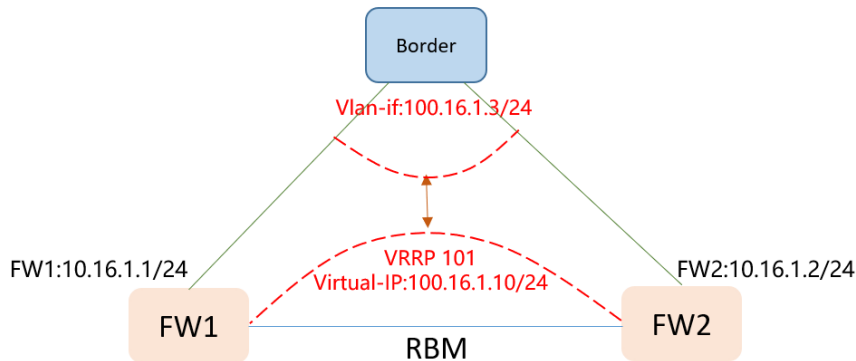


# 知 RBM结合VRRP场景下支持VRRP虚拟地址和接口地址不在同一网段

VRRP 双机热备 孔凡安 2023-12-27 发表

## 组网及说明

组网简化如下:



## 配置步骤

FW部分配置:

	FW1	FW2
RBM部分	<pre># remote-backup group data-channel interface Route-Aggregation 64 local-ip 192.60.12.1 remote-ip 192.60.12.2 device-role primary #</pre>	<pre># remote-backup group data-channel interface Route-Aggregation n64 local-ip 192.60.12.2 remote-ip 192.60.12.1 device-role secondary #</pre>
VRRP部分	<pre># interface Route-Aggregation1.10 ip address 10.16.1.1 255.255.255.0 <b>vrp vrid 101 virtual-ip 100.16.1.10</b> <b>255.255.255.0 active</b> vlan-type dot1q vid 101 #</pre>	<pre># interface Route-Aggregation1.10 ip address 10.16.1.2 255.255.255.0 <b>vrp vrid 101 virtual-ip 100.16.1.10 255.</b> <b>255.255.0 standby</b> vlan-type dot1q vid 101 #</pre>

Border配置vlan对接, 配置

```
#
interface Bridge-Aggregation11
port link-type trunk
undo port trunk permit vlan 1
port trunk permit vlan 101
link-aggregation mode dynamic
#
interface Bridge-Aggregation12
port link-type trunk
undo port trunk permit vlan 1
port trunk permit vlan 101
link-aggregation mode dynamic
#
interface Vlan-interface101
ip address 100.16.1.3 255.255.255.0
#
```

## 配置关键点

配置要点:

1. Border使用vlan接口对接，并在vlan-if接口下配置IP地址。
2. FW配置VRRP虚拟地址时候**配置掩码参数**，并保持和对端设备掩码一致。mask：表示IPv4地址的掩码，点分十进制格式。不指定mask和mask-length时，缺省使用32位掩码。
3. 在子接口下配置VRRP时需要**先配置vlan终结命令**（vlan-type dot1q vid xxx），再配置VRRP。防止VRRP震荡。详情可以参考：[某局点RBM结合VRRP组网下新增配置导致RBM状态切换典型分析](#)

#### 验证：

在FW1上查看学习到的ARP信息，包括FW2接口地址（10.16.1.2）以及Border上vlan-if地址对应的ARP：

```
RBM_P<FW_01>disp arp
Type: S-Static D-Dynamic O-Openflow R-Rule I-Invalid
IP address  MAC address  VLAN/VSI name Interface/Link ID  Aging Type
10.16.1.2   3c8c-40be-9b5e --    RAGG1.10         17 D
100.16.1.3  b0f9-63b3-c46e --    RAGG1.10         16 D
```

在FW2上查看学习到的ARP信息，只有FW1接口地址（10.16.1.1）对应的ARP信息：

```
RBM_S<FW_02>disp arp
Type: S-Static D-Dynamic O-Openflow R-Rule I-Invalid
IP address  MAC address  VLAN/VSI name Interface/Link ID  Aging Type
10.16.1.1   9c06-1bff-3143 --    RAGG1.10         14 D
```

在Border上查看ARP表项，可以学到FW VRRP虚拟地址ARP，且**对应的MAC为虚拟地址对应的MAC，从FW1互联的接口所学。**

```
<Border>disp arp
Type: S-Static D-Dynamic O-Openflow R-Rule M-Multiport I-Invalid
IP address  MAC address  SVLAN/VSI Interface/Link ID  Aging Type
100.16.1.10 0000-5e00-0165 101  BAGG11         10 D
```

通过查看ARP信息可以明确，RBM结合VRRP场景下支持VRRP虚拟地址和接口地址不在同一网段，VRRP协商详情如下：

```
RBM_P<FW_01>disp vrrp verbose
IPv4 Virtual Router Information:
Running mode      : Standard
RBM control channel is established
VRRP active group status : Master
VRRP standby group status: Master
Total number of virtual routers : 1
Interface Route-Aggregation1.10
VRID (group)    : 101 (Active)   Adver Timer : 100
Admin Status   : Up             State        : Master
Config Pri     : 100            Running Pri  : 100
Preempt Mode   : Yes           Delay Time   : 0
Auth Type      : Not supported
Version        : 3
Virtual IP    : 100.16.1.10/24
Virtual MAC    : 0000-5e00-0165
Master IP    : 10.16.1.1
```