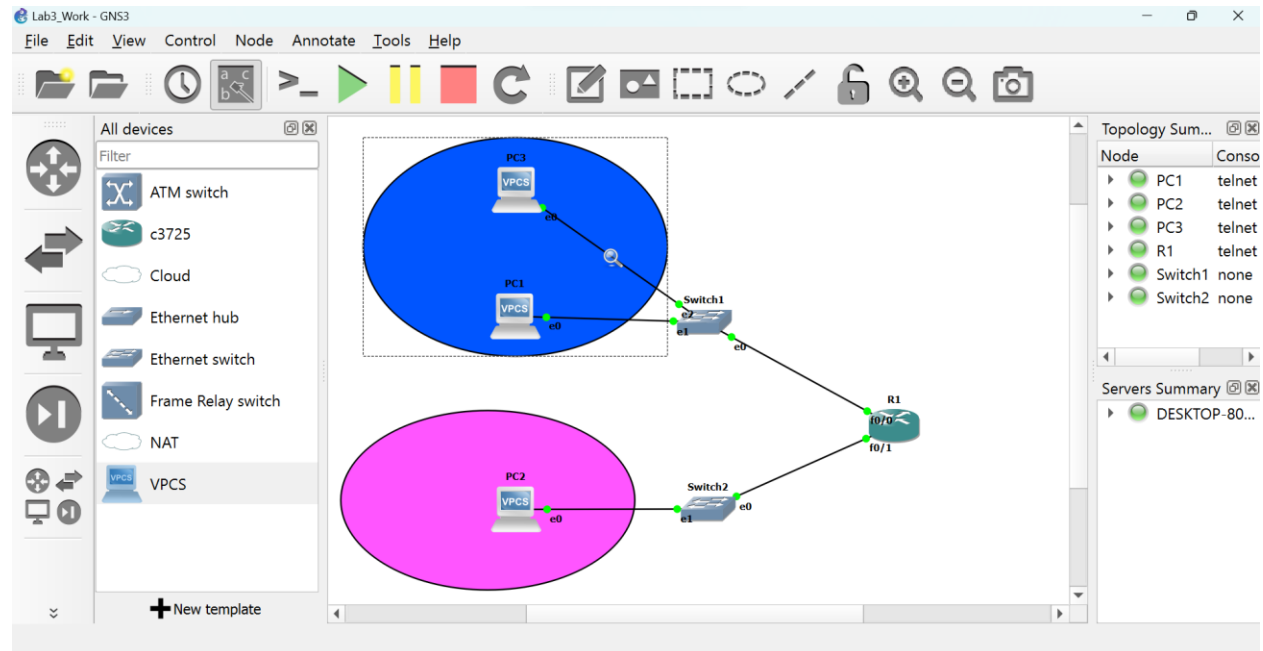


Lab Work 1



~ [R1 FastEthernet0/0 to Switch1 Ethernet0]

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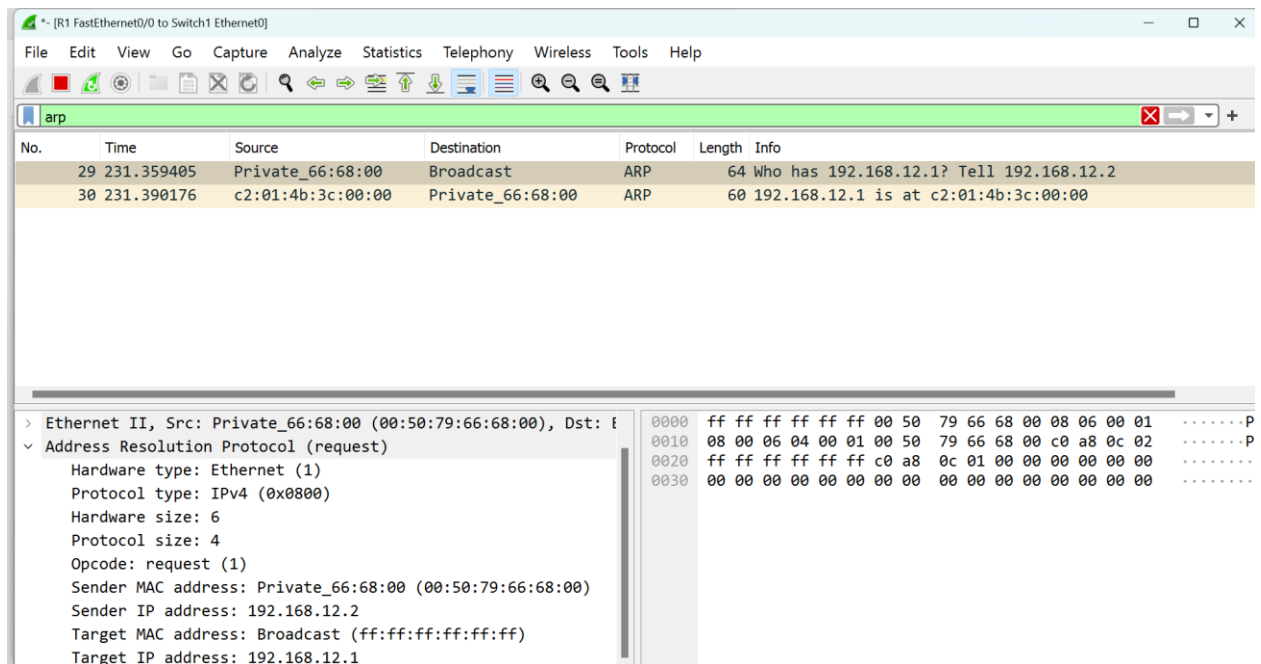
arp

No.	Time	Source	Destination	Protocol	Length	Info
29	231.359405	Private_66:68:00	Broadcast	ARP	64	Who has 192.168.12.1? Tell 192.168.12.2
30	231.390176	c2:01:4b:3c:00:00	Private_66:68:00	ARP	60	192.168.12.1 is at c2:01:4b:3c:00:00

```

> Ethernet II, Src: c2:01:4b:3c:00:00 (c2:01:4b:3c:00:00), Dst:
  Address Resolution Protocol (reply)
    Hardware type: Ethernet (1)
    Protocol type: IPv4 (0x0800)
    Hardware size: 6
    Protocol size: 4
    Opcode: reply (2)
    Sender MAC address: c2:01:4b:3c:00:00 (c2:01:4b:3c:00:00)
    Sender IP address: 192.168.12.1
    Target MAC address: Private_66:68:00 (00:50:79:66:68:00)
    Target IP address: 192.168.12.2

```



```

welcome to Virtual PC Simulator, version 0.6.2
indicated to Qiling.
Build time: Apr 10 2019 02:42:20
Copyright (c) 2007-2016, Paul Peng (pirmish@gmail.com)
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VPCS is free software, distributed under the terms of the "BSD" licence.
Source code and license can be found at vpcs.sf.net.
For more information, please visit wiki.freecode.com.cn.

Press '?' to get help.

Executing the startup file

Checking for duplicate address...
PC1 : 192.168.11.2 255.255.255.0 gateway 192.168.11.1
PC2: ip 192.168.11.2/24 192.168.11.1
Checking for duplicate address...
PC1 : 192.168.11.2 255.255.255.0 gateway 192.168.11.1
PC2> save
Saving startup configuration to startup.vpc
. done
PC2> show ip
NAME      : PC2[1]
IP/MASK   : 192.168.11.2/24
GATEWAY   : 192.168.11.1
DNS       :
MAC       : 00:50:79:66:66:01
LPORT     : 10024
RHOST:PORT : 127.0.0.1:10015
MTU       : 1500

PC2>

ip 192.168.12.2/
Checking for duplicate address...
PC1 : 192.168.12.2 255.255.255.0
PC1> ip 192.168.12.2/24 192.168.12.1
Checking for duplicate address...
PC1 : 192.168.12.2 255.255.255.0 gateway 192.168.12.1
PC1> save
Saving startup configuration to startup.vpc
. done
PC1> show ip
NAME      : PC1[1]
IP/MASK   : 192.168.12.2/24
GATEWAY   : 192.168.12.1
DNS       :
MAC       : 00:50:79:66:66:00
LPORT     : 10032
RHOST:PORT : 127.0.0.1:10013
MTU       : 1500

PC1> ping 192.168.11.2/24
192.168.11.2 icmp_seq=1 timeout
64 bytes from 192.168.11.2 icmp_seq=2 ttl=63 time=46.359 ms
64 bytes from 192.168.11.2 icmp_seq=3 ttl=63 time=46.303 ms
64 bytes from 192.168.11.2 icmp_seq=4 ttl=63 time=61.291 ms
64 bytes from 192.168.11.2 icmp_seq=5 ttl=63 time=61.138 ms

PC1> ping 192.168.12.3/24
64 bytes from 192.168.12.3 icmp_seq=1 ttl=64 time=0.955 ms
64 bytes from 192.168.12.3 icmp_seq=2 ttl=64 time=0.623 ms
64 bytes from 192.168.12.3 icmp_seq=3 ttl=64 time=0.634 ms
64 bytes from 192.168.12.3 icmp_seq=4 ttl=64 time=1.002 ms
64 bytes from 192.168.12.3 icmp_seq=5 ttl=64 time=1.072 ms

PC1> ping 192.168.12.3/24
64 bytes from 192.168.12.3 icmp_seq=1 ttl=64 time=2.053 ms
64 bytes from 192.168.12.3 icmp_seq=2 ttl=64 time=1.004 ms
64 bytes from 192.168.12.3 icmp_seq=3 ttl=64 time=0.954 ms
64 bytes from 192.168.12.3 icmp_seq=4 ttl=64 time=1.001 ms
64 bytes from 192.168.12.3 icmp_seq=5 ttl=64 time=1.017 ms

PC1> ping 192.168.11.2
192.168.11.2 icmp_seq=1 timeout
192.168.11.2 icmp_seq=2 timeout
64 bytes from 192.168.11.2 icmp_seq=3 ttl=63 time=45.918 ms
64 bytes from 192.168.11.2 icmp_seq=4 ttl=63 time=45.774 ms
64 bytes from 192.168.11.2 icmp_seq=5 ttl=63 time=48.622 ms

PC1> ping 192.168.12.3
64 bytes from 192.168.12.3 icmp_seq=1 ttl=64 time=0.570 ms
64 bytes from 192.168.12.3 icmp_seq=2 ttl=64 time=0.560 ms
64 bytes from 192.168.12.3 icmp_seq=3 ttl=64 time=0.549 ms
64 bytes from 192.168.12.3 icmp_seq=4 ttl=64 time=0.940 ms
64 bytes from 192.168.12.3 icmp_seq=5 ttl=64 time=0.842 ms

```

R1

PC3

PC1

PC2

+

-

📄

✕

```

PC1> ip 192.168.12.3/24 192.168.12.1
Checking for duplicate address...
PC1 : 192.168.12.3 255.255.255.0 gateway 192.168.12.1

PC1> save
Saving startup configuration to startup.vpc
- done

PC1> show ip
NAME      : PC1[1]
IP/MASK    : 192.168.12.3/24
GATEWAY    : 192.168.12.1
DNS        :
MAC        : 00:50:79:66:68:02
LPORT     : 10000
HOST PORT  : 127.0.0.1:10019
HTTU      : 1500

PC1>

```

R1

PC3

PC1

PC2

+

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```

0 administratively down
Mar 1 00:00:03.721: NLINK-S-CHANGED: Interface FastEthernet2/0, changed state
0 administratively down
Mar 1 00:00:04.471: NLINKPROTO-S-UPDOWN: Line protocol on Interface FastEthernet
2/0, changed state to up
Mar 1 00:00:04.623: NLINKPROTO-S-UPDOWN: Line protocol on Interface FastEthernet
2/0, changed state to up
Mar 1 00:00:04.711: NLINKPROTO-S-UPDOWN: Line protocol on Interface FastEthernet
2/0, changed state to down
Mar 1 00:00:04.711: NLINKPROTO-S-UPDOWN: Line protocol on Interface FastEthernet
2/0, changed state to down
18enable
18config t
Enter configuration commands, one per line. End with CNTL/Z.
18(config)#name R1
18
Invalid input detected at '^' marker.

18(config)#hostname R1
18(config)#int f0/0
18(config-if)#ip address 192.168.12.1 255.255.255.0
18(config-if)#no shutdown
18(config-if)#exit
18(config-if)#int f0/1
18(config-if)#ip address 192.168.11.1 255.255.255.0
18(config-if)#no shutdown
18(config-if)#exit
18(config-if)#exit
18
Mar 1 00:09:52.263: NVR-S-CNF10_1: Configured from console by console
18no
18
Building configuration...
OK!
18
18copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
OK!
18show ip interface brief
Interface      IP-Address      OK? Method Status      Protocol
FastEthernet0/0 192.168.12.1    YES NVRAM  up          up
FastEthernet0/1 192.168.11.1    YES NVRAM  up          up
FastEthernet1/0 unassigned      YES NVRAM  administratively down down
FastEthernet2/0 unassigned      YES NVRAM  administratively down down
18show ip route
Codes: C - connected, S - static, R - RIP, H - 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
        I - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
        ia - IS-IS inter area, * - candidate default, U - per-user static route
        o - ODR, P - periodic downloaded static route

Gateway of last resort is not set

192.168.12.0/24 is directly connected, FastEthernet0/0
192.168.11.0/24 is directly connected, FastEthernet0/1

```

solarwinds

Solar-PuTTY free tool

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[-] [Switch1 Ethernet2 to PC3 Ethernet0]

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arp

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	Private_66:68:00	Broadcast	ARP	64	Who has 192.168.12.3? Tell 192.168.12.2
2	0.000957	Private_66:68:02	Private_66:68:00	ARP	64	192.168.12.3 is at 00:50:79:66:68:02

> Ethernet II, Src: Private_66:68:02 (00:50:79:66:68:02), Dst: f

▼ Address Resolution Protocol (reply)

Hardware type: Ethernet (1)

Protocol type: IPv4 (0x0800)

Hardware size: 6

Protocol size: 4

Opcode: reply (2)

Sender MAC address: Private_66:68:02 (00:50:79:66:68:02)

Sender IP address: 192.168.12.3

Target MAC address: Private_66:68:00 (00:50:79:66:68:00)

0000 00 50 79 66 68 00 00 50 79 66 68 02 08 06 00 01 .Pyfh..P

0010 08 00 06 04 00 02 00 50 79 66 68 02 c0 a8 0c 03 ..P

0020 00 50 79 66 68 00 c0 a8 0c 02 00 00 00 00 00 00 .Pyfh...

0030 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Hardware size (arp.hw.size), 1 byte

Packets: 14 · Displayed: 2 (14.3%)

Profile: Default

[-] [Switch1 Ethernet2 to PC3 Ethernet0]

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

arp

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	Private_66:68:00	Broadcast	ARP	64	Who has 192.168.12.3? Tell 192.168.12.2
2	0.000957	Private_66:68:02	Private_66:68:00	ARP	64	192.168.12.3 is at 00:50:79:66:68:02

> Ethernet II, Src: Private_66:68:00 (00:50:79:66:68:00), Dst: f

▼ Address Resolution Protocol (request)

Hardware type: Ethernet (1)

Protocol type: IPv4 (0x0800)

Hardware size: 6

Protocol size: 4

Opcode: request (1)

Sender MAC address: Private_66:68:00 (00:50:79:66:68:00)

Sender IP address: 192.168.12.2

Target MAC address: Broadcast (ff:ff:ff:ff:ff:ff)

0000 ff ff ff ff ff 00 50 79 66 68 00 08 06 00 01 .P

0010 08 00 06 04 00 01 00 50 79 66 68 00 c0 a8 0c 02 ..P

0020 ff ff ff ff ff c0 a8 0c 03 00 00 00 00 00 00

0030 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Hardware size (arp.hw.size), 1 byte

Packets: 14 · Displayed: 2 (14.3%)

Profile: Default