

知 QOS之WRED典型组网配置案例

VLAN

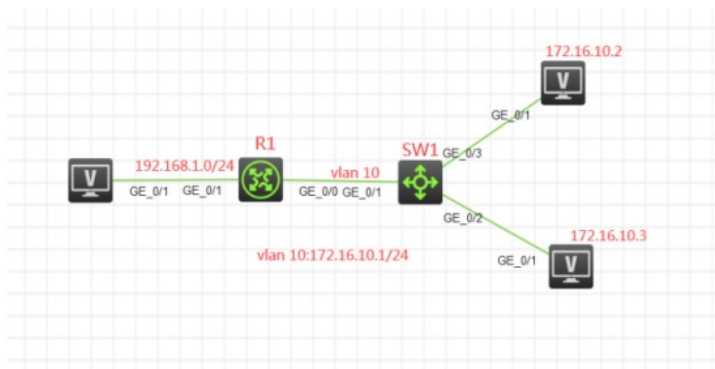
QoS

H3C模拟器

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组网及说明



组网说明：

本案例采用H3C HCL模拟器来模拟WRED典型组网。R1的GE 0/1端口连接服务器。其中172.16.10.2是IP电话。要求在拥塞发生时，172.16.10.3和172.16.10.2要有不同的丢弃行为，从而保证语音流能有更好的服务。

配置步骤

- 1、要将语音报文标记为IP Precedence 5，数据流为IP Precedence 0。
- 2、采用CAR的重标记方式对报文进行分类，将来自IP电话和数据报文的优先级分别设置为5和0，在做CAR时，CIR的值全部保持一致，确保所匹配的报文都能全部被重标记
- 3、启用WFQ功能，与WRED同时使用

配置关键点

第一阶段调试（基础网络配置）：

SW1：

```
<H3C>sys
System View: return to User View with Ctrl+Z.
[H3C]sysname SW1
[SW1]vlan 10
[SW1-vlan10]quit
[SW1]int gi 1/0/1
[SW1-GigabitEthernet1/0/1]port link-type trunk
[SW1-GigabitEthernet1/0/1]undo port trunk permit vlan 1
[SW1-GigabitEthernet1/0/1]port trunk permit vlan 10
[SW1-GigabitEthernet1/0/1]quit
[SW1]int range gi 1/0/2 to gi 1/0/3
[SW1-if-range]port link-type access
[SW1-if-range]port access vlan 10
[SW1-if-range]quit
[SW1]
```

R1：

```
<H3C>sys
System View: return to User View with Ctrl+Z.
[H3C]sysname R1
[R1]vlan 10
[R1-vlan10]quit
[R1]int vlan 10
[R1-Vlan-interface10]ip address 172.16.10.1 24
[R1-Vlan-interface10]quit
[R1]int gi 0/0
[R1-GigabitEthernet0/0]port link-mode bridge
[R1-GigabitEthernet0/0]port link-type trunk
[R1-GigabitEthernet0/0]undo port trunk permit vlan 1
[R1-GigabitEthernet0/0]port trunk permit vlan 10
```

```
[R1-GigabitEthernet0/0]quit
[R1]int gi 0/1
[R1-GigabitEthernet0/1]ip address 192.168.1.1 24
[R1-GigabitEthernet0/1]quit
```

第二阶段调试（WRED+WFQ关键配置）：

R1：

```
[R1]acl basic 2000
[R1-acl-ipv4-basic-2000]rule 0 permit source 172.16.10.2 0
[R1-acl-ipv4-basic-2000]quit
[R1]acl basic 2001
[R1-acl-ipv4-basic-2001]rule 0 permit source 172.16.10.3 0
[R1-acl-ipv4-basic-2001]quit

[R1]int gi 0/0
[R1-GigabitEthernet0/0]qos car inbound acl 2000 cir 100000 green remark-prec-pass 5 red pass
[R1-GigabitEthernet0/0]qos car inbound acl 2001 cir 100000 green remark-prec-pass 0 red pass
[R1-GigabitEthernet0/0]quit

[R1]int gi 0/1
[R1-GigabitEthernet0/1]qos wfq
[R1-GigabitEthernet0/1]qos wred enable
[R1-GigabitEthernet0/1]qos wred ip-precedence 5 low-limit 10 high-limit 250 discard-probability 10
[R1-GigabitEthernet0/1]qos wred ip-precedence 0 low-limit 10 high-limit 180 discard-probability 11
[R1-GigabitEthernet0/1]quit
```

查看QOS的显示信息：

```
[R1]dis cu int gi 0/0
#
interface GigabitEthernet0/0
  port link-mode bridge
  port link-type trunk
  undo port trunk permit vlan 1
  port trunk permit vlan 10
  combo enable copper
  qos car inbound acl 2000 cir 100000 cbs 6250000 ebs 0 green remark-prec-pass 5 red pass y
  ellow pass
  qos car inbound acl 2001 cir 100000 cbs 6250000 ebs 0 green remark-prec-pass 0 red pass y
  ellow pass
#
return
[R1]dis cu int gi 0/1
#
interface GigabitEthernet0/1
  port link-mode route
  combo enable copper
  ip address 192.168.1.1 255.255.255.0
  qos wfq precedence queue-length 64 queue-number 256
  qos wred enable
  qos wred ip-precedence 0 low-limit 10 high-limit 180 discard-probability 11
  qos wred ip-precedence 5 low-limit 10 high-limit 250 discard-probability 10
#
return
[R1]
```

```
[R1]dis qos wred interface
Interface: GigabitEthernet0/1
Current WRED configuration:
Exponent: 9 (1/512)
Pre  Low  High  Dis-prob  Random-discard  Tail-discard
-----
0    10    180   11        0                0
1    10    30    10        0                0
2    10    30    10        0                0
3    10    30    10        0                0
4    10    30    10        0                0
5    10    250   10        0                0
6    10    30    10        0                0
7    10    30    10        0                0

[R1]
```

```
[R1]dis qos car interface
Interface: GigabitEthernet0/0
Direction: inbound
Rule: If-match acl 2000
  CIR 100000 (kbps), CBS 6250000 (Bytes), EBS 0 (Bytes)
  Green action : remark ip-precedence 5 and pass
  Yellow action : pass
  Red action   : pass
  Green packets : 0 (Packets), 0 (Bytes)
  Yellow packets: 0 (Packets), 0 (Bytes)
  Red packets   : 0 (Packets), 0 (Bytes)
Rule: If-match acl 2001
  CIR 100000 (kbps), CBS 6250000 (Bytes), EBS 0 (Bytes)
  Green action : remark ip-precedence 0 and pass
  Yellow action : pass
  Red action   : pass
  Green packets : 0 (Packets), 0 (Bytes)
  Yellow packets: 0 (Packets), 0 (Bytes)
  Red packets   : 0 (Packets), 0 (Bytes)
[R1]
```

至此，QOS之WRED典型组网配置案例已完成！