

组网及说明

1 配置需求或说明

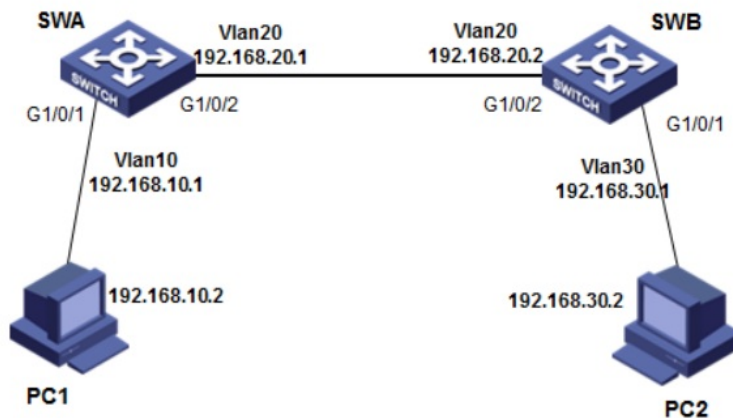
1.1 适用产品系列

本案例适用于如S5800-32C-EI、S5800-32F、S5800-60C-PWR、S5830-106S等S5800、S5830系列的交换机。

1.2 配置需求

SWA和SWB通过VLAN20互联、通过OSPF路由协议实现PC1和PC2的互连互通。

2 组网图



配置步骤

3 配置步骤

3.1 SWA配置

#创建vlan10和vlan20，并把G1/0/1口加入vlan10、1/0/2口加入vlan20，并且配置vlan10和vlan20的虚接口地址

```
<SWA>system-view
System View: return to User View with Ctrl+Z.
[SWA]vlan 10
[SWA-vlan10]port GigabitEthernet 1/0/1
[SWA-vlan10]quit
[SWA]vlan 20
[SWA-vlan20]port GigabitEthernet 1/0/2
[SWA-vlan20]quit
[SWA]interface vlan 10
[SWA-Vlan-interface10]ip address 192.168.10.1 255.255.255.0
[SWA-Vlan-interface10]quit
[SWA]interface vlan 20
[SWA-Vlan-interface20]ip address 192.168.20.1 255.255.255.0
[SWA-Vlan-interface20]quit
```

#启动ospf协议，并设置路由器的router id

```
[SWA]ospf 1 router-id 192.168.20.1
#配置区域0并且发布网段
[SWA-ospf-1]area 0
[SWA-ospf-1-area-0.0.0.0]network 192.168.10.0 0.0.0.255
[SWA-ospf-1-area-0.0.0.0]network 192.168.20.0 0.0.0.255
[SWA-ospf-1-area-0.0.0.0]quit
[SWA-ospf-1]quit
#保存配置
[SWA]save force
```

3.2 SWB配置

#创建vlan10和vlan30, 并把G1/0/1口加入vlan20、1/0/2口加入vlan30, 并且配置vlan20和vlan30 的虚接口地址

```
<SWB>system-view
System View: return to User View with Ctrl+Z.
[SWB]vlan 20
[SWB-vlan20]port GigabitEthernet 1/0/1
[SWB-vlan20]quit
[SWB]vlan 30
[SWB-vlan30]port GigabitEthernet 1/0/2
[SWB-vlan30]quit
[SWB]interface vlan 20
[SWB-Vlan-interface20]ip address 192.168.20.2 255.255.255.0
[SWB-Vlan-interface20]quit
[SWB]interface vlan 30
[SWB-Vlan-interface30]ip address 192.168.30.1 255.255.255.0
[SWB-Vlan-interface30]quit
#启动ospf协议, 并设置路由器的router id
[SWB]ospf 1 router-id 192.168.20.2
#配置区域0并且发布网段
[SWB-ospf-1]area 0
[SWB-ospf-1-area-0.0.0.0]network 192.168.20.0 0.0.0.255
[SWB-ospf-1-area-0.0.0.0]network 192.168.30.0 0.0.0.255
[SWB-ospf-1-area-0.0.0.0]quit
[SWB-ospf-1]quit
#保存配置
[SWB]save force
```

3.3 验证配置

查看Switch A的OSPF邻居, Full为正常状态。

```
<SWA>display ospf peer
    OSPF Process 1 with Router ID 192.168.20.1
      Neighbor Brief Information
    Area: 0.0.0.0
  Router ID   Address      Pri Dead-Time State      Interface
  192.168.20.2 192.168.20.2 1 35   Full/BDR   Vlan20
```

#查看Switch A的OSPF路由信息

```
<SWB>display ospf routing
    OSPF Process 1 with Router ID 192.168.20.1
      Routing Table
      Topology base (MTID 0)
    Routing for network
  Destination  Cost  Type  NextHop  AdvRouter  Area
  192.168.10.0/24  1    Stub  0.0.0.0  192.168.20.1  0.0.0.0
  192.168.30.0/24  2    Stub  192.168.20.2  192.168.20.2  0.0.0.0
  192.168.20.0/24  1    Transit  0.0.0.0  192.168.20.1  0.0.0.0
```

#查看Switch A的路由表信息, 有到192.168.30.0/24网段的路由

```
<SWA>display ip routing-table
Destinations : 17    Routes : 17
Destination/Mask  Proto  Pre Cost    NextHop    Interface
0.0.0.0/32        Direct 0 0      127.0.0.1  InLoop0
127.0.0.0/8       Direct 0 0      127.0.0.1  InLoop0
127.0.0.0/32      Direct 0 0      127.0.0.1  InLoop0
127.0.0.1/32      Direct 0 0      127.0.0.1  InLoop0
127.255.255.255/32 Direct 0 0      127.0.0.1  InLoop0
192.168.10.0/24   Direct 0 0      192.168.10.1  Vlan10
192.168.10.0/32   Direct 0 0      192.168.10.1  Vlan10
192.168.10.1/32   Direct 0 0      127.0.0.1  InLoop0
192.168.10.255/32 Direct 0 0      192.168.10.1  Vlan10
192.168.20.0/24   Direct 0 0      192.168.20.1  Vlan20
192.168.20.0/32   Direct 0 0      192.168.20.1  Vlan20
192.168.20.1/32   Direct 0 0      127.0.0.1  InLoop0
192.168.20.255/32 Direct 0 0      192.168.20.1  Vlan20
```

```
192.168.30.0/24 O_INTRA 10 2 192.168.20.2 Vlan20
224.0.0.0/4 Direct 0 0 0.0.0.0 NULL0
224.0.0.0/24 Direct 0 0 0.0.0.0 NULL0
255.255.255.255/32 Direct 0 0 127.0.0.1 InLoop0
```

PC1 ping PC2 正常通信

```
C:\Users\mfw2656>ping 192.168.30.2
```

```
Ping 192.168.30.2 (192.168.30.2): 56 data bytes, press CTRL_C to break
```

```
56 bytes from 192.168.30.2: icmp_seq=0 ttl=254 time=8.000 ms
```

```
56 bytes from 192.168.30.2: icmp_seq=1 ttl=254 time=2.000 ms
```

```
56 bytes from 192.168.30.2: icmp_seq=2 ttl=254 time=3.000 ms
```

```
56 bytes from 192.168.30.2: icmp_seq=3 ttl=254 time=3.000 ms
```

```
192.168.30.2 的 Ping 统计信息:
```

```
数据包: 已发送 = 4, 已接收 = 4, 丢失 = 0 (0% 丢失),
```

```
返行程的估计时间(以毫秒为单位):
```

```
最短 = 2ms, 最长 = 3ms, 平均 = 2ms
```

配置关键点