NSD NETWORK DAY02

1 案例1：划分VLAN

1.1 问题

在交换机上创建以下VLAN，按照拓扑图-1将端口加入到指定的VLAN并配置服务器IP地址，实现同VLAN主机的通信
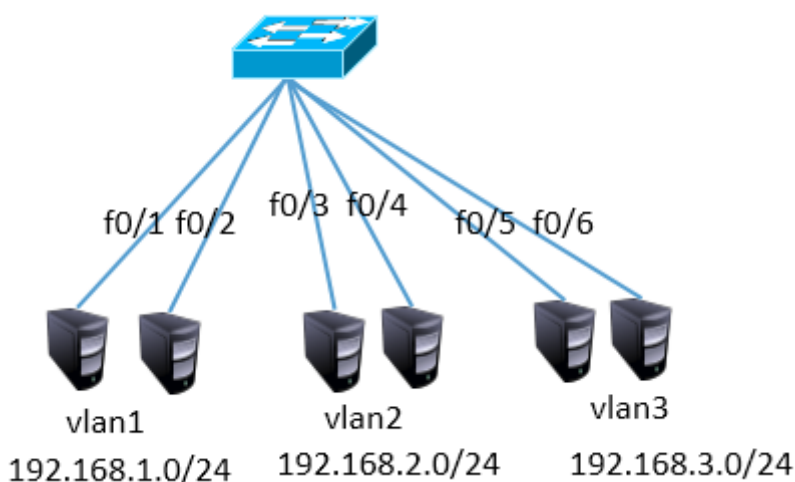

图-1

1.2 步骤

由于默认情况下所有接口都在VLAN1中，且VLAN1默认就存在，所以只需要配置VLAN2和VLAN3即可。

```
01.    <Huawei>system-view
02.    [Huawei]vlan batch 2 3          //创建VLAN2、3
03.    [Huawei]port-group 1
04.    [Huawei-port-group-1]group-member Ethernet0/0/3 Ethernet0/0/4
05.    [Huawei-port-group-1]port link-type access
06.    [Huawei-port-group-1]port default vlan 2
07.    [Huawei-port-group-1]quit
08.    [Huawei]port-group 2
09.    [Huawei-port-group-2]group-member Ethernet0/0/5 Ethernet0/0/6
10.    [Huawei-port-group-2]port link-type access
```

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11.   [Huawei-port-group-2]port default vlan 3

2 案例2：多交换机VLAN的划分

2.1 问题

通过配置交换机实现图-2中的同VLAN主机互通

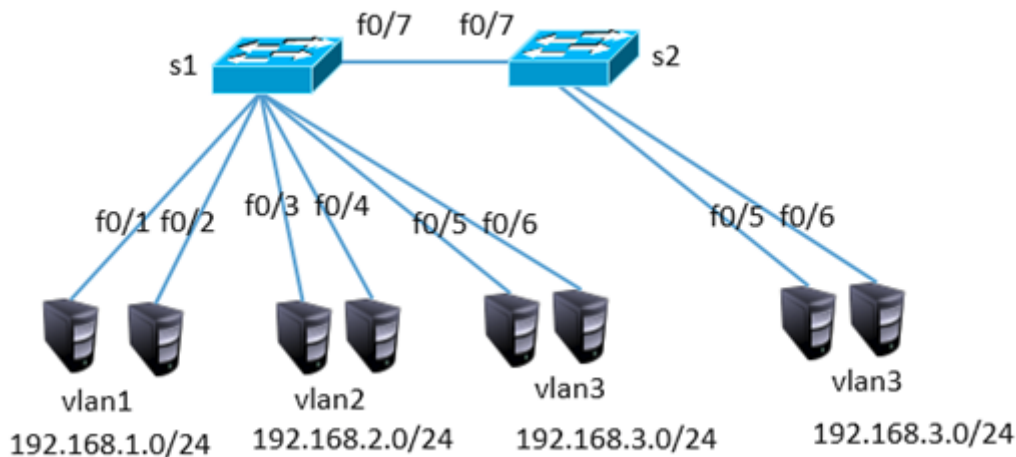
图-2

2.2 步骤

注：以下配置需要在案例1的基础上完成

S1配置

01.   [Huawei]interface Ethernet0/0/7
02.   [Huawei-Ethernet0/0/7] port link-type access
03.   [Huawei-Ethernet0/0/7] port default vlan 3

S2配置

01.   <Huawei>system-view
02.   [Huawei]vlan 3   //创建VLAN3
03.   [Huawei]port-group 1
04.   [Huawei-port-group-1]group-member Ethernet0/0/5 to Ethernet0/0/7
05.   [Huawei-port-group-1]port link-type access
06.   [Huawei-port-group-1]port default vlan 3

3 案例3：配置trunk中继链路   Top
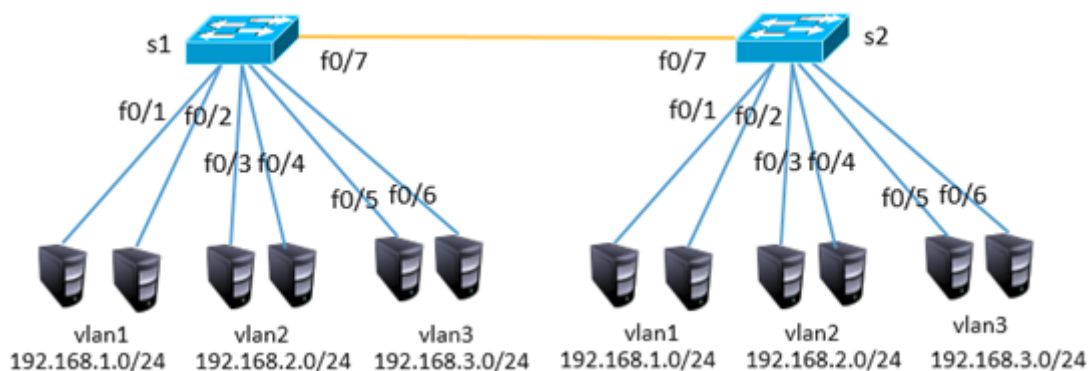
3.1 问题

通过配置实现跨交换机的同VLAN通信，如图-3所示

图-3

3.2 步骤

注：以下配置需要在案例2的基础上完成

S1配置

01.   [Huawei]interface Ethernet0/0/7

02.   [Huawei-Ethernet0/0/7]port default vlan 1

03.   [Huawei-Ethernet0/0/7]port link-type trunk

04.   [Huawei-Ethernet0/0/1]port trunk allow-pass vlan all

S2配置

01.   <Huawei>system-view

02.   [Huawei]vlan 2   //创建VLAN2

03.   [Huawei]port-group 1

04.   [Huawei-port-group-1]group-member Ethernet0/0/3 Ethernet0/0/4

05.   [Huawei-port-group-1]port link-type access

06.   [Huawei-port-group-1]port default vlan 2

07.   [Huawei]interface Ethernet0/0/7

08.   [Huawei-Ethernet0/0/7]port default vlan 1

09.   [Huawei-Ethernet0/0/7]port link-type trunk

10.   [Huawei-Ethernet0/0/1]port trunk allow-pass vlan all

4 案例4：链路聚合配置

4.1 问题

参照图-4将两台交换机的f0/1-f0/2接口互联，并实现高可用

图-4

4.2 步骤

S1配置

01.   [Huawei]interface Eth-trunk 1
02.   [Huawei- Eth-trunk1]trunkport ethernet 0/0/1 0/0/2

S2配置

01.   [Huawei]interface Eth-trunk 1
02.   [Huawei- Eth-trunk1]trunkport ethernet 0/0/1 0/0/2

5 案例5：配置静态路由
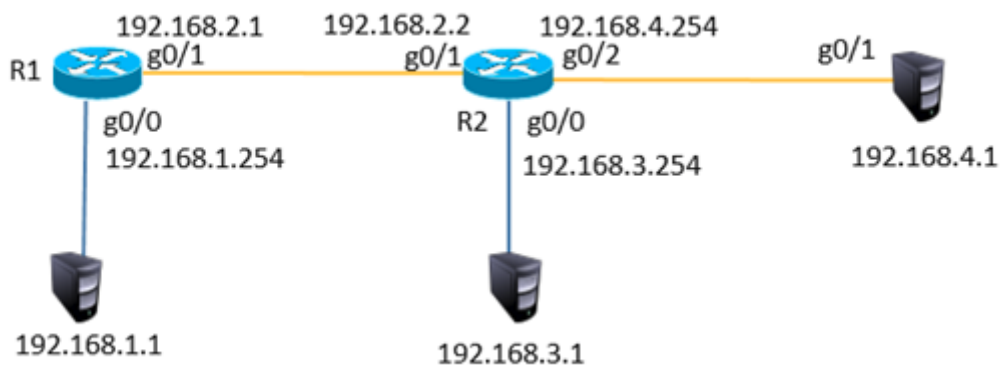
5.1 问题

按照图-5拓扑结构配置接口ip地址并通过静态路由实现全网互通

图-5

5.2 步骤

R1配置

01.   <Huawei>system-view
02.   [Huawei]interface GigabitEthernet 0/0/0
03.   [Huawei-GigabitEthernet0/0/1]ip address 192.168.1.254 24
04.   [Huawei-GigabitEthernet0/0/1]quit

05.   [Huawei]interface GigabitEthernet 0/0/1

06.   [Huawei-GigabitEthernet0/0/1]ip address 192.168.2.1 24

07.   [Huawei]ip route-static 192.168.3.0 24 192.168.2.2

08.   [Huawei]ip route-static 192.168.4.0 24 192.168.2.2

R2配置

01.   <Huawei>system-view

02.   [Huawei]interface GigabitEthernet 0/0/0

03.   [Huawei-GigabitEthernet0/0/1]ip address 192.168.3.254 24

04.   [Huawei-GigabitEthernet0/0/1]quit

05.   [Huawei]interface GigabitEthernet 0/0/1

06.   [Huawei-GigabitEthernet0/0/1]ip address 192.168.2.2 24

07.   [Huawei-GigabitEthernet0/0/1]quit

08.   [Huawei]interface GigabitEthernet 0/0/2

09.   [Huawei-GigabitEthernet0/0/1]ip address 192.168.4.254 24

10.   [Huawei]ip route-static 192.168.1.0 24 192.168.2.1

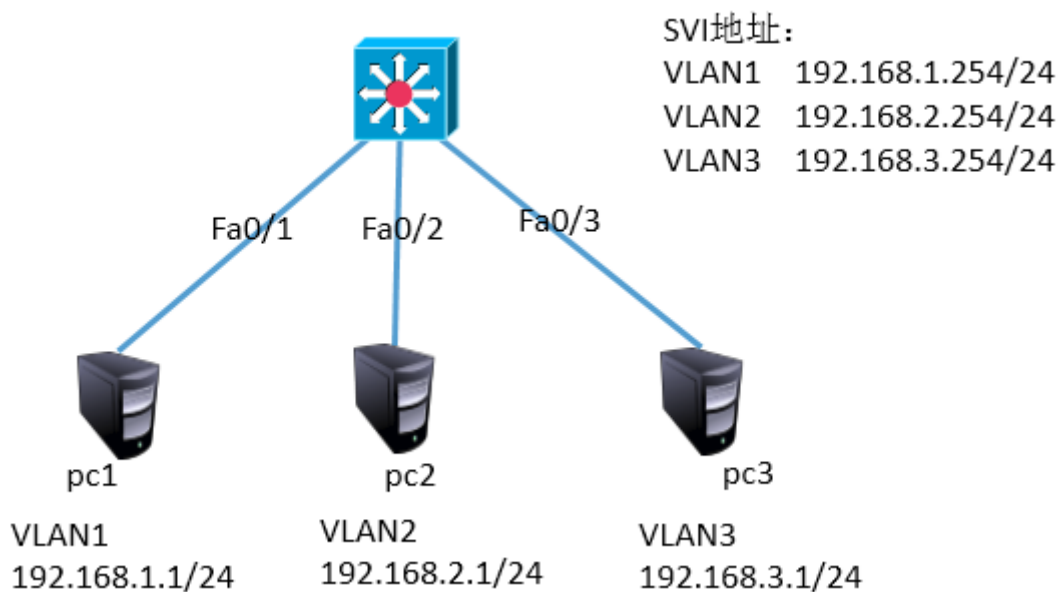# 6 案例6：三层交换机基本配置

6.1 问题

按照图-6的拓扑结构配置ip地址并通过三层交换实现VLAN间通信

SVI地址：
VLAN1   192.168.1.254/24
VLAN2   192.168.2.254/24
VLAN3   192.168.3.254/24

Fa0/1   Fa0/2   Fa0/3

pc1   pc2   pc3

VLAN1   VLAN2   VLAN3
192.168.1.1/24   192.168.2.1/24   192.168.3.1/24

图-6

6.2 步骤

三层交换机配置

01.   [Huawei]vlan batch 2 3

02.   [Huawei]interface Vlanif 1

03.   [Huawei-Vlanif1]ip address 192.168.1.254 24

04.   [Huawei]interface Vlanif 2

05.   [Huawei-Vlanif1]ip address 192.168.2.254 24

06.   [Huawei]interface Vlanif 3

07.   [Huawei-Vlanif1]ip address 192.168.3.254 24

08.   [Huawei]interface Ethernet0/0/2

09.   [Huawei-Ethernet0/0/7] port link-type access

10.   [Huawei-Ethernet0/0/7] port default vlan 2

11.   [Huawei]interface Ethernet0/0/3

12.   [Huawei-Ethernet0/0/7] port link-type access

13.   [Huawei-Ethernet0/0/7] port default vlan 3

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