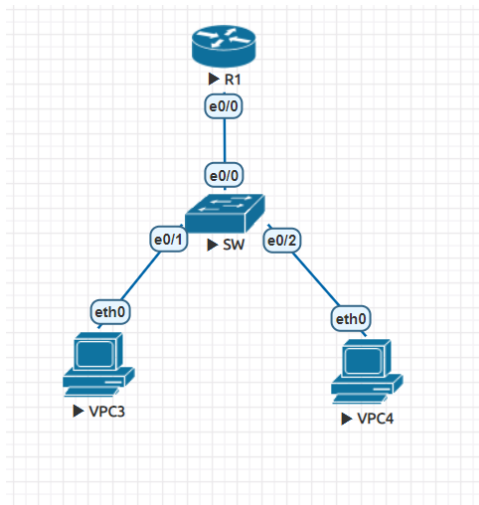


計算機網路期末  
110810532 汪建同

1.

2.



SW:

```
Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#exit
Switch(config)#int e0/0
Switch(config-if)#swi
Switch(config-if)#switchport trunk encapsulation dot1q
Switch(config-if)#switchport mode trunk
```

```
0, changed state to up
Switch(config-if)#int e0/1
Switch(config-if)#swit
Switch(config-if)#switchport access vlan 10
Switch(config-if)#sw
Switch(config-if)#switchport mode access
Switch(config-if)#int e0/2
Switch(config-if)#switchport access vlan 20
Switch(config-if)#switchport mode access
```

R1:

```
Router(config)#int e0/0.10
Router(config-subif)#encapsulation dot1Q 10
*Dec 31 23:29:45.772: %CDP-4-DUPLEX_MISMATCH: duplex mismatch discovered on E
rnet0/0 (not full duplex), with Switch Ethernet0/0 (full duplex).
Router(config-subif)#encapsulation dot1Q 10
^
% Invalid input detected at '^' marker.

Router(config-subif)#encapsulation dot1Q 10
Router(config-subif)#ip addr 192.168.10.254 255.255.255.0
Router(config-subif)#int e0/0.20
Router(config-subif)#encapsulation dot1Q 20
Router(config-subif)#ip addr 192.168.20.254 255.255.255.0
Router(config-subif)#
```

```

Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int e0/0
Router(config-if)#no shut
Router(config-if)#i
*Dec 31 23:16:49.921: %LINK-3-UPDOWN: Interface Ethernet0/0, changed state to up
*Dec 31 23:16:50.925: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/0, changed state to up
Router(config-if)#int e0/0.10
Router(config-subif)#
*Dec 31 23:17:04.155: %CDP-4-DUPLEX_MISMATCH: duplex mismatch discovered on Ethernet0/0 (not full duplex), with Switch Ethernet0/0 (full duplex).
Router(config-subif)#encapsulation dot1q 10
Router(config-subif)#
*Dec 31 23:17:59.046: %CDP-4-DUPLEX_MISMATCH: duplex mismatch discovered on Ethernet0/0 (not full duplex), with Switch Ethernet0/0 (full duplex).
Router(config-subif)#
*Dec 31 23:18:57.452: %CDP-4-DUPLEX_MISMATCH: duplex mismatch discovered on Ethernet0/0 (not full duplex), with Switch Ethernet0/0 (full duplex).
Router(config-subif)#
*Dec 31 23:19:47.469: %CDP-4-DUPLEX_MISMATCH: duplex mismatch discovered on Ethernet0/0 (not full duplex), with Switch Ethernet0/0 (full duplex).
Router(config-subif)#
*Dec 31 23:20:36.111: %CDP-4-DUPLEX_MISMATCH: duplex mismatch discovered on Ethernet0/0 (not full duplex), with Switch Ethernet0/0 (full duplex).
Router(config-subif)#ip dhcp pool mypool
Router(dhcp-config)#network 192.168
*Dec 31 23:21:35.024: %CDP-4-DUPLEX_MISMATCH: duplex mismatch discovered on Ethernet0/0 (not full duplex), with Switch Ethernet0/0 (full duplex).
Router(dhcp-config)#network 192.168.10.0 255.255.255.0

```

```

Router(dhcp-config)#network 192.168.10.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.10.254
Router(dhcp-config)#dns-server 8.8.8.8
*Dec 31 23:23:27.121: %CDP-4-DUPLEX_MISMATCH: duplex mismatch discovered on Ethernet0/0 (not full duplex), with Switch Ethernet0/0 (full duplex).
Router(dhcp-config)#dns-server 8.8.8.8
Router(dhcp-config)#exit
Router(config)#
*Dec 31 23:24:22.980: %CDP-4-DUPLEX_MISMATCH: duplex mismatch discovered on Ethernet0/0 (not full duplex), with Switch Ethernet0/0 (full duplex).
Router(config)#int e0/0.20
Router(config-subif)#encapsulation dot1q 20
Router(config-subif)#
*Dec 31 23:25:14.541: %CDP-4-DUPLEX_MISMATCH: duplex mismatch discovered on Ethernet0/0 (not full duplex), with Switch Ethernet0/0 (full duplex).
Router(config-subif)#ip dhcp pool my poo2
Router(dhcp-config)#network 192.168.20.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.20.254
Router(dhcp-config)#dns-server 8.8.8.8
Router(dhcp-config)#exit
Router(config)#ip dhcp excluded-address 192.168.2.250 192.168.2.254

```

VPC3:

```

VPCS> ip dhcp
DDORA IP 192.168.10.1/24 GW 192.168.10.254

```

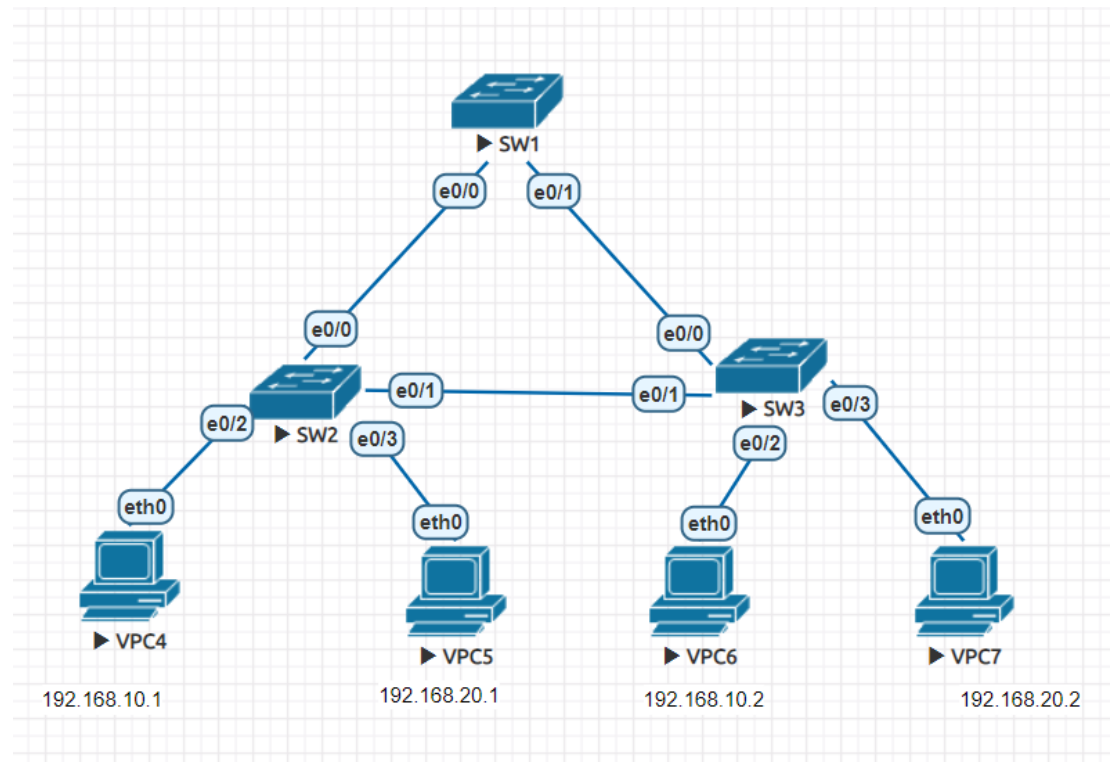
VPC4:

```

VPCS> ip dhcp
DDORA IP 192.168.20.1/24 GW 192.168.20.254

```

3.



SW1:

```

Switch(config)#int range e0/0,e0/1
Switch(config-if-range)#switchport trunk encapsulation dot1q
Switch(config-if-range)#switchport mode trunk
Switch(config-if-range)#

```

SW2:

```

Switch(config)#int e0/2
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
% Access VLAN does not exist. Creating vlan 10
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int e0/3
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
% Access VLAN does not exist. Creating vlan 20
Switch(config-if)#sw access vlan 20

```

```

Switch(config-if)#int range e0/0,e0/1
Switch(config-if-range)#switchport trunk encapsulation dot1q
Switch(config-if-range)#switchport mode trunk
Switch(config-if-range)#spanning-tree vlan 20 priority 8192
Switch(config-if-range)#

```

SW3:

```
Enter configuration commands, one per line. End with Ctrl-Z.
Switch(config)#int e0/2
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
% Access VLAN does not exist. Creating vlan 10
Switch(config-if)#int e0/3
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
% Access VLAN does not exist. Creating vlan 20
```

```
Switch(config-if)#int range e0/0,e0/1
Switch(config-if-range)#switchport trunk encapsulation dot1q
Switch(config-if-range)#switchport mode trunk
```

Ping:

Sw2 e0/0, vlan10:

The image shows two windows. The left window is Wireshark, displaying a packet capture on interface 0. The right window is VPC4, showing the results of a ping command from 192.168.10.2 to 192.168.10.2. The results show five successful ping attempts with times ranging from 1.452 ms to 2.761 ms.

No.	Time	Source	Destination	Protocol	Length	Info
1392	1.000000	192.168.10.1	192.168.10.2	ICMP	60	Echo (ping) request id=0x261a, seq=2/512, ttl=64 (reply in 1094)
1393	1.000000	192.168.10.2	192.168.10.1	ICMP	60	Echo (ping) reply id=0x261a, seq=2/512, ttl=64 (request in 1094)
1394	1.000000	192.168.10.1	192.168.10.2	ICMP	60	Echo (ping) request id=0x261a, seq=3/512, ttl=64 (reply in 1093)
1395	1.000000	192.168.10.2	192.168.10.1	ICMP	60	Echo (ping) reply id=0x261a, seq=3/512, ttl=64 (request in 1093)
1396	1.000000	192.168.10.1	192.168.10.2	ICMP	60	Echo (ping) request id=0x261a, seq=4/512, ttl=64 (reply in 1091)
1397	1.000000	192.168.10.2	192.168.10.1	ICMP	60	Echo (ping) reply id=0x261a, seq=4/512, ttl=64 (request in 1091)
1398	1.000000	192.168.10.1	192.168.10.2	ICMP	60	Echo (ping) request id=0x261a, seq=5/512, ttl=64 (reply in 1703)
1399	1.000000	192.168.10.2	192.168.10.1	ICMP	60	Echo (ping) reply id=0x261a, seq=5/512, ttl=64 (request in 1703)

Sw2 e0/1, vlan20

The image shows two windows. The left window is Wireshark, displaying a packet capture on interface 0. The right window is VPC5, showing the results of a ping command from 192.168.20.2 to 192.168.20.2. The results show five successful ping attempts with times ranging from 0.738 ms to 1.713 ms.

No.	Time	Source	Destination	Protocol	Length	Info
2413	1.000000	192.168.20.1	192.168.20.2	ICMP	60	Echo (ping) request id=0x261a, seq=1/512, ttl=64 (reply in 2416)
2414	1.000000	192.168.20.2	192.168.20.1	ICMP	60	Echo (ping) reply id=0x261a, seq=1/512, ttl=64 (request in 2416)
2415	1.000000	192.168.20.1	192.168.20.2	ICMP	60	Echo (ping) request id=0x261a, seq=2/512, ttl=64 (reply in 2420)
2416	1.000000	192.168.20.2	192.168.20.1	ICMP	60	Echo (ping) reply id=0x261a, seq=2/512, ttl=64 (request in 2420)
2417	1.000000	192.168.20.1	192.168.20.2	ICMP	60	Echo (ping) request id=0x261a, seq=3/512, ttl=64 (reply in 2424)
2418	1.000000	192.168.20.2	192.168.20.1	ICMP	60	Echo (ping) reply id=0x261a, seq=3/512, ttl=64 (request in 2424)
2419	1.000000	192.168.20.1	192.168.20.2	ICMP	60	Echo (ping) request id=0x261a, seq=4/512, ttl=64 (reply in 2427)
2420	1.000000	192.168.20.2	192.168.20.1	ICMP	60	Echo (ping) reply id=0x261a, seq=4/512, ttl=64 (request in 2427)
2421	1.000000	192.168.20.1	192.168.20.2	ICMP	60	Echo (ping) request id=0x261a, seq=5/512, ttl=64 (reply in 2431)
2422	1.000000	192.168.20.2	192.168.20.1	ICMP	60	Echo (ping) reply id=0x261a, seq=5/512, ttl=64 (request in 2431)