

TRABALLU INDIVIDUAL

REDES II



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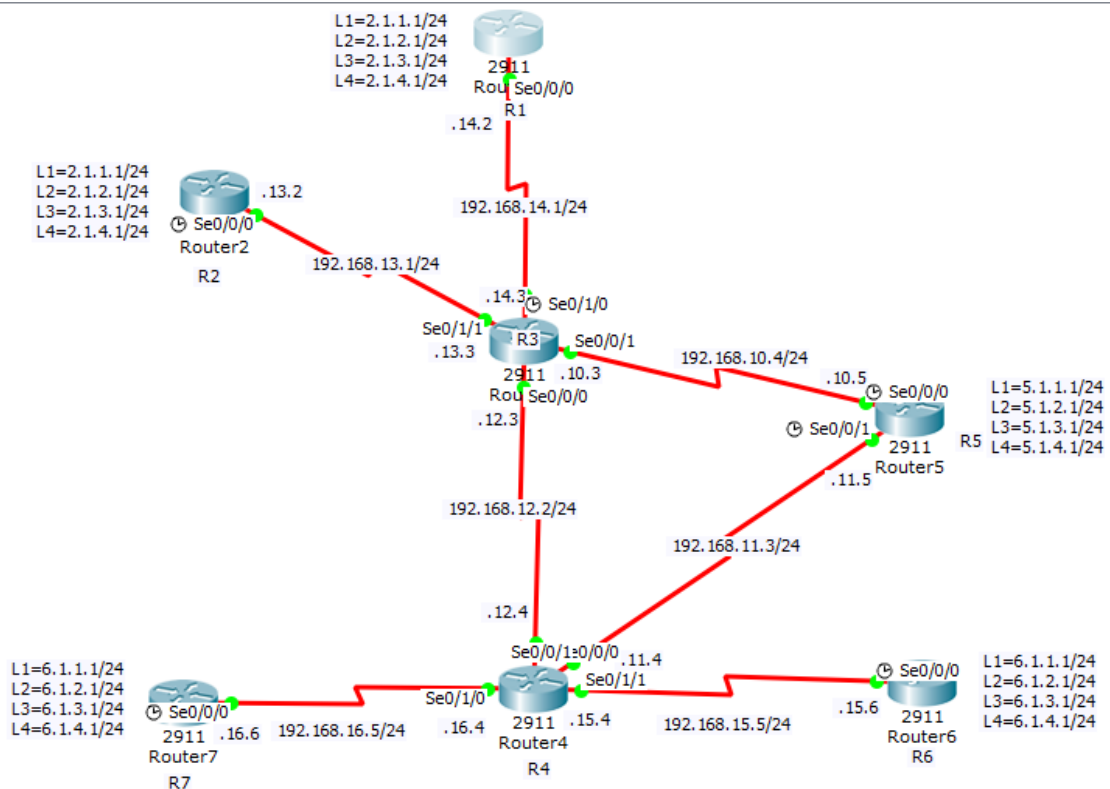
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Departamentu: Informatica.

**FACULDADE ENGENHARIA CIÊNCIA E TECNOLOGIA**

**UNIVERSIDADE NACIONAL TIMOR LOROSA'E**

## 1. TOPOLOGIA.



Relasiona ho traballu ida ne'e utiliza router hitu(7) ho marka 2911 no kabel serial, hodi halo konfigurasan ip address ho enable EIGRP ba kada router ne'ebe mak refere.

Konfigura EIGRP katak ita halo konfigurasan ip network ne'ebe mak iha ligasan direktamente ba malu tan sira liu husi lina internet ida.

## 2. KONFIGURA ROUTER R1.

### • Konfigurasan Router 1.

```
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#host
Router(config)#hostname R1
R1(config)#ena
R1(config)#enable secr
R1(config)#enable secret aries
R1(config)#line cons
R1(config)#line console 0
R1(config-line)#pass
R1(config-line)#password aries
R1(config-line)#login
R1(config-line)#exit
R1(config)#line vty 0 4
R1(config-line)#pass
R1(config-line)#password aries
R1(config-line)#login
R1(config-line)#exit
```

- **Konfigurasaun ip address R1.**

```
R1(config)#interface serial 0/0/0
R1(config-if)#ip add
R1(config-if)#ip address 192.168.14.2 255.255.255.0
R1(config-if)#band
R1(config-if)#bandwidth 1024
R1(config-if)#no shut
R1(config-if)#no shutdown

R1(config-if)#
%LINK-S-CHANGED: Interface Serial0/0/0, changed state to up
exit
```

- **Konfigurasaun EIGRP R1.**

```
R1#conf terminal
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#rout
R1(config)#router eig
R1(config)#router eigrp 10
R1(config-router)#net
R1(config-router)#network 192.168.14.1
R1(config-router)#
%DUAL-S-NBRCHANGE: IP-EIGRP 10: Neighbor 192.168.14.3 (Serial0/0/0) is up: new
adjacency

R1(config-router)#network 192.168.14.1
R1(config-router)#no au
R1(config-router)#no auto-summary
R1(config-router)#exit
```

- **Show ip route R1.**

```
R1#sh ip rou
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, E - EGP
        i - IS-IS, 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

D    192.168.10.0/24 [90/3523840] via 192.168.14.3, 00:02:52, Serial0/0/0
D    192.168.11.0/24 [90/4035840] via 192.168.14.3, 00:02:52, Serial0/0/0
D    192.168.12.0/24 [90/3523840] via 192.168.14.3, 00:02:52, Serial0/0/0
D    192.168.13.0/24 [90/3523840] via 192.168.14.3, 00:02:52, Serial0/0/0
     192.168.14.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.14.0/24 is directly connected, Serial0/0/0
L    192.168.14.2/32 is directly connected, Serial0/0/0
```

- **Show ip route EIGRP R1.**

```
R1#sh ip route eigrp
D    192.168.10.0/24 [90/3523840] via 192.168.14.3, 00:03:52, Serial0/0/0
D    192.168.11.0/24 [90/4035840] via 192.168.14.3, 00:03:52, Serial0/0/0
D    192.168.12.0/24 [90/3523840] via 192.168.14.3, 00:03:52, Serial0/0/0
D    192.168.13.0/24 [90/3523840] via 192.168.14.3, 00:03:52, Serial0/0/0
```

### 3. KONFIGURA ROUTER R2.

- **Konfigurasaun Router 2.**

```

Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#host
Router(config)#hostname R2
R2(config)#ena
R2(config)#enable sec
R2(config)#enable secret aries
R2(config)#line cons
R2(config)#line console 0
R2(config-line)#pass
R2(config-line)#password aries
R2(config-line)#login
R2(config-line)#exit
R2(config)#line vty 0 4
R2(config-line)#pass
R2(config-line)#password aries
R2(config-line)#login
R2(config-line)#exit

```

- **Konfigurasaun ip address R2.**

```

R2(config)#interface ser
R2(config)#interface serial 0/0/0
R2(config-if)#ip add
R2(config-if)#ip address 192.168.13.2 255.255.255.0
R2(config-if)#band
R2(config-if)#bandwidth 1024
R2(config-if)#no shu
R2(config-if)#no shutdown

R2(config-if)#
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up
exit

```

- **Konfigurasaun EIGRP R2.**

```

R2#conf terminal
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#rout
R2(config)#router eig
R2(config)#router eigrp 10
R2(config-router)#net
R2(config-router)#network 192.168.13.1
R2(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 10: Neighbor 192.168.13.3 (Serial0/0/0) is up: new
adjacency

R2(config-router)#network 192.168.13.1
R2(config-router)#no au
R2(config-router)#no auto-summary
R2(config-router)#exit

```

- **Show ip route R2.**

```

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, E - EGP
i - IS-IS, 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

D    192.168.10.0/24 [90/3523840] via 192.168.13.3, 00:03:47, Serial0/0/0
D    192.168.11.0/24 [90/4035840] via 192.168.13.3, 00:03:47, Serial0/0/0
D    192.168.12.0/24 [90/3523840] via 192.168.13.3, 00:03:47, Serial0/0/0
D    192.168.13.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.13.0/24 is directly connected, Serial0/0/0
L    192.168.13.2/32 is directly connected, Serial0/0/0
D    192.168.14.0/24 [90/3523840] via 192.168.13.3, 00:03:47, Serial0/0/0

```

- **Show ip route EIGRP R2.**

```

R2#sh ip route eig
R2#sh ip route eigrp
D    192.168.10.0/24 [90/3523840] via 192.168.13.3, 00:04:10, Serial0/0/0
D    192.168.11.0/24 [90/4035840] via 192.168.13.3, 00:04:10, Serial0/0/0
D    192.168.12.0/24 [90/3523840] via 192.168.13.3, 00:04:10, Serial0/0/0
D    192.168.13.0/24 is variably subnetted, 2 subnets, 2 masks
D    192.168.14.0/24 [90/3523840] via 192.168.13.3, 00:04:10, Serial0/0/0

```

## 4. KONFIGURA ROUTER R3.

- **Konfigurasaun Router 3.**

```
Router>en
Router>enable
Router#conf t
Router#conf terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#host
Router(config)#host
Router(config)#hostname R3
R3(config)#ena
R3(config)#enable secret aries
R3(config)#line con
R3(config)#line console 0
R3(config-line)#pass
R3(config-line)#password aries
R3(config-line)#login
R3(config-line)#exit
R3(config)#line vty 0 4
R3(config-line)#pass
R3(config-line)#password aries
R3(config-line)#login
R3(config-line)#exit
```

- **Konfigurasaun ip address R3.**

```
R3(config)#interface ser
R3(config)#interface serial 0/0/1
R3(config-if)#ip add
R3(config-if)#ip address 192.168.10.3 255.255.255.0
R3(config-if)#band
R3(config-if)#bandwidth 1024
R3(config-if)#no shut
R3(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial0/0/1, changed state to down
R3(config-if)#exit
```

- **Konfigurasaun EIGRP R3.**

```
R3#conf t
R3#conf terminal
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#router eigrp 10
R3(config-router)#net
R3(config-router)#network 192.168.14.1
R3(config-router)#net
R3(config-router)#network 192.168.13.1
R3(config-router)#net
R3(config-router)#network 192.168.12.3
R3(config-router)#net
R3(config-router)#network 192.168.10.4
R3(config-router)#no atut
R3(config-router)#no aut
R3(config-router)#no auto-summary
R3(config-router)#exit
```

- **Show ip route R3.**

```
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, E - EGP
       i - IS-IS, 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

    192.168.10.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.10.0/24 is directly connected, Serial0/0/1
L       192.168.10.3/32 is directly connected, Serial0/0/1
D       192.168.11.0/24 [90/3523840] via 192.168.10.5, 00:06:22, Serial0/0/1
    192.168.12.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.12.0/24 is directly connected, Serial0/0/0
L       192.168.12.3/32 is directly connected, Serial0/0/0
    192.168.13.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.13.0/24 is directly connected, Serial0/1/1
L       192.168.13.3/32 is directly connected, Serial0/1/1
    192.168.14.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.14.0/24 is directly connected, Serial0/1/0
L       192.168.14.3/32 is directly connected, Serial0/1/0
```

- **Show ip route EIGRP R3.**

```

R3#sh ip route eig
R3#sh ip route eigrp
      192.168.10.0/24 is variably subnetted, 2 subnets, 2 masks
D      192.168.11.0/24 [90/3523840] via 192.168.10.5, 00:06:51, Serial0/0/1

```

## 5. KONFIGURA ROUTER R4.

- Konfigurasaun Router 4.

```

Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#host
Router(config)#hostname R4
R4(config)#enab
R4(config)#enable sec
R4(config)#enable secret aries
R4(config)#line cons
R4(config)#line console 0
R4(config-line)#pass
R4(config-line)#password aries
R4(config-line)#login
R4(config-line)#exit
R4(config)#line vty 0 4
R4(config-line)#pass
R4(config-line)#password aries
R4(config-line)#login
R4(config-line)#exit

```

- Konfigurasaun ip address R4.

```

R4(config)#inter
R4(config)#interface ser
R4(config)#interface serial 0/0/0
R4(config-if)#ip add
R4(config-if)#ip address 192.168.11.4 255.255.255.0
R4(config-if)#band
R4(config-if)#bandwidth 1024
R4(config-if)#no shut
R4(config-if)#no shutdown

R4(config-if)#
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up
exit

```

- Konfigurasaun EIGRP R4.

```

R4#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R4(config)#rout
R4(config)#router eig
R4(config)#router eigrp 10
R4(config-router)#net
R4(config-router)#network 192.168.12.2
R4(config-router)#net
R4(config-router)#network 192.168.11.3
R4(config-router)#net
R4(config-router)#network 192.168.15.5
R4(config-router)#net
R4(config-router)#network 192.168.16.5
R4(config-router)#no au
R4(config-router)#no auto-summary
R4(config-router)#exit

```

## 6. KONFIGURA ROUTER R5.

- Konfigurasaun Router 5.

```

Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#host
Router(config)#hostname R5
R5(config)#ena
R5(config)#enable sec
R5(config)#enable secret aries
R5(config)#line con
R5(config)#line console 0
R5(config-line)#pass
R5(config-line)#password aries
R5(config-line)#login
R5(config-line)#exit
R5(config)#line vty 0 4
R5(config-line)#pass
R5(config-line)#password aries
R5(config-line)#login
R5(config-line)#exit

```

- **Konfigurasaun ip address R5.**

```

R5(config)#interface ser
R5(config)#interface serial 0/0/1
R5(config-if)#ip add
R5(config-if)#ip address 192.168.11.5 255.255.255.0
R5(config-if)#band
R5(config-if)#bandwidth 1024
R5(config-if)#no shut
R5(config-if)#no shutdown

R5(config-if)#
%LINK-5-CHANGED: Interface Serial0/0/1, changed state to up
exit

```

- **Konfigurasaun EIGRP R5.**

```

R5#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R5(config)#rout
R5(config)#router eig
R5(config)#router eigrp 10
R5(config-router)#net
R5(config-router)#network 192.168.10.4
R5(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 10: Neighbor 192.168.10.3 (Serial0/0/0) is up: new
adjacency

R5(config-router)#network 192.168.11.3
R5(config-router)#ne
R5(config-router)#net
R5(config-router)#network 192.168.10.4
R5(config-router)#no auto
R5(config-router)#no auto-summary
R5(config-router)#exit

```

## 7. KONFIGURA ROUTER R6.

- **Konfigurasaun Router 6.**

```

Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#host
Router(config)#hostname R6
R6(config)#ena
R6(config)#enable sec
R6(config)#enable secret aries
R6(config)#line cons
R6(config)#line console 0
R6(config-line)#pass
R6(config-line)#password aries
R6(config-line)#login
R6(config-line)#exit
R6(config)#line vty 0 4
R6(config-line)#pass
R6(config-line)#password aries
R6(config-line)#login
R6(config-line)#exit

```

- **Konfigurasaun ip address R6.**



```

R6(config)#interface serial 0/0/0
R6(config-if)#ip add
R6(config-if)#ip address 192.168.15.6 255.255.255.0
R6(config-if)#band
R6(config-if)#bandwidth 1024
R6(config-if)#no shut
R6(config-if)#no shutdown

R6(config-if)#
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up
exit

```

- **Konfigurasaun EIGRP R6.**

```

R6#conf terminal
Enter configuration commands, one per line. End with CNTL/Z.
R6(config)#rout
R6(config)#router eigr
R6(config)#router eigrp 10
R6(config-router)#net
R6(config-router)#network 192.168.15.5
R6(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 10: Neighbor 192.168.15.4 (Serial0/0/0) is up: new
adjacency

R6(config-router)#network 192.168.15.5
R6(config-router)#no au
R6(config-router)#no auto-summary
R6(config-router)#exit

```

- **Show ip route R6.**

```

R6#show 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, E - EGP
       i - IS-IS, 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

D    192.168.11.0/24 [90/3523840] via 192.168.15.4, 00:08:57, Serial0/0/0
D    192.168.12.0/24 [90/3523840] via 192.168.15.4, 00:08:57, Serial0/0/0
     192.168.15.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.15.0/24 is directly connected, Serial0/0/0
L    192.168.15.6/32 is directly connected, Serial0/0/0
D    192.168.16.0/24 [90/3523840] via 192.168.15.4, 00:08:57, Serial0/0/0

```

- **Show ip route EIGRP R6.**

```

R6#sh ip route eigr
R6#sh ip route eigrp
D    192.168.11.0/24 [90/3523840] via 192.168.15.4, 00:09:24, Serial0/0/0
D    192.168.12.0/24 [90/3523840] via 192.168.15.4, 00:09:24, Serial0/0/0
     192.168.15.0/24 is variably subnetted, 2 subnets, 2 masks
D    192.168.16.0/24 [90/3523840] via 192.168.15.4, 00:09:24, Serial0/0/0

```

## 8. KONFIGURA ROUTER R7.

- **Konfigurasaun Router 7.**



```

Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#host
Router(config)#hostname R7
R7(config)#en
R7(config)#ena
R7(config)#enable sec
R7(config)#enable secret aries
R7(config)#line con
R7(config)#line console 0
R7(config-line)#pass
R7(config-line)#password aries
R7(config-line)#login
R7(config-line)#exit
R7(config)#line vty 0 4
R7(config-line)#pass
R7(config-line)#password aries
R7(config-line)#login
R7(config-line)#exit

```

- **Konfigurasaun ip address R7.**

```

R7(config)#inter serial 0/0/0
R7(config-if)#ip add
R7(config-if)#ip address 192.168.16.6 255.255.255.0
R7(config-if)#band
R7(config-if)#bandwidth 1024
R7(config-if)#no shu
R7(config-if)#no shutdown

R7(config-if)#
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up
exit
R7(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up

```

- **Konfigurasaun EIGRP R7.**

```

R7#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R7(config)#rout
R7(config)#router eig
R7(config)#router eigrp 10
R7(config-router)#net
R7(config-router)#network 192.168.16.5
R7(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 10: Neighbor 192.168.16.4 (Serial0/0/0) is up: new
adjacency

R7(config-router)#network 192.168.16.5
R7(config-router)#no au
R7(config-router)#no auto-summary
R7(config-router)#exit

```

- **Show ip route R7.**

```

R7#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, E - EGP
i - IS-IS, 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

D    192.168.11.0/24 [90/3523840] via 192.168.16.4, 00:10:28, Serial0/0/0
D    192.168.12.0/24 [90/3523840] via 192.168.16.4, 00:10:28, Serial0/0/0
D    192.168.15.0/24 [90/3523840] via 192.168.16.4, 00:10:28, Serial0/0/0
    192.168.16.0/24 is variably subnetted, 2 subnets, 2 masks
C        192.168.16.0/24 is directly connected, Serial0/0/0
L        192.168.16.6/32 is directly connected, Serial0/0/0

```

- **Show ip route EIGRP R7.**

```
R7#sh ip route eig
R7#sh ip route eigrp
D    192.168.11.0/24 [90/3523840] via 192.168.16.4, 00:10:55, Serial0/0/0
D    192.168.12.0/24 [90/3523840] via 192.168.16.4, 00:10:55, Serial0/0/0
D    192.168.15.0/24 [90/3523840] via 192.168.16.4, 00:10:55, Serial0/0/0
```