

# 廈門大學



## 信息学院软件工程系

### 《计算机网络》实验报告

题    目 实验五  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

2020 年  4 月  8 日

## 1 实验目的

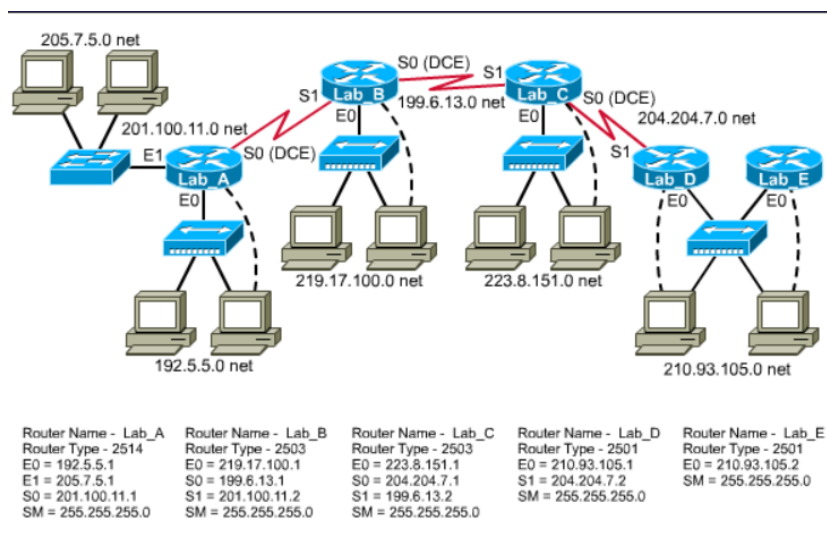
使用 Router eSIM v1.1 模拟器来模拟路由器的配置环境；使用 CCNA Network Visualizer 6.0 配置静态路由、动态路由和交换机端口的 VLAN（虚拟局域网）。

## 2 实验环境

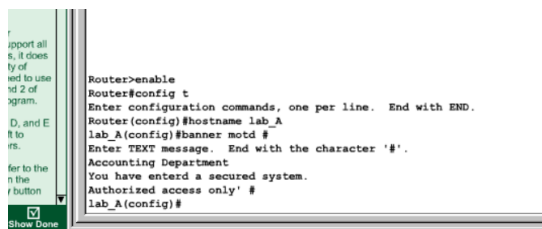
操作系统：windows

## 3 实验结果

### 5.2 Cisco IOS 的基本操作和路由器的常规配置



①



③

```

Authorized access only' #
lab_A(config)#ip host lab_A 192.5.5.1 205.7.5.1 201.100.11.1
lab_A(config)#ip host lab_B 219.17.100.1 199.6.13.1 201.100.11.2
lab_A(config)#ip host lab_C 223.8.151.1 204.204.7.2
lab_A(config)#ip host lab_C 223.8.151.1 204.204.7.1 199.6.13.2
lab_A(config)#ip host lab_D 210.93.105.1 204.204.7.2
lab_A(config)#ip host lab_E 210.93.105.2
lab_A(config)#s

```

⑤

```

lab_A(config)#int eth 0
lab_A(config-if)#ip address 192.5.5.1 255.255.255.0
lab_A(config-if)#int eth 1
lab_A(config-if)#ip address 205.7.5.1 255.255.255.0
lab_A(config-if)#int serial 0
lab_A(config-if)#ip address 201.100.11.1 255.255.255.0
lab_A(config-if)#

```

```

lab_A#show interface serial 0
Serial0 is administratively down, line protocol is down
  Internet address is 201.100.11.1/24
  Hardware is HD64570
  MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation HDLC, loopback not set
  Keepalive set (10 sec)
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0 (size/max/drops); Total output drops: 0
  Queueing strategy: weighted fair
  Output queue: 0/1000/64/0 (size/max total/threshold/drops)
    Conversations 0/0/256 (active/max active/max total)
    Reserved Conversations 0/0 (allocated/max allocated)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 output buffer failures, 0 output buffers swapped out
--More--

```

思考题:

```

lab_A(config)#enable password cisco
lab_A(config)#enable secret class
lab_A(config)#line console 0
lab_A(config-line)#login
lab_A(config-line)#password cisco
lab_A(config-line)#exit
lab_A(config)#line vty 0 4
lab_A(config-line)#login
lab_A(config-line)#password cisco

```

设置密码保护:

show 命令判定网络故障

```

00:02:37: SYS-5-CONFIG_1: Configured from console by console
lab_A#show interface serial 0
Serial0 is administratively down, line protocol is down
  Internet address is 201.100.11.1/24
  Hardware is HD64570

```

显示网络工作状

况。

各个配置模式切换

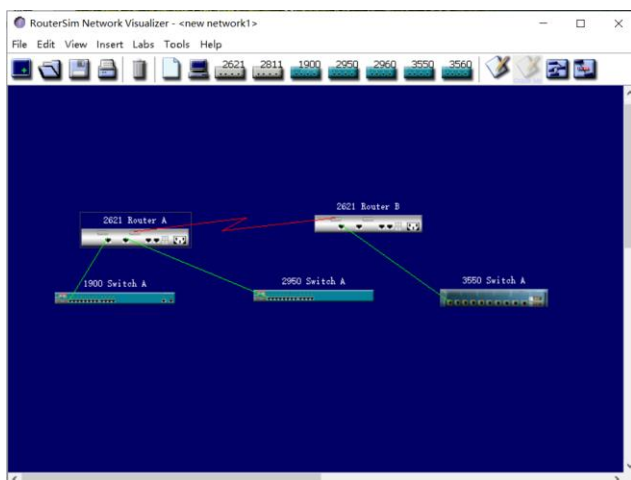
```

lab_A(config)#line console 0
lab_A(config-line)#exit
lab_A(config)#int eth 0
lab_A(config-if)#exit
lab_A(config)#interface serial 0
lab_A(config-if)#exit
lab_A(config)#

```

Show controller serial X (Router eSIM 不支持, 但可从拓扑图看出)

## 5.3



RouteA

RouteB

```

Console for 2621 Router A
File Edit View Tools Help

Enter configuration commands, one per line. End with CNTL/Z
Router(config)#int s0/0
Router(config-if)#ip addr 201.100.11.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#clock rate 56000

% Invalid input detected at '^' marker.
Router(config-if)#clock rate 56000
Router(config-if)#no shutdown
Router(config-if)#
Router(config-if)#exit
Router(config)#exit
Router#show ip route
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
Router#

```

```

Console for 2621 Router B
File Edit View Tools Help

Router(config-if)#no shutdown
11:35:32 %LINK-3-UPDOWN: Interface Serial0/1, changed state to up
11:35:32 %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1, changed state to up

Router(config-if)#exit
Router(config)#exit
Router#route show
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    201.100.11.0/24 is directly connected, Serial0/1
C    199.6.13.0/24 is directly connected, FastEthernet0/0
Router#

```

## Ping

```

Console for 2621 Router A
File Edit View Tools Help

Router Con0 is now available

Press RETURN to get started!

Router>enable
Router#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 0 percent (0/5), round-trip min/avg/max = 0/0/0 ms
Router#

```

```

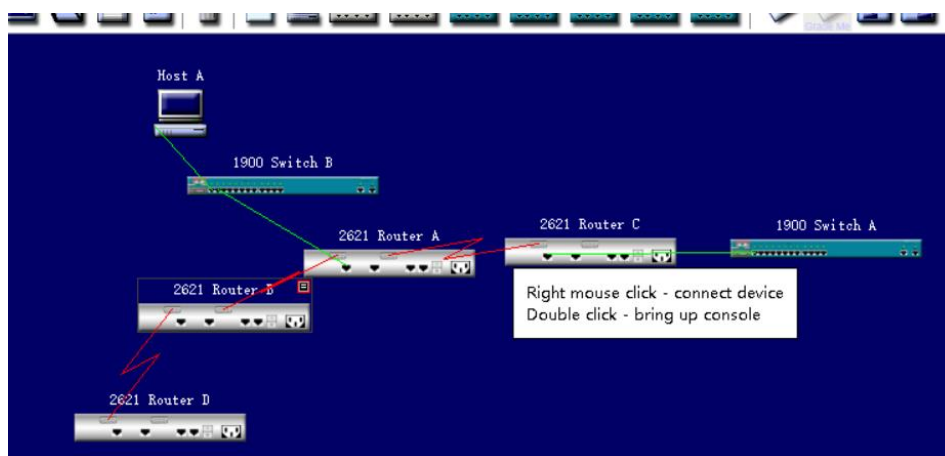
success rate is 100 percent (5/5), round-trip min/avg/max = 4/4/4 ms
Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 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
S    199.6.13.0 [1/0] via 201.100.11.2
C    201.100.11.0/24 is directly connected, Serial0/0
C    192.5.5.0/24 is directly connected, FastEthernet0/0

Router>enable
Router#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
Router#
    
```

思考题:



```

Console for 2621 Router B
File Edit View Tools Help

1 - 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
  10.0.0.0/24 is subnetted, 1 subnets
C    10.0.0.0 is directly connected, Serial0/1
  172.16.0.0/24 is subnetted, 1 subnets
S    172.16.2.0 [1/0] via 201.100.11.2
C    201.100.11.0/24 is directly connected, Serial0/0
Router#config t
Enter configuration commands, one per line. End with CNTL/Z
Router(config)#ip route 0.0.0.0 0.0.0.0 201.100.11.2
Router(config)#exit
Router#ping 172.16.1.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.16.1.1, timeout is 2 seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 4/4/4 ms
Router#
    
```

```

Console for 2621 Router A
File Edit View Tools Help

Press RETURN to get started!

Router>enable
Router#show ip route
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

    10.0.0.0/24 is subnetted, 1 subnets
S       10.0.0.0 [1/0] via 201.100.11.1
    172.16.0.0/24 is subnetted, 1 subnets
C       172.16.2.0 is directly connected, Serial0/0
C       201.100.11.0/24 is directly connected, Serial0/1
Router#_

```

```

Console for 2621 Router C
File Edit View Tools Help

Router Con0 is now available

Press RETURN to get started!

Router>enable
Router#ping 10.0.0.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.0.1, timeout is 2 seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 4/4/4 ms
Router#

```

## 5.5

①

```

Console for 2621 Router A
File Edit View Tools Help

User Access Verification
Password:
Password:

RouterA>show ip route
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       201.100.11.0/24 is directly connected, Serial0/1
C       199.6.13.0/24 is directly connected, FastEthernet0/0
RouterA>

Console for 2621 Router A
File Edit View Tools Help

RouterA>show ip route
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       201.100.11.0/24 is directly connected, Serial0/1
C       199.6.13.0/24 is directly connected, FastEthernet0/0
RouterA>enable
Password:
Password:
RouterA#config t
Enter configuration commands, one per line. End with CNTL/Z
RouterA(config)#router rip
RouterA(config-router)#network 201.100.11.0
RouterA(config-router)#network 199.6.13.0
RouterA(config-router)#exit
RouterA(config)#

```

```

Console for Host B
File Edit View Tools Help

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

C:\>ping 205.7.5.8

Pinging 205.7.5.8 with 32 bytes of data:

Reply from 205.7.5.8 :bytes=32 time=22ms TTL=254
Reply from 205.7.5.8 :bytes=32 time=22ms TTL=254
Reply from 205.7.5.8 :bytes=32 time=22ms TTL=254
Reply from 205.7.5.8 :bytes=32 time=22ms TTL=254

Ping Statistics for 205.7.5.8:
    Packets Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 22ms, Maximum = 23ms, Average = 22ms
C:\>

```

```

Console for 2621 Router B
File Edit View Tools Help

User Access Verification

Password:
Password:

RouterB#enable
Password:
RouterB#config t
Enter configuration commands, one per line. End with CNTL/Z
RouterB(config)#access-list 50 deny host 192.5.5.6
RouterB(config)#access-list 50 permit any

% Invalid input detected at '^' marker.
RouterB(config)#access-list 50 permit any
RouterB(config)#int f0/1
RouterB(config-if)#ip access-group 50 out
RouterB(config-if)#exit
RouterB(config)#

```

```

Console for Host B
File Edit View Tools Help

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

C:\>ping 205.7.5.8

Pinging 205.7.5.8 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping Statistics for 205.7.5.8:
    Packets Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>

```

②

```

Console for 2621 Router B
File Edit View Tools Help

RouterB#enable
Password:
RouterB#config t
Enter configuration commands, one per line. End with CNTL/Z
RouterB(config)#access-list 50 deny host 192.5.5.6
RouterB(config)#access-list 50 permit any
RouterB(config)#int f0/1
RouterB(config-if)#int f0/0
RouterB(config-if)#ip access-group 50 out
RouterB(config-if)#exit
RouterB(config)#access-list 51 deny host 192.5.5.8 255.255.248
RouterB(config)#access-list 51 deny host 192.5.5.8 255.255.255.248

% Invalid input detected at '^' marker.
RouterB(config)#access-list 51 deny host 192.5.5.8 255.255.255.248

% Invalid input detected at '^' marker.
RouterB(config)#access-list 51 permit any
RouterB(config)#int s0/1
RouterB(config-if)#ip access-group 51 out
RouterB(config-if)#exit
RouterB(config)#

```

```

Console for Host A
File Edit View Tools Help

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

C:\>ping 199.6.13.0

Pinging 199.6.13.0 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping Statistics for 199.6.13.0:
    Packets Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>

```

③

```

% Invalid input detected at '^' marker.
RouterA#config t
Enter configuration commands, one per line. End with CNTL/Z
RouterA(config)#access-list 50 deny host 205.7.5.8
RouterA(config)#access-list 50 permit any
RouterA(config)#line vty 0 4
RouterA(config-line)#access-class 50 in
RouterA(config-line)#exit
RouterA(config)#

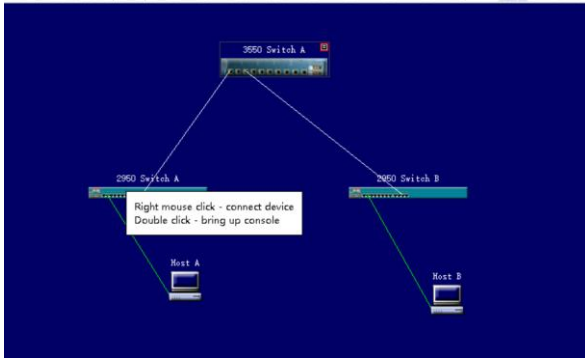
```

```

Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>telnet 201.100.11.2
Connecting To 201.100.11.2 ...Could not open a connection to host: Connect failed
C:\>

```

## 5.6



①

```

Console for 3550 Switch A
File Edit View Tools Help

switch>en
switch#conf t
Enter configuration commands, one per line. End with CNTL/Z
switch(config)#hostname 3550A
3550A(config)#vtp domain Cisco
Changing VTP domain name from NULL to Cisco
3550A(config)#exit
3550A#sh vtp status
VTP Version                : 2
Configuration Revision      : 1
Maximum VLANs supported locally : 64
Number of existing VLANs    : 5
VTP Operating Mode          : Server
VTP Domain Name             : Cisco
VTP Pruning Mode            : Disabled
VTP V2 Mode                 : Disabled
VTP Traps Generation        : Disabled
MD5 digest                  : 0x70 0x01 0xF2 0x72 0x97 0xA1 0x35 0xEB
Configuration last modified by: 0.0.0.0 at 11-29-93 20:39:24
Local updater ID is 0.0.0.0 on interface Vll1 (lowest numbered VLAN interface found)
3550A#

```

```

Console for 2950 Switch A
File Edit View Tools Help

switch>conf t
Enter configuration commands, one per line. End with CNTL/Z
switch(config)#hostname 2950A
2950A(config)#vtp domain Cisco
Changing VTP domain name from NULL to Cisco
2950A(config)#vtp mode ?
    client    Set the device to client mode.
    server    Set the device to server mode.
    transparent Set the device to transparent mode.

2950A(config)#vtp mode
% Incomplete command.
2950A(config)#vtp mode ?
    client    Set the device to client mode.
    server    Set the device to server mode.
    transparent Set the device to transparent mode.

2950A(config)#vtp mode client
Setting device to VTP CLIENT mode.
2950A(config)#exit
2950A#sh vtp status
VTP Version                : 2
Configuration Revision      : 1
Maximum VLANs supported locally : 64
Number of existing VLANs    : 5
VTP Operating Mode          : Client
VTP Domain Name             : Cisco
VTP Pruning Mode            : Disabled
VTP V2 Mode                 : Disabled
VTP Traps Generation        : Disabled
MD5 digest                  : 0x70 0x01 0xF2 0x72 0x97 0xA1 0x35 0xEB
Configuration last modified by: 2950 SwitchA at 11-29-93 20:39:24
Local updater ID is 2950 SwitchA on interface Vll1 (lowest numbered VLAN interface found)
2950A#

```

```

switch>en
switch#conf t
Enter configuration commands, one per line. End with CNTL/Z
switch(config)#hostname 2950B
2950B(config)#vtp domain Cisco
Changing VTP domain name from NULL to Cisco
2950B(config)#vtp mde client
^
% Invalid input detected at '^' marker.
2950B(config)#vtp mode client
Setting device to VTP CLIENT mode.
2950B(config)#

```



②

```

3550A(config-if)#interface fa0/1
3550A(config-if)#switchport trunk encapsulation dot
3550A(config-if)#switchport mode trunk
3550A(config-if)#interface fa0/3
3550A(config-if)#switchport trunk encapsulation dot
3550A(config-if)#switchport mode trunk
3550A(config-if)#

```

```

2950B(config)#interface fa0/11
2950B(config-if)#switchport mode trunk
2950B(config-if)#

```

③

```

% Invalid input detected at '^' marker.
3550A(config)#exit
3550A#sh vlan

```

VLAN Name	Status	Ports
1 default	active	Fa0/2, Fa0/4, Fa0/5, Fa0/6 Fa0/7, Fa0/8, Fa0/9, Fa0/10
10 VLAN0010	active	
20 VLAN0020	active	
1002 fddi-default	active	
1003 token-ring-default	active	
1004 fddinet-default	active	
1005 trnet-default	active	

④

```

2950A#conf
Enter configuration commands, one per line. End with CNTL/Z
2950A(config)#interface fa0/2
2950A(config-if)#switchport access vlan 10
^
% Invalid input detected at '^' marker.
2950A(config-if)#switchport access vlan 10

2950B>en
2950B#conf
Enter configuration commands, one per line. End with CNTL/Z
2950B(config)#interface fa0/2
2950B(config-if)#switchport access vlan 20
2950B(config-if)#

```

⑤

```

3550A#conf
Enter configuration commands, one per line. End with CNTL/Z
3550A(config)#ip address 10.10.10.1 255.255.255.0
^
% Invalid input detected at '^' marker.
3550A(config)#int vlan10
3550A(config-if)#ip address 10.10.10.1 255.255.255.0
3550A(config-if)#int vlan 20
3550A(config-if)#ip address 20.20.20.1 255.255.255.0
3550A(config-if)#no shut
3550A(config-if)#int vlan10
3550A(config-if)#no shut
3550A(config-if)#

3550A(config)#int vlan 1
3550A(config-if)#ip address 192.168.10.1 255.255.255.0
3550A(config-if)#no shut

```

⑥

```

2950A(config-if)#int vlan 1
2950A(config-if)#ip address 192.168.10
^
% Invalid input detected at '^' marker.
2950A(config-if)#ip address 192.168.10.2 255.255.255.0
2950A(config-if)#no shut

2950B(config-if)#int vlan 1
2950B(config-if)#ip address 192.168.10.3 255.255.255.0
2950B(config-if)#no shut
    
```

⑦

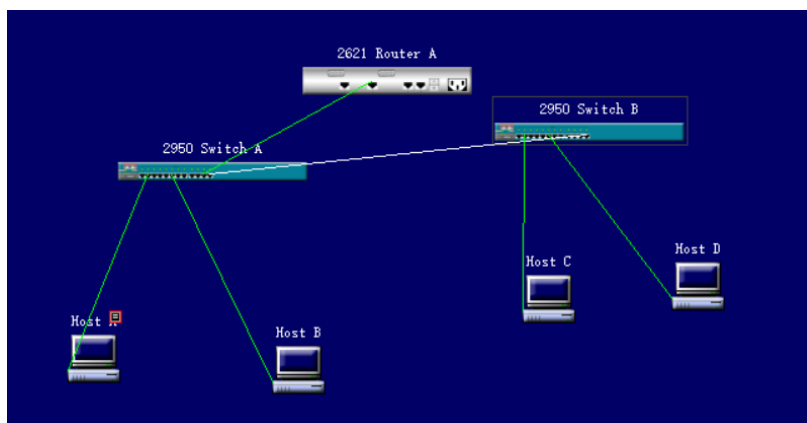
Configure Host A		Configure Host B	
Host Name:	HostA	Host Name:	HostB
<input type="radio"/> Obtain an IP address automatically <input checked="" type="radio"/> Use the following IP address:		<input type="radio"/> Obtain an IP address automatically <input checked="" type="radio"/> Use the following IP address:	
IP Address	10 . 10 . 10 . 2	IP Address	20 . 20 . 20 . 2
Subnet	255 . 255 . 255 . 0	Subnet	255 . 255 . 255 . 0
Default Gateway	10 . 10 . 10 . 1	Default Gateway	20 . 20 . 20 . 1
<input type="button" value="OK"/> <input type="button" value="Cancel"/>		<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

```

3550A#ping 192.168.10.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.10.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 4/4/4 ms
3550A#ping 192.168.10.3

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.10.3, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 4/4/4 ms
3550A#
    
```



②

```

2950A>en
2950A#config
Enter configuration commands, one per line. End with CNTL/Z
2950A(config)#interface
% Incomplete command.
2950A(config)#interface fa0/12
2950A(config-if)#switchport mode trunk
2950A(config-if)#interface fa0/11
2950A(config-if)#switchport mode trunk
2950A(config-if)#exit
2950A(config)#

```

```

switch>en
switch#config
Enter configuration commands, one per line. End with CNTL/Z
switch(config)#hostname 2950B
2950B(config)#interface fa0/12
2950B(config-if)#switchport mode trunk
2950B(config-if)#

```

③

```

% Unknown command or computer name, or unable to find computer address
2950A#
2950A#vlan database
2950A(vlan)#vlan 2 name vlan2
VLAN 2 added:
  Name: vlan2
2950A(vlan)#vlan 3 name vlan3
VLAN 3 added:
  Name: vlan3
2950A(vlan)#exit
APPLY completed.
Exiting....
2950A#

```

④

```

% Unknown command or computer name, or unable to find computer address
2950A#conf t
Enter configuration commands, one per line. End with CNTL/Z
2950A(config)#interface fa0/2
2950A(config-if)#switchport access vlan 2
2950A(config-if)#switchport mode access
2950A(config-if)#interface fa0/6
2950A(config-if)#switchport access vlan 3
2950A(config-if)#switchport mode access
2950A(config-if)#

```

```

2950A(config)#exit
2950A#show vlan

```

VLAN	Name	Status	Ports
1	default	active	Fa0/1, Fa0/3, Fa0/4, Fa0/5 Fa0/7, Fa0/8, Fa0/9, Fa0/10
2	vlan2	active	Fa0/2
3	vlan3	active	Fa0/6
1002	fddi-default	active	
1003	token-ring-default	active	
1004	fddinet-default	active	
1005	trinet-default	active	

VLAN	Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	Trans1	Trans2
1	enet	100001	1500	-	-	-	-	0	0	
2	enet	100002	1500	-	-	-	-	0	0	
3	enet	100003	1500	-	-	-	-	0	0	
1002	fddi	101002	1500	-	-	-	-	0	0	
1003	tr	101003	1500	-	-	-	-	0	0	
1004	fdnet	101004	1500	-	-	-	ieee	0	0	

```
% Invalid input detected at '^' marker.  
2950B(config-if)#exit  
2950B(config)#vtp domain Test  
Changing VTP domain name from NULL to Test  
2950B(config)#vtp mode client  
Setting device to VTP CLIENT mode.  
2950B(config)#
```

```
2950B(config)#interface fa0/2  
2950B(config-if)#switchport access vlan 2  
2950B(config-if)#switchport mode access  
2950B(config-if)#interface fa0/6  
2950B(config-if)#switchport access vlan 3  
2950B(config-if)#switchport mode access  
2950B(config-if)#
```

⑤

```
2621(config-subif)#encapsulation dot1q 1  
2621(config-subif)#ip address 172.16.10.1 255.255.255.0  
2621(config-subif)#interface f0/0.2  
2621(config-subif)#encapsulation dot1q 2  
2621(config-subif)#ip address 172.16.20.1 255.255.255.0  
2621(config-subif)#interface f0/0.3  
2621(config-subif)#encapsulation dot1q 3  
2621(config-subif)#ip address 172.16.30.1 255.255.255.0  
2621(config-subif)#
```

⑥

Configure Host B

Host Name: HostB

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP Address: 172 . 16 . 30 . 3

Subnet: 255 . 255 . 255 . 0

Default Gateway: 172 . 16 . 30 . 1

OK Cancel

⑦

```
Console for Host A
File Edit View Tools Help

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

C:\>ping 172.16.20.1

Pinging 172.16.20.1 with 32 bytes of data:

Reply from 172.16.20.1 :bytes=32 time=22ms TTL=254
Reply from 172.16.20.1 :bytes=32 time=22ms TTL=254
Reply from 172.16.20.1 :bytes=32 time=22ms TTL=254
Reply from 172.16.20.1 :bytes=32 time=22ms TTL=254

Ping Statistics for 172.16.20.1:
    Packets Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 22ms, Maximum = 23ms, Average = 22ms
C:\>
```

```
Console for Host B
File Edit View Tools Help

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

C:\>ping 172.30.1
Unknown host 172.30.1
C:\>ping 172.16.30.1

Pinging 172.16.30.1 with 32 bytes of data:

Reply from 172.16.30.1 :bytes=32 time=22ms TTL=254
Reply from 172.16.30.1 :bytes=32 time=22ms TTL=254
Reply from 172.16.30.1 :bytes=32 time=22ms TTL=254
Reply from 172.16.30.1 :bytes=32 time=22ms TTL=254

Ping Statistics for 172.16.30.1:
    Packets Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 22ms, Maximum = 23ms, Average = 22ms
C:\>
```

```
Console for Host A
File Edit View Tools Help

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

C:\>ping 172.16.20.1

Pinging 172.16.20.1 with 32 bytes of data:

Reply from 172.16.20.1 :bytes=32 time=22ms TTL=254
Reply from 172.16.20.1 :bytes=32 time=22ms TTL=254

Ping Statistics for 172.16.20.1:
    Packets Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 22ms, Maximum = 23ms, Average = 22ms
C:\>ping 172.16.30.3

Pinging 172.16.30.3 with 32 bytes of data:

Reply from 172.16.30.3 :bytes=32 time=22ms TTL=254
Reply from 172.16.30.3 :bytes=32 time=22ms TTL=254
Reply from 172.16.30.3 :bytes=32 time=22ms TTL=254
Reply from 172.16.30.3 :bytes=32 time=22ms TTL=254

Ping Statistics for 172.16.30.3:
    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

学会了基础的配置路由方法，更加了解了路由器下一跳。