

# ΑΝΑΦΟΡΑ ΓΙΑ ΤΟ 2<sup>ο</sup> ΕΡΓΑΣΤΗΡΙΟ ΣΤΑ ΔΙΚΤΥΑ

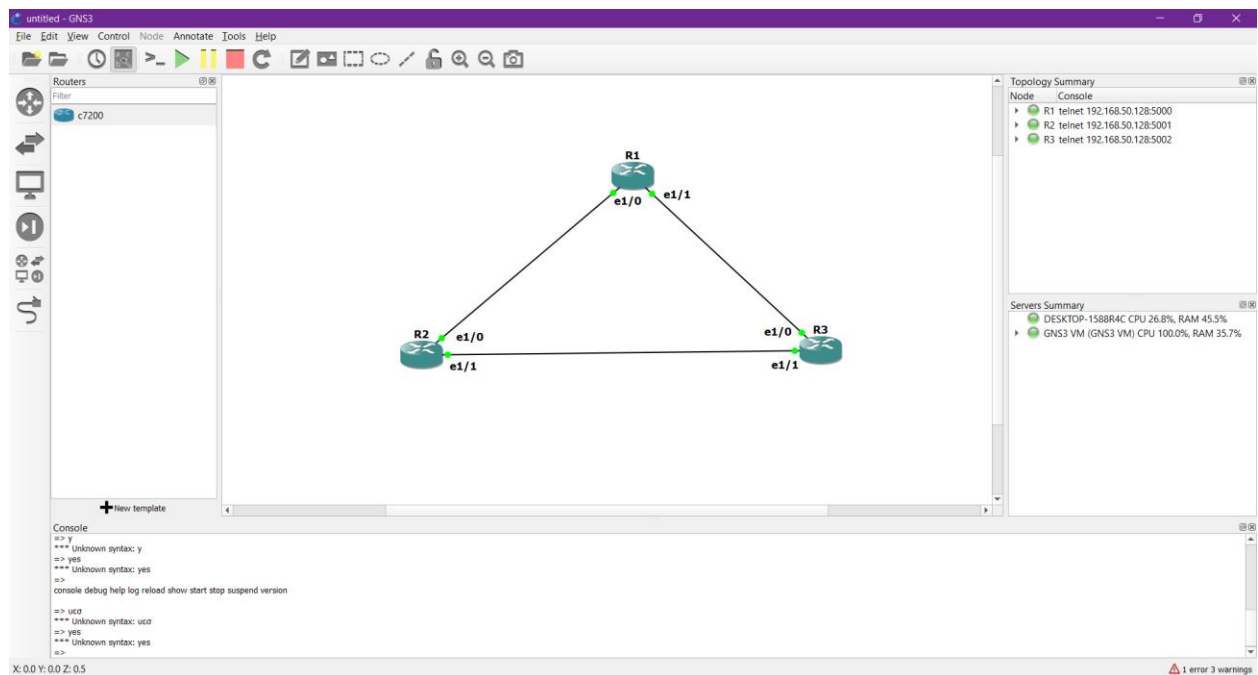
## ΥΠΟΛΟΓΙΣΤΩΝ

ΑΜ = 1070263

Ον/μο = ΣΠΥΡΟ ΣΟΥΛΙ

Έτος = 6<sup>ο</sup>

### Υλοποίηση



## Ερώτημα 1<sup>ο</sup>

Εισαγωγή ip και sh ip int br

R1

```
2, changed state to down
*Mar 17 12:52:13.799: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/
3, changed state to down
*Mar 17 12:52:13.915: %CRYPTO-6-ISAKMP_ON_OFF: ISAKMP is OFF
*Mar 17 12:52:13.915: %CRYPTO-6-GDOI_ON_OFF: GDOI is OFF
*Mar 17 12:52:14.779: %LINK-5-CHANGED: Interface FastEthernet0/0, changed state
to administratively down
*Mar 17 12:52:15.299: %LINK-5-CHANGED: Interface Ethernet1/0, changed state to a
dministratively down
*Mar 17 12:52:15.311: %LINK-5-CHANGED: Interface Ethernet1/1, changed state to a
dministratively down
*Mar 17 12:52:15.319: %LINK-5-CHANGED: Interface Ethernet1/2, changed state to a
dministratively down
*Mar 17 12:52:15.327: %LINK-5-CHANGED: Interface Ethernet1/3, changed state to a
dministratively down
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#int e1/0
R1(config-if)#no shut
R1(config-if)#ip add
*Mar 17 12:56:10.623: %LINK-3-UPDOWN: Interface Ethernet1/0, changed state to up
R1(config-if)#ip add 10.
*Mar 17 12:56:11.623: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/0, changed state to up
R1(config-if)#ip add 10.1.1.1 255.255.255.0
R1(config-if)#int loop 0
R1(config-if)#ip
*Mar 17 12:56:38.683: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback0, changed state to up
R1(config-if)#ip add 1.1.1.1 255.255.255.255
R1(config-if)#int e1/1
R1(config-if)#no shut
R1(config-if)#
*Mar 17 12:57:06.883: %LINK-3-UPDOWN: Interface Ethernet1/1, changed state to up
*Mar 17 12:57:07.883: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/1, changed state to up
R1(config-if)#ip add 10.1.5.1 255.255.255.0
R1(config-if)#int loop 0
R1(config-if)#end
R1#
*Mar 17 12:57:43.935: %SYS-5-CONFIG_I: Configured from console by console
R1#sh ip int br
Interface IP-Address OK? Method Status Protocol
FastEthernet0/0 unassigned YES unset administratively down down
Ethernet1/0 10.1.1.1 YES manual up up
Ethernet1/1 10.1.5.1 YES manual up up
Ethernet1/2 unassigned YES unset administratively down down
Ethernet1/3 unassigned YES unset administratively down down
Loopback0 1.1.1.1 YES manual up up
R1#
R1#
```

Sh int e1/0 , e1/1

```

MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output 00:00:02, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
 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 IP multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    23 packets output, 2869 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets

R1#sh int e1/1
Ethernet1/1 is up, line protocol is up
  Hardware is AmdP2, address is ca01.2124.001d (bia ca01.2124.001d)
  Internet address is 10.1.5.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output 00:00:01, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
    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 IP multicasts)
      0 runs, 0 giants, 0 throttles
      0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
      0 input packets with dribble condition detected
      19 packets output, 2730 bytes, 0 underruns
      0 output errors, 0 collisions, 1 interface resets
      0 unknown protocol drops
      0 babbles, 0 late collision, 0 deferred
      0 lost carrier, 0 no carrier
      0 output buffer failures, 0 output buffers swapped out
R1#

```

## R2

```

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Compiled Tue 19-Nov-13 04:39 by prod_rel_team
*Mar 17 12:52:13.579: %SNMP-5-COLDSTART: SNMP agent on host R2 is undergoing a c
old start
*Mar 17 12:52:13.763: %CRYPTO-6-ISAKMP_ON_OFF: ISAKMP is OFF
*Mar 17 12:52:13.767: %CRYPTO-6-GDOI_ON_OFF: GDOI is OFF
*Mar 17 12:52:14.667: %LINK-5-CHANGED: Interface FastEthernet0/0, changed state
to administratively down
*Mar 17 12:52:15.115: %LINK-5-CHANGED: Interface Ethernet1/0, changed state to a
dministratively down
*Mar 17 12:52:15.123: %LINK-5-CHANGED: Interface Ethernet1/1, changed state to a
dministratively down
*Mar 17 12:52:15.135: %LINK-5-CHANGED: Interface Ethernet1/2, changed state to a
dministratively down
*Mar 17 12:52:15.143: %LINK-5-CHANGED: Interface Ethernet1/3, changed state to a
dministratively down
R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#int e1/0
R2(config-if)#no shut
R2(config-if)#ip add 10
*Mar 17 13:00:06.323: %LINK-3-UPDOWN: Interface Ethernet1/0, changed state to up
*Mar 17 13:00:07.323: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/0, changed state to up
R2(config-if)#ip add 10.1.1.2 255.255.255.0
R2(config-if)#int loop 0
R2(config-if)#ip a
*Mar 17 13:00:22.339: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback0, changed state to up
R2(config-if)#ip add 2.2.2.2 255.255.255.255
R2(config-if)#int e1/1
R2(config-if)#no shut
R2(config-if)#ip add
*Mar 17 13:00:51.415: %LINK-3-UPDOWN: Interface Ethernet1/1, changed state to up
*Mar 17 13:00:52.415: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/1, changed state to up
R2(config-if)#ip add 10.1.5.2 255.255.255.0
R2(config-if)#int loop 0
R2(config-if)#end
R2#sh
*Mar 17 13:01:16.863: %SYS-5-CONFIG_I: Configured from console by console
R2#sh ip int br

```

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	unassigned	YES	unset	administratively down	down
Ethernet1/0	10.1.1.2	YES	manual	up	up
Ethernet1/1	10.1.5.2	YES	manual	up	up
Ethernet1/2	unassigned	YES	unset	administratively down	down
Ethernet1/3	unassigned	YES	unset	administratively down	down
Loopback0	2.2.2.2	YES	manual	up	up

```

R2#

```

## Sh int e1/0 , e1/1

```
R2#sh int e1/0
Ethernet1/0 is up, line protocol is up
  Hardware is AmdP2, address is ca02.2144.001c (bia ca02.2144.001c)
  Internet address is 10.1.1.2/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:29, output 00:00:05, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    2 packets input, 756 bytes, 0 no buffer
    Received 2 broadcasts (0 IP multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    18 packets output, 2256 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets

R2#sh int e1/1
Ethernet1/1 is up, line protocol is up
  Hardware is AmdP2, address is ca02.2144.001d (bia ca02.2144.001d)
  Internet address is 10.1.5.2/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output 00:00:04, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  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 IP multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    14 packets output, 2112 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets

--More--
```

## R3

```
Compiled Tue 19-Nov-13 04:39 by prod_rel_team
*Mar 17 12:52:13.555: %SNMP-5-COLDSTART: SNMP agent on host R3 is undergoing a c
old start
*Mar 17 12:52:13.767: %CRYPTO-6-ISAKMP_ON_OFF: ISAKMP is OFF
*Mar 17 12:52:13.771: %CRYPTO-6-GDOI_ON_OFF: GDOI is OFF
*Mar 17 12:52:14.599: %LINK-5-CHANGED: Interface FastEthernet0/0, changed state
to administratively down
*Mar 17 12:52:15.079: %LINK-5-CHANGED: Interface Ethernet1/0, changed state to a
dministratively down
*Mar 17 12:52:15.087: %LINK-5-CHANGED: Interface Ethernet1/1, changed state to a
dministratively down
*Mar 17 12:52:15.099: %LINK-5-CHANGED: Interface Ethernet1/2, changed state to a
dministratively down
*Mar 17 12:52:15.107: %LINK-5-CHANGED: Interface Ethernet1/3, changed state to a
dministratively down
R3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#int e1/0
R3(config-if)#no shut
R3(config-if)#ip add 10.1
*Mar 17 13:02:48.051: %LINK-3-UPDOWN: Interface Ethernet1/0, changed state to up
*Mar 17 13:02:49.051: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/0, changed state to up
R3(config-if)#ip add 10.1.1.3 255.255.255.0
R3(config-if)#int loop
% Incomplete command.

R3(config)#int loop 0
R3(config-if)#
*Mar 17 13:03:08.667: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback0, changed state to up
R3(config-if)#ip add 3.3.3.3 255.255.255.255
R3(config-if)#int e1/1
R3(config-if)#no shut
R3(config-if)#ip add
*Mar 17 13:03:32.563: %LINK-3-UPDOWN: Interface Ethernet1/1, changed state to up
*Mar 17 13:03:33.563: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/1, changed state to up
R3(config-if)#ip add 10.1.5.3 255.255.255.0
R3(config-if)#end
R3#
*Mar 17 13:03:47.123: %SYS-5-CONFIG_I: Configured from console by console
R3#sh ip int br
Interface IP-Address OK? Method Status Protocol
FastEthernet0/0 unassigned YES unset administratively down down
Ethernet1/0 10.1.1.3 YES manual up up
Ethernet1/1 10.1.5.3 YES manual up up
Ethernet1/2 unassigned YES unset administratively down down
Ethernet1/3 unassigned YES unset administratively down down
Loopback0 3.3.3.3 YES manual up up
R3#
```

## Sh int e1/0 , e1/1

```
R3(config-if)#ip add 3.3.3.3 255.255.255.255
R3(config-if)#int e1/1
R3(config-if)#no shut
R3(config-if)#ip add
*Mar 17 13:03:32.563: %LINK-3-UPDOWN: Interface Ethernet1/1, changed state to up
*Mar 17 13:03:33.563: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/1, changed state to up
R3(config-if)#ip add 10.1.5.3 255.255.255.0
R3(config-if)#end
R3#
*Mar 17 13:03:47.123: %SYS-5-CONFIG_I: Configured From console by console
R3#sh ip int br

```

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	unassigned	YES	unset	administratively down	down
Ethernet1/0	10.1.1.3	YES	manual	up	up
Ethernet1/1	10.1.5.3	YES	manual	up	up
Ethernet1/2	unassigned	YES	unset	administratively down	down
Ethernet1/3	unassigned	YES	unset	administratively down	down
Loopback0	3.3.3.3	YES	manual	up	up

```
R3#sh int e1/0
Ethernet1/0 is up, line protocol is up
  Hardware is AmdP2, address is ca03.2164.001c (bia ca03.2164.001c)
  Internet address is 10.1.1.3/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:13, output 00:00:04, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    3 packets input, 833 bytes, 0 no buffer
    Received 3 broadcasts (0 IP multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    19 packets output, 2333 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier
    0 output buffer failures, 0 output buffers swapped out
R3#sh int e1/1
Ethernet1/1 is up, line protocol is up
  Hardware is AmdP2, address is ca03.2164.001d (bia ca03.2164.001d)
```

```
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:13, output 00:00:04, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  3 packets input, 833 bytes, 0 no buffer
  Received 3 broadcasts (0 IP multicasts)
  0 runs, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
  19 packets output, 2333 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  0 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out
R3#sh int e1/1
Ethernet1/1 is up, line protocol is up
  Hardware is AmdP2, address is ca03.2164.001d (bia ca03.2164.001d)
  Internet address is 10.1.5.3/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:14, output 00:00:01, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    3 packets input, 833 bytes, 0 no buffer
    Received 3 broadcasts (0 IP multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    14 packets output, 2112 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
R3#
```

## Ερώτημα 2<sup>ο</sup>

R1

```
R1#sh int e1/1
Ethernet1/1 is up, line protocol is up
  Hardware is AmdP2, address is ca01.2124.001d (bia ca01.2124.001d)
  Internet address is 10.1.5.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output 00:00:01, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  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 IP multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    19 packets output, 2730 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier
    0 output buffer failures, 0 output buffers swapped out
R1#ping 10.1.1.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 20/21/24 ms
R1#ping 10.1.5.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.2, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#ping 10.1.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#ping 10.1.5.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#
```

## R2

```
18 packets output, 2256 bytes, 0 underruns
0 output errors, 0 collisions, 1 interface resets

R2#sh int e1/1
Ethernet1/1 is up, line protocol is up
  Hardware is AmdP2, address is ca02.2144.001d (bia ca02.2144.001d)
  Internet address is 10.1.5.2/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output 00:00:04, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  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 IP multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
  14 packets output, 2112 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets

R2#ping 10.1.1.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/27/84 ms
R2#ping 10.1.5.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R2#ping 10.1.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R2#ping 10.1.5.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.3, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 20/29/44 ms
R2#
```

## R3

```
0 output buffer failures, 0 output buffers swapped out

R3#sh int e1/1
Ethernet1/1 is up, line protocol is up
  Hardware is AmdP2, address is ca03.2164.001d (bia ca03.2164.001d)
  Internet address is 10.1.5.3/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:14, output 00:00:01, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    3 packets input, 833 bytes, 0 no buffer
      Received 3 broadcasts (0 IP multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
  14 packets output, 2112 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred

R3#ping 10.1.1.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.5.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.1.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.2, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.5.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/12/24 ms
R3#
```

## Ερώτημα 3ο

R1

```
Queueing strategy: fifo
Output queue: 0/40 (size/max)
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 IP multicasts)
  0 runs, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
19 packets output, 2730 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  0 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out
R1#ping 10.1.1.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.2, timeout is 2 seconds:
!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 20/21/24 ms
R1#ping 10.1.5.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.2, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#ping 10.1.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#ping 10.1.5.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#router ospf 1
R1(config-router)#router-id 1.1.1.1
R1(config-router)#0.0.0.0 255.255.255.255 area 0
^
% Invalid input detected at '^' marker.

R1(config-router)#network 0.0.0.0 255.255.255.255 area 0
R1(config-router)#end
R1#
*Mar 17 13:13:44.211: %SYS-5-CONFIG_I: Configured from console by console
R1#
```



## R2

```
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output 00:00:04, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
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 IP multicasts)
  0 runs, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
 14 packets output, 2112 bytes, 0 underruns
   0 output errors, 0 collisions, 1 interface resets

R2#ping 10.1.1.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/27/84 ms
R2#ping 10.1.5.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R2#ping 10.1.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R2#ping 10.1.5.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.3, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 20/29/44 ms
R2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#router ospf 1
R2(config-router)#router-id 2.2.2.2
R2(config-router)#network 0.0.0.0 255.255.255.255 area 0
R2(config-router)#
*Mar 17 13:15:29.315: %OSPF-5-ADJCHG: Process 1, Nbr 1.1.1.1 on Ethernet1/0 from LOADING to FULL, Loading Done
R2(config-router)#end
R2#
*Mar 17 13:15:40.831: %SYS-5-CONFIG_I: Configured from console by console
R2#
```

## R3

```
Last input 00:00:14, output 00:00:01, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  3 packets input, 833 bytes, 0 no buffer
    Received 3 broadcasts (0 IP multicasts)
  0 runs, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
 14 packets output, 2112 bytes, 0 underruns
   0 output errors, 0 collisions, 1 interface resets
   0 unknown protocol drops
   0 babbles, 0 late collision, 0 deferred

R3#ping 10.1.1.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.5.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.1.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.2, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.5.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/12/24 ms
R3#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R3(config)#router ospf 1
R3(config-router)#router-id 3.3.3.3
R3(config-router)#network 0.0.0.0 255.255.255.255 area 0
R3(config-router)#
*Mar 17 13:16:38.307: %OSPF-5-ADJCHG: Process 1, Nbr 2.2.2.2 on Ethernet1/1 from LOADING to FULL, Loading Done
R3(config-router)#end
R3#
*Mar 17 13:16:41.607: %SYS-5-CONFIG_I: Configured from console by console
R3#
```

## Ερώτημα 4ο

R1

```
Sending 5, 100-byte ICMP Echos to 10.1.5.2, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#ping 10.1.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#ping 10.1.5.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#router ospf 1
R1(config-router)#router-id 1.1.1.1
R1(config-router)#0.0.0.0 255.255.255.255 area 0
^
% Invalid input detected at '^' marker.

R1(config-router)#network 0.0.0.0 255.255.255.255 area 0
R1(config-router)#end
R1#
*Mar 17 13:13:44.211: %SYS-5-CONFIG_I: Configured from console by console
R1#
*Mar 17 13:15:29.239: %OSPF-5-ADJCHG: Process 1, Nbr 2.2.2.2 on Ethernet1/0 from LOADING to FULL, Loading Done
R1#ping 10.1.1.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 20/33/56 ms
R1#ping 10.1.5.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.2, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#ping 10.1.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#ping 10.1.5.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#
```

## R2

```
R2#ping 10.1.5.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R2#ping 10.1.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R2#ping 10.1.5.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.3, timeout is 2 seconds:
!!!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 20/29/44 ms
R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#router ospf 1
R2(config-router)#router-id 2.2.2.2
R2(config-router)#network 0.0.0.0 255.255.255.255 area 0
R2(config-router)#
*Mar 17 13:15:29.315: %OSPF-5-ADJCHG: Process 1, Nbr 1.1.1.1 on Ethernet1/0 from LOADING to FULL, Loading Done
R2(config-router)#end
R2#
*Mar 17 13:15:40.831: %SYS-5-CONFIG_I: Configured from console by console
R2#
*Mar 17 13:16:38.359: %OSPF-5-ADJCHG: Process 1, Nbr 3.3.3.3 on Ethernet1/1 from LOADING to FULL, Loading Done
R2#ping 10.1.1.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.1, timeout is 2 seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 16/20/24 ms
R2#ping 10.1.5.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R2#ping 10.1.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R2#ping 10.1.5.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.3, timeout is 2 seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/13/24 ms
R2#
```

## R3

```
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.5.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.1.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.2, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.5.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.2, timeout is 2 seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/12/24 ms
R3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#router ospf 1
R3(config-router)#router-id 3.3.3.3
R3(config-router)#network 0.0.0.0 255.255.255.255 area 0
R3(config-router)#
*Mar 17 13:16:38.307: %OSPF-5-ADJCHG: Process 1, Nbr 2.2.2.2 on Ethernet1/1 from LOADING to FULL, Loading Done
R3(config-router)#end
R3#
*Mar 17 13:16:41.607: %SYS-5-CONFIG_I: Configured from console by console
R3#ping 10.1.1.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.5.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.1.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.2, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.5.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.2, timeout is 2 seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 16/19/24 ms
R3#
```

## Ερώτημα 5<sup>ο</sup>

## R1

```

Sending 5, 100-byte ICMP Echos to 10.1.1.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 20/33/56 ms
R1#ping 10.1.5.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.2, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#ping 10.1.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#ping 10.1.5.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#sh ip ospf neigh

Neighbor ID      Pri   State           Dead Time   Address      Interface
2.2.2.2          1    FULL/BDR        00:00:35    10.1.1.2     Ethernet1/0
R1#sh ip route
Codes: L - local, C - connected, S - static, 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
       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, H - NHRP, l - LISP
       a - application route
       + - replicated route, % - next hop override

Gateway of last resort is not set

    1.0.0.0/32 is subnetted, 1 subnets
C       1.1.1.1 is directly connected, Loopback0
    2.0.0.0/32 is subnetted, 1 subnets
O       2.2.2.2 [110/11] via 10.1.1.2, 00:10:03, Ethernet1/0
    3.0.0.0/32 is subnetted, 1 subnets
O       3.3.3.3 [110/21] via 10.1.1.2, 00:08:54, Ethernet1/0
    10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
C       10.1.1.0/24 is directly connected, Ethernet1/0
L       10.1.1.1/32 is directly connected, Ethernet1/0
C       10.1.5.0/24 is directly connected, Ethernet1/1
L       10.1.5.1/32 is directly connected, Ethernet1/1
R1#
R1#

```

## R2

```

!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 16/20/24 ms
R2#ping 10.1.5.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R2#ping 10.1.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R2#ping 10.1.5.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.3, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/13/24 ms
R2#sh ip ospf neigh

Neighbor ID      Pri   State           Dead Time   Address        Interface
3.3.3.3          1    FULL/BDR        00:00:39    10.1.5.3       Ethernet1/1
1.1.1.1          1    FULL/DR         00:00:36    10.1.1.1       Ethernet1/0
R2#sh ip route
Codes: L - local, C - connected, S - static, 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
       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, H - NHRP, l - LISP
       a - application route
       + - replicated route, % - next hop override

Gateway of last resort is not set

    1.0.0.0/32 is subnetted, 1 subnets
O       1.1.1.1 [110/11] via 10.1.1.1, 00:11:18, Ethernet1/0
    2.0.0.0/32 is subnetted, 1 subnets
C       2.2.2.2 is directly connected, Loopback0
    3.0.0.0/32 is subnetted, 1 subnets
O       3.3.3.3 [110/11] via 10.1.5.3, 00:10:09, Ethernet1/1
    10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
C       10.1.1.0/24 is directly connected, Ethernet1/0
L       10.1.1.2/32 is directly connected, Ethernet1/0
C       10.1.5.0/24 is directly connected, Ethernet1/1
L       10.1.5.2/32 is directly connected, Ethernet1/1
R2#
R2#

```

## R3

```

Sending 5, 100-byte ICMP Echos to 10.1.1.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.5.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.1.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.2, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 10.1.5.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.5.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 16/19/24 ms
R3#sh ip ospf neigh

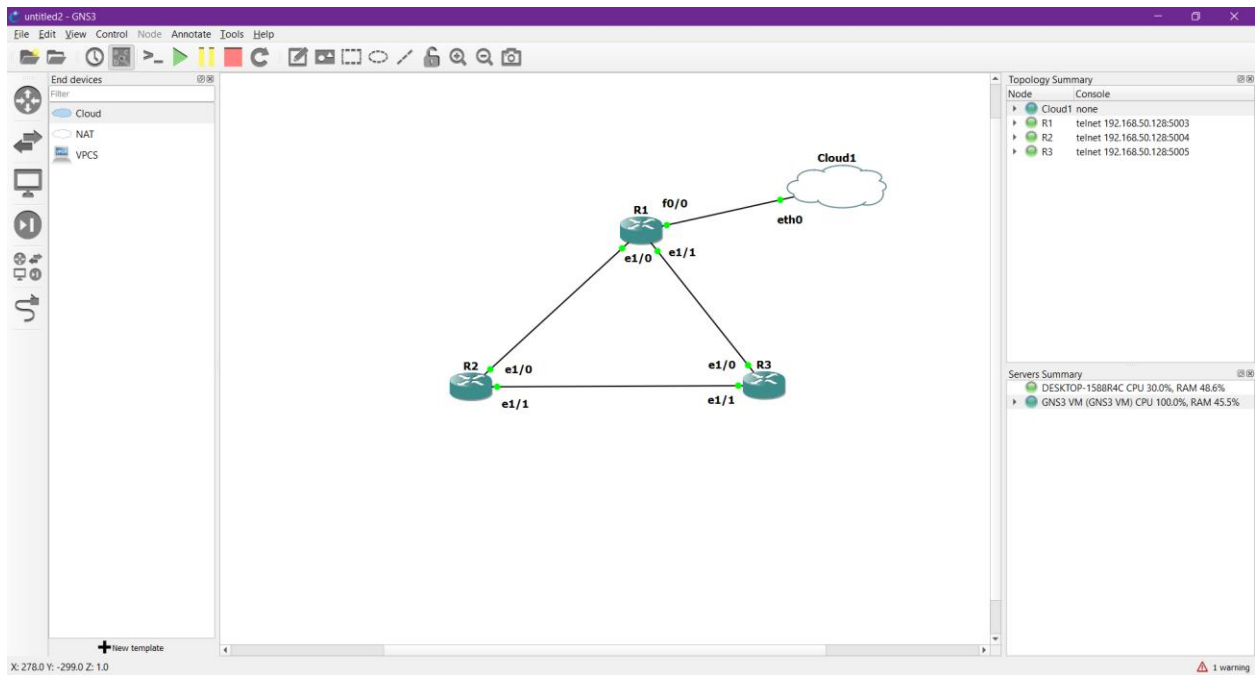
Neighbor ID      Pri   State           Dead Time   Address        Interface
2.2.2.2          1    FULL/DR         00:00:38    10.1.5.2       Ethernet1/1
R3#sh ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       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, H - NHRP, l - LISP
       a - application route
       + - replicated route, % - next hop override

Gateway of last resort is not set

    1.0.0.0/32 is subnetted, 1 subnets
O       1.1.1.1 [110/21] via 10.1.5.2, 00:10:51, Ethernet1/1
    2.0.0.0/32 is subnetted, 1 subnets
O       2.2.2.2 [110/11] via 10.1.5.2, 00:10:51, Ethernet1/1
    3.0.0.0/32 is subnetted, 1 subnets
C       3.3.3.3 is directly connected, Loopback0
    10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
C       10.1.1.0/24 is directly connected, Ethernet1/0
L       10.1.1.3/32 is directly connected, Ethernet1/0
C       10.1.5.0/24 is directly connected, Ethernet1/1
L       10.1.5.3/32 is directly connected, Ethernet1/1
R3#
R3#

```

## Μερος 2<sup>ο</sup>



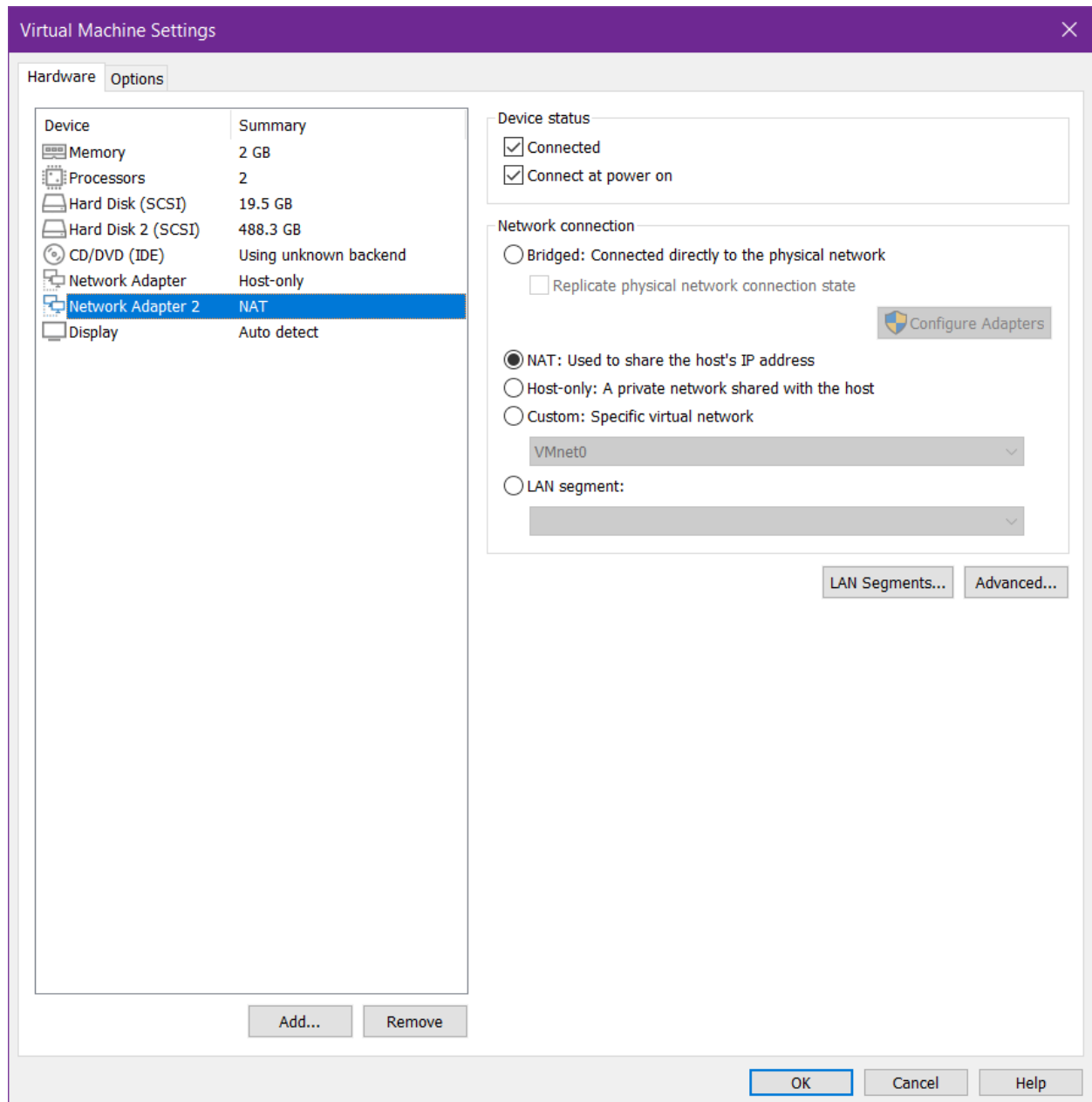
## R1

```
% Crashinfo may not be recovered at bootflash:crashinfo
% This file system device reports an error

Press RETURN to get started!

*Mar 17 15:50:34.395: %LINEPROTO-5-UPDOWN: Line protocol on Interface VoIP-Null0, changed state to up
*Mar 17 15:50:34.403: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Mar 17 15:50:34.411: %LINK-3-UPDOWN: Interface Ethernet1/0, changed state to up
*Mar 17 15:50:34.419: %LINK-3-UPDOWN: Interface Ethernet1/1, changed state to up
*Mar 17 15:50:34.427: %LINK-3-UPDOWN: Interface Ethernet1/2, changed state to up
*Mar 17 15:50:34.431: %LINK-3-UPDOWN: Interface Ethernet1/3, changed state to up
*Mar 17 15:50:36.175: %SYS-5-CONFIG_I: Configured from memory by console
*Mar 17 15:50:36.455: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to down
*Mar 17 15:50:36.455: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/0, changed state to up
*Mar 17 15:50:36.459: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/1, changed state to up
*Mar 17 15:50:36.463: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/2, changed state to down
*Mar 17 15:50:36.463: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/3, changed state to down
*Mar 17 15:50:36.467: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback0, changed state to up
*Mar 17 15:50:36.759: %SYS-5-RESTART: System restarted --
Cisco IOS Software, 7200 Software (C7200-ADVENTERPRISEK9-M), Version 15.3(3)XB12, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2013 by Cisco Systems, Inc.
Compiled Tue 19-Nov-13 04:39 by prod_rel_team
*Mar 17 15:50:36.807: %SNMP-5-COLDSTART: SNMP agent on host R1 is undergoing a cold start
*Mar 17 15:50:37.027: %CRYPTO-6-ISAKMP_ON_OFF: ISAKMP is OFF
*Mar 17 15:50:37.027: %CRYPTO-6-GDOI_ON_OFF: GDOI is OFF
*Mar 17 15:50:37.519: %LINK-5-CHANGED: Interface FastEthernet0/0, changed state to administratively down
*Mar 17 15:50:37.927: %LINK-5-CHANGED: Interface Ethernet1/2, changed state to administratively down
*Mar 17 15:50:37.959: %LINK-5-CHANGED: Interface Ethernet1/3, changed state to administratively down
*Mar 17 15:51:17.539: %OSPF-5-ADJCHG: Process 1, Nbr 2.2.2.2 on Ethernet1/0 from LOADING to FULL, Loading Done
R1#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#interface FastEthernet 0/0
^
% Invalid input detected at '^' marker.
R1(config)#interface FastEthernet 0/0
R1(config-if)#ip address dhcp
R1(config-if)#no shutdown
R1(config-if)#end
R1#
*Mar 17 15:54:12.359: %SYS-5-CONFIG_I: Configured from console by console
R1#
*Mar 17 15:54:12.583: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Mar 17 15:54:13.583: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
R1#
```

Εδώ φαίνονται τα settings του VM μου και είναι όπως δείξατε





Παρά όλα αυτά ακολουθώντας κατά γράμμα τις οδηγίες που μας δώσατε δεν γίνεται ping

```
*Mar 19 13:35:45.767: %OSPF-5-ADJCHG: Process 1, Nbr 2.2.2.2 on Ethernet1/0 from LOADING to FULL, Loading Done
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#int f0/0
R1(config-if)#ip address dhcp
R1(config-if)#no shutdown
R1(config-if)#en
*Mar 19 13:36:11.371: %DHCP-6-ADDRESS_ASSIGN: Interface FastEthernet0/0 assigned DHCP address 192.168.50.130, mask 255.255.255.0, host
name R1
R1(config-if)#end
R1#
*Mar 19 13:36:22.279: %SYS-5-CONFIG_I: Configured from console by console
R1#ping 2.2.2.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 2.2.2.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/30/84 ms
R1#ping 3.3.3.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 3.3.3.3, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#ping 192.168.50.130
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.50.130, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/3/8 ms
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#ip domain-lookup
R1(config)#ip name-server 8.8.8.8
R1(config)#end
R1#
*Mar 19 13:37:52.895: %SYS-5-CONFIG_I: Configured from console by console
R1#ping google.com
Translating "google.com"...domain server (8.8.8.8) (192.168.50.1)
% Unrecognized host or address, or protocol not running.
R1#
R1#
R1#ping 8.8.8.8
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
Translating "google.com"...domain server (8.8.8.8) (192.168.50.1)
% Unrecognized host or address, or protocol not running.
R1#
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#int f0/0
R1(config-if)#ip address 10.1.3.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#end
R1#
*Mar 19 13:40:41.375: %SYS-5-CONFIG_I: Configured from console by console
R1#
```

```

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.50.130, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/3/8 ms
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#ip domain-lookup
R1(config)#ip name-server 8.8.8.8
R1(config)#end
R1#
*Mar 19 13:37:52.895: %SYS-5-CONFIG_I: Configured from console by console
R1#ping google.com
Translating "google.com"...domain server (8.8.8.8) (192.168.50.1)
% Unrecognized host or address, or protocol not running.

R1#
R1#
R1#ping 8.8.8.8
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#ping google.com
Translating "google.com"...domain server (8.8.8.8) (192.168.50.1)
% Unrecognized host or address, or protocol not running.

R1#
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#int f0/0
R1(config-if)#ip address 10.1.3.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#end
R1#
*Mar 19 13:40:41.375: %SYS-5-CONFIG_I: Configured from console by console
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#router ospf 1
R1(config-router)#network 10.0.0.0 0.255.255.255 area 0
R1(config-router)#default-information originate
R1(config-router)#end
R1#
*Mar 19 13:42:56.299: %SYS-5-CONFIG_I: Configured from console by console
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#ip domain-lookup
R1(config)#ip name-server 8.8.8.8
R1(config)#end
^
% Invalid input detected at '^' marker.

R1(config)#ip name-server 8.8.8.8
R1(config)#end
R1#ping
*Mar 19 13:43:36.131: %SYS-5-CONFIG_I: Configured from console by console
R1#ping 8.8.8.8
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#

```

```

*Mar 19 12:42:26.823: %LINK-5-CHANGED: Interface Ethernet1/3, changed state to administratively down
*Mar 19 12:42:27.651: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/2, changed state to down
*Mar 19 12:42:27.823: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/3, changed state to down
*Mar 19 12:43:05.851: %OSPF-5-ADJCHG: Process 1, Nbr 1.1.1.1 on Ethernet1/0 from LOADING to FULL, Loading Done
*Mar 19 12:43:05.979: %OSPF-5-ADJCHG: Process 1, Nbr 3.3.3.3 on Ethernet1/1 from LOADING to FULL, Loading Done
R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#int e1/1
R2(config-if)#no shut
R2(config-if)#ip add 10.1.2.2 255.255.255.0
R2(config-if)#
*Mar 19 12:46:45.347: %OSPF-5-ADJCHG: Process 1, Nbr 3.3.3.3 on Ethernet1/1 from FULL to DOWN, Neighbor Down: Interface down or detached
R2(config-if)#int loop 0
R2(config-if)#end
R2#sh
*Mar 19 12:46:58.143: %SYS-5-CONFIG_I: Configured from console by console
R2#sh ip int br
Interface IP-Address OK? Method Status Protocol
FastEthernet0/0 unassigned YES NVRAM administratively down down
Ethernet1/0 10.1.1.2 YES NVRAM up up
Ethernet1/1 10.1.2.2 YES manual up up
Ethernet1/2 unassigned YES NVRAM administratively down down
Ethernet1/3 unassigned YES NVRAM administratively down down
Loopback0 2.2.2.2 YES NVRAM up up
R2#
*Mar 19 12:48:01.455: %OSPF-5-ADJCHG: Process 1, Nbr 3.3.3.3 on Ethernet1/1 from LOADING to FULL, Loading Done
R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#router ospf 1
R2(config-router)#router-id 2.2.2.2
R2(config-router)#network 0.0.0.0 255.255.255.255 area 0
R2(config-router)#end
R2#
*Mar 19 12:50:58.323: %SYS-5-CONFIG_I: Configured from console by console
R2#sh ip ospf neigh
Neighbor ID Pri State Dead Time Address Interface
3.3.3.3 1 FULL/BDR 00:00:31 10.1.2.3 Ethernet1/1
1.1.1.1 1 FULL/BDR 00:00:39 10.1.1.1 Ethernet1/0
R2#router ospf 1
^
% Invalid input detected at '^' marker.

R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#router ospf 1
R2(config-router)#network 10.0.0.0 0.255.255.255 area 0
R2(config-router)#default-information originate
R2(config-router)#end
R2#
*Mar 19 13:18:48.351: %SYS-5-CONFIG_I: Configured from console by console
R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#ip domain-lookup
R2(config)#ip name-server 8.8.8.8
R2(config)#end
R2#
*Mar 19 13:21:05.247: %SYS-5-CONFIG_I: Configured from console by console
R2#

```

```

*Mar 19 12:42:27.463: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/2, changed state to down
*Mar 19 12:42:27.599: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/3, changed state to down
*Mar 19 12:43:05.639: %OSPF-5-ADJCHG: Process 1, Nbr 2.2.2.2 on Ethernet1/1 from LOADING to FULL, Loading Done
R3#sh ip int br
Interface                IP-Address      OK? Method Status      Protocol
FastEthernet0/0          unassigned      YES NVRAM   administratively down down
Ethernet1/0               10.1.1.3        YES NVRAM   up          up
Ethernet1/1               10.1.5.3        YES NVRAM   up          up
Ethernet1/2               unassigned      YES NVRAM   administratively down down
Ethernet1/3               unassigned      YES NVRAM   administratively down down
Loopback0                 3.3.3.3         YES NVRAM   up          up
R3#
*Mar 19 12:47:23.223: %OSPF-5-ADJCHG: Process 1, Nbr 2.2.2.2 on Ethernet1/1 from FULL to DOWN, Neighbor Down: Dead timer expired
R3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#int e1/1
R3(config-if)#no shut
R3(config-if)#ip add 10.1.2.3 255.255.255.0
R3(config-if)#int loop 0
R3(config-if)#
*Mar 19 12:48:01.119: %OSPF-5-ADJCHG: Process 1, Nbr 2.2.2.2 on Ethernet1/1 from LOADING to FULL, Loading Done
R3(config-if)#end
R3#sh
*Mar 19 12:48:06.739: %SYS-5-CONFIG_I: Configured from console by console
R3#sh ip int br
Interface                IP-Address      OK? Method Status      Protocol
FastEthernet0/0          unassigned      YES NVRAM   administratively down down
Ethernet1/0               10.1.1.3        YES NVRAM   up          up
Ethernet1/1               10.1.2.3        YES manual  up          up
Ethernet1/2               unassigned      YES NVRAM   administratively down down
Ethernet1/3               unassigned      YES NVRAM   administratively down down
Loopback0                 3.3.3.3         YES NVRAM   up          up
R3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#router ospf 1
R3(config-router)#router-id 3.3.3.3
R3(config-router)#network 0.0.0.0 255.255.255.255 area 0
R3(config-router)#end
R3#
*Mar 19 12:51:36.607: %SYS-5-CONFIG_I: Configured from console by console
R3#sh ip ospf neigh

Neighbor ID    Pri   State           Dead Time   Address        Interface
2.2.2.2        1     FULL/DR         00:00:35    10.1.2.2       Ethernet1/1
R3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#router ospf 1
R3(config-router)#network 10.0.0.0 0.255.255.255 area 0
R3(config-router)#default-information originate
R3(config-router)#end
R3#
*Mar 19 13:19:36.471: %SYS-5-CONFIG_I: Configured from console by console
R3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#ip domain-lookup
R3(config)#ip name-server 8.8.8.8
R3(config)#end
R3#
*Mar 19 13:21:25.343: %SYS-5-CONFIG_I: Configured from console by console
R3#

```

## Ping 8.8.8.8

```

R1(config-if)#end
R1#
*Mar 19 13:14:46.055: %SYS-5-CONFIG_I: Configured from console by console
R1#ping 8.8.8.8
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#conf t
^
% Invalid input detected at '^' marker.

R1(config)#router ospf 1
R1(config-router)#network 10.0.0.0 0.255.255.255 area 0
R1(config-router)#default-information originate
^
% Invalid input detected at '^' marker.

R1(config-router)#default-information originate
R1(config-router)#end
R1#
*Mar 19 13:17:49.835: %SYS-5-CONFIG_I: Configured from console by console
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#ip domain-lookup
R1(config)#ip name-server 8.8.8.8
R1(config)#end
R1#
*Mar 19 13:20:44.239: %SYS-5-CONFIG_I: Configured from console by console
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#int f0/0
R1(config-if)#ip nat outside
R1(config-if)#
*Mar 19 13:22:09.947: %LINEPROTO-5-UPDOWN: Line protocol on Interface NVI0, changed state to up
R1(config-if)#int e0/1
^
% Invalid input detected at '^' marker.

R1(config)#int e1/0
R1(config-if)#ip nat inside
R1(config-if)#ip nat inside source list 1 interface f0/0 overload
R1(config)#access-list 1 permit 10.0.0.0 0.255.255.255
R1(config)#end
R1#wr
*Mar 19 13:23:50.055: %SYS-5-CONFIG_I: Configured from console by console
R1#wr
Warning: Attempting to overwrite an NVRAM configuration previously written
by a different version of the system image.
Overwrite the previous NVRAM configuration?[confirm]
Building configuration...
[OK]
R1#ping 8.8.8.8
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R1#

```

```

R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#int e1/1
R2(config-if)#no shut
R2(config-if)#ip add 10.1.2.2 255.255.255.0
R2(config-if)#
*Mar 19 12:46:45.347: %OSPF-5-ADJCHG: Process 1, Nbr 3.3.3.3 on Ethernet1/1 from FULL to DOWN, Neighbor Down: Interface down or detached
R2(config-if)#int loop 0
R2(config-if)#end
R2#sh
*Mar 19 12:46:58.143: %SYS-5-CONFIG_I: Configured from console by console
R2#sh ip int br
Interface                IP-Address      OK? Method Status        Protocol
FastEthernet0/0          unassigned      YES NVRAM    administratively down  down
Ethernet1/0              10.1.1.2        YES NVRAM    up            up
Ethernet1/1              10.1.2.2        YES manual  up            up
Ethernet1/2              unassigned      YES NVRAM    administratively down  down
Ethernet1/3              unassigned      YES NVRAM    administratively down  down
Loopback0                 2.2.2.2        YES NVRAM    up            up
R2#
*Mar 19 12:48:01.455: %OSPF-5-ADJCHG: Process 1, Nbr 3.3.3.3 on Ethernet1/1 from LOADING to FULL, Loading Done
R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#router ospf 1
R2(config-router)#router-id 2.2.2.2
R2(config-router)#network 0.0.0.0 255.255.255.255 area 0
R2(config-router)#end
R2#
*Mar 19 12:50:58.323: %SYS-5-CONFIG_I: Configured from console by console
R2#sh ip ospf neigh
Neighbor ID     Pri   State           Dead Time   Address         Interface
3.3.3.3         1     FULL/BDR        00:00:31    10.1.2.3        Ethernet1/1
1.1.1.1         1     FULL/BDR        00:00:39    10.1.1.1        Ethernet1/0
R2#router ospf 1
^
% Invalid input detected at '^' marker.

R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#router ospf 1
R2(config-router)#network 10.0.0.0 0.255.255.255 area 0
R2(config-router)#default-information originate
R2(config-router)#end
R2#
*Mar 19 13:18:48.351: %SYS-5-CONFIG_I: Configured from console by console
R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#ip domain-lookup
R2(config)#ip name-server 8.8.8.8
R2(config)#end
R2#
*Mar 19 13:21:05.247: %SYS-5-CONFIG_I: Configured from console by console
R2#ping 8.8.8.8
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
....
Success rate is 0 percent (0/5)
R2#

```

```

R3(config-if)#int loop 0
R3(config-if)#
*Mar 19 12:48:01.119: %OSPF-5-ADJCHG: Process 1, Nbr 2.2.2.2 on Ethernet1/1 from LOADING to FULL, Loading Done
R3(config-if)#end
R3#sh
*Mar 19 12:48:06.739: %SYS-5-CONFIG_I: Configured from console by console
R3#sh ip int br

```

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	unassigned	YES	NVRAM	administratively down	down
Ethernet1/0	10.1.1.3	YES	NVRAM	up	up
Ethernet1/1	10.1.2.3	YES	manual	up	up
Ethernet1/2	unassigned	YES	NVRAM	administratively down	down
Ethernet1/3	unassigned	YES	NVRAM	administratively down	down
Loopback0	3.3.3.3	YES	NVRAM	up	up

```

R3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#router ospf 1
R3(config-router)#router-id 3.3.3.3
R3(config-router)#network 0.0.0.0 255.255.255.255 area 0
R3(config-router)#end
R3#
*Mar 19 12:51:36.607: %SYS-5-CONFIG_I: Configured from console by console
R3#sh ip ospf neigh

```

Neighbor ID	Pri	State	Dead Time	Address	Interface
2.2.2.2	1	FULL/DR	00:00:35	10.1.2.2	Ethernet1/1

```

R3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#router ospf 1
R3(config-router)#network 10.0.0.0 0.255.255.255 area 0
R3(config-router)#default-information originate
R3(config-router)#end
R3#
*Mar 19 13:19:36.471: %SYS-5-CONFIG_I: Configured from console by console
R3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#ip domain-lookup
R3(config)#ip name-server 8.8.8.8
R3(config)#end
R3#
*Mar 19 13:21:25.343: %SYS-5-CONFIG_I: Configured from console by console
R3#ping google.com
Translating "google.com"...domain server (8.8.8.8)
% Unrecognized host or address, or protocol not running.

R3#
R3#ping 8.8.8.8
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#ping 8.8.8.8
% Unrecognized host or address, or protocol not running.

R3#ping 8.8.8.8
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#

```

## Traceroute 8.8.8.8

```
1.1.1.1      1  FULL/BDR      00:00:39   10.1.1.1   Ethernet1/0
R2#router ospf 1
^
% Invalid input detected at '^' marker.

R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#router ospf 1
R2(config-router)#network 10.0.0.0 0.255.255.255 area 0
R2(config-router)#default-information originate
R2(config-router)#end
R2#
*Mar 19 13:18:48.351: %SYS-5-CONFIG_I: Configured from console by console
R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#ip domain-lookup
R2(config)#ip name-server 8.8.8.8
R2(config)#end
R2#
*Mar 19 13:21:05.247: %SYS-5-CONFIG_I: Configured from console by console
R2#ping 8.8.8.8
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R2#traceroute 8.8.8.8
Type escape sequence to abort.
Tracing the route to 8.8.8.8
VRF info: (vrf in name/id, vrf out name/id)
 0  *  *  *
 1  *  *  *
 2  *  *  *
 3  *  *  *
 4  *  *  *
 5  *  *  *
 6  *  *  *
 7  *  *  *
 8  *  *  *
 9  *  *  *
10  *  *  *
11  *  *  *
12  *  *  *
13  *  *  *
14  *  *  *
15  *  *  *
16  *  *  *
17  *  *  *
18  *  *  *
19  *  *  *
20  *  *  *
21  *  *  *
22  *  *  *
23  *  *  *
24  *  *  *
25  *  *  *
26  *  *  *
27  *  *  *
28  *  *  *
29  *  *  *
30  *  *  *
R2#
```

Έκανα πολλές προσπάθειες με διαφορετικές ρυθμίσεις αλλά ping δεν έκανε  
οπότε δεν θα σας κουράσω με περισσότερα screenshot εφόσον έχω  
αποθηκεύσει το project και μπορείτε να το δείτε.

Ευχαριστώ για τον χρόνο σας !

Note \* υπάρχει ένα θέμα με το πρόγραμμα Nvidia GeForce Experience και το GNS3 για όταν κάνουμε κάνουμε import portable project οπότε άμα το έχετε πρέπει να το διαγράψετε για να ανοίξει σωστά το project