

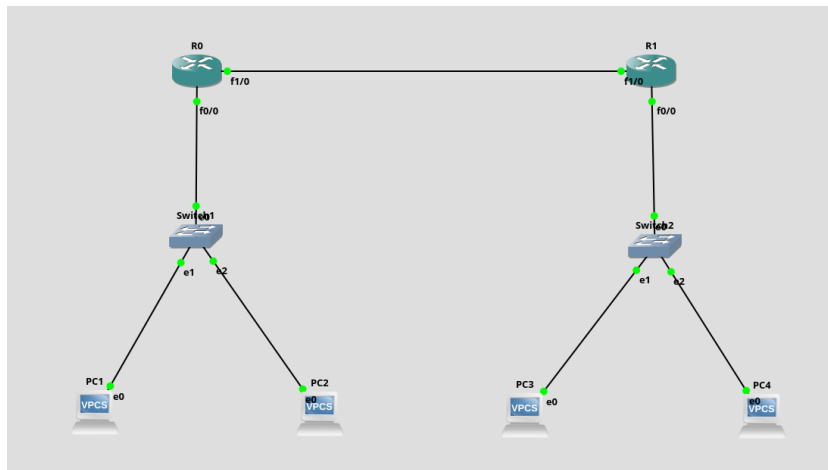
Lab – 4: GNS3 and Cisco Packet Tracer Documentation

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GNS3

Question 1:

Arrangement -



Configuration of Ips of all PCs: (respectively for all PCs)

```
PC1> show ip
```

```
NAME          : PC1[1]
IP/MASK        : 192.168.1.2/24
GATEWAY        : 192.168.1.1
DNS            :
MAC            : 00:50:79:66:68:00
LPORT         : 10022
RHOST:PORT     : 127.0.0.1:10023
MTU            : 1500
```

Code (at PCs):

```
# Configuring the PCs
# PC 1
192.168.1.2/24 192.168.1.1
# PC 2
192.168.1.3/24 192.168.1.1

# PC 3
192.168.2.2/24 192.168.2.1
# PC 4
192.168.2.3/24 192.168.2.1
```

Router Configuration:

```
R0#config t
Enter configuration commands, one per line. End with CNTL/Z.
R0(config)#int f0/0
R0(config-if)#ip address 192.168.1.1 255.255.255.0
R0(config-if)#no shutdown
R0(config-if)#
R0(config-if)#
R0(config-if)#
R0(config-if)#int f1/0
R0(config-if)#ip address 11.0.0.1 255.255.255.0
R0(config-if)#no shutdown
R0(config-if)#
R0(config-if)#
R0(config-if)#end
R0#co
*Mar  1 00:33:28.339: %SYS-5-CONFIG_I: Configured from console by console
R0#config t
Enter configuration commands, one per line. End with CNTL/Z.
R0(config)#ip route 192.168.2.0 255.255.255.0 11.0.0.2
```

Code (at Router 1):

```
config t
int f0/0
ip address 192.168.1.1 255.255.255.0
no shutdown

int f1/0
ip address 11.0.0.1 255.255.255.0
no shutdown
end

# Part 2 – same router in config mode without selecting the interface
ip route 192.168.2.0 255.255.255.0 11.0.0.2
no shutdown
end
```

Code (at Router 2):

```
config t
int f1/0
ip address 192.168.2.1 255.255.255.0
no shutdown

int f0/0
ip address 11.0.0.2 255.255.255.0
no shutdown
end

# Part 2 – same router in config mode without selecting the interface
ip route 192.168.2.0 255.255.255.0 11.0.0.1
no shutdown
end
```

Pinging a computer across routers:

```
PC1>
PC1>
PC1>
PC1> ping 192.168.2.3

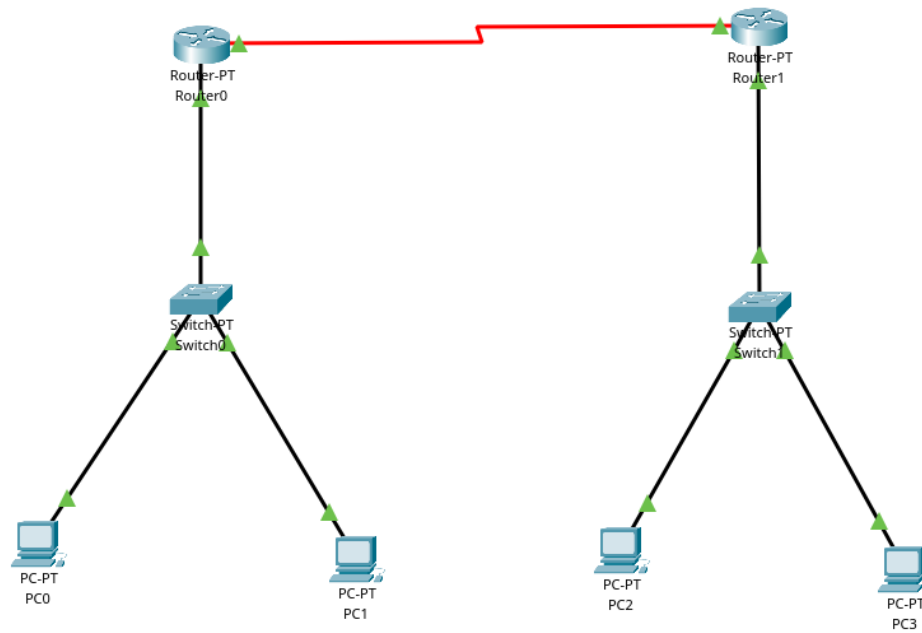
84 bytes from 192.168.2.3 icmp_seq=1 ttl=62 time=77.220 ms
84 bytes from 192.168.2.3 icmp_seq=2 ttl=62 time=79.715 ms
84 bytes from 192.168.2.3 icmp_seq=3 ttl=62 time=111.722 ms
84 bytes from 192.168.2.3 icmp_seq=4 ttl=62 time=101.255 ms
84 bytes from 192.168.2.3 icmp_seq=5 ttl=62 time=71.202 ms

PC1> █
```

P.T.O.

Cisco Packet Tracer

Arrangement of PCs, Routers and Switches:



(Configure the PCs and routers like it is done in GNS3)

Pinging a PC across routers:

```
PC0
C:\>ping 192.168.2.3

Pinging 192.168.2.3 with 32 bytes of data:

Reply from 192.168.2.3: bytes=32 time=17ms TTL=126
Reply from 192.168.2.3: bytes=32 time=1ms TTL=126
Reply from 192.168.2.3: bytes=32 time=1ms TTL=126
Reply from 192.168.2.3: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 17ms, Average = 5ms

C:\>
```

Cisco Packet Tracer

Question 2:

DNS server configuration

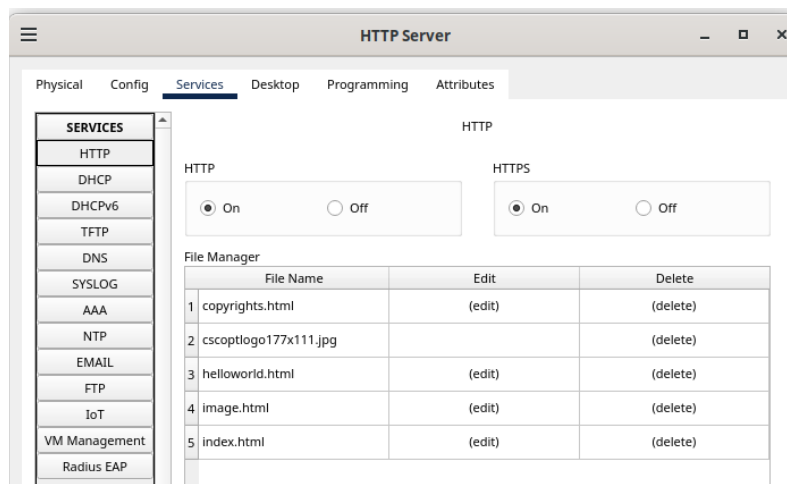
1. Set the DNS value on all PCs as the IP address of the DNS server, 192.168.1.200.
2. In the server config, switch off all services other than DNS.
3. Add an A Record for domain name www.sg.com with IP address 192.168.1.100, i.e. the IP address of the HTTP server.

HTTP Server Configuration

1. Set the IP address of the HTTP Server as 192.168.1.100
2. Switch off all services except the HTTP service.
3. Add an index.html file with a HTML code to display a basic webpage

Accessing the webpage

1. On any of the PCs, go to Desktop and select the Web Browser.
2. Search and hit Go for the URL www.sg.com.
3. Add an index.html file with a HTML code to display a basic webpage



Webpage:

