

ComwareV7 FW带VPN实例的AFT典型配置 (V4访问V6)

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组网及说明

组网如下:

FW的g1/0/1属于vpn1, 对接ipv6网络, FW的g1/0/2属于vpn2,对接ipv6网络

需求是实现MSR1通过20.1.1.1访问MSR2的IPv6地址240C:0:FF14:101:100::

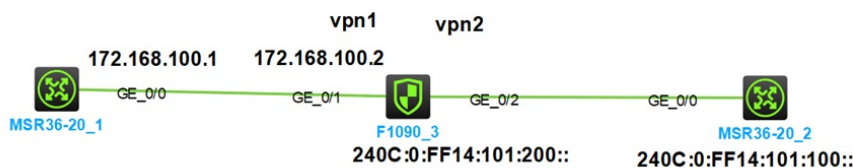
为IPv6网络分配一个IVI前缀 (240c::) 和ipv4网段(20.1.1.0/24),IPv6网络中所有IPv6主机的地址均配置

为由IVI前缀和IPv4网段中地址组合而成的IPv6地址

为IPv4网络分配一个NAT64前缀 (2012: :), IPv4网络主动访问IPv6网络时, IPv4源地址使用NAT

64前缀转换为IPv6地址; IPv6网络主动访问IPv4网络时, 目的地址使用NAT64前缀和IPv4地址组合成

的IPv6地址。



配置步骤

MSR1的配置如下:

接口起IP地址

```
interface GigabitEthernet0/0
```

```
port link-mode route
```

```
combo enable copper
```

```
ip address 172.168.100.1 255.255.255.0
```

FW的配置如下:

```
ip vpn-instance vpn1
```

```
ip vpn-instance vpn2
```

配置IPv6到IPv4的目的地址转换

```
aft prefix-nat64 2012:: 96
```

```
acl basic 2000
```

```
rule 0 permit vpn-instance vpn1
```

配置IVI前缀, 在IPv4到IPv6动态目的地址转换策略中引用该前缀

```
aft prefix-ivi 240C::
```

```
aft v4tov6 destination acl number 2000 prefix-ivi 240C:: vpn-instance vpn2
```

接口配置VPN实例, 起IP地址, 配置AFT

```
interface GigabitEthernet1/0/1
```

```
port link-mode route
```

```
combo enable copper
```

```
ip binding vpn-instance vpn1
```

```
ip address 172.168.100.2 255.255.255.0
```

```
aft enable
```

```
interface GigabitEthernet1/0/2
port link-mode route
combo enable copper
ip binding vpn-instance vpn2
aft enable
ipv6 address 240C:0:FF14:101:200::/64
```

MSR2配置

```
interface GigabitEthernet0/0
port link-mode route
combo enable copper
ipv6 address 240C:0:FF14:101:100::/64
```

```
ipv6 route-static 240C:0:FF14:101::ACA8:6401 128 240C:0:FF14:101:200::
```

需要说明的是，PC的地址是由IVI前缀+IPv4地址+全0的suffix固定，其中IVI配好之后，IVI与suffix固定，只需要将IPv4的32位2进制转换为

8位16进制，然后放到其中即可。例如将20.1.1.1通过IVI前缀转换为IPv6地址，20对应14；1对应01；204c:0:ff与最后的::不变，将14 01 01 01放入对应的位置即可

```
204c:0:ff14:0101:100::
```

```
interface GigabitEthernet8/0
```

```
port link-mode route
```

```
aft enable
```

```
ipv6 address 240C:0:FF14:101:200::/64
```

配置完成之后，MSR1可以通过20.1.1.1访问MSR2的240C:0:FF14:101:100::

```
<RT1>ping 20.1.1.1
```

```
Ping 20.1.1.1 (20.1.1.1): 56 data bytes, press CTRL+C to break
```

```
56 bytes from 20.1.1.1: icmp_seq=0 ttl=63 time=0.734 ms
```

```
56 bytes from 20.1.1.1: icmp_seq=1 ttl=63 time=0.646 ms
```

```
56 bytes from 20.1.1.1: icmp_seq=2 ttl=63 time=0.571 ms
```

```
56 bytes from 20.1.1.1: icmp_seq=3 ttl=63 time=0.504 ms
```

```
56 bytes from 20.1.1.1: icmp_seq=4 ttl=63 time=0.711 ms
```

FW的AFT会话如下

```
[FW]display aft session ipv4 verbose
```

```
Slot 1:
```

```
Initiator:
```

```
Source IP/port: 172.168.100.1/10964
```

```
Destination IP/port: 20.1.1.1/2048
```

```
DS-Lite tunnel peer: -
```

```
VPN instance/VLAN ID/Inline ID: vpn1/-/-
```

```
Protocol: ICMP(1)
```

```
Inbound interface: GigabitEthernet1/0/1
```

```
Source security zone: Trust
```

```
Responder:
```

```
Source IP/port: 20.1.1.1/10964
```

```
Destination IP/port: 172.168.100.1/0
```

```
DS-Lite tunnel peer: -
```

```
VPN instance/VLAN ID/Inline ID: vpn2/-/-
```

```
Protocol: ICMP(1)
```

```
Inbound interface: GigabitEthernet1/0/2
```

```
Source security zone: Local
```

```
State: ICMP_REPLY
```

Application: ICMP
Rule ID: -/-/
Rule name:
Start time: 2024-01-19 13:47:48 TTL: 22s
Initiator->Responder: 5 packets 420 bytes
Responder->Initiator: 5 packets 420 bytes

Total sessions found: 1

[FW]display aft session ipv6 v

[FW]display aft session ipv6 verbose

Slot 1:

Initiator:

Source IP/port: 2012::ACA8:6401/10964
Destination IP/port: 240C:0:FF14:101:100::/32768
VPN instance/VLAN ID/Inline ID: vpn1/-/
Protocol: IPV6-ICMP(58)
Inbound interface: GigabitEthernet1/0/1
Source security zone: Local

Responder:

Source IP/port: 240C:0:FF14:101:100::/10964
Destination IP/port: 2012::ACA8:6401/33024
VPN instance/VLAN ID/Inline ID: vpn2/-/
Protocol: IPV6-ICMP(58)
Inbound interface: GigabitEthernet1/0/2
Source security zone: Untrust

State: ICMPV6_REPLY

Application: ICMP

Rule ID: 2

Rule name: 2

Start time: 2024-01-19 13:47:48 TTL: 17s

Initiator->Responder: 5 packets 520 bytes

Responder->Initiator: 5 packets 520 bytes

Total sessions found: 1

[FW]

配置关键点

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配置IPv6到IPv4的目的地址转换

```
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```