

# NSD NETWORK DAY02

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## 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

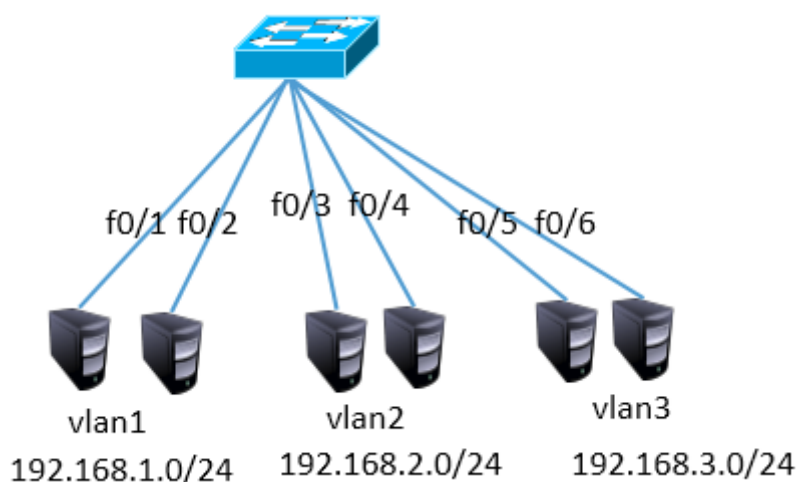


图-1

### 1.2 步骤

实现此案例需要按照如下步骤进行

#### 步骤一：创建vlan，并将接口加入

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

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09. [Huawei-port-group-2]group-member Ethernet0/0/5 Ethernet0/0/6
10. [Huawei-port-group-2]port link-type access
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

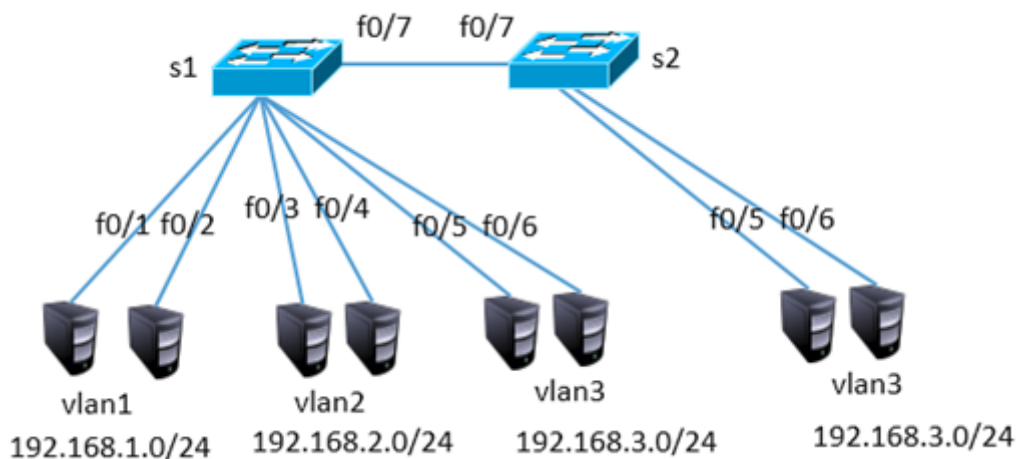


图-2

### 2.2 步骤

注：以下配置需要在案例1的基础上完成

#### 步骤一：创建vlan，并将接口加入

##### 1) 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

##### 2) 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

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### 3 案例3：配置trunk中继链路

#### 3.1 问题

通过配置实现跨交换机的同VLAN通信，如图-3所示

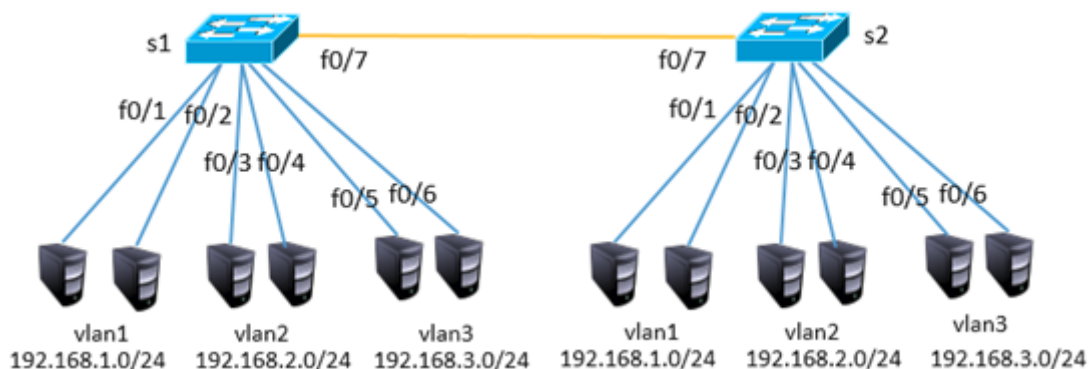


图-3

#### 3.2 步骤

注：以下配置需要在案例2的基础上完成

##### 步骤一：配置trunk，放行所有vlan

###### 1) S1配置

01. 如果接口被改动过，则需要恢复默认配置
02. [Huawei] clear configuration interface Ethernet0/0/7
03. [Huawei] interface Ethernet0/0/7
04. [Huawei-Ethernet0/0/7] port default vlan 1
05. [Huawei-Ethernet0/0/7] port link-type trunk
06. [Huawei-Ethernet0/0/1] port trunk allow-pass vlan all

###### 2) 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

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## 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

步骤一：创建链路聚合接口，并捆绑物理接口

1) S1配置

01. [Huawei]interface Eth-trunk 1
02. [Huawei-Eth-trunk1]trunkport ethernet 0/0/1 0/0/2
- 03.
04. 如果接口被改动过，则需要恢复默认配置
05. [Huawei] clear configuration interface Ethernet0/0/1

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

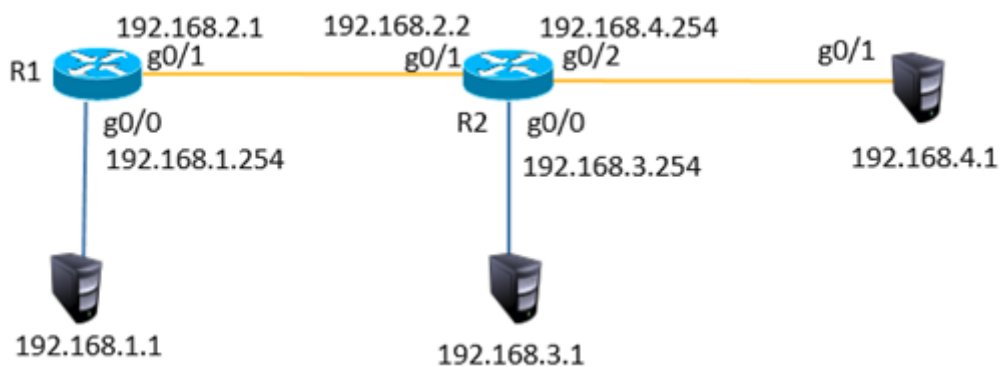


图-5

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## 5.2 步骤

### 步骤一：配置ip地址，添加静态路由

#### 1) 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

#### 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

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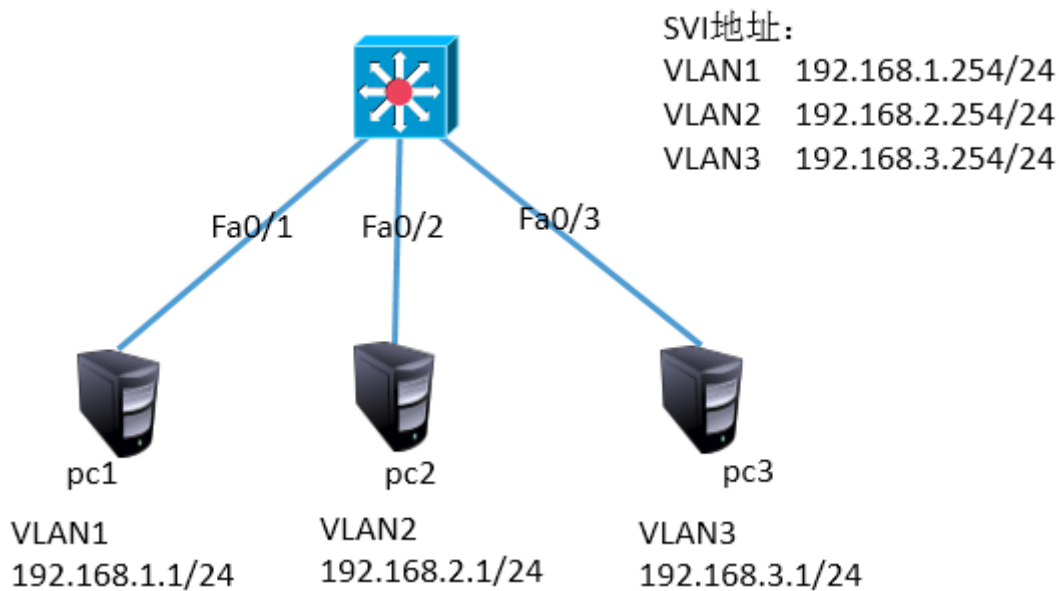


图-6

## 6.2 步骤

### 步骤一：创建vlan，并配置虚拟接口的ip

#### 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 G0/0/2
09. [Huawei-GigabitEthernet0/0/2] port link-type access
10. [Huawei-GigabitEthernet0/0/2] port default vlan 2
11. [Huawei]interface G0/0/3
12. [Huawei-GigabitEthernet0/0/2] port link-type access
13. [Huawei-GigabitEthernet0/0/2] port default vlan 3

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