_IPv6-address/mask>	—	2061::/16
<wsg_iproute_ike1_nexthop_IPv6-address>	—	2086::10
<wsg_iproute_ike2_IPv6-address/mask>	—	2186::/16
<wsg_iproute_ike2_nexthop_IPv6-address>	—	2086::10
<wsg_iproute_clear1_IPv6-address/mask>	—	2065::/16
<wsg_iproute_clear1_nexthop_IPv6-address>	—	2096::10
<wsg_iproute_clear2_IPv6-address/mask>	—	2066::/16
<wsg_iproute_clear2_nexthop_IPv6-address>	—	2096::10
<wsg_iproute_clear3_IPv6-address/mask>	—	2068::/16
<wsg_iproute_clear3_nexthop_IPv6-address>	—	2096::10
<wsg_iproute_clear4_IPv6-address/mask>	—	2067::/16
<wsg_iproute_clear4_nexthop_IPv6-address>	—	2096::10
<wsg_iproute_clear5_IPv6-address/mask>	—	2069::/16
<wsg_iproute_clear5_nexthop_IPv6-address>	—	2096::10
<wsg_sri-route_IPv4-address>	43.43.43.43	43.43.43.43
<wsg_sri-route_nexthop_IPv4-address>	87.87.87.20	86.86.86.20
<wsg_rri_nexthop_IPv4-address>	—	—
<wsg_rri_network-mode_IPv4-address>	87.87.87.8	87.87.87.87
<wsg_rri_network-mode_nexthop_IPv4-address>	97.97.97.20	96.96.96.20
<srp_monitor_hsrp_vlan_id>	2064	2064
<srp_hsrp-group_number>	403	403
<srp_peer_IPv4-address>	76.76.76.20	77.77.77.20
<srp_bind_IPv4-address>	77.77.77.20	76.76.76.20

Variable	Primary ASR 9000	Backup ASR 9000
<srp_interface_icsr_IPv4-address_mask>	77.77.77.20 255.255.255.0	76.76.76.20 255.255.255.0
<srp_iproute_icsr_IPv4-address_mask>	0.0.0.0 0.0.0.0 77.77.77.10	0.0.0.0 0.0.0.0 76.76.76.10
<connectedapps_session_IPv4-address>	192.172.12.10	192.168.10.10
<port_1/10_vlan_id>	1303	1203
<port_1/11_vlan_id_wsg>	1313	1213
<port_1/11_vlan_id_srp>	1323	1223

Table 5: StarOS IP Address Mapping - SecGW4

Variable	Primary ASR 9000	Backup ASR 9000
<interface_LOCAL1_IPv4-address_mask>	10.78.1.118 255.255.255.0	10.78.1.114 255.255.255.0
<interface_LOCAL1_IPv4-address_mask_secondary>	192.172.12.14 255.255.255.0	92.168.10.14 255.255.255.0
<iproute_LOCAL1_IPv4-address_mask>	0.0.0.0 0.0.0.0 10.78.1.1	0.0.0.0 0.0.0.0 10.78.1.1
<wsg_acl1_permit1_IPv4-address_mask>	65.65.0.0 0.0.255.255 45.45.0.0 0.0.255.255	65.65.0.0 0.0.255.255 45.45.0.0 0.0.255.255
<wsg_acl1_permit2_IPv4-address_mask>	66.66.0.0 0.0.255.25 46.46.0.0 0.0.255.255	66.66.0.0 0.0.255.25 46.46.0.0 0.0.255.255
<wsg_acl1_permit3_IPv4-address_mask>	67.67.0.0 0.0.255.255 47.47.0.0 0.0.255.255	67.67.0.0 0.0.255.255 47.47.0.0 0.0.255.255
<wsg_acl1_permit4_IPv4-address_mask>	68.68.0.0 0.0.255.255 48.48.0.0 0.0.255.255	68.68.0.0 0.0.255.255 48.48.0.0 0.0.255.255
<wsg_acl1_permit5_IPv4-address_mask>	69.69.0.0 0.0.255.255 49.49.0.0 0.0.255.255	69.69.0.0 0.0.255.255 49.49.0.0 0.0.255.255
<wsg_acl1_permit1_IPv6-address_mask>	2065:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2045:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2065:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2045:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit2_IPv6-address_mask>	2066: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2046:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2066: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2046:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit3_IPv6-address_mask>	2067:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2047:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2067:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2047:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_acl1_permit4_IPv6-address/_>	2068:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2048:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2068:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2048:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff

Variable	Primary ASR 9000	Backup ASR 9000
<wsg_acl1_permit5_IPv6-address_mask>	2069:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2049:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff	2069:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff 2049:: 0:ffff:ffff:ffff:ffff:ffff:ffff:ffff
<wsg_pool1_IPv4-address_mask>	20.13.0.1 20.13.255.255	20.13.0.1 20.13.255.255
<wsg_pool2_IPv4-address_mask>	20.14.0.1 20.14.255.255	20.14.0.1 20.14.255.255
<wsg_pool2_IPv6-address/mask>	2013::/56	2013::/56
<crypto_ike-ts-1_local_IPv6-addrress>	2053::53	2023::23
<wsg_interface_clear_IPv4-address_mask>	99.99.99.20 255.255.255.0	98.98.98.20 255.255.255.0
<wsg_interface_clear_IPv6-address/mask>	2099::23/64	2098::23/64
<wsg_interface_clear-loopback_IPv4-address_mask>	99.99.99.100 255.255.255.255	98.98.98.100 255.255.255.255
<wsg_interface_ike_IPv4-address_mask>	89.89.89.20 255.255.255.0	88.88.88.20 255.255.255.0
<wsg_interface_ike_IPv6-address/mask>	2089::23/64	2088::23/64
<wsg_interface_ike-loop_IPv4-address_mask>	89.89.89.100 255.255.255.255	88.88.88.100 255.255.255.255
<wsg_interface_wsg-service_loop_IPv4-address_mask>	53.53.53.53 255.255.255.255	53.53.53.53 255.255.255.255
<wsg_interface_wsg-service_loop_IPv6-address_mask>	2053::53/128	2053::53/128
<wsg-service_bind_ras_IPv4-address>	—	—
<wsg-service_bind_s2s_IPv4-address>	53.53.53.53	53.53.53.53
<wsg-service_bind_s2s_IPv6-address>	2053::53	2053::53
<wsg_iproute_ike1_IPv4-address_mask>	181.8.0.0 255.255.255.0	181.8.0.0 255.255.255.0
<wsg_iproute_ike1_IPv4-address>	89.89.89.10	88.88.88.10
<wsg_iproute_ike2_IPv4-address_mask>	186.0.0.0 255.0.0.0	186.0.0.0 255.0.0.0
<wsg_iproute_ike2_IPv4-address>	89.89.89.10	88.88.88.10
<wsg_iproute_ike3_IPv4-address_mask>	120.0.1.0 255.255.255.0	120.0.1.0 255.255.255.0
<wsg_iproute_ike3_IPv4-address>	89.89.89.10	88.88.88.10
<wsg_iproute_ike4_IPv4-address_mask>	—	211.0.1.0 255.255.255.0
<wsg_iproute_ike4_IPv4-address>	—	88.88.88.10
<wsg_iproute_ike5_IPv4-address_mask>	19.0.0.0 255.0.0.0	19.0.0.0 255.0.0.0
<wsg_iproute_ike5_IPv4-address>	89.89.89.10	88.88.88.10
<wsg_iproute_clear1_IPv4-address_mask>	65.65.0.0 255.255.0.0	65.65.0.0 255.255.0.0
<wsg_iproute_clear1_IPv4-address>	99.99.99.10	98.98.98.10
<wsg_iproute_clear2_IPv4-address_mask>	66.66.0.0 255.255.0.0	66.66.0.0 255.255.0.0
<wsg_iproute_clear2_IPv4-address>	99.99.99.10	98.98.98.10
<wsg_iproute_clear3_IPv4-address_mask>	67.67.0.0 255.255.0.0	67.67.0.0 255.255.0.0

Variable	Primary ASR 9000	Backup ASR 9000
<wsg_iproute_clear3_IPv4-address>	99.99.99.10	98.98.98.10
<wsg_iproute_clear4_IPv4-address_mask>	68.68.0.0 255.255.0.0	68.68.0.0 255.255.0.0
<wsg_iproute_clear4_IPv4-address>	99.99.99.10	98.98.98.10
<wsg_iproute_clear5_IPv4-address_mask>	69.69.0.0 255.255.0.0	69.69.0.0 255.255.0.0
<wsg_iproute_clear5_IPv4-address>	99.99.99.10	98.98.98.10
<wsg_iproute_ike1_IPv6-address/mask>	2061::/16	2061::/16
<wsg_iproute_ike1_nextthop_IPv6-address>	2089::10	2088::10
<wsg_iproute_ike2_IPv6-address/mask>	2186::/16	2186::/16
<wsg_iproute_ike2_nextthop_IPv6-address>	2089::10	2088::10
<wsg_iproute_clear1_IPv6-address/mask>	2065::/16	2065::/16
<wsg_iproute_clear1_nextthop_IPv6-address>	2099::10	2098::10
<wsg_iproute_clear2_IPv6-address/mask>	2066::/16	2066::/16
<wsg_iproute_clear2_nextthop_IPv6-address>	2099::10	2098::10
<wsg_iproute_clear3_IPv6-address/mask>	2068::/16	2068::/16
<wsg_iproute_clear3_nextthop_IPv6-address>	2099::10	2098::10
<wsg_iproute_clear4_IPv6-address/mask>	2067::/16	2067::/16
<wsg_iproute_clear4_nextthop_IPv6-address>	2099::10	2098::10
<wsg_iproute_clear5_IPv6-address/mask>	2069::/16	2069::/16
<wsg_iproute_clear5_nextthop_IPv6-address>	2099::10	2098::10
<wsg_sri-route_IPv4-address>	53.53.53.53	53.53.53.53
<wsg_sri-route_nextthop_IPv4-address>	89.89.89.20	88.88.88.20
<wsg_rri_nextthop_IPv4-address>	—	—
<wsg_rri_network-mode_IPv4-address>	88.88.88.88	88.88.88.88
<wsg_ri_network-mode_nextthop_IPv4-address>	99.99.99.2	98.98.98.20
<srp_monitor_hsrp_vlan_id>	2065	2065
<srp_hsrp-group_number>	404	404
<srp_peer_IPv4-address>	78.78.78.20	79.79.79.20
<srp_bind_IPv4-address>	79.79.79.20	78.78.78.20
<srp_interface_icsr_IPv4-address_mask>	79.79.79.20 255.255.255.0	78.78.78.20 255.255.255.0
<srp_iproute_icsr_IPv4-address_mask>	0.0.0.0 0.0.0.0 79.79.79.10	0.0.0.0 0.0.0.0 78.78.78.10
<connectedapps_session_IPv4-address>	192.172.12.10	192.168.10.10
<port_1/10_vlan_id>	1304	1204

Variable	Primary ASR 9000	Backup ASR 9000
<port_1/11_vlan_id_wsg>	1314	1214
<port_1/11_vlan_id_srp>	1324	1224

SecGW VM Configuration - Primary ASR 9000 Chassis

```

config
  cli hidden
  tech-support test-commands encrypted password <unique_encrypted_password>
  logging disable eventid 10171
  logging disable eventid 10638
  logging disable eventid 12822
  logging disable eventid 12987
  license key "\
<SecGW_license_key>"
  system hostname <ASR9k_hostname>-<SecGW#>
  autoconfirm
  orbem
    no siop-port
    no iiop-port
  #exit
  require session recovery
  context local
    interface LOCAL1
      ip address <LOCAL1_IPv4-address_mask>
      ip address <LOCAL1_IPv4-address_mask_secondary>
    #exit
  server ftpd
  #exit
  ssh key <unique_encrypted_ssh_key1> len <length>
  ssh key <unique_encrypted_ssh_key2> len <length> type v2-rsa
  ssh key <unique_encrypted_ssh_key3> len <length> type v2-dsa
  server sshd
    subsystem sftp
  #exit
  server telnetd
  #exit
  subscriber default
  exit
  administrator admin encrypted password <unique_encrypted_password>
  aaa group default
  #exit
  ip route <iproute_:LOCAL1_IPv4-address_mask> LOCAL1
#exit
port ethernet 1/1
  description ICSR
  no shutdown
  bind interface LOCAL1 local

```

```

#exit
ca-certificate name ca-cert-tls \
pem data \
"-----BEGIN CERTIFICATE-----\n\
<certificate-data>
-----END CERTIFICATE-----"
task facility mmedemux mmemgr-startup-percentage 90
mmemgr-startup-wait-time 600
#exit
#exit
context srp
service-redundancy-protocol
hello-interval 3
configuration-interval 60
dead-interval 15
checkpoint session duration non-ims-session 30
route-modifier threshold 10
priority 101
monitor hsrp interface
GigabitEthernet0/2/0/18.<srp_monitor_hsrp_vlan_ID> afi-type ipv4 hsrp-group
<srp_hsrp-group_number>
peer-ip-address <srp_peer_IPv4-address>
bind address <srp_bind_IPv4-address>
#exit
interface icsr
ip address <srp_interface_icsr_IPv4-address_mask_per_CPU-VM>
#exit
subscriber default
exit
aaa group default
#exit
ip route <srp_iproute_IPv4-address_mask> <srp_iproute_IPv4-address> icsr
#exit
context wsg
ip access-list acl1
permit ip <wsg_acl1_permit1_IPv4-address_mask>
<wsg_acl1_permit1_IPv4-address_mask> protocol <IPv4-address_mask>
permit ip <wsg_acl1_permit2_IPv4-address_mask>
<wsg_acl1_permit2_IPv4-address_mask> protocol <IPv4-address_mask>
permit ip <wsg_acl1_permit3_IPv4-address_mask>
<wsg_acl1_permit3_IPv4-address_mask> protocol <IPv4-address_mask>
permit ip <wsg_acl1_permit4_IPv4-address_mask>
<wsg_acl1_permit4_IPv4-address_mask> protocol <IPv4-address_mask>
permit ip <wsg_acl1_permit5_IPv4-address_mask>
<wsg_acl1_permit5_IPv4-address_mask> protocol <IPv4-address_mask>
#exit
ipv6 access-list acl1
permit ip <wsg_acl1_permit1_IPv6-address_mask>
<wsg_acl1_permit1_IPv6-address_mask>
permit ip <wsg_acl1_permit2_IPv6-address_mask>
<wsg_acl1_permit2_IPv6-address_mask>
permit ip <wsg_acl1_permit3_IPv6-address_mask>

```

```

<wsg_acl1_permit3_IPv6-address_mask>
    permit ip <wsg_acl1_permit4_IPv6-address_mask>
<wsg_acl1_permit4_IPv6-address_mask>
    permit ip <wsg_acl1_permit5_IPv6-address_mask>
<wsg_acl1_permit5_IPv6-address_mask>
    #exit
    ip pool <IPv4_pool_name> range <wsg_pool1_IPv4-address/mask>
<wsg_pool2_IPv4-address_mask> public <pool_priority>
    ip pool <IPv4_pool_name> range <wsg_pool2_IPv4-address/mask>
<wsg_pool2_IPv4-address_mask> public <pool_priority>
    ipv6 pool <IPv6_pool_name> prefix <wsg_pool1_IPv6-address/mask>
public<pool_priority>
    ipsec transform-set ipsec-ts-1
    #exit
    ikev2-ikesa transform-set ike-ts-1
    #exit
    crypto template ipv4 ikev2-dynamic
        authentication local pre-shared-key encrypted key
<unique_encrypted_key>
        authentication remote pre-shared-key encrypted key
<unique_encrypted_key>
        max-childsa 5 overload-action ignore
        ikev2-ikesa transform-set list ike-ts-1
        ikev2-ikesa rekey
        payload ipv4 match childsa match ipv4
        ip-address-alloc dynamic
        ipsec transform-set list ipsec-ts-1
        rekey keepalive
    #exit
#exit
crypto template ipv6 ikev2-dynamic
    authentication local pre-shared-key encrypted key <unique_encrypted_key>

    authentication remote pre-shared-key encrypted key
<unique_encrypted_key>
    max-childsa 5 overload-action ignore
    ikev2-ikesa transform-set list ike-ts-1
    ikev2-ikesa rekey
    payload ipv6 match childsa match ipv6
    ip-address-alloc dynamic
    ipsec transform-set list ipsec-ts-1
    rekey keepalive
    #exit
    identity local id-type ip-addr id <crypto_ike-ts-1_IPv6-address>
#exit
interface clear
    ip address <wsg_interface_clear_IPv4-address>
    ipv6 address <wsg_interface_clear_IPv6-address> secondary
#exit
interface ike
    ip address <wsg_interface_ike_IPv4-address>
    ipv6 address <wsg_interface_ike_IPv6-address> secondary
#exit

```

```

interface ike-loop loopback
  ip address <wsg_interface_ike-loop_IPv4-address_mask> srp-activate
#exit
interface wsg-service-ipv4 loopback
  ip address <wsg_interface_wsg-service_loop_IPv4-address_mask> srp-activate
#exit
interface wsg-service-ipv6 loopback
  ipv6 address <wsg_interface_wsg-service_loop_IPv6-address/mask> srp-activate

#exit
subscriber default
exit
aaa group default
#exit
wsg-service ipv4-ras
  deployment-mode remote-access
#exit
wsg-service ipv4-s2s
  deployment-mode site-to-site
  ip access-group acl1
  bind address <wsg-service_bind_rar_IPv4-address> crypto-template ipv4
#exit
wsg-service ipv6-s2s
  deployment-mode site-to-site
  ipv6 access-group acl1
  bind address <wsg-service_bind_s2s_IPv6-address> crypto-template ipv6
#exit
ip route <wsg_iproute_clear1_IPv4-address_mask> <wsg_iproute_clear1_IPv4-address>
clear
ip route <wsg_iproute_ike1_IPv4-address mask> <wsg_iproute_ike1_IPv4-address> ike

ip route <wsg_iproute_clear2_IPv4-address_mask> <wsg_iproute_clear2_IPv4-address>
clear
ip route <wsg_iproute_clear3_IPv4-address_mask> <wsg_iproute_clear3_IPv4-address>
clear
ip route <wsg_iproute_clear4_IPv4-address_mask> <wsg_iproute_clear4_IPv4-address>
clear
ip route <wsg_iproute_clear5_IPv4-address_mask> <wsg_iproute_clear5_IPv4-address>
clear
  ipv6 route <wsg_iproute_clear1_IPv6-address/mask>
<wsg_iproute_clear1_nexthop_IPv6-address> interface clear
  ipv6 route <wsg_iproute_clear2_IPv6-address/mask>
<wsg_iproute_clear2_nexthop_IPv6-address> interface clear
  ipv6 route <wsg_iproute_clear3_IPv6-address/mask>
<wsg_iproute_clear3_nexthop_IPv6-address> interface clear
  ipv6 route <wsg_iproute_ike2_IPv6-address/mask>
<wsg_iproute_ike2_nexthop_IPv6-address> interface ike
ip route <wsg_iproute_ike2_IPv4-address mask> <wsg_iproute_ike2_IPv4-address> ike

ip route <wsg_iproute_ike3_IPv4-address mask> <wsg_iproute_ike3_IPv4-address> ike

ipv6 route <wsg_iproute_clear4_IPv6-address/mask>

```

```

<wsg_iproute_clear4_nexthop_IPv6-address> interface clear
    ipv6 route <wsg_iproute_clear5_IPv6-address/mask>
<wsg_iproute_clear5_nexthop_IPv6-address> interface clear
    ipv6 route <wsg_iproute_ike3_IPv6-address/mask>
<wsg_iproute_ike3_nexthop_IPv6-address> interface ike
    ip route <wsg_iproute_ike4_IPv4-address mask> <wsg_iproute_ike4_IPv4-address> ike

    ip route <wsg_iproute_ike5_IPv4-address mask> <wsg_iproute_ike5_IPv4-address> ike

    ip sri-route <wsg_sri-route_IPv4-address>
next-hop<wsg_sri-route_nexthop_IPv4-address> interface ike
    ip rri-route network-mode L3 <wsg_rri-route_network-mode_IPv4-address>
next-hop<wsg_rri-route_network-mode_nexthop_IPv4-address> interface clear
#exit
connectedapps
    sess-userid root
    sess-passwd encrypted password <unique_encrypted_password>
    sess-name <srp_hsrp-group_number>
    sess-ip-address <connectapps_session_IPv4-address>
    rri-mode BOTH
    ha-chassis-mode inter
    ha-network-mode L3
    ca-certificate-name ca-cert-tls
    activate
#exit
wsg-lookup
    priority 1 source-netmask 28 destination-netmask 28
    priority 2 source-netmask 32 destination-netmask 32
    priority 3 source-netmask 16 destination-netmask 16
    priority 4 source-netmask 24 destination-netmask 24
    priority 5 source-netmask 16 destination-netmask 24
#exit
port ethernet 1/10
    no shutdown
    vlan <port_1/10_vlan_id>
        no shutdown
        bind interface ike wsg
    #exit
#exit
port ethernet 1/11
    no shutdown
    vlan <port_1/11_vlan_id_wsg>
        no shutdown
        bind interface clear wsg
    #exit
    vlan <port_1/11_vlan_id_srp>
        no shutdown
        bind interface icshr srp
    #exit
#exit
end

```

SecGW VM Configuration - Backup ASR 9000 Chassis

```

config
cli hidden
tech-support test-commands encrypted password <unique_encrypted_password>
license key "\
<SecGW_license_key>"
system hostname <ASR9k_hostname>-<SecGW#>
autoconfirm
orbem
  no siop-port
  no iiop-port
#exit
crash enable encrypted url <encrypted_url>
require session recovery
context local
  interface LOCAL1
    ip address <LOCAL1_IPv4-address_mask>
    ip address <LOCAL1_IPv4-address_mask_secondary>
  #exit
  server ftpd
  #exit
  ssh key <unique_encrypted_ssh_key1> len <length>
  ssh key <unique_encrypted_ssh_key2> len <length> type v2-rsa
  ssh key <unique_encrypted_ssh_key3> len <length> type v2-dsa
  server sshd
  subsystem sftp
  #exit
  server telnetd
  #exit
  subscriber default
  exit
  administrator admin encrypted password <unique_encrypted_password>
  aaa group default
  #exit
  ip route <iproute_:LOCAL1_IPv4-address_mask> LOCAL1
#exit
port ethernet 1/1
  description ICSR
  no shutdown
  bind interface LOCAL1 local
#exit
ca-certificate name ca-cert-tls \
pem data \
"-----BEGIN CERTIFICATE-----\n\
<certificate-data>
-----END CERTIFICATE-----"
  task facility mmedemux mmemgr-startup-percentage 90
mmemgr-startup-wait-time 600
#exit
#exit

```



```

context srp
  service-redundancy-protocol
    hello-interval 3
    configuration-interval 60
    dead-interval 15
    checkpoint session duration non-ims-session 30
    route-modifier threshold 10
    priority 101
    monitor hsrp interface
GigabitEthernet0/2/0/18.<srp_monitor_hsrp_vlan_ID> afi-type ipv4 hsrp-group
<srp_hsrp-group_number>
  peer-ip-address <srp_peer_IPv4-address>
  bind address <srp_bind_IPv4-address>
#exit
interface icsr
  ip address <srp_interface_icsr_IPv4-address_mask_per_CPU-VM>
#exit
subscriber default
exit
aaa group default
#exit
ip route <srp_iproute_IPv4-address_mask> <srp_iproute_IPv4-address> icsr
#exit
context wsg
  ip access-list acl1
    permit ip <wsg_acl1_permit1_IPv4-address_mask> <wsg_acl1_permit1_IPv4-address_mask>
protocol <IPv4-address_mask>
    permit ip <wsg_acl1_permit2_IPv4-address_mask> <wsg_acl1_permit2_IPv4-address_mask>
protocol <IPv4-address_mask>
    permit ip <wsg_acl1_permit3_IPv4-address_mask> <wsg_acl1_permit3_IPv4-address_mask>
protocol <IPv4-address_mask>
    permit ip <wsg_acl1_permit4_IPv4-address_mask> <wsg_acl1_permit4_IPv4-address_mask>
protocol <IPv4-address_mask>
    permit ip <wsg_acl1_permit5_IPv4-address_mask> <wsg_acl1_permit5_IPv4-address_mask>
protocol <IPv4-address_mask>
#exit
  ipv6 access-list acl1
    permit ip <wsg_acl1_permit1_IPv6-address_mask>
<wsg_acl1_permit1_IPv6-address_mask>
    permit ip <wsg_acl1_permit2_IPv6-address_mask>
<wsg_acl1_permit2_IPv6-address_mask>
    permit ip <wsg_acl1_permit3_IPv6-address_mask>
<wsg_acl1_permit3_IPv6-address_mask>
    permit ip <wsg_acl1_permit4_IPv6-address_mask>
<wsg_acl1_permit4_IPv6-address_mask>
    permit ip <wsg_acl1_permit5_IPv6-address_mask>
<wsg_acl1_permit5_IPv6-address_mask>
#exit
  ip pool <IPv4_pool_name> range <wsg_pool1_IPv4-address/mask>
<wsg_pool2_IPv4-address_mask> public <pool_priority>
  ipv6 pool <IPv6_pool_name> prefix <wsg_pool1_IPv6-address/mask>
public<pool_priority>
  ipsec transform-set ipsec-ts-1

```

```

#exit
ikev2-ikesa transform-set ike-ts-1
#exit
crypto template ipv4 ikev2-dynamic
  authentication local pre-shared-key encrypted key <unique_encrypted_key>

  authentication remote pre-shared-key encrypted key
<unique_encrypted_key>
  max-childsa 5 overload-action ignore
  ikev2-ikesa transform-set list ike-ts-1
  ikev2-ikesa rekey
  payload ipv4 match childsa match ipv4
    ip-address-alloc dynamic
    ipsec transform-set list ipsec-ts-1
    rekey keepalive
  #exit
#exit
crypto template ipv6 ikev2-dynamic
  authentication local pre-shared-key encrypted key <unique_encrypted_key>

  authentication remote pre-shared-key encrypted key
<unique_encrypted_key>
  max-childsa 5 overload-action ignore
  ikev2-ikesa transform-set list ike-ts-1
  ikev2-ikesa rekey
  payload ipv6 match childsa match ipv6
    ip-address-alloc dynamic
    ipsec transform-set list ipsec-ts-1
    rekey keepalive
  #exit
  identity local id-type ip-addr id <crypto_ike-ts-1_IPv6-address>
#exit
interface clear
  ip address <wsg_interface_clear_IPv4-address>
  ipv6 address <wsg_interface_clear_IPv6-address> secondary
#exit
interface ike
  ip address <wsg_interface_ike_IPv4-address>
  ipv6 address <wsg_interface_ike_IPv6-address> secondary
#exit
interface ike-loop loopback
  ip address <wsg_interface_ike-loop_IPv4-address_mask> srp-activate
#exit
interface wsg-service-ipv4 loopback
  ip address <wsg_interface_wsg-service_loop_IPv4-address_mask> srp-activate
#exit
interface wsg-service-ipv6 loopback
  ipv6 address <wsg_interface_wsg-service_loop_IPv6-address/mask> srp-activate

#exit
subscriber default
exit

```

```

aaa group default
#exit
wsg-service ipv4-s2s
  deployment-mode site-to-site
  ip access-group acl1
  bind address <wsg-service_bind_rar_IPv4-address> crypto-template ipv4
#exit
wsg-service ipv6-s2s
  deployment-mode site-to-site
  ipv6 access-group acl1
  bind address <wsg-service_bind_s2s_IPv6-address> crypto-template ipv6
#exit
ip route <wsg_iproute_clear1_IPv4-address_mask> <wsg_iproute_clear1_IPv4-address>
clear
ip route <wsg_iproute_ike1_IPv4-address mask> <wsg_iproute_ike1_IPv4-address> ike

ip route <wsg_iproute_clear2_IPv4-address_mask> <wsg_iproute_clear2_IPv4-address>
clear
ip route <wsg_iproute_clear3_IPv4-address_mask> <wsg_iproute_clear3_IPv4-address>
clear
ip route <wsg_iproute_clear4_IPv4-address_mask> <wsg_iproute_clear4_IPv4-address>
clear
ip route <wsg_iproute_clear5_IPv4-address_mask> <wsg_iproute_clear5_IPv4-address>
clear
  ipv6 route <wsg_iproute_clear1_IPv6-address/mask>
<wsg_iproute_clear1_nexthop_IPv6-address> interface clear
  ipv6 route <wsg_iproute_clear2_IPv6-address/mask>
<wsg_iproute_clear2_nexthop_IPv6-address> interface clear
  ipv6 route <wsg_iproute_clear3_IPv6-address/mask>
<wsg_iproute_clear3_nexthop_IPv6-address> interface clear
  ipv6 route <wsg_iproute_ike2_IPv6-address/mask>
<wsg_iproute_ike2_nexthop_IPv6-address> interface ike
  ip route <wsg_iproute_ike2_IPv4-address mask> <wsg_iproute_ike2_IPv4-address> ike

ip route <wsg_iproute_ike3_IPv4-address mask> <wsg_iproute_ike3_IPv4-address> ike

  ipv6 route <wsg_iproute_clear4_IPv6-address/mask>
<wsg_iproute_clear4_nexthop_IPv6-address> interface clear
  ipv6 route <wsg_iproute_clear5_IPv6-address/mask>
<wsg_iproute_clear5_nexthop_IPv6-address> interface clear
  ipv6 route <wsg_iproute_ike3_IPv6-address/mask>
<wsg_iproute_ike3_nexthop_IPv6-address> interface ike
  ip route <wsg_iproute_ike4_IPv4-address mask> <wsg_iproute_ike4_IPv4-address> ike

ip route <wsg_iproute_ike5_IPv4-address mask> <wsg_iproute_ike5_IPv4-address> ike

ip sri-route <wsg_sri-route_IPv4-address>
next-hop<wsg_sri-route_nexthop_IPv4-address> interface ike
ip rri-route network-mode L3 <wsg_rri-route_network-mode_IPv4-address>
next-hop<wsg_rri-route_network-mode_nexthop_IPv4-address> interface clear
#exit
connectedapps

```

```

sess-userid root
sess-passwd encrypted password <unique_encrypted_password>
sess-name <srp_hsrp-group_number>
sess-ip-address <connectapps_session_IPv4-address>
rri-mode BOTH
ha-chassis-mode inter
ha-network-mode L3
ca-certificate-name ca-cert-tls
activate
#exit
wsg-lookup
priority 1 source-netmask 28 destination-netmask 28
priority 2 source-netmask 32 destination-netmask 32
priority 3 source-netmask 16 destination-netmask 16
priority 4 source-netmask 24 destination-netmask 24
priority 5 source-netmask 16 destination-netmask 24
#exit
port ethernet 1/10
no shutdown
vlan <port_1/10_vlan_id>
no shutdown
bind interface ike wsg
#exit
#exit
port ethernet 1/11
no shutdown
vlan <port_1/11_vlan_id_wsg>
no shutdown
bind interface clear wsg
#exit
vlan <port_1/11_vlan_id_srp>
no shutdown
bind interface icsr srp
#exit
#exit
end

```