Лабораториска вежба бр. 6	GNS3 IP Конфигурација		
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1 <u>Конфигурација на рутери</u>

За конфигурацијата на рутерите ги искористив следните команди за соодветните барања:

- името на рутерот: "config t", "hostname"

- поставување на лозинки: "config t", "enable password", "enable secret", "service-password encryption"

- опис на интерфејсите: "config t", "interface", "description"

- порака на денот: "config t", "banner motd"

- IP адреса на секој интерфејс: "config t", "interface", "ip address"

- вклучување на интерфејс: "config t", "interface", "no shutdown"

- рата на часовник: "config t", "interface", "clock rate"

2 <u>Проверка на конфигурацијата</u>

2.1. Работна конфигурација
- Работната конфигурација може да се прегледа со помош на командата "show run". Пр. (рутер А):

```
R_A#show run
Building configuration...

*Mar  1 00:12:30.551: %SYS-5-CONFIG_I: Configured from console by console
Current configuration : 1088 bytes
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
!
hostname R_A
!
boot-start-marker
boot-end-marker
!
enable password 7 1105180741
!
no aaa new-model
memory-size iomem 5
no ip icmp rate-limit unreachable
!
ip cef
no ip domain lookup
```

2.2. Рутирачка табела

- Рутирачката табела на одреден рутер може да се набљудува користејќи ја командата "show ip route".

2.3. Рутирачка табела на Рутер Е?

- Рутирачката табела на рутерот Е ги наведува IP адресите на интерфејсите со кои што е директно поврзан:

```
R_E#show ip route
Codes: 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

Gateway of last resort is not set

     172.16.0.0/24 is subnetted, 3 subnets
C       172.16.30.0 is directly connected, Serial0/1
C       172.16.20.0 is directly connected, Serial0/0
C       172.16.10.0 is directly connected, FastEthernet1/0
```

3. Конфигурација и проверка на домаќините

Host	IP Address	Default Gateway
H_E	172.16.60.3/24	172.16.60.1
H_F	172.16.70.3/24	172.16.70.1
H_G	172.16.80.3/24	172.16.80.1
H_H	172.16.90.3/24	172.16.90.1

- Дали работи ping од домаќинот Е до интерфејсите на рутерот А? Ако не, зошто?
- Може да се изврши ping од домаќинот Е до интерфејсите на рутерот А.

```
H-E> ping 172.16.60.1
84 bytes from 172.16.60.1 icmp_seq=1 ttl=255 time=15.180 ms
84 bytes from 172.16.60.1 icmp_seq=2 ttl=255 time=15.177 ms
84 bytes from 172.16.60.1 icmp_seq=3 ttl=255 time=15.116 ms
84 bytes from 172.16.60.1 icmp_seq=4 ttl=255 time=15.152 ms
84 bytes from 172.16.60.1 icmp_seq=5 ttl=255 time=15.121 ms

H-E> ping 172.16.20.2
84 bytes from 172.16.20.2 icmp_seq=1 ttl=255 time=15.258 ms
84 bytes from 172.16.20.2 icmp_seq=2 ttl=255 time=15.032 ms
84 bytes from 172.16.20.2 icmp_seq=3 ttl=255 time=15.163 ms
84 bytes from 172.16.20.2 icmp_seq=4 ttl=255 time=15.166 ms
84 bytes from 172.16.20.2 icmp_seq=5 ttl=255 time=15.181 ms
```

- Дали работи ping од домаќинот E до 172.16.10.1? Ако не, зошто?
Не, бидејќи немаме конфигурирано рути до адресата.

```
H-F> ping 172.16.10.1
*172.16.70.1 icmp_seq=1 ttl=255 time=15.597 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.70.1 icmp_seq=2 ttl=255 time=15.192 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.70.1 icmp_seq=3 ttl=255 time=14.982 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.70.1 icmp_seq=4 ttl=255 time=15.217 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.70.1 icmp_seq=5 ttl=255 time=15.189 ms (ICMP type:3, code:1, Destination host unreachable)
```

- Дали работи ping од домаќинот G до интерфејсите на рутерите E и F и до домаќините E, F и H? Ако не, зошто?
Не. Сеуште не се конфигурирани рутите на соодветните рутери.

- интерфејсите на рутерот E

```
H-G> ping 172.16.20.1
*172.16.80.1 icmp_seq=1 ttl=255 time=15.116 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=2 ttl=255 time=15.211 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=3 ttl=255 time=14.870 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=4 ttl=255 time=15.228 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=5 ttl=255 time=15.183 ms (ICMP type:3, code:1, Destination host unreachable)

H-G> ping 172.16.30.1
*172.16.80.1 icmp_seq=1 ttl=255 time=15.200 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=2 ttl=255 time=15.081 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=3 ttl=255 time=15.149 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=4 ttl=255 time=15.694 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=5 ttl=255 time=15.215 ms (ICMP type:3, code:1, Destination host unreachable)

H-G> ping 172.16.10.1
*172.16.80.1 icmp_seq=1 ttl=255 time=15.047 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=2 ttl=255 time=15.156 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=3 ttl=255 time=15.037 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=4 ttl=255 time=15.216 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=5 ttl=255 time=15.101 ms (ICMP type:3, code:1, Destination host unreachable)
```

- интерфејсите на рутерот Ф

```
H-G> ping 172.16.40.1
172.16.40.1 icmp_seq=1 timeout
172.16.40.1 icmp_seq=2 timeout
172.16.40.1 icmp_seq=3 timeout
172.16.40.1 icmp_seq=4 timeout
172.16.40.1 icmp_seq=5 timeout

H-G> ping 172.16.50.1
*172.16.80.1 icmp_seq=1 ttl=255 time=15.258 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=2 ttl=255 time=15.049 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=3 ttl=255 time=15.714 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=4 ttl=255 time=15.151 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=5 ttl=255 time=15.173 ms (ICMP type:3, code:1, Destination host unreachable)

H-G> ping 172.16.10.2
*172.16.80.1 icmp_seq=1 ttl=255 time=15.118 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=2 ttl=255 time=14.916 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=3 ttl=255 time=15.134 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=4 ttl=255 time=15.311 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=5 ttl=255 time=15.438 ms (ICMP type:3, code:1, Destination host unreachable)
```

- домаќините E, Ф и X

```
H-G> ping 172.16.60.3
*172.16.80.1 icmp_seq=1 ttl=255 time=15.120 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=2 ttl=255 time=15.185 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=3 ttl=255 time=15.220 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=4 ttl=255 time=15.046 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=5 ttl=255 time=15.172 ms (ICMP type:3, code:1, Destination host unreachable)

H-G> ping 172.16.70.3
*172.16.80.1 icmp_seq=1 ttl=255 time=15.466 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=2 ttl=255 time=15.259 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=3 ttl=255 time=15.103 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=4 ttl=255 time=15.189 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=5 ttl=255 time=15.113 ms (ICMP type:3, code:1, Destination host unreachable)

H-G> ping 172.16.90.3
*172.16.80.1 icmp_seq=1 ttl=255 time=15.147 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=2 ttl=255 time=15.125 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=3 ttl=255 time=14.970 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=4 ttl=255 time=15.108 ms (ICMP type:3, code:1, Destination host unreachable)
*172.16.80.1 icmp_seq=5 ttl=255 time=15.257 ms (ICMP type:3, code:1, Destination host unreachable)
```