V7防火墙常见冗余组网配置举例（上下路由器三层组网）

目录

1 配置需求及说明

1.1 适用的产品系列

本案例适用于软件平台为Comware V7系列防火墙：F100-X-G2、F1000-X-G2、F100-X-WiNet、F1000-AK、F10X0等。

1.2 配置需求及实现的效果

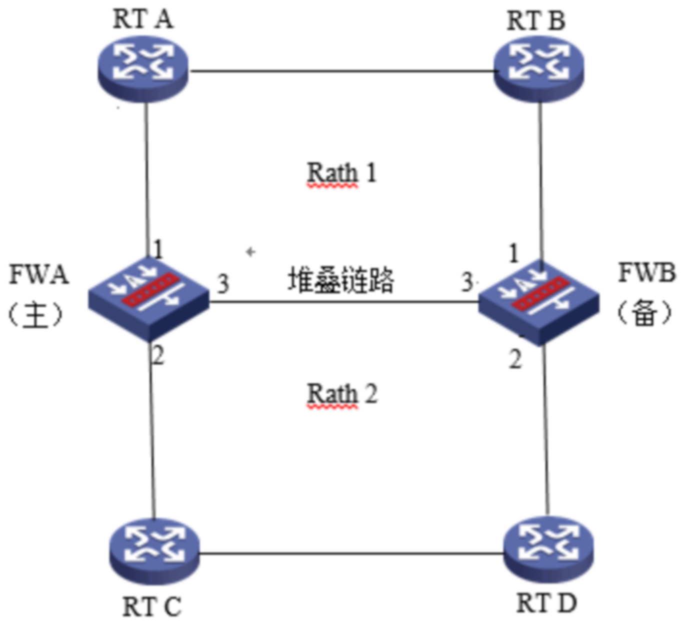
防火墙A与防火墙B堆叠后上联路由器A下联路由器

B，应用户业务需求：

1、 防火墙做主备运行

2、 正常情况下业务流量全部负载在FWA，FWA出现故障后流量全部切到FWB运行

2 组网图



3 配置步骤

3.1 路由器A配置

3.1.1 配置路由器A下联防火墙接口

```
<H3C>system
[H3C]interface GigabitEthernet 1/0/1
[H3C-GigabitEthernet1/0/1] ip address 1.1.1.1 24
[H3C-GigabitEthernet1/0/1]quit
[H3C]ospf 1
[H3C-ospf-1]area 0
[H3C-ospf-1-area-0.0.0.0]network 1.1.1.1 0.0.0.0
```

路由器B、C、D配置相同不再赘述

3.2 防火墙配置

3.2.1 FWA与FWB建立堆叠

具体配置可参考防火墙虚拟化配置举例，本章不做介绍。

3.2.2 配置track联动上下行接口的物理状态

配置track检测上下行端口的物理状态

```
[H3C] track 1 interface gigabitethernet 1/0/1
physical
[H3C-track-1] quit
[H3C] track 2 interface gigabitethernet 1/0/2
physical
[H3C-track-2] quit
```

```
[H3C] track 3 interface gigabitethernet 2/0/1 physical
[H3C-track-3] quit
[H3C] track 4 interface gigabitethernet 2/0/2 physical
[H3C-track-4] quit
```

3.2.3 配置冗余组关联冗余接口

1. 创建节点1与防火墙A所有接口绑定

```
[H3C] redundancy group aaa
[H3C-redundancy-group-aaa] node 1
[H3C-redundancy-group-aaa-node1] bind slot 1
[H3C-redundancy-group-aaa-node1] priority 100
[H3C-redundancy-group-aaa-node1] node-member interface gigabitethernet 1/0/1
[H3C-redundancy-group-aaa-node1] node-member interface gigabitethernet 1/0/2
[H3C-redundancy-group-aaa-node1] track 1 interface gigabitethernet 1/0/1
[H3C-redundancy-group-aaa-node1] track 2 interface gigabitethernet 1/0/2
[H3C-redundancy-group-aaa-node1] quit
```

2. 创建节点2与防火墙B所有接口绑定

```
[H3C-redundancy-group-aaa] node 2
[H3C-redundancy-group-aaa-node2] bind slot 2
[H3C-redundancy-group-aaa-node2] priority 50
[H3C-redundancy-group-aaa-node2] node-member interface gigabitethernet 2/0/1
[H3C-redundancy-group-aaa-node2] node-member interface gigabitethernet 2/0/2
[H3C-redundancy-group-aaa-node2] track 3 interface gigabitethernet 2/0/1
[H3C-redundancy-group-aaa-node2] track 4 interface gigabitethernet 2/0/2
[H3C-redundancy-group-aaa-node2] quit
```

3.2.4 开启会话热备

```
[H3C] session synchronization enable
```

3.2.5 安全策略配置

1. 将接口加入安全域

将1/0/1与2/0/1加入Untrust区域

```
[H3C]security-zone name Untrust
[H3C-security-zone-Untrust]import interface GigabitEthernet 1/0/1
[H3C-security-zone-Untrust]import interface GigabitEthernet 2/0/1
```

将1/0/2与2/0/2加入trust区域

```
[H3C]security-zone name trust
[H3C-security-zone-trust]import interface GigabitEthernet 1/0/2
[H3C-security-zone-trust]import interface GigabitEthernet 2/0/2
[H3C-security-zone-trust]quit
```

防火墙目前版本存在两套安全策略，请在放通安全策略前确认设备运行那种类型的安全策略？以下配置任选其一。

2. 通过命令“display cu | in security-policy”如果查到命令行存在“security-policy disable”或者没有查到任何信息，则使用下面策略配置。

```
[H3C]display cu | in security-policy
 security-policy disable
```

#创建对象策略pass。

```
[H3C]object-policy ip pass
[H3C-object-policy-ip-pass] rule 0 pass
[H3C-object-policy-ip-pass]quit
```

#创建Trust到Untrust域的域间策略调用pass策略。

```
[H3C]zone-pair security source Trust destination
```

```
local
[H3C-zone-pair-security-Trust- local]object-policy apply ip pass
[H3C-zone-pair-security-Trust- local]quit
[H3C]zone-pair security source local destination Trust
[H3C-zone-pair-security-local -trust]object-policy apply ip pass
[H3C-zone-pair-security-local -trust]quit
[H3C]zone-pair security source Untrust destination local
[H3C-zone-pair-security-Untrust- local]object-policy apply ip pass
[H3C-zone-pair-security-Untrust- local]quit
[H3C]zone-pair security source local destination Untrust
[H3C-zone-pair-security-local -Untrust]object-policy apply ip pass
[H3C-zone-pair-security-local -Untrust]quit
[H3C]zone-pair security source Trust destination Untrust
[H3C-zone-pair-security-Trust -Untrust]object-policy apply ip pass
[H3C-zone-pair-security-Trust -Untrust]quit
```

3. 通过命令“display cu | in security-policy”如果查到命令行存在“security-policy ip”并且没有查到“security-policy disable”，则使用下面策略配置。

```
[H3C]display cu | in security-policy
security-policy ip
```

创建安全策略并放通local到trust和trust到local的安全策略。

```
[H3C]security-policy ip
[H3C-security-policy-ip]rule 10 name test
[H3C-security-policy-ip-10-test]action pass
[H3C-security-policy-ip-10-test]source-zone local
[H3C-security-policy-ip-10-test]source-zone Trust
[H3C-security-policy-ip-10-test]source-zone Untrust
[H3C-security-policy-ip-10-test]destination-zone local
[H3C-security-policy-ip-10-test]destination-zone Trust
[H3C-security-policy-ip-10-test]destination-zone Untrust
[H3C-security-policy-ip-10-test]quit
```

4 检验配置结果

4.1.1 正常时查看冗余组状态

节点1为主用状态，节点二为备用状态。

```
[H3C-redundancy-group-aaa] display redundancy
group aaa
Redundancy group aaa (ID 1):
  Node ID       Slot        Priority   Status         Track
weight
  1             Slot1       100        Primary        255
  2             Slot2       50         Secondary      255

Preempt delay time remained      : 0    min
Preempt delay timer setting      : 1    min
Remaining hold-down time         : 0    sec
Hold-down timer setting          : 1    sec
Manual switchover request        : No

Member interfaces:

Node 1:
  Node member      Physical status
```

```
    GE1/0/1   UP
    GE1/0/2   UP
  Track info:
   Track    Status      Reduced weight     Interface
   1        Positive    255                GE1/0/1
   2        Positive    255                GE1/0/2
Node 2:
  Node member     Physical status
    GE2/0/1   UP
    GE2/0/2   UP
  Track info:
   Track    Status      Reduced weight     Interface
   3        Positive      255              GE2/0/1
   4        Positive      255              GE2/0/2
```

4.1.2 手动关闭1/0/2接口后时查看冗余组状态

查看到主备状态已经发生了变化，并且1/0/1与1/0/2的物理状态全部置为down。

```
[H3C] display redundancy group aaa
Redundancy group aaa (ID 1):
  Node ID      Slot      Priority   Status        Track
weight
  1           Slot1     100        Secondary     -255
  2           Slot2     50        Primary       255
```

```
Preempt delay time remained     : 0    min
Preempt delay timer setting     : 1    min
Remaining hold-down time        : 0    sec
Hold-down timer setting         : 1    sec
Manual switchover request       : No

Member interfaces:

Node 1:
  Node member     Physical status
     GE1/0/1       DOWN(redundancy down)
     GE1/0/2       DOWN
  Track info:
    Track    Status       Reduced weight     Interface
    1        Negative     255                GE1/0/1
    2        Negative     255                GE1/0/2
(Fault)
Node 2:
  Node member     Physical status
     GE2/0/1   UP
     GE2/0/2   UP
  Track info:
```

```
Track   Status      Reduced weight   Interface
3       Positive    255              GE2/0/1
4       Positive    255              GE2/0/2
```

4.1.3 注意事项

1、配置冗余组后需要加入冗余接口的物理口全部连接，否则会造成冗余组异常。