

VLAN配置

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VLAN的原理

- VLAN是通过软件把网络按逻辑分组，按照物理上交换机端口分割，把不同地理位置的主机分割到相同VLAN内，VLAN是在交换机上实现。
- VLAN能够解决广播风暴问题。交换机的每个端口是一个冲突域，但不能隔离广播，而一个VLAN就是一个广播域。

Cisco2950

- 24个默认10M百兆端口
- 交换机默认所有端口在 VLAN 1

主要命令

- VLAN database
- VLAN XX name XX
- **switchport access vlan 2**
- **Show Vlan**
-

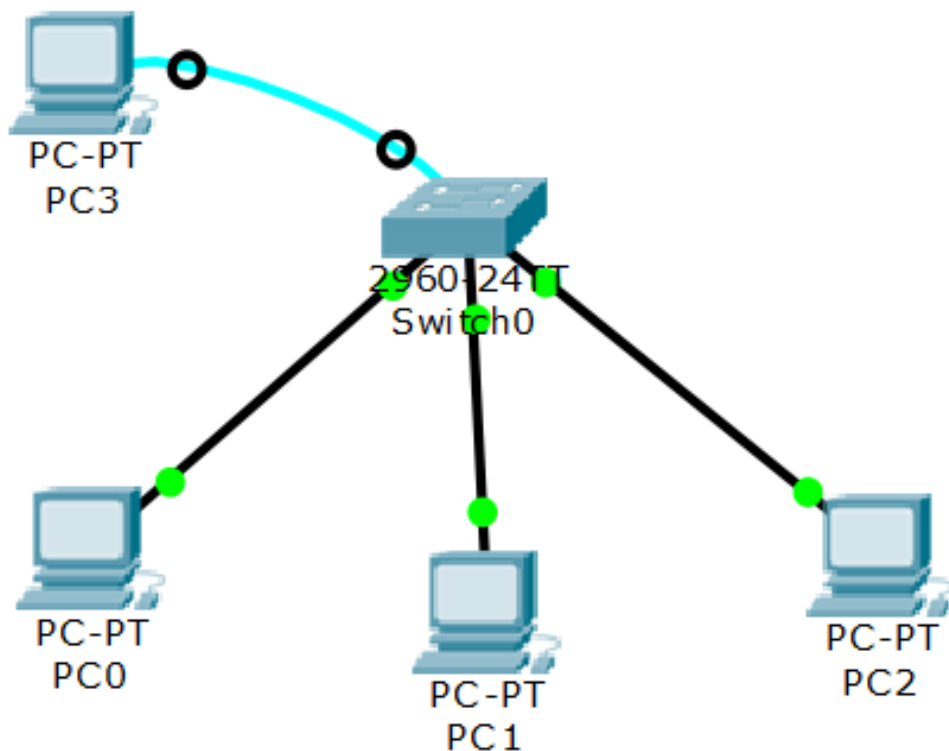
示例：子网规划

- PC0 192.168.1.1 mask 255.255.255.0 Fo/1 VLAN10
- PC1 192.168.1.11 mask 255.255.255.0 Fo/2 VLAN20
- PC2 192.168.1.21 mask 255.255.255.0 Fo/3 VLAN 30

Ping 使用

- PC o ping PC₁
- PC>ping 192.168.1.21
- Pinging 192.168.1.21 with 32 bytes of data:
- Reply from 192.168.1.21: bytes=32 time=203ms TTL=128
- Reply from 192.168.1.21: bytes=32 time=62ms TTL=128
- Reply from 192.168.1.21: bytes=32 time=62ms TTL=128
- Reply from 192.168.1.21: bytes=32 time=62ms TTL=128
- Ping statistics for 192.168.1.21:
 - Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
 - Approximate round trip times in milli-seconds:
 - Minimum = 62ms, Maximum = 203ms, Average = 97ms

拓扑结构



PC0 192.168.1.1 mask 255.255.255.0 F0/1 VLAN10
PC1 192.168.1.11 mask 255.255.255.0 F0/2 VLAN20
PC2 192.168.1.21 mask 255.255.255.0 F0/3 VLAN 30

交换机配置：Vlan10

- Switch>en
- Switch#vlan database
- Switch(vlan)#vlan 10
- ○ ○ ○ ○ ○
- Switch(config)#interface fo/1
- Switch(config-if)#switchport a vlan 10
- Switch#sh vlan

交换机配置：Vlan20

- Switch>en
- Switch#vlan database
- Switch(vlan)#vlan 20
- ○ ○ ○ ○ ○
- Switch(config)#interface fo/2
- Switch(config-if)#switchport a vlan 20
- Switch#sh vlan

交换机配置：Vlan30

- Switch>en
- Switch#vlan database
- Switch(vlan)#vlan 30
- o o o o o
- Switch(config)#interface fo/3
- Switch(config-if)#switchport a vlan 30
- Switch#sh vlan

测试

- PC₀ PC₁ PC₂互相PING，查看结果。