CS305-2022Spring Lab15 Report

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Lab Time：Thursday 10:20 a.m. to 12:10 p.m.

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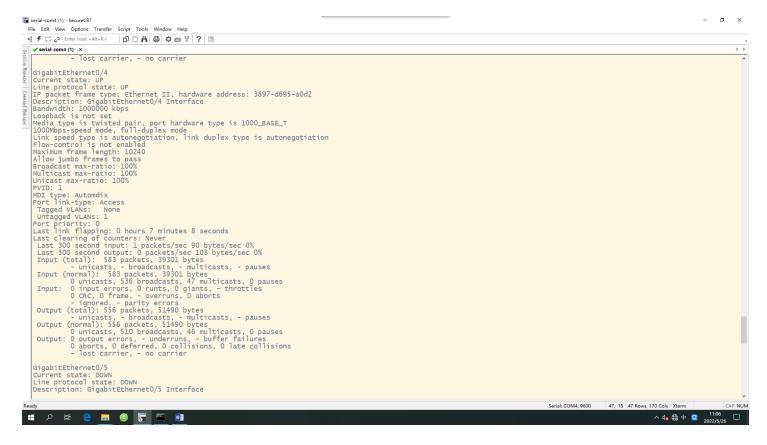- Xingying ZHENG 11912039@mail.sustech.edu.cn

Practice 15.1

Q1.

- Hardware address: 3897-d695-a0d2
- Bandwidth: 1,000,000 kbps
- Received or sent: It has received 583 packets, 39301 bytes. It has sent 556 packets, 51490 bytes.

```
              - lost carrier, - no carrier

GigabitEthernet0/4
Current state: UP
Line protocol state: UP
IP packet frame type: Ethernet II, hardware address: 3897-d695-a0d2
Description: GigabitEthernet0/4 Interface
Bandwidth: 1000000 kbps
Loopback is not set
Media type is twisted pair, port hardware type is 1000_BASE_T
1000Mbps-speed mode, full-duplex mode
Link speed type is autonegotiation, link duplex type is autonegotiation
Flow-control is not enabled
Maximum frame length: 10240
Allow jumbo frames to pass
Broadcast max-ratio: 100%
Multicast max-ratio: 100%
Unicast max-ratio: 100%
PVID: 1
MDI type: Automdix
Port link-type: Access
 Tagged VLANs:   None
 Untagged VLANs: 1
Port priority: 0
Last link flapping: 0 hours 7 minutes 8 seconds
Last clearing of counters: Never
 Last 300 second input: 1 packets/sec 90 bytes/sec 0%
 Last 300 second output: 0 packets/sec 103 bytes/sec 0%
 Input (total):  583 packets, 39301 bytes
          - unicasts, - broadcasts, - multicasts, - pauses
 Input (normal):  583 packets, 39301 bytes
          0 unicasts, 536 broadcasts, 47 multicasts, 0 pauses
 Input:   0 input errors, 0 runts, 0 giants, - throttles
          0 CRC, 0 frame, - overruns, 0 aborts
          - ignored, - parity errors
 Output (total): 556 packets, 51490 bytes
          - unicasts, - broadcasts, - multicasts, - pauses
 Output (normal): 556 packets, 51490 bytes
          0 unicasts, 510 broadcasts, 46 multicasts, 0 pauses
 Output: 0 output errors, - underruns, - buffer failures
          0 aborts, 0 deferred, 0 collisions, 0 late collisions
          - lost carrier, - no carrier

GigabitEthernet0/5
Current state: DOWN
Line protocol state: DOWN
Description: GigabitEthernet0/5 Interface
```

Q2.

Two types. It can be changed from bridge mode into link mode via `port link-mode route` .

```
[H3C]display interface brief
Brief information on interfaces in route mode:
Link: ADM - administratively down; Stby - standby
Protocol: (s) - spoofing
Interface              Link Protocol Primary IP      Description
Dia0                   UP   UP(s)    --
Dia1                   UP   UP(s)    --
Dia2                   UP   UP(s)    --
Dia3                   UP   UP(s)    --
Dia4                   UP   UP(s)    --
Dia5                   UP   UP(s)    --
Dia6                   UP   UP(s)    --
Dia7                   UP   UP(s)    --
Dia8                   UP   UP(s)    --
Dia1023                UP   UP(s)    --
GE0/0                  DOWN DOWN     --
GE0/5                  DOWN DOWN     --
InLoop0                UP   UP(s)    --
NULL0                  UP   UP(s)    --
REG0                   UP   --       --
Vlan1                  UP   UP       192.168.0.1

Brief information on interfaces in bridge mode:
Link: ADM - administratively down; Stby - standby
Speed: (a) - auto
Duplex: (a)/A - auto; H - half; F - full
Type: A - access; T - trunk; H - hybrid
Interface              Link Speed      Duplex Type PVID Description
GE0/1                  DOWN auto       A      A    1
GE0/2                  DOWN auto       A      A    1
GE0/3                  UP   1G(a)      F(a)   A    1
GE0/4                  UP   1G(a)      F(a)   A    1

[H3C]
[H3C]
```

Q3.

It is possible. Command: `port link-mode bridge` .

```
[H3C-GigabitEthernet0/4]port link-mode bridge
%Jan  1 00:22:10:306 2011 H3C IFNET/3/PHY_UPDOWN: Physical state on the interface GigabitEthernet0/4 changed to down.
%Jan  1 00:22:10:306 2011 H3C IFNET/5/LINK_UPDOWN: Line protocol state on the interface GigabitEthernet0/4 changed to
 down.
[H3C-GigabitEthernet0/4]display %Jan  1 00:22:14:067 2011 H3C IFNET/3/PHY_UPDOWN: Physical state on the interface Gig
abitEthernet0/4 changed to up.
%Jan  1 00:22:14:068 2011 H3C IFNET/5/LINK_UPDOWN: Line protocol state on the interface GigabitEthernet0/4 changed to
 up.
this
#
```

Q4.

It is not possible.

```
[H3C-GigabitEthernet0/4]port link-type access
                       ^
 % Unrecognized command found at '^' position.
[H3C-GigabitEthernet0/4]port link-mode bridge
%Jan  1 00:27:04:947 2011 H3C IFNET/3/PHY_UPDOWN: Physical state on the interface GigabitEthernet0/4 changed t
o down.
%Jan  1 00:27:04:948 2011 H3C IFNET/5/LINK_UPDOWN: Line protocol state on the interface GigabitEthernet0/4 cha
nged to down.
```
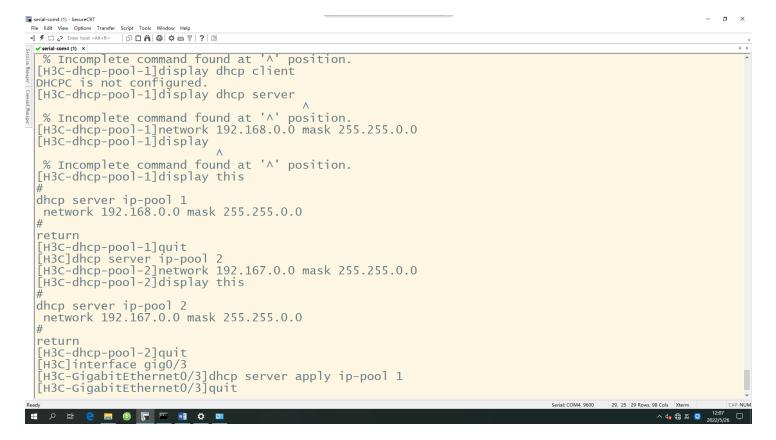
Practice 15.2

Show IP address:

Build subnet ip pool:

```
 % Incomplete command found at '^' position.
[H3C-dhcp-pool-1]display dhcp client
DHCPC is not configured.
[H3C-dhcp-pool-1]display dhcp server
                                    ^
 % Incomplete command found at '^' position.
[H3C-dhcp-pool-1]network 192.168.0.0 mask 255.255.0.0
[H3C-dhcp-pool-1]display
                        ^
 % Incomplete command found at '^' position.
[H3C-dhcp-pool-1]display this
#
dhcp server ip-pool 1
 network 192.168.0.0 mask 255.255.0.0
#
return
[H3C-dhcp-pool-1]quit
[H3C]dhcp server ip-pool 2
[H3C-dhcp-pool-2]network 192.167.0.0 mask 255.255.0.0
[H3C-dhcp-pool-2]display this
#
dhcp server ip-pool 2
 network 192.167.0.0 mask 255.255.0.0
#
return
[H3C-dhcp-pool-2]quit
[H3C]interface gig0/3
[H3C-GigabitEthernet0/3]dhcp server apply ip-pool 1
[H3C-GigabitEthernet0/3]quit
```

Belong to the subnet:


```
 % Incomplete command found at '^' position.
[H3C-dhcp-pool-1]network 192.168.0.0 mask 255.255.0.0
[H3C-dhcp-pool-1]display
                        ^
 % Incomplete c
[H3C-dhcp-pool-
#
dhcp server ip-
 network 192.16
#
return
[H3C-dhcp-pool-
[H3C]dhcp serve
[H3C-dhcp-pool-
[H3C-dhcp-pool-
#
dhcp server ip-
 network 192.16
#
return
[H3C-dhcp-pool-
[H3C]interface
[H3C-GigabitEth
[H3C-GigabitEth
[H3C]interface gig0/4
[H3C-GigabitEthernet0/4]dhcp server apply ip-pool 2
[H3C-GigabitEthernet0/4]
```

```
数据包: 已发送 = 4, 已接收 = 0, 丢失 = 4 (100% 丢失),

C:\users\Administrator>ipconfig

Windows IP 配置

以太网适配器 以太网:

    连接特定的 DNS 后缀 . . . . . . . :
    本地链接 IPv6 地址. . . . . . . . : fe80::6977:d6c5:77ea:ceb4%15
    IPv4 地址 . . . . . . . . . . . . : 192.167.0.1
    子网掩码  . . . . . . . . . . . . : 255.255.0.0
    默认网关. . . . . . . . . . . . . :

以太网适配器 VirtualBox Host-Only Network:

    连接特定的 DNS 后缀 . . . . . . . :
    本地链接 IPv6 地址. . . . . . . . : fe80::304a:fab7:54c9:93b2%6
    IPv4 地址 . . . . . . . . . . . . : 192.168.56.1
    子网掩码  . . . . . . . . . . . . : 255.255.255.0
    默认网关. . . . . . . . . . . . . :

C:\users\Administrator>ping 169.254.45.107
```