F1000-X-G2/F100-X-G2系列防火墙常见冗余组网配置举例（上接路由器下接交换机组网）

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组网及说明

1 配置需求及说明

1.1 适用的产品系列

本案例适用于如F1000-A-G2、F1000-S-G2、F100-M-G2、F100-S-G2等F1000-X-G2、F100-X-G2系列的防火墙

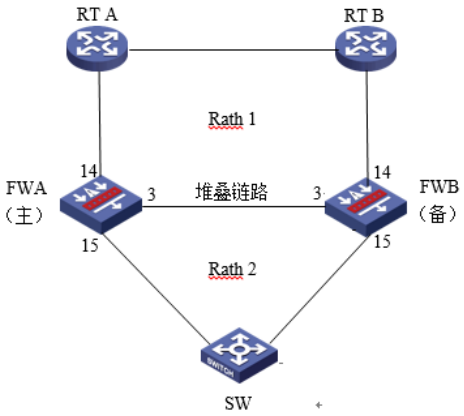
1.2 配置需求及实现的效果

防火墙A与防火墙B堆叠后上联路由器A、B下联交换机，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



配置步骤

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

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除IP地址外，配置相同不再赘述。

3.2 交换机配置

3.2.1 配置交换机上联防火墙接口

交换机配置vlan 10将上联防火墙的14和15接口加入vlan10，并创建vlan10接口IP地址为3.3.3.1。

system

[H3C]vlan20

[H3C-vlan20]port GigabitEthernet 1/0/14 GigabitEthernet 1/0/15

[H3C]interface Vlan-interface 10

[H3C-Vlan-interface10]ip address 3.3.3.1 24

配置默认路由到防火墙Reth2接口地址。

[H3C]ip route-static 0.0.0.0 0 3.3.3.2

3.3 防火墙配置

3.3.1 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。

3.3.2 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 1/0/15 physical

[H3C-track-1] quit

[H3C] track 2 interface gigabitethernet 1/0/14 physical

[H3C-track-2] quit

[H3C] track 3 interface gigabitethernet 2/0/14 physical

[H3C-track-3] quit
[H3C] track 4 interface gigabitethernet 2/0/15 physical
[H3C-track-4] quit

3.3.3 配置冗余组关联冗余接口

1. 创建Reth1接口关联下联防火墙的接口

创建Reth1接口配置IP地址为3.3.3.2/24，并配置1/0/15成员优先级为255，2/0/15成员优先级为50。

system-view
[H3C] interface reth 1
[H3C-Reth1] ip address 3.3.3.2 24
[H3C-Reth1] member interface gigabitethernet 1/0/15 priority 255
[H3C-Reth1] member interface gigabitethernet 2/0/15 priority 50
[H3C-Reth1] quit

2. 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 1/0/14
[H3C-redundancy-group-aaa-node1] track 1 interface gigabitethernet 1/0/15
[H3C-redundancy-group-aaa-node1] track 2 interface gigabitethernet 1/0/14
[H3C-redundancy-group-aaa-node1] quit

3. 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 2/0/14
[H3C-redundancy-group-aaa-node2] track 3 interface gigabitethernet 2/0/15
[H3C-redundancy-group-aaa-node2] track 4 interface gigabitethernet 2/0/14
[H3C-redundancy-group-aaa-node2] quit

4. 将Reth1添加到冗余组

[H3C-redundancy-group-aaa] member interface reth 1

3.3.4 开启会话热备

[H3C] session synchronization enable

3.3.5 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 1/0/14
[H3C-security-zone-Untrust]import interface GigabitEthernet 2/0/14
将1/0/2与2/0/2加入trust区域
[H3C]security-zone name trust
[H3C-security-zone-trust]import interface Reth1
[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。

```
[F1060]dis redundancy group bin
Redundancy group bin (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:
    Reth1

Node 1:
  Node member     Physical status
    GE1/0/14      UP
  Track info:
    Track    Status       Reduced weight     Interface
    1        Positive     255                GE1/0/15
    2        Positive     255                GE1/0/14
Node 2:
  Node member     Physical status
    GE2/0/14      UP
  Track info:
    Track    Status       Reduced weight     Interface
    3        Positive     255                GE2/0/15
    4        Positive     255                GE2/0/14
[F1060]
```

显示Reth信息。可以看到Reth1中优先级高的成员接口处于激活状态。

```
[F1060]dis reth interface Reth 1
Reth1 :
  Redundancy group  : bin
  Member           Physical status         Forwarding status   Presence status
  GE1/0/15         UP                      Active              Normal
  GE2/0/15         UP                      Inactive            Normal
```

4.1.2 异常时查看冗余组状态

手动关闭1/0/14接口后时查看冗余组状态,

```
[F1060]dis redundancy group bin
Redundancy group bin (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:
    Reth1

Node 1:
  Node member     Physical status
    GE1/0/14      DOWN
  Track info:
    Track    Status       Reduced weight     Interface
    1        Negative     255                GE1/0/15
    2        Negative     255                GE1/0/14(Fault)
Node 2:
  Node member     Physical status
    GE2/0/14      UP
  Track info:
    Track    Status       Reduced weight     Interface
    3        Positive     255                GE2/0/15
    4        Positive     255                GE2/0/14
```

配置关键点

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。