

廈門大學



信息学院软件工程系

《计算机网络》实验报告

题 目 实验 5 CISCO IOS 路由器基本配置

班 级 软件工程 2018 级 1 班

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实验时间 2020 年 4 月 8 日

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1 实验目的

2 实验环境

Router eSIM v1.1 模拟器 CCNA Network Visualizer 6.0

3 实验结果

(1) 在 router esim v1.1 上完成五个路由器的配置

The following table summarizes the configuration status and time elapsed for each lab as shown in the screenshots:

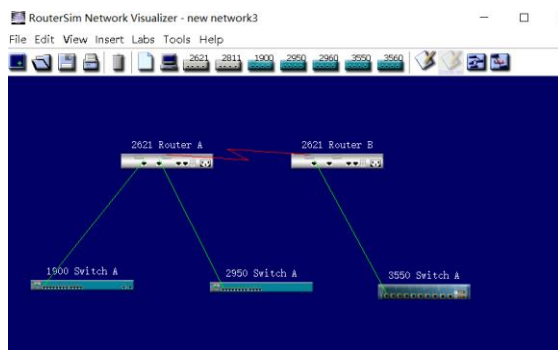
Lab	Configuration Status	Time elapsed
Lab_A	Completed	17:21
Lab_B	Completed	18:13
Lab_C	Completed	23:37
Lab_D	Completed	28:00
Lab_E	Completed	31:35

通过

Hostname enable secret line con 0 line vty 0 4 interface ip host
等指令完成

(2) 使用 CCNA Network Visualizer 6.0 配置静态路由、动态路由和交换机端口的 VLAN（虚拟局域网）

首先按要求建立几个路由器和交换机，并进行连接



静态地址配置完成后进行 ping 测试

```

Console for 2621 Router A
File Edit View Tools Help

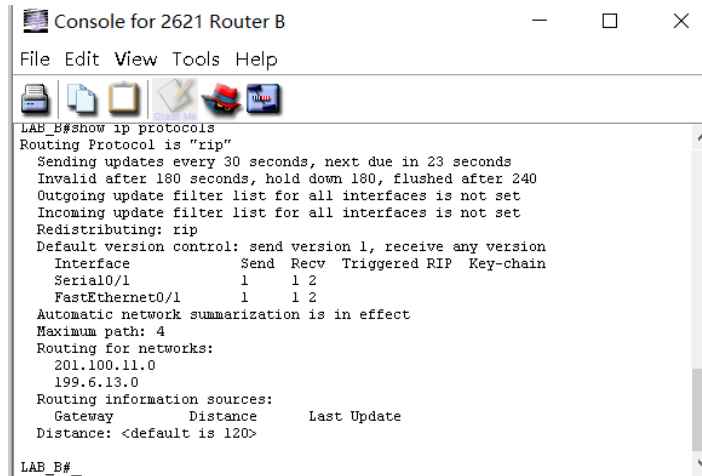
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
        D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
        N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
        E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
        i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, * - candidate default
        U - per-user static route, o - ODR, P - periodic downloaded static route
        T - traffic engineered route

Gateway of last resort is not set
C    205.7.5.0/24 is directly connected, FastEthernet0/1
C    201.100.11.0/24 is directly connected, Serial0/0
C    192.5.5.0/24 is directly connected, FastEthernet0/0
S    199.6.13.0 [1/0] via 201.100.11.2
S    199.6.13.1 [1/0] via 201.100.11.2
LAB_A#ping 199.6.13.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 199.6.13.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 4/4/4 ms
LAB_A#

```

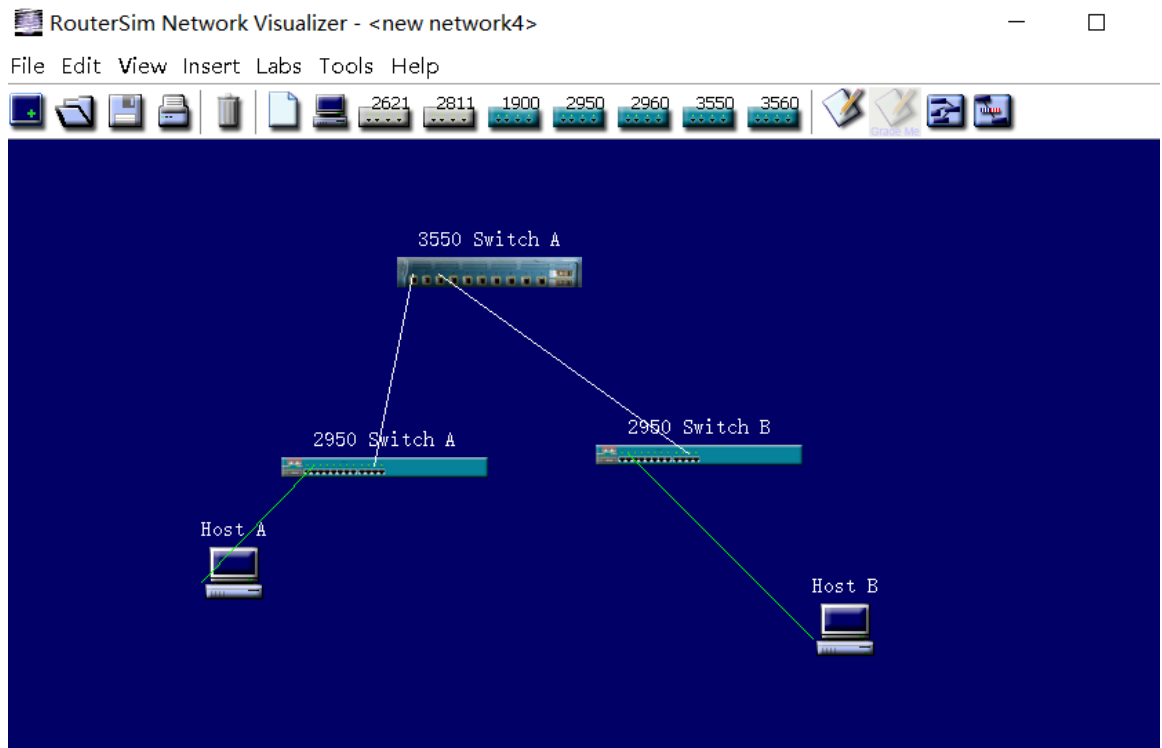
配置动态路由协议



图为动态路由配置完后的 routing protocol

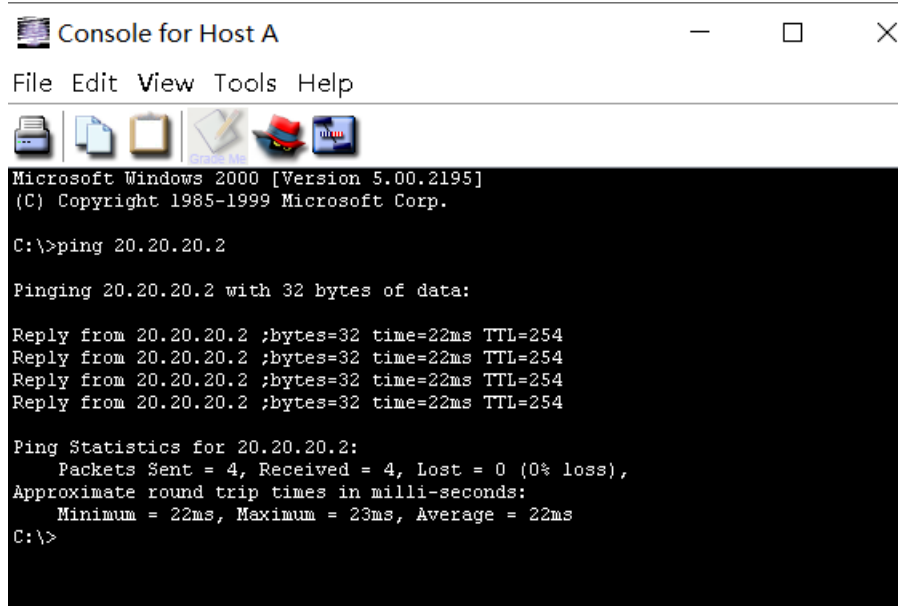
配置 VLAN

建立如图的连接



通过五个步骤配置 VLAN

最后通过通过 hostA ping hostB 进行测试



```
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-1999 Microsoft Corp.

C:\>ping 20.20.20.2

Pinging 20.20.20.2 with 32 bytes of data:

Reply from 20.20.20.2 :bytes=32 time=22ms TTL=254
Reply from 20.20.20.2 :bytes=32 time=22ms TTL=254
Reply from 20.20.20.2 :bytes=32 time=22ms TTL=254
Reply from 20.20.20.2 :bytes=32 time=22ms TTL=254

Ping Statistics for 20.20.20.2:
    Packets Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 22ms, Maximum = 23ms, Average = 22ms
C:\>
```

4 实验总结

掌握了路由器的配置，以及路由表的结构。对于路由器这一物件有了更深的理解，同时了解交换器 VLAN 的配置方法，对原理有了一个更深的理解