H3C万兆核心路由器SR8800 BFD for OSPF典型配置

李渊 2008-03-14 发表

BFD for OSPF典型配置

1.组网需求

l 两台路由器Router A、Router B通过二层交换机互连，并且在双方接口上使能BFD应用，在路由器上运行OSPF，网络层相互可达。

l 在Router A和交换机之间的链路发生故障后，BFD能够快速检测并通告OSPF协议。

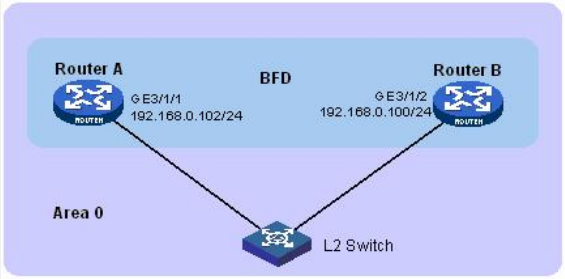

图1 BFD for OSPF配置举例组网图

2.配置思路

l 配置OSPF基本功能

l 配置BFD for OSPF

3 配置步骤

3.1 路由器A的配置

1. 配置步骤

配置OSPF基本功能

<RouterA> system-view

[RouterA] ospf

[RouterA-ospf-1] area 0

[RouterA-ospf-1-area-0.0.0.0] network 192.168.0.0 0.0.0.255

[RouterA-ospf-1-area-0.0.0.0] quit

[RouterA-ospf-1] quit

[RouterA] interface gigabitEthernet 3/1/1

[RouterA-GigabitEthernet3/1/1] ospf bfd enable

配置各路由器接口及BFD参数

<RouterA> system-view

[RouterA] bfd session init-mode active

[RouterA] interface gigabitEthernet 3/1/1

[RouterA-GigabitEthernet3/1/1] ip address 192.168.0.102 24

[RouterA-GigabitEthernet3/1/1] bfd min-transmit-interval 100

[RouterA-GigabitEthernet3/1/1] bfd min-receive-interval 100

[RouterA-GigabitEthernet3/1/1] bfd detect-multiplier 5

2. 配置文件

```
interface GigabitEthernet3/1/1
 port link-mode route
 ip address 192.168.0.102 255.255.255.0
 ospf bfd enable
bfd min-transmit-interval 100
bfd min-receive-interval 100
 bfd detect-multiplier 5
#
interface GigabitEthernet3/1/5
 port link-mode route
 shutdown
#
interface M-Ethernet4/0/0
 ip address 191.1.1.231 255.255.255.0
#
ospf 1
 area 0.0.0.0
```

```
  network 192.168.0.0 0.0.0.255
#
return
```

3.2 路由器B的配置

1. 配置步骤

```
# 配置OSPF基本功能
<RouterB> system-view
[RouterB] ospf
[RouterB-ospf-1] area 0
[RouterB-ospf-1-area-0.0.0.0] network 192.168.0.0 0.0.0.255
[RouterB-ospf-1-area-0.0.0.0] quit
[RouterB-ospf-1] quit
[RouterB] interface GigabitEthernet 3/1/2
[RouterB-GigabitEthernet3/1/2] ospf bfd enable
# 配置各路由器接口及BFD参数
<RouterB> system-view
[RouterB] bfd session init-mode active
[RouterB] interface gigabitEthernet 3/1/2
[RouterB-GigabitEthernet3/1/2] ip address 192.168.0.100 24
[RouterB-GigabitEthernet3/1/2] bfd min-transmit-interval 100
[RouterB-GigabitEthernet3/1/2] bfd min-receive-interval 100
[RouterB-GigabitEthernet3/1/2] bfd detect-multiplier 5
```

2. 配置文件

```
[RouterB]dis cur
#
 bfd echo-source-ip 10.10.10.10
#
vlan 1
#
vlan 100
#
interface GigabitEthernet3/1/4
 port link-mode route
#
interface GigabitEthernet3/1/6
 port link-mode route
#
interface GigabitEthernet3/1/2
 port link-mode route
 ip address 192.168.0.100 255.255.255.0
 ospf bfd enable
bfd min-transmit-interval 100
bfd min-receive-interval 100
 bfd detect-multiplier 5
#
interface M-Ethernet4/0/0
 ip address 191.1.1.232 255.255.255.0
 ospf trans-delay 23
#
ospf 1
 area 0.0.0.0
  network 192.168.0.0 0.0.0.255
#
return
```

3.3 验证结果

可通过以下方式验证上述配置，注意到设备之间已经建立了相应的session：

```
[RouterA]dis bfd session v

 Total Session Num: 1            Init Mode: Active

 Session Working Under Ctrl Mode:

     Local Discr: 2                  Remote Discr: 3
       Source IP: 192.168.0.102     Destination IP: 192.168.0.100
```

```
  Session State: Up                 Interface: GigabitEthernet3/1/1
 Min Trans Inter: 100ms           Act Trans Inter: 100ms
  Min Recv Inter: 100ms           Act Detect Inter: 2800ms
  Establish Time: 272:15:44       Last Down Time: 272:15:44
   Last Up Time: 272:15:45            Auth mode: None
   Connect Type: Direct              Board Num: 3
      Protocol: OSPF
     Diag Info: No Diagnostic

[RouterB]dis bfd sess v
 Total Session Num: 1           Init Mode: Active
 Session Working Under Ctrl Mode:
    Local Discr: 3                 Remote Discr: 2
     Source IP: 192.168.0.100     Destination IP: 192.168.0.102
  Session State: Up                 Interface: GigabitEthernet3/1/2
 Min Trans Inter: 100ms           Act Trans Inter: 100ms
  Min Recv Inter: 100ms           Act Detect Inter: 2400ms
  Establish Time: 271:50:23       Last Down Time: 271:50:23
   Last Up Time: 271:50:32            Auth mode: None
   Connect Type: Direct              Board Num: 3
      Protocol: OSPF
     Diag Info: No Diagnostic
```