PRAKTIKUM

JARINGAN KOMPUTER

MODUL 7

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NIM : L200200101

PROGRAM STUDI

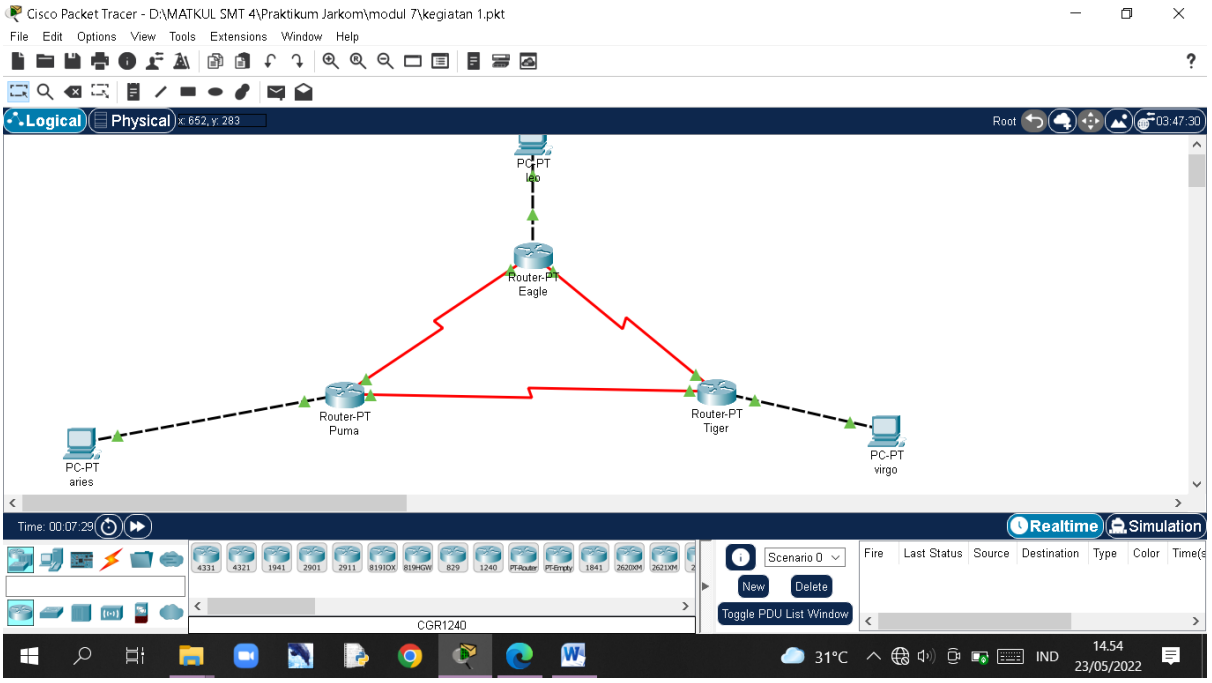
INFORMATIKA

FAKULTAS KOMUNIKASI DAN INFORMATIKA

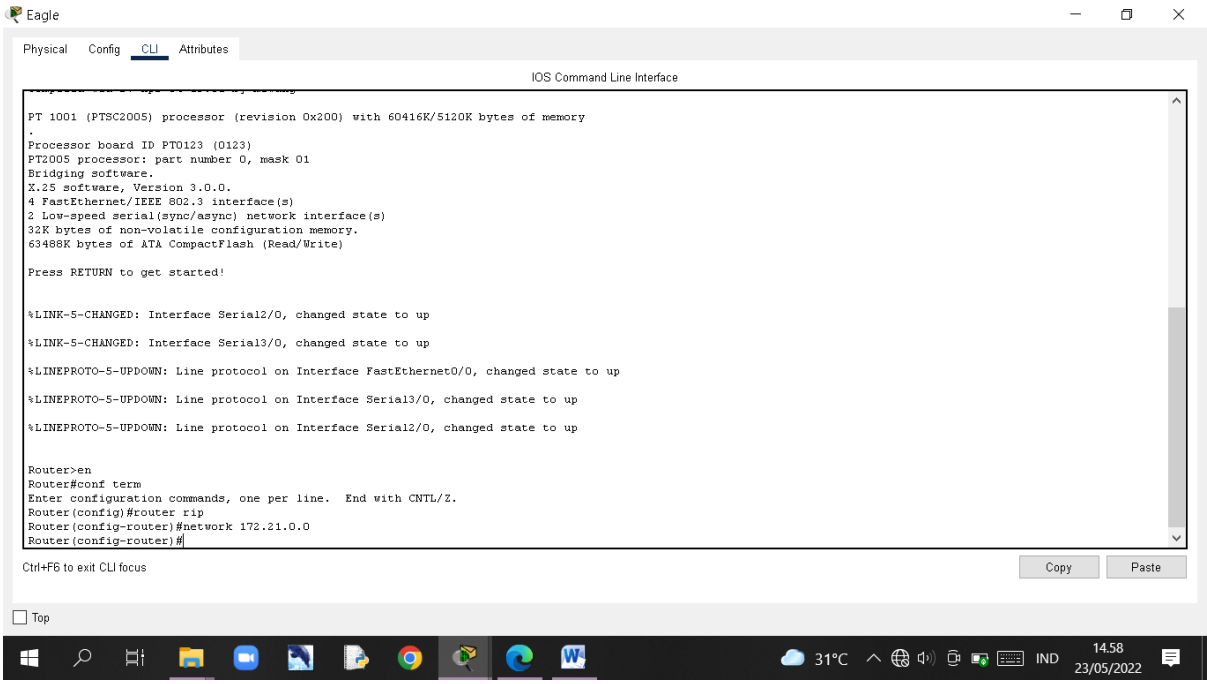
UNIVERSITAS MUHAMMADIYAH SURAKARTA

TAHUN 2021/2022

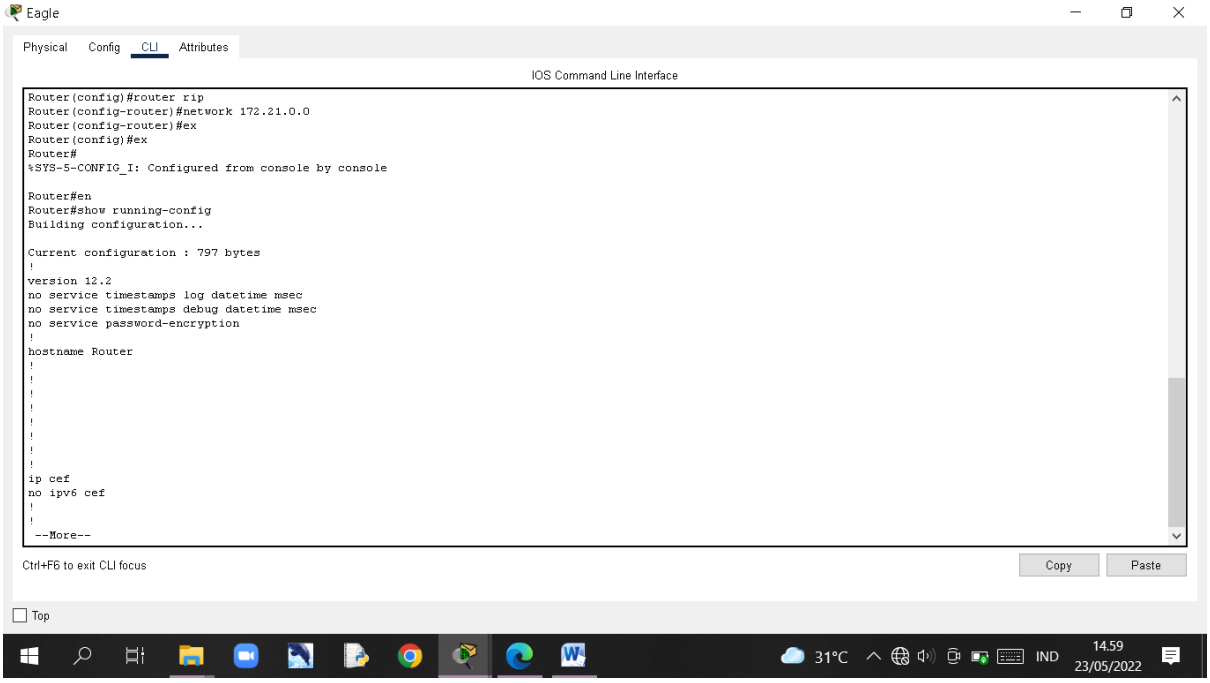
- Kegiatan 2
  a. Topologi



  b. Load konfigurasi seluruh device yang disimpan pada langkah 6 Kegiatan
  c. Pada mode configuration, konfigurasi routing RIP pada router eagle.
     - Langkah pengoperasian
       - Masuk mode configuration
       - Ketik router rip
       - Ketik network 172.21.0.0



d. Lihat konfigurasi routing RIP yang telah dibuat dengan perintah " show running-config" pada mode user. Perhatikan konfigurasi pada bagian " router rip"

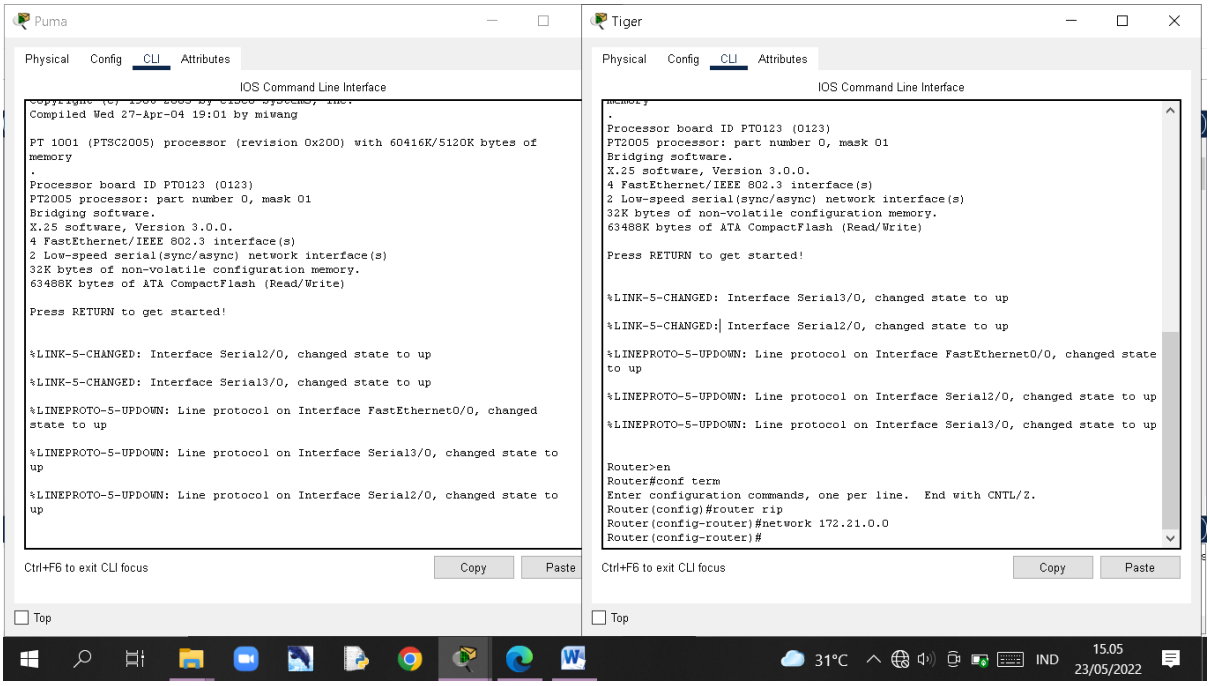


- Tugas 4A: Berapa nomor alamat jaringan yang terdaftar pada konfigurasi routing RIP? **172.21.0.0**
- Tugas 4B: Mengapa alamat jaringan yang langsung terhubung dengan interface e0 (172.21.10.0), s0 (172.21.1.0), dan s1 (172.21.2.0) tidak didaftarkan ke konfigurasi routing RIP?**karena pada saat proses routing RIP hanya network 172.21.0.0 saja yang di daftarkan.**

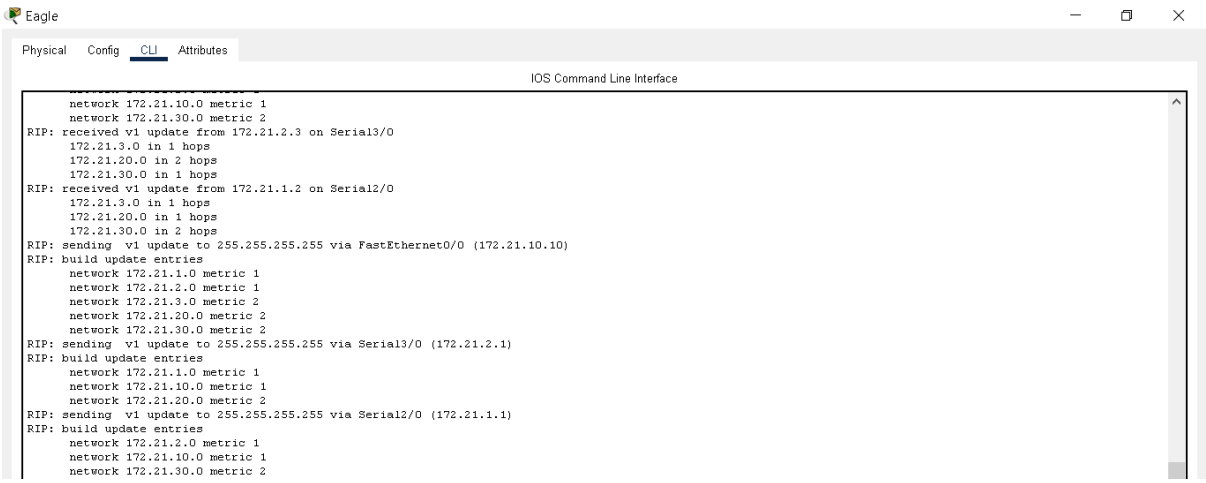
e. Lihat proses update routing RIP pada router eagle dengan perintah " debug ip rip" pada mode user. Tunggu beberapa saat untuk melihat proses yang terjadi.

- Tugas 5A: Jelaskan secara singkat proses tersebut?
  Update dari send dan received melalui interface router di tamplkan di terminal.jika network tidak berubah,informasi debug akan terus berulang setap aat.di atas router mengirim pembaharuan v1,pada ethernet 0 interface RIP dikirim sebagai broadcast ke alamat multicast sehiingga router meng advertising ke alamat 255.255.255.255. pada output di tas router mwngklaim dapat menjangkau 3 network.

f. Lakukan konfigurasi routing RIP pada router puma dan tiger. Perhatikan proses update routing RIP pada router eagle ketika konfigurasi router puma dan tiger dilakukan.



- Perintah debug ip rip



- Tugas 6A: Tuliskan langkah konfigurasi routing RIP yang dilakukan pada salah satu router (puma atau tiger).
    - **Enable**
    - **Conf term**
    - **Router rip**
    - **Network 172.21.0.0**

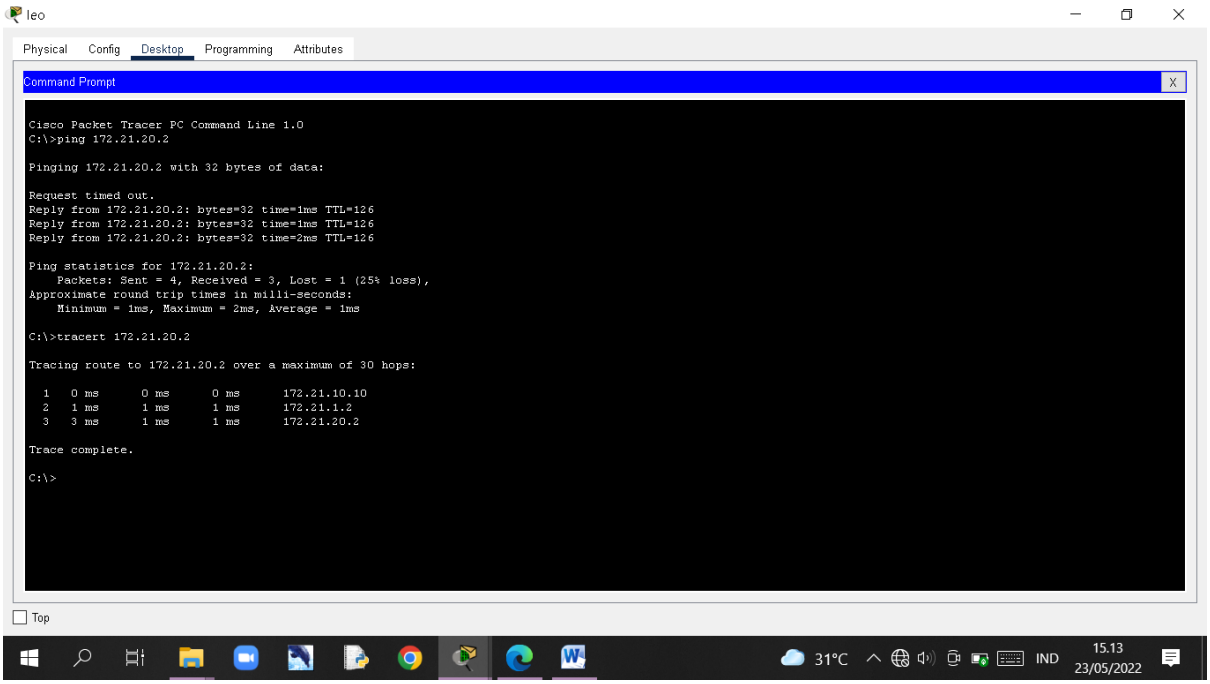
- Tugas 6B: Jelaskan secara singkat proses update yang terjadi pada router eagle ketika konfigurasi salah satu router (puma atau tiger) dilakukan. (perhatikan bagian “ RIP : Received updated from 172.21.X.X on SerialX” dan tambahan subnet yang terjadi

```
RIP: sending  v1 update to 255.255.255.255 via Serial3/0 (172.21.2.1)
RIP: build update entries
      network 172.21.1.0 metric 1
      network 172.21.10.0 metric 1
      network 172.21.20.0 metric 2
RIP: sending  v1 update to 255.255.255.255 via Serial2/0 (172.21.1.1)
RIP: build update entries
      network 172.21.2.0 metric 1
      network 172.21.10.0 metric 1
      network 172.21.30.0 metric 2
```

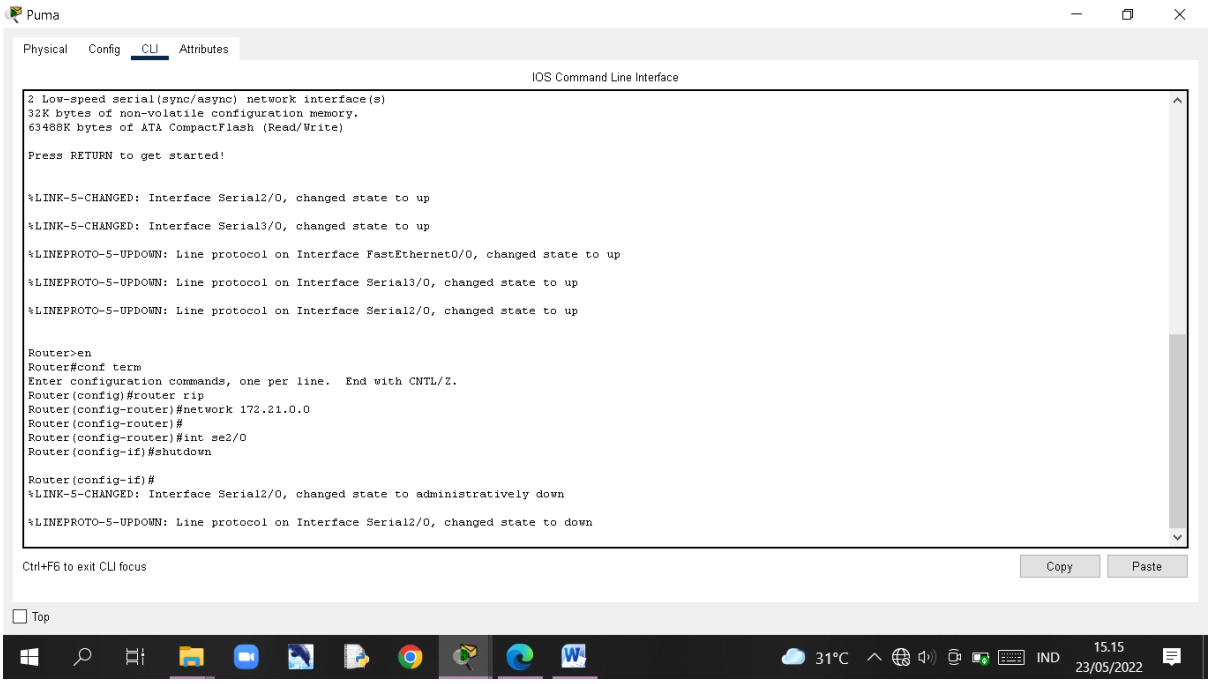
Pada saat routing RIP dlakukan pada puma dan tiger ,maka akan terjadi terjadi:

- **Version 1 mengirimkan updae ke 255.255.255.255 via serial 3/0 (172.21.2.1),yang dimana akan mengupdate network 172.21.20.0(milik tiger).**
- **Version 1 mengirimkan updae ke 255.255.255.255 via serial 2/0 (172.21.1.1),yang dimana akan mengupdate network 172.21.30.0(milik puma).**

g. Trace pc leo ke aries

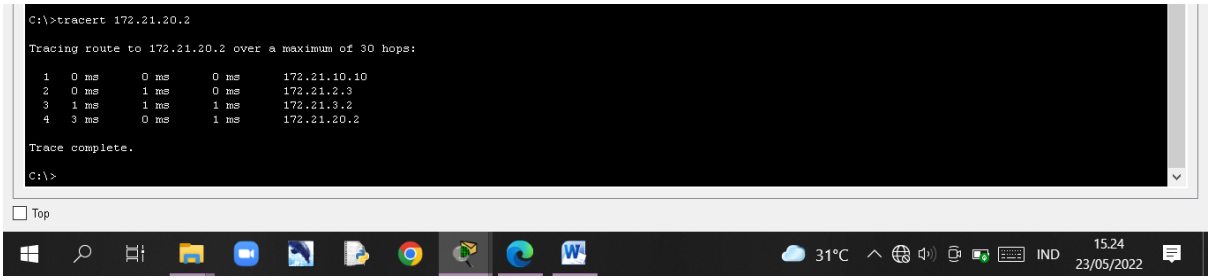


h. Buat hubungan antara router eagle dan puma terputus dan perhatikan proses update routing RIP yang terjadi.



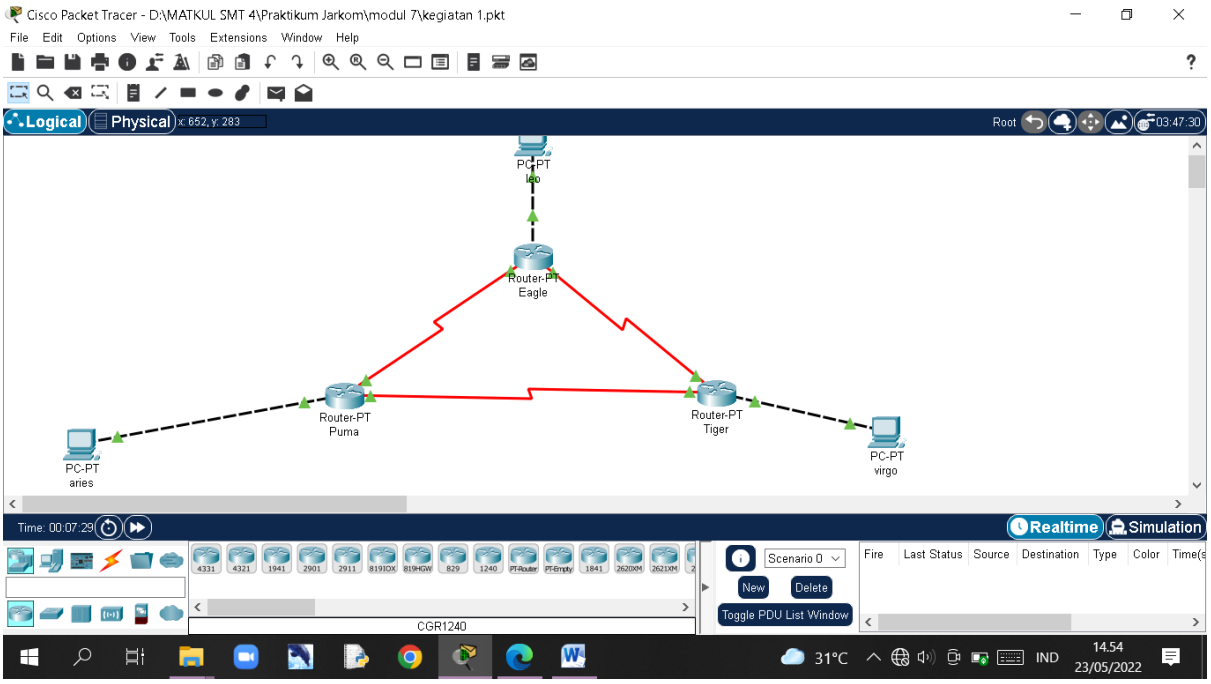
- Tugas 8A: Jelaskan secara singkat proses update yang terjadi pada router eagle. (perhatikan bagian " RIP : Received updated from 172.21.2.3 on Serial1" dan perubahan hops dari subnet 172.21.20.0 yang terjadi)!
  Proses update yang terjadi yaitu pada router eagle sudah tidak lagi menerima update dari serial 2/0(172.21.1.1),hanya menerima update dari serial 3/0 saja.dan untuk hops sendiri juga sudah tidak menerima update dari serial 2/0 hanya menerima serial 3/0.

i. Trace PC Leo ke pc aries



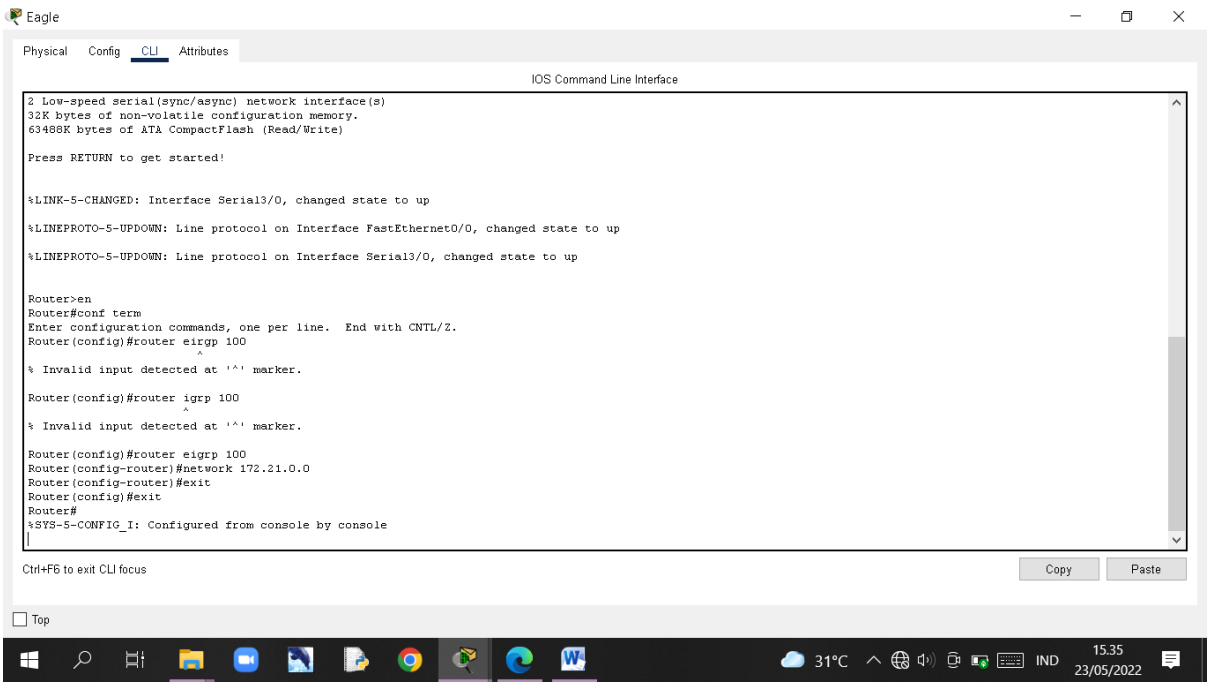
- Tugas 9A: Apakah hasil yang diperoleh berbeda dengan langkah 7 di atas (ketika langkah 8 belum dilakukan)? Jelaskan secara singkat mengapa demikian?
  Setelah melakukan shut down pada serial 2/0 ,maka yang tampil adalah serial 3/0 172.21.3.2(puma) dan serial 172.21.2.3(tiger).

- Kegiatan 8
  a. Dari Packet Tracer, buka (load) topologi NetMap yang dipakai di Kegiatan 1.

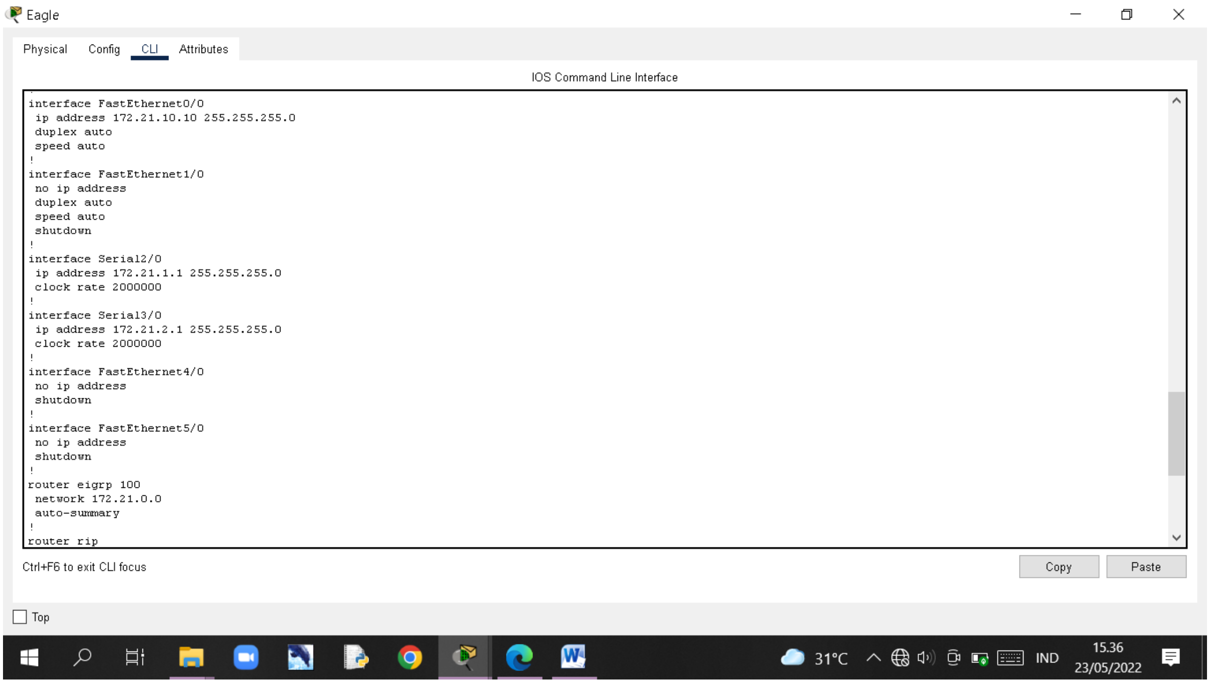


b. Load konfigurasi seluruh device yang disimpan pada langkah 6 Kegiatan 1.

c. konfigurasi routing IGRP pada router eagle

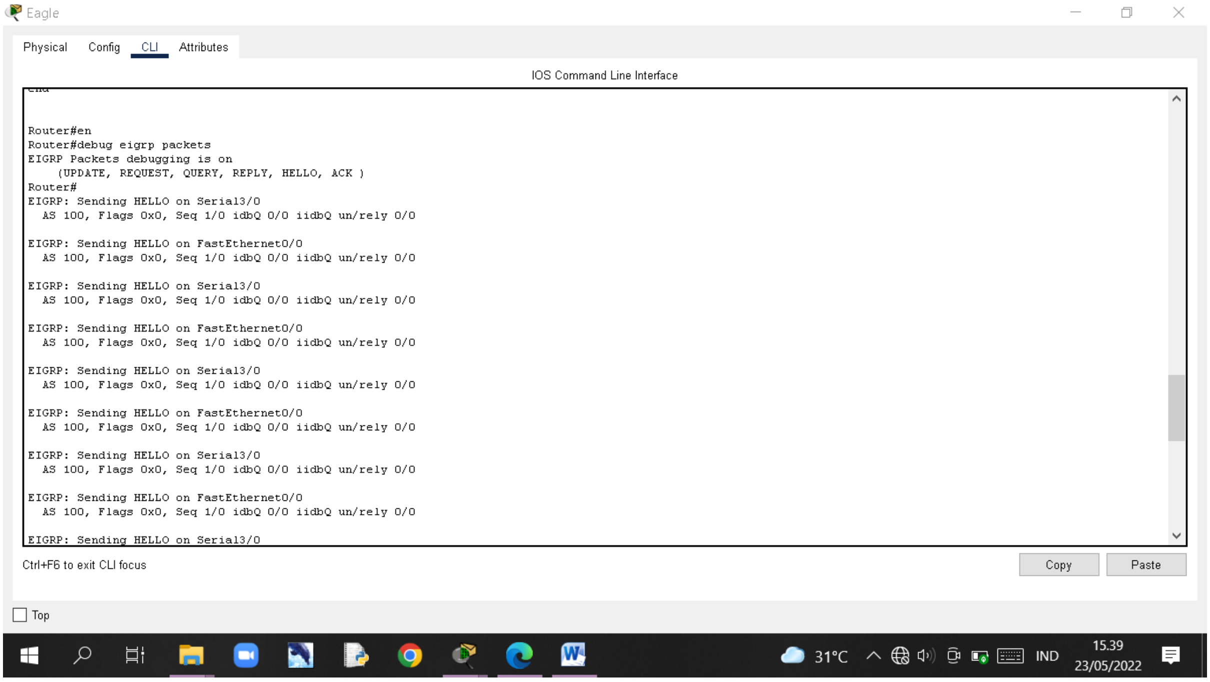


d. show konfigurasi routing IGRP



- Tugas 4A: Berapa nomor alamat jaringan yang terdaftar pada konfigurasi routing IGRP?**alamat jaringan yang terkonfigurasi routing IGRP adalah 172.21.0.0.**

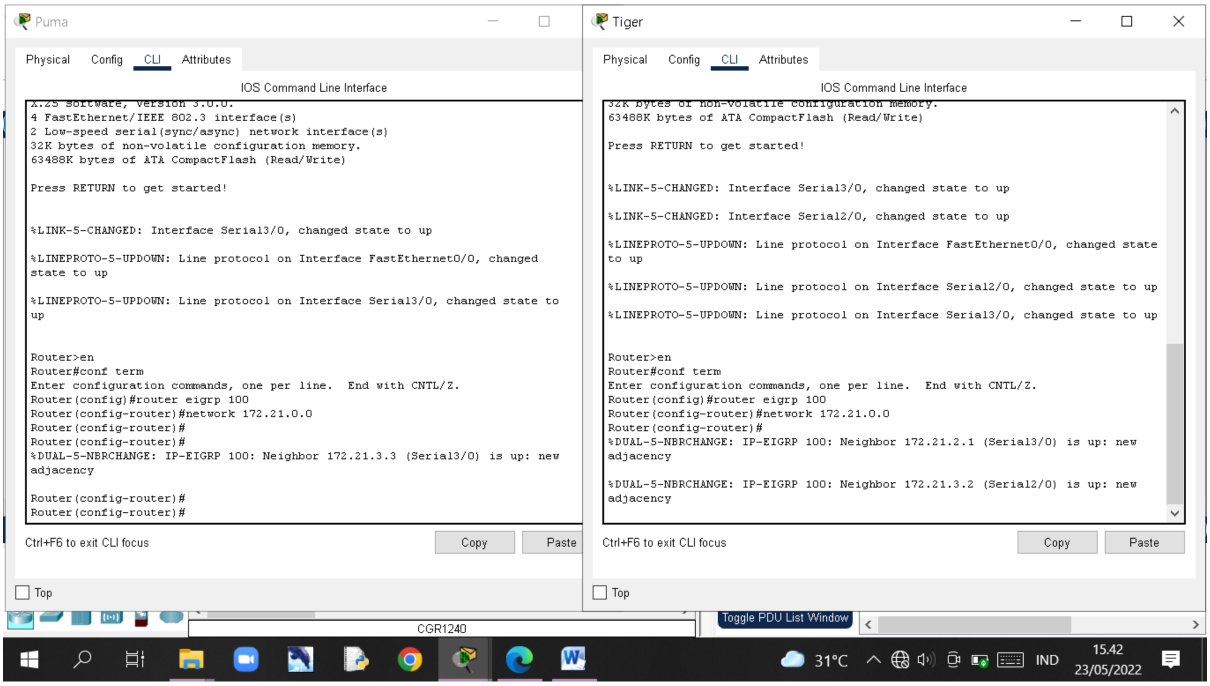
e. Transaksi IGRP pada router eagle

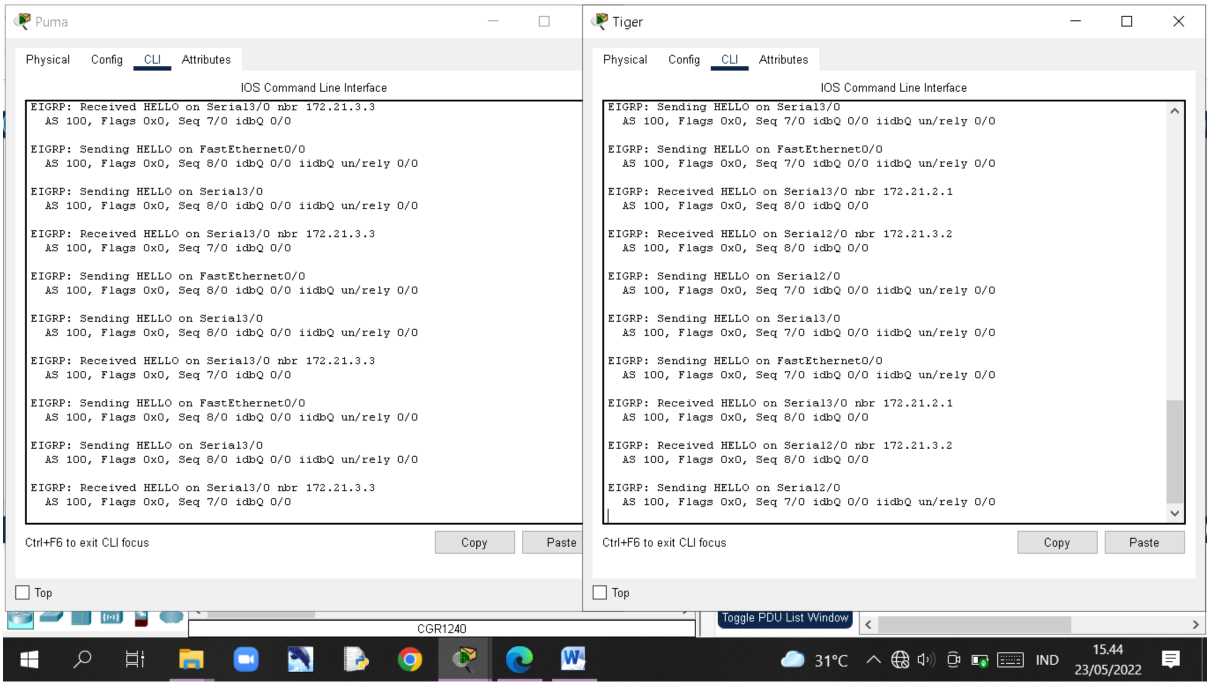


f. Tugas 5A: Jelaskan secara singkat proses tersebut?
Output menampilkan transmisi dan penerimaan paket EIGRP, jenis paket ini berupa hello, update, request, query, atau reply. Squence dan acknowledgmen yang digunakan oleh transaksi algoritma EIGRP

ditampilkan di output. Jika memungkinkan “network-layer address” dari neighboring juga akan disertakan.

g. Lakukan konfigurasi routing IGRP pada router puma dan tiger.

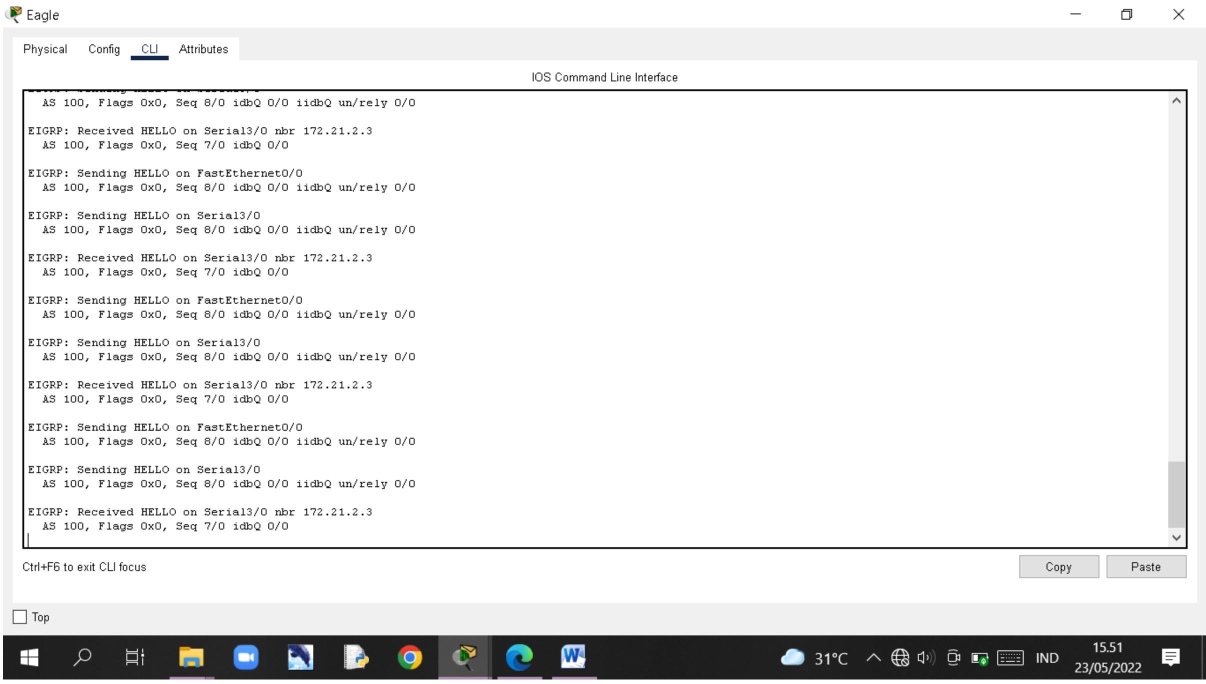




- Tugas 7A: Tuliskan langkah konfigurasi routing IGRP yang dilakukan pada salah satu router (puma atau tiger).
    - **En**
    - **Conf term**
    - **Router eigrp 100**

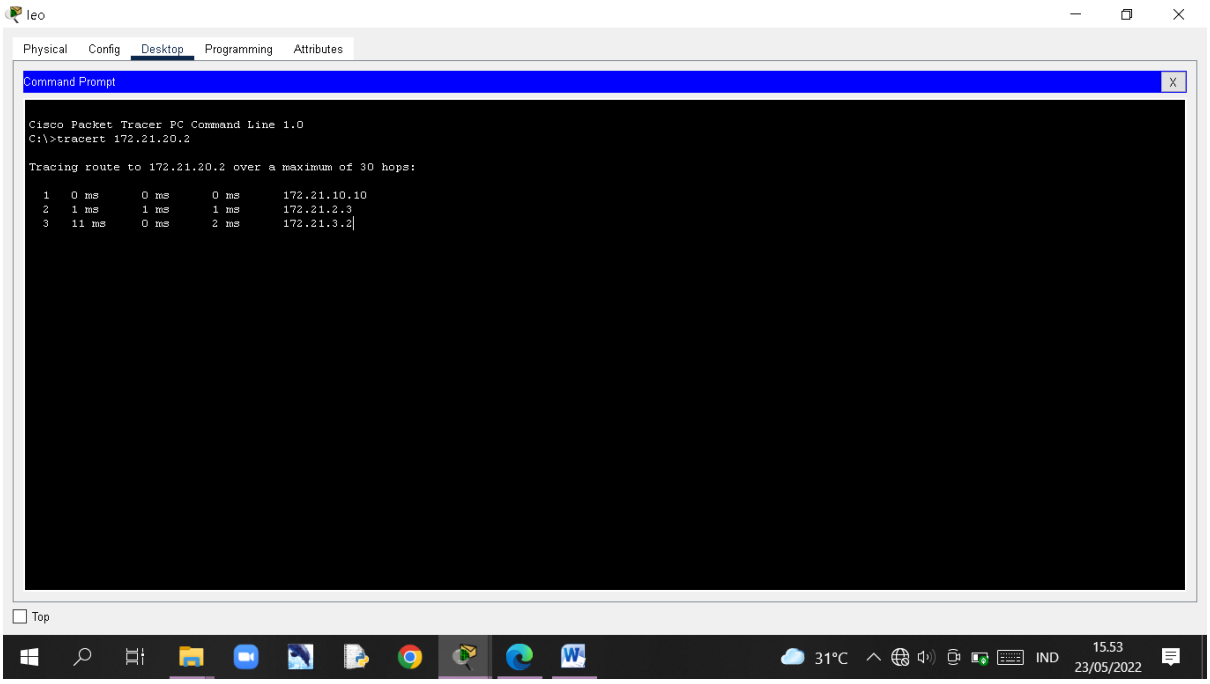
- **Network 172.21.0.0**
- **End**

- Tugas 7B: Jelaskan secara singkat proses update yang terjadi pada router eagle ketika konfigurasi salah satu router (puma atau tiger) dilakukan. (perhatikan bagian " IGRP : Received updated from 172.21.X.X on SerialX" dan tambahan subnet yang terjadi)
  Router eagle menerima update dari serial 2/0 172.21.1.2 (puma) dan serial 3/0 172.21.2.3 (tiger),yang berupa "hello" dengan nilai eigrp = 100.

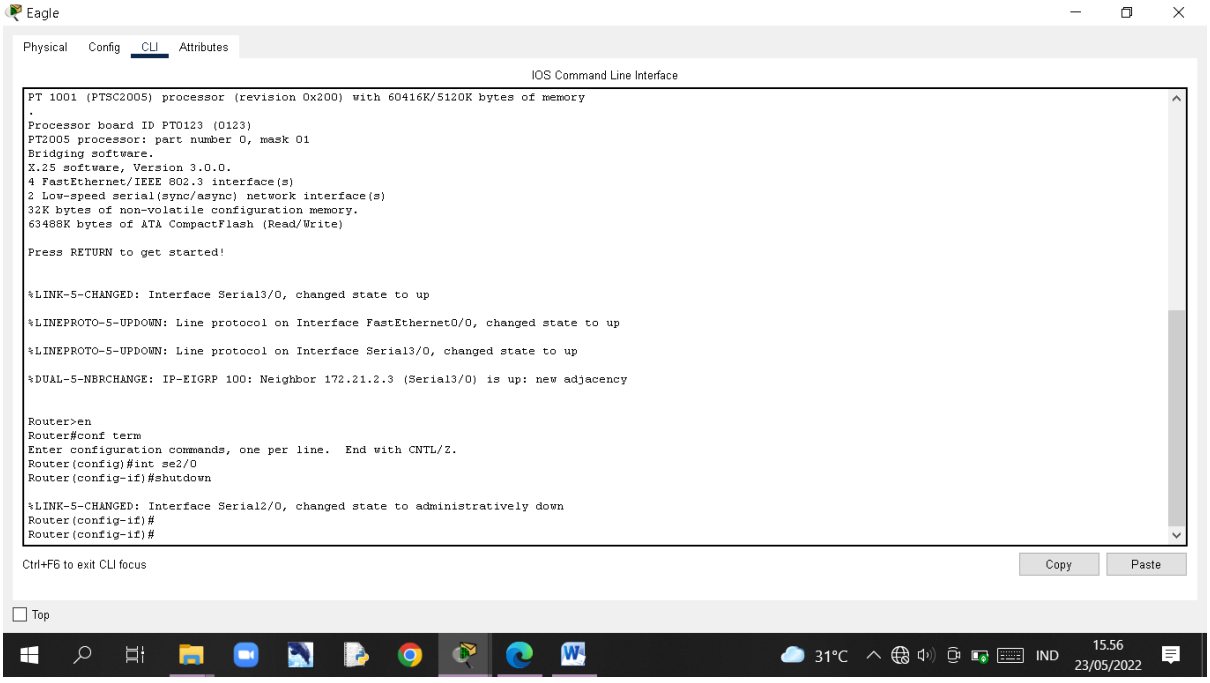


- Tugas 7C: Jika alamat jaringan pada segmen leo diubah dari 172.21.10.0/24 menjadi 172.21.100.0/24. Apakah perlu dilakukan?
  Jika alamat segmen Leo diubah ke 172.21.100.0/24, perlu dilakukan perubahan konfigurasi pada setiap router, karena pada PC Leo dilakukan perubahanpada alamat jaringan pada segmen, maka router lain juga harus dirouting ulang sesuai alamat jaringan pada segmen dari PC Leo.

h. Dari PC leo lakukan trace ke PC aries

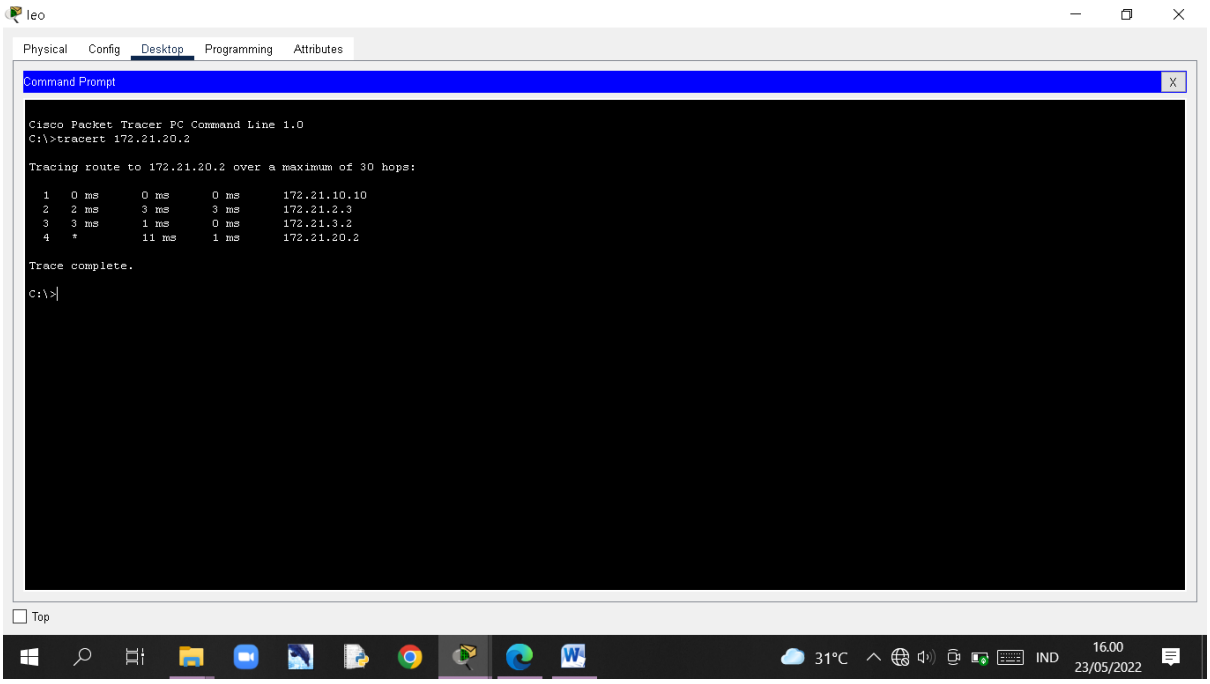


i. Buat hubungan antara router eagle dan puma terputus



- Tugas 9A: Jelaskan secara singkat proses update yang terjadi pada router eagle. (perhatikan bagian " IGRP : Received updated from 172.21.2.3 on Serial1")
  Router eigle tidak menerima update serial 2/0 172.21.1.2(puma),hanya menerima update dari serial 3/0 172.21.2.3(tiger).

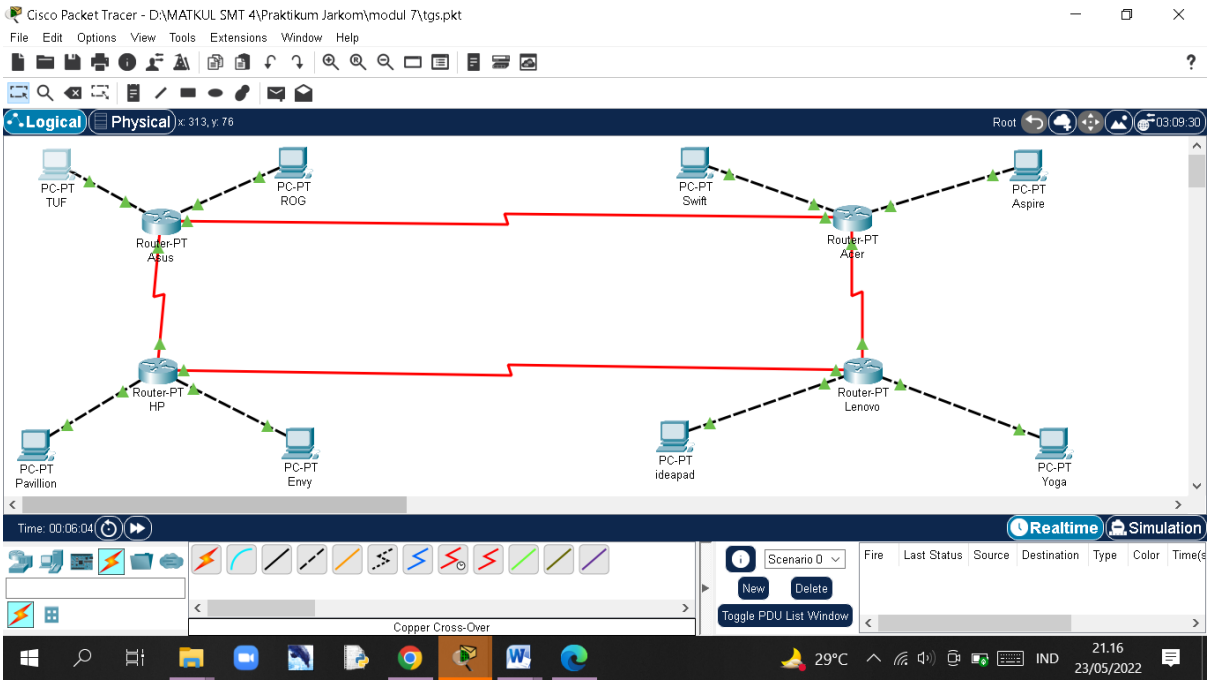
j. Dari PC leo lakukan trace ke PC aries



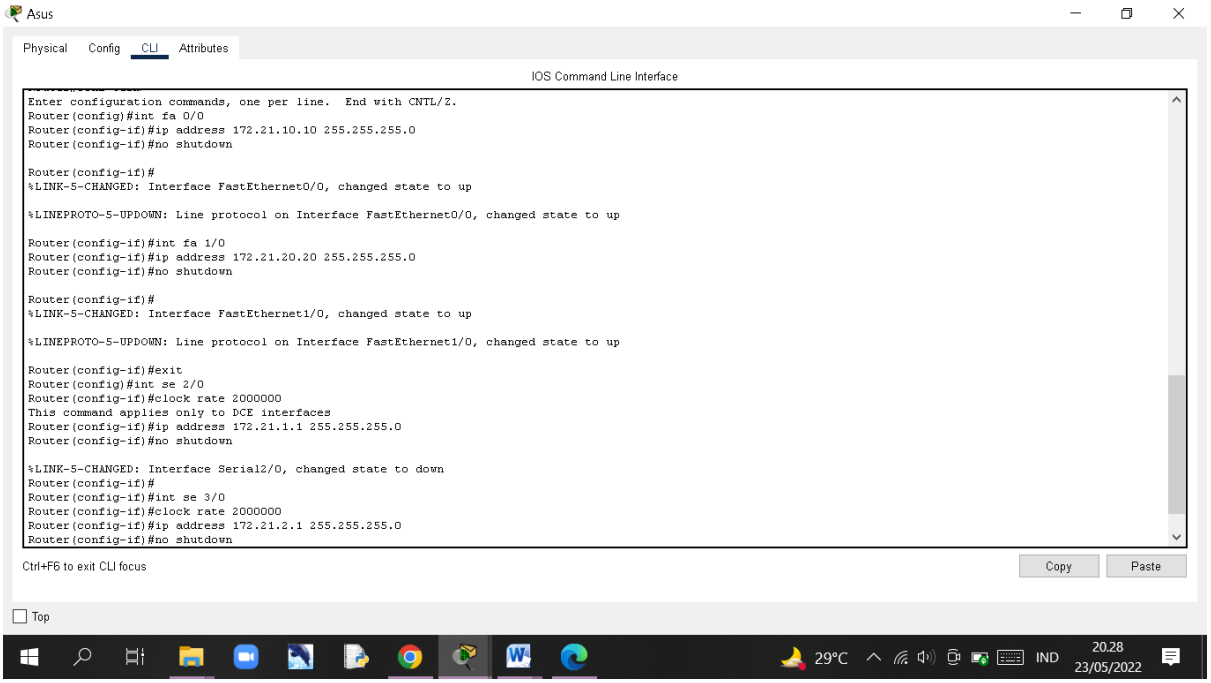
- Tugas 10A: Apakah hasil yang diperoleh berbeda dengan langkah 8 di atas (ketika langkah 9 belum dilakukan)? Jelaskan secara singkat mengapa demikian

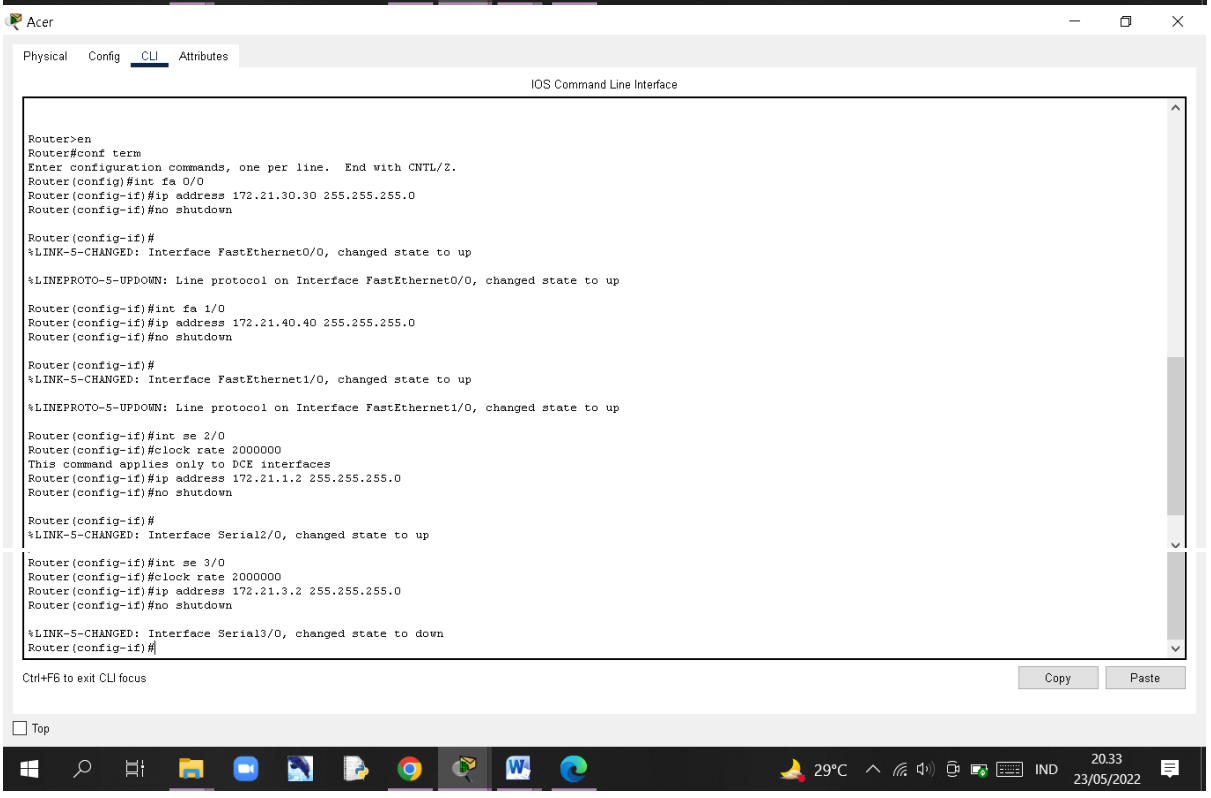
  Leo sudah tidak menerima tanggapan dari serial 2/0 172.21.2.3(puma),karena sudah shut down.leo hanya menerima serial 2/0 172.21.2..3(tiger) dan serial 3/0 172.21.3.2(puma).

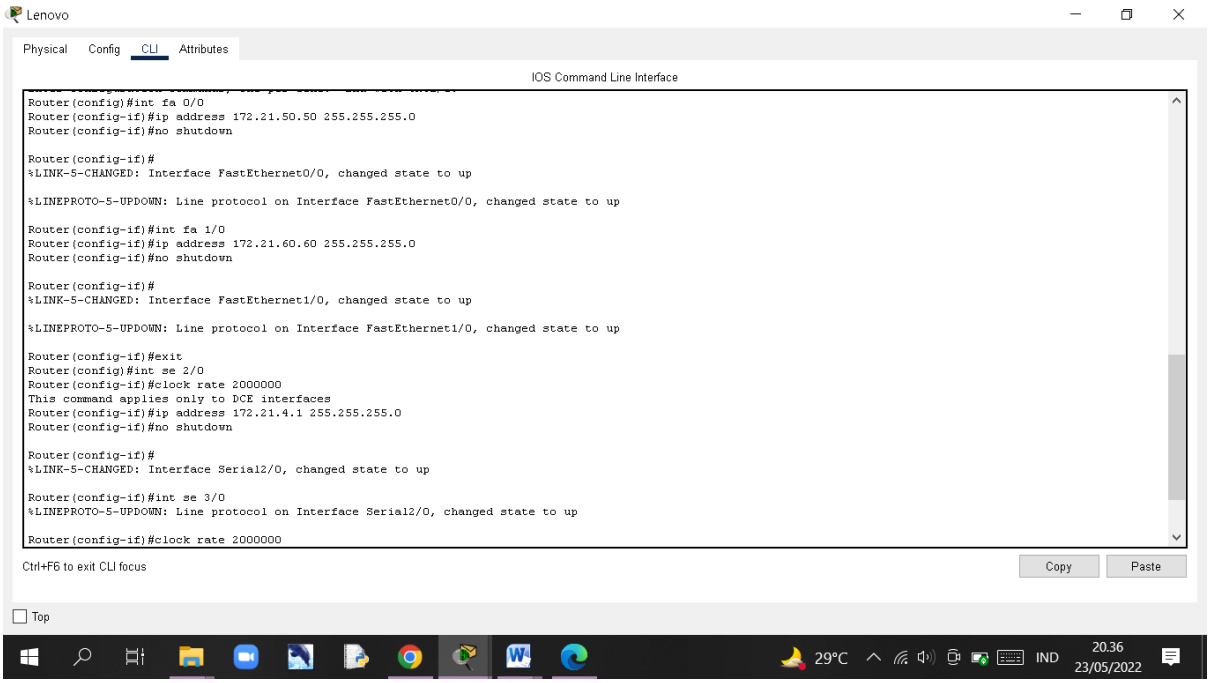
- **Tugas**
  - **Topologi**

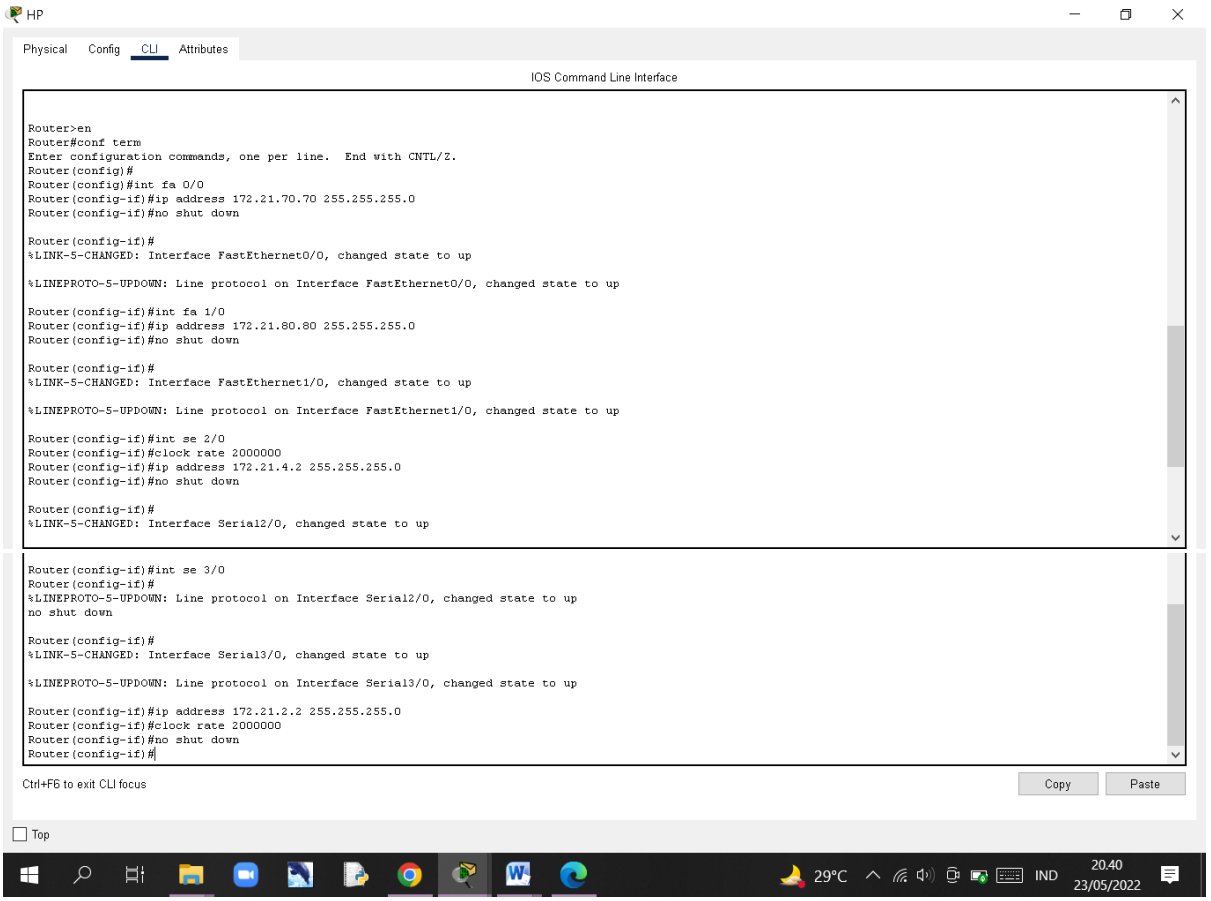


b. Konfigurasi router

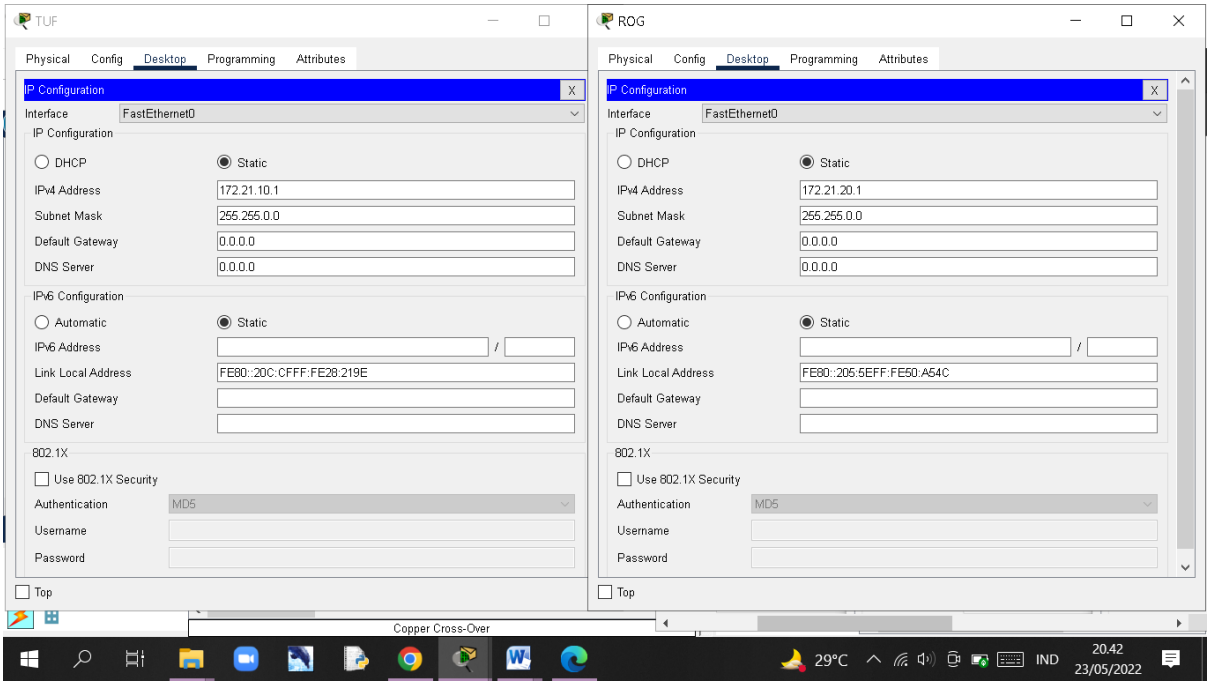


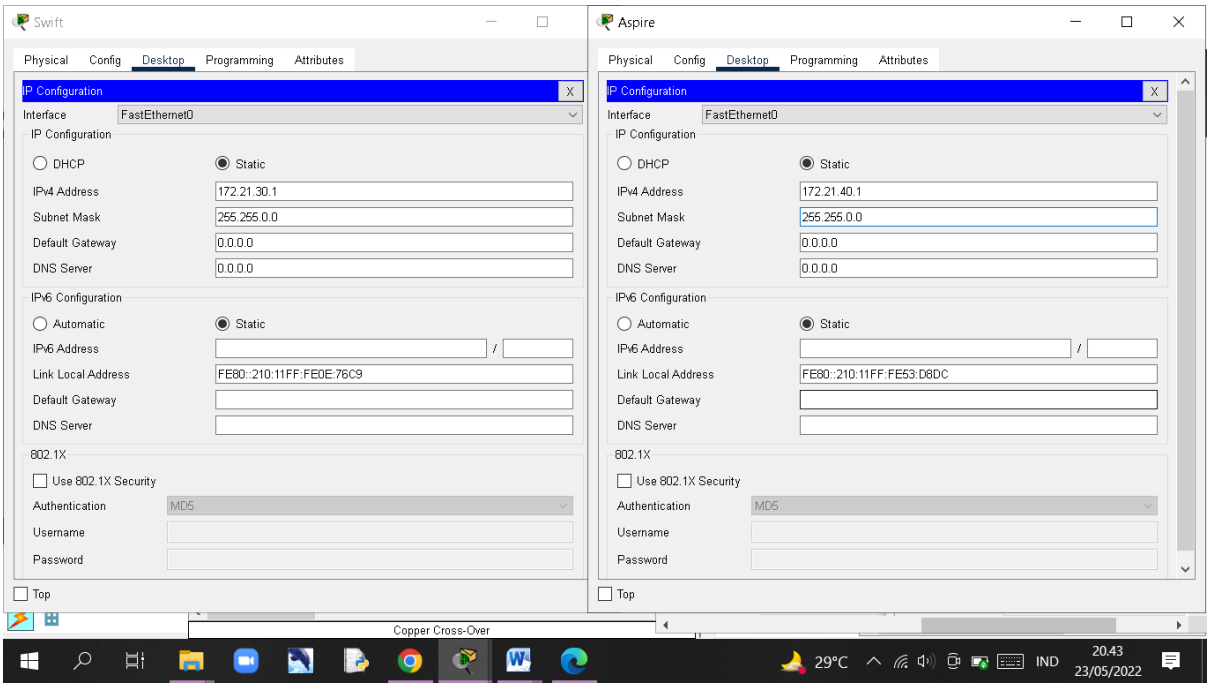


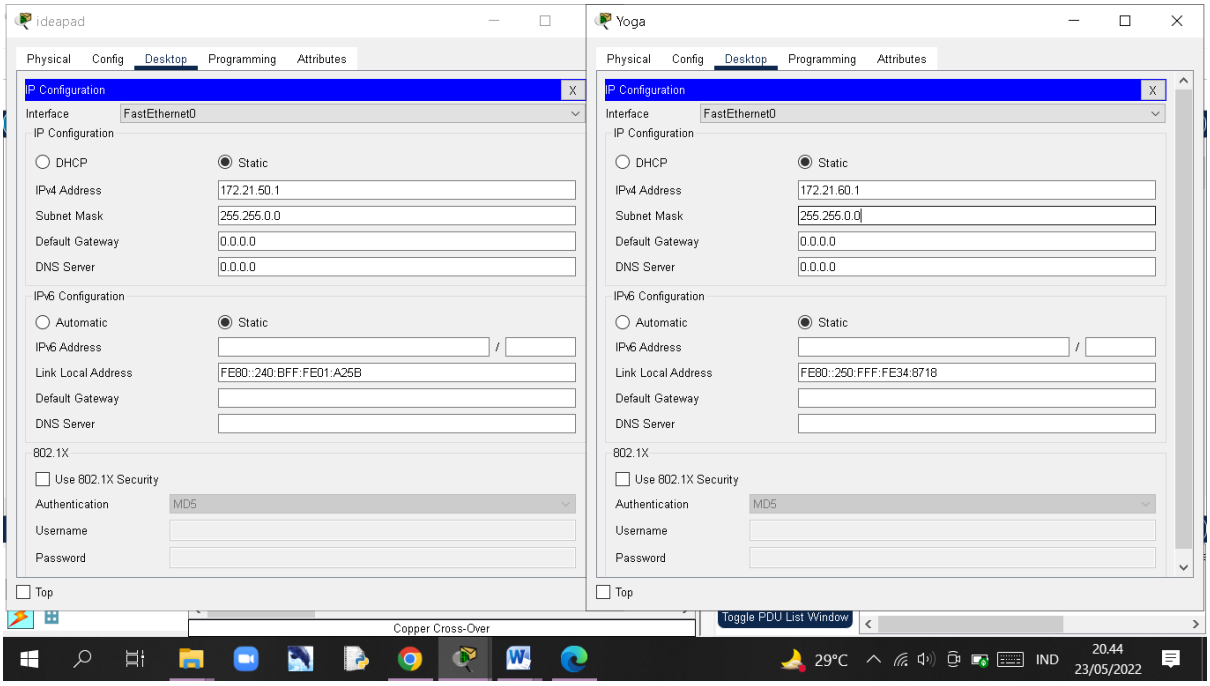


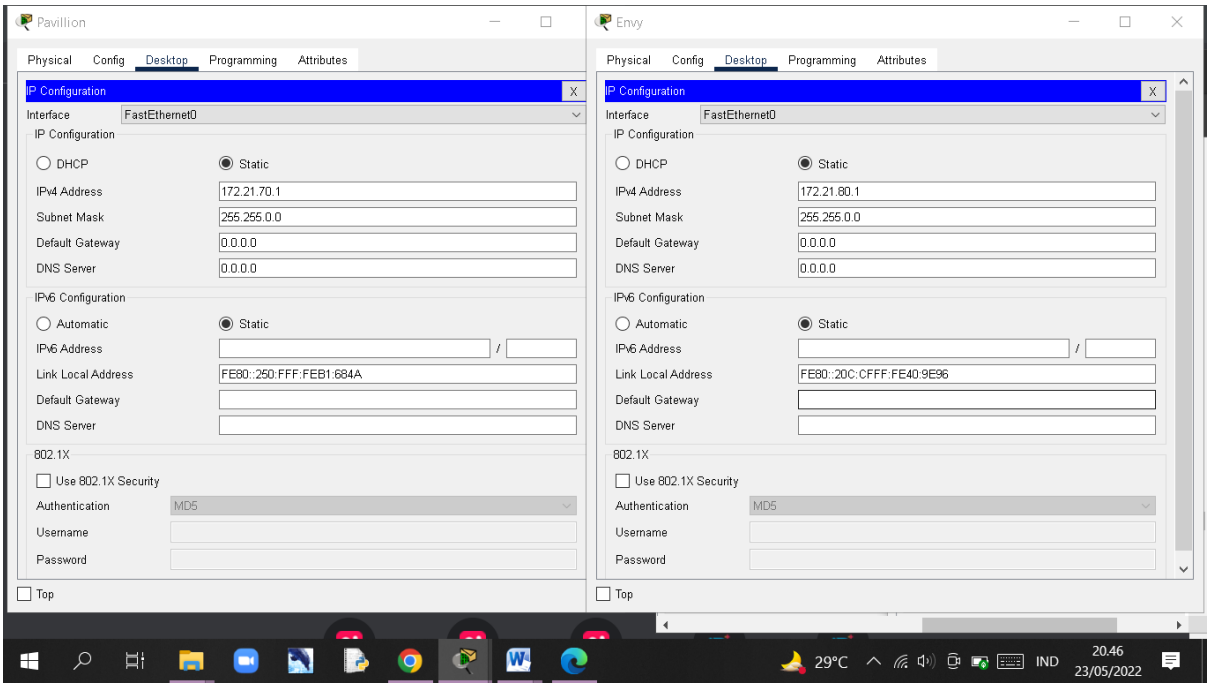


c. Konfigurasi pc

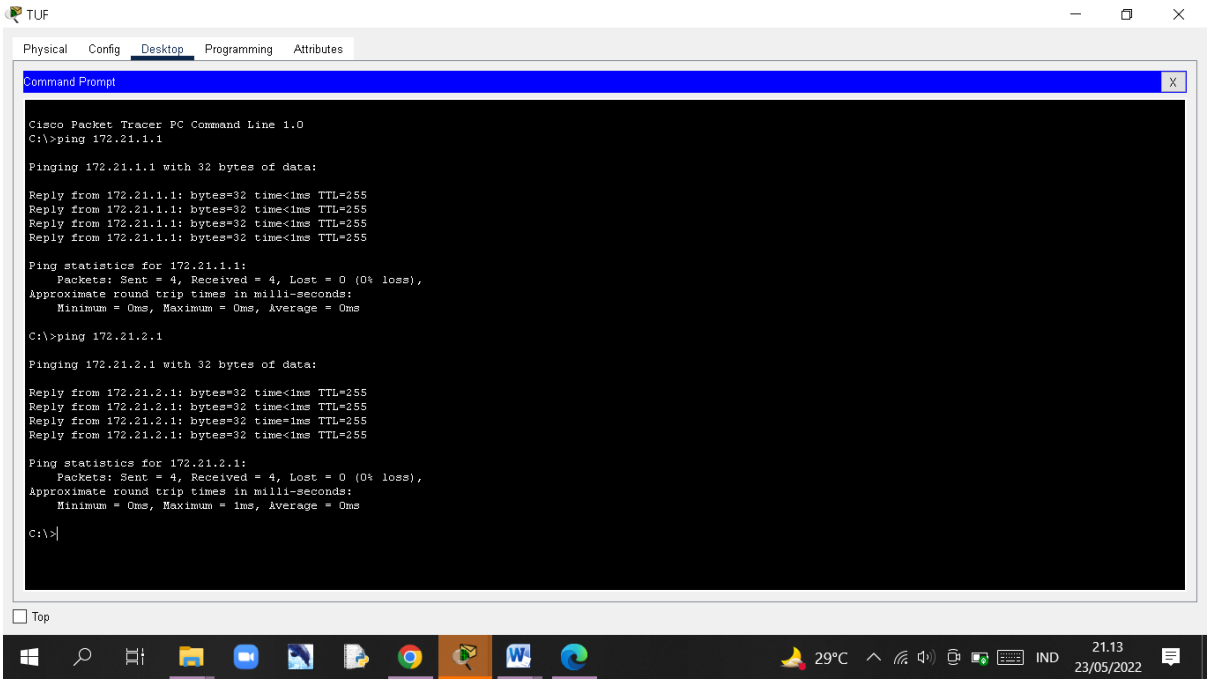

TUF
Physical Config Desktop Programming Attributes
IP Configuration
Interface FastEthernet0
IP Configuration
DHCP Static
IPv4 Address 172.21.10.1
Subnet Mask 255.255.0.0
Default Gateway 0.0.0.0
DNS Server 0.0.0.0
IPv6 Configuration
Automatic Static
IPv6 Address /
Link Local Address FE80::20C:CFFF:FE28:219E
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication MD5
Username
Password
Top
ROG
Physical Config Desktop Programming Attributes
IP Configuration
Interface FastEthernet0
IP Configuration
DHCP Static
IPv4 Address 172.21.20.1
Subnet Mask 255.255.0.0
Default Gateway 0.0.0.0
DNS Server 0.0.0.0
IPv6 Configuration
Automatic Static
IPv6 Address /
Link Local Address FE80::205:5EFF:FE50:A54C
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication MD5
Username
Password
Top
Copper Cross-Over
29°C
IND
20.42
23/05/2022


Swift
Physical Config Desktop Programming Attributes
IP Configuration
Interface FastEthernet0
IP Configuration
DHCP Static
IPv4 Address 172.21.30.1
Subnet Mask 255.255.0.0
Default Gateway 0.0.0.0
DNS Server 0.0.0.0
IPv6 Configuration
Automatic Static
IPv6 Address /
Link Local Address FE80::210:11FF:FE0E:76C9
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication MD5
Username
Password
Top
Aspire
Physical Config Desktop Programming Attributes
IP Configuration
Interface FastEthernet0
IP Configuration
DHCP Static
IPv4 Address 172.21.40.1
Subnet Mask 255.255.0.0
Default Gateway 0.0.0.0
DNS Server 0.0.0.0
IPv6 Configuration
Automatic Static
IPv6 Address /
Link Local Address FE80::210:11FF:FE53:D8DC
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication MD5
Username
Password
Top
Copper Cross-Over
29°C
IND
20.43
23/05/2022

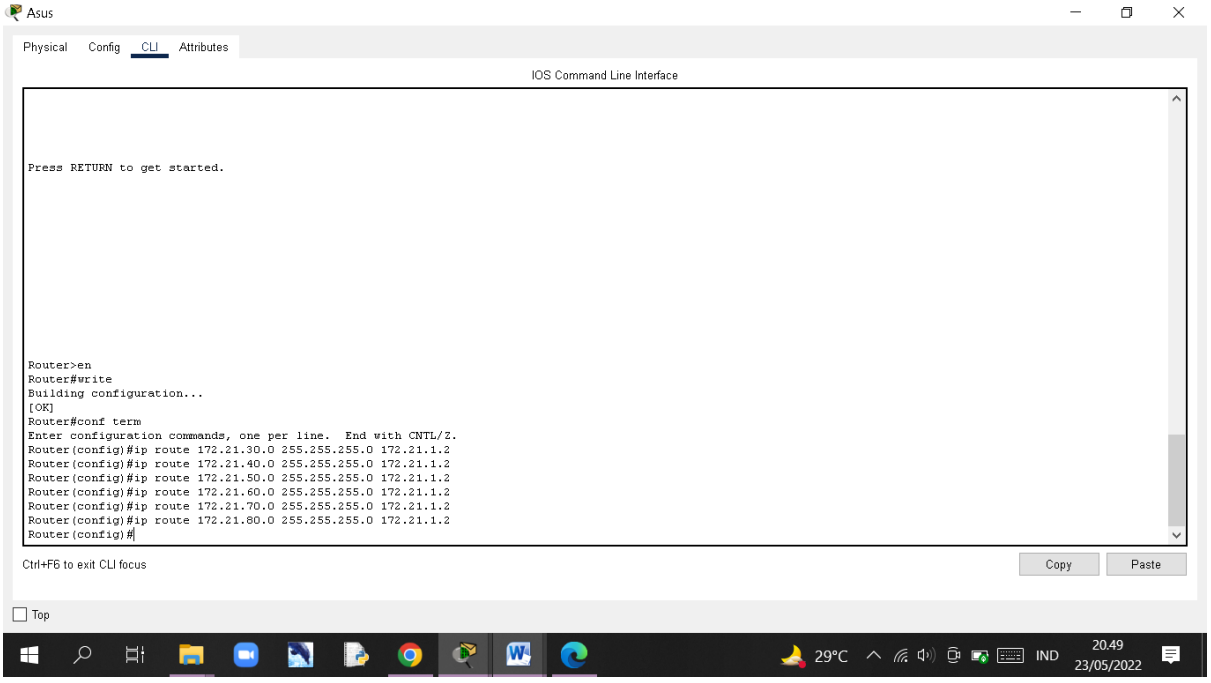


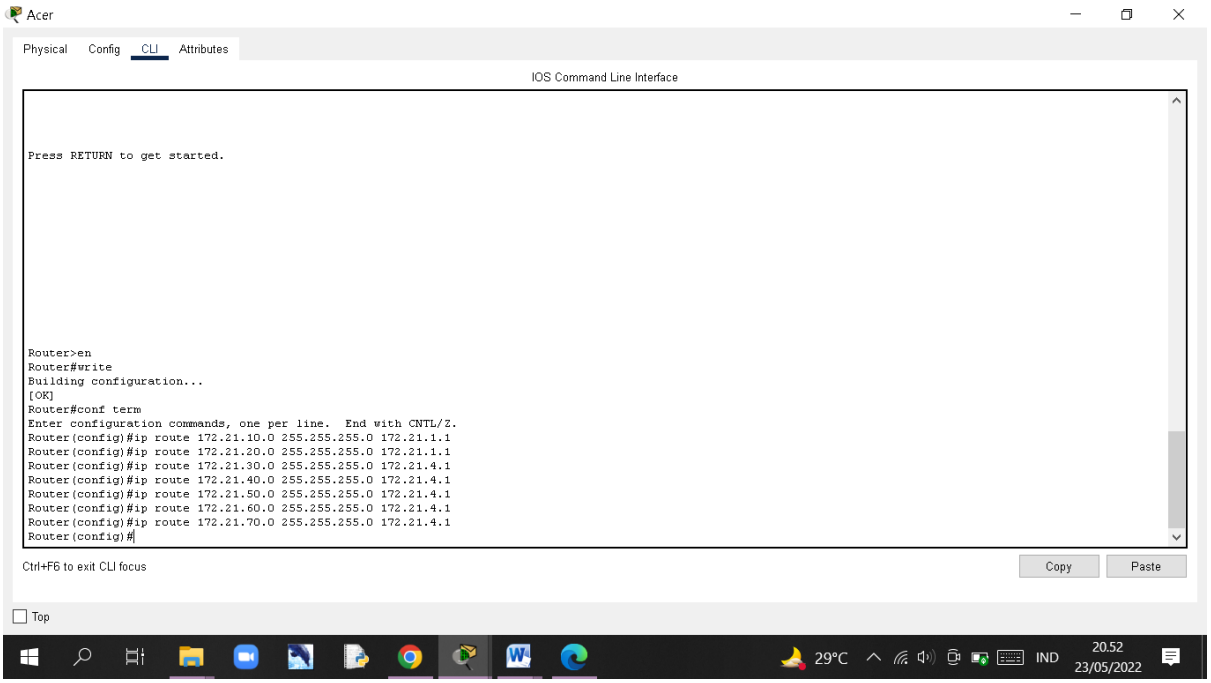


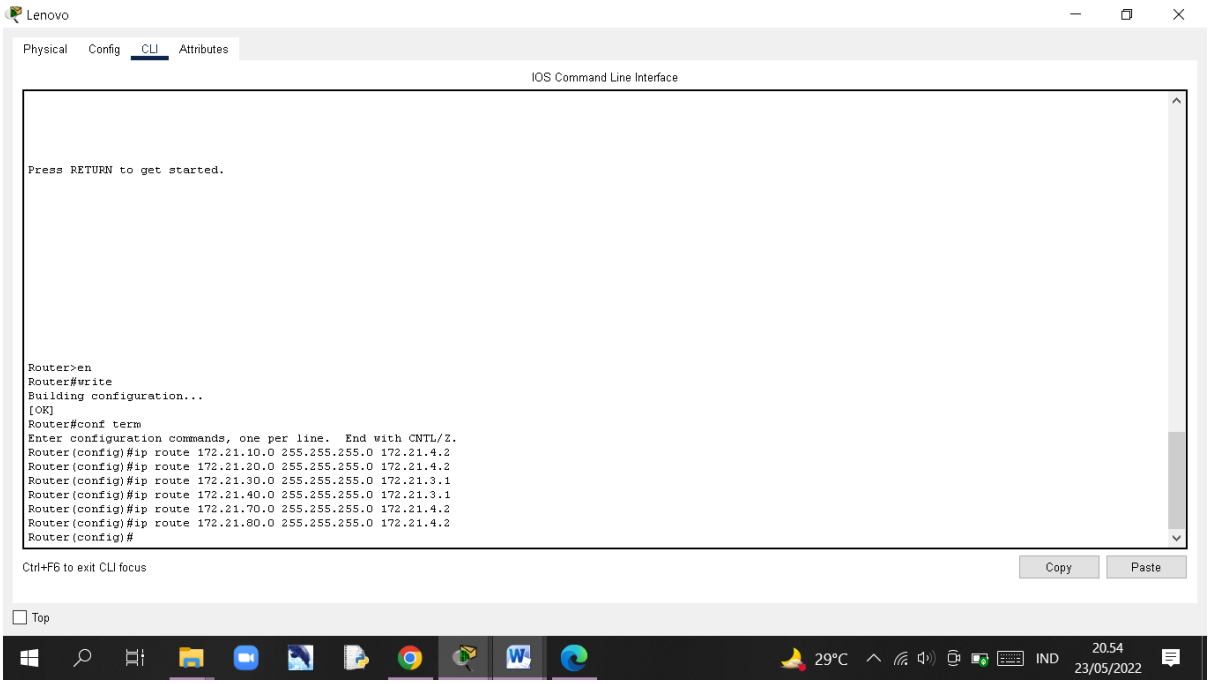
d. Mengecek koneksi



e. Routing router




Acer
Physical
Config
CLI
Attributes
IOS Command Line Interface
Press RETURN to get started.
Router>en
Router#write
Building configuration...
[OK]
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.10.0 255.255.255.0 172.21.1.1
Router(config)#ip route 172.21.20.0 255.255.255.0 172.21.1.1
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.4.1
Router(config)#ip route 172.21.40.0 255.255.255.0 172.21.4.1
Router(config)#ip route 172.21.50.0 255.255.255.0 172.21.4.1
Router(config)#ip route 172.21.60.0 255.255.255.0 172.21.4.1
Router(config)#ip route 172.21.70.0 255.255.255.0 172.21.4.1
Router(config)#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top
29°C
IND
20.52
23/05/2022


Lenovo
Physical
Config
CLI
Attributes
IOS Command Line Interface
Press RETURN to get started.
Router>en
Router#write
Building configuration...
[OK]
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.10.0 255.255.255.0 172.21.4.2
Router(config)#ip route 172.21.20.0 255.255.255.0 172.21.4.2
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.3.1
Router(config)#ip route 172.21.40.0 255.255.255.0 172.21.3.1
Router(config)#ip route 172.21.70.0 255.255.255.0 172.21.4.2
Router(config)#ip route 172.21.80.0 255.255.255.0 172.21.4.2
Router(config)#
Ctrl+F6 to exit CLI focus
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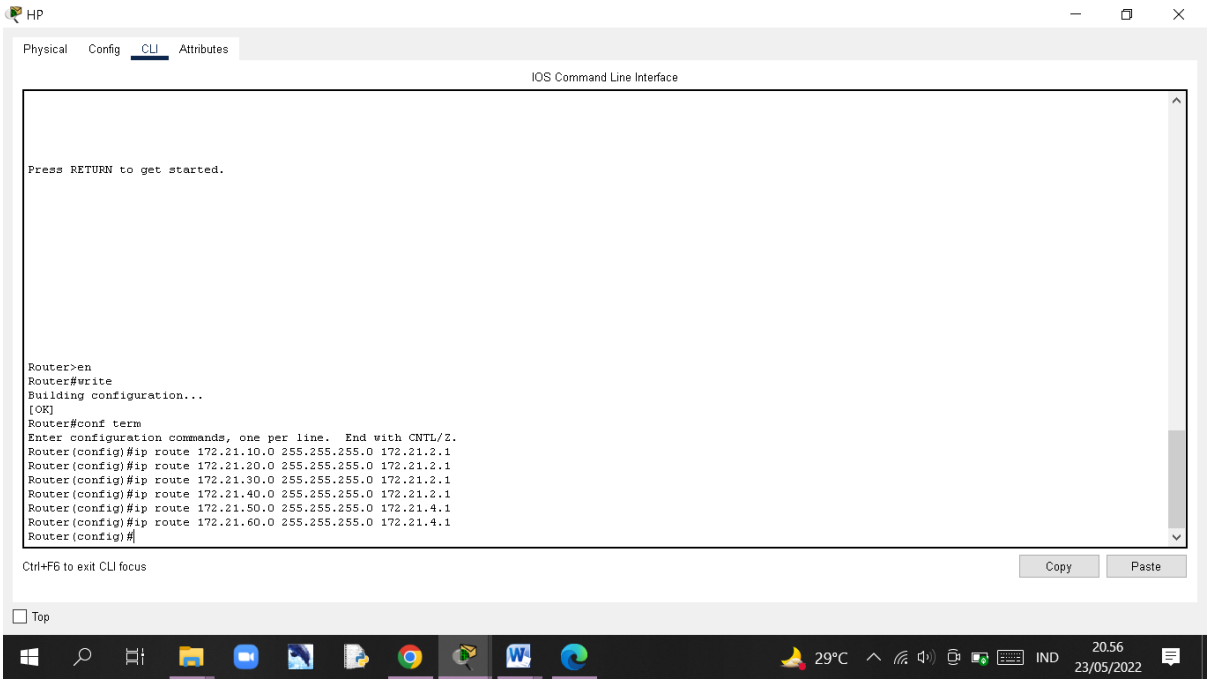
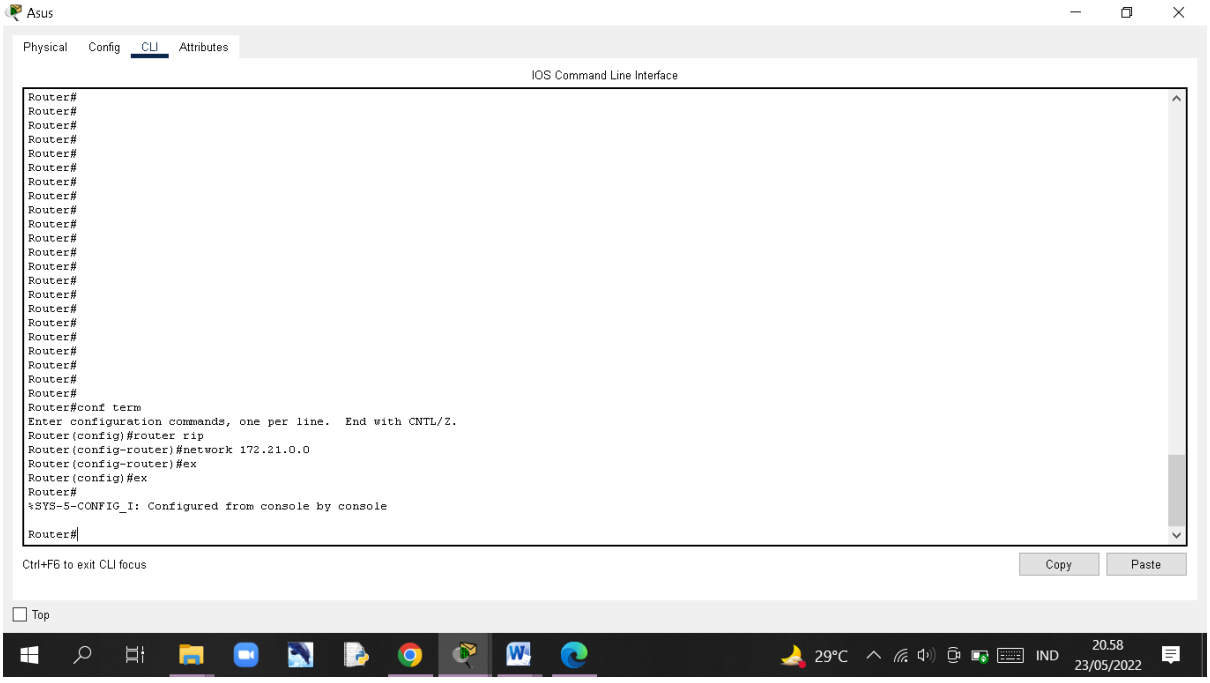
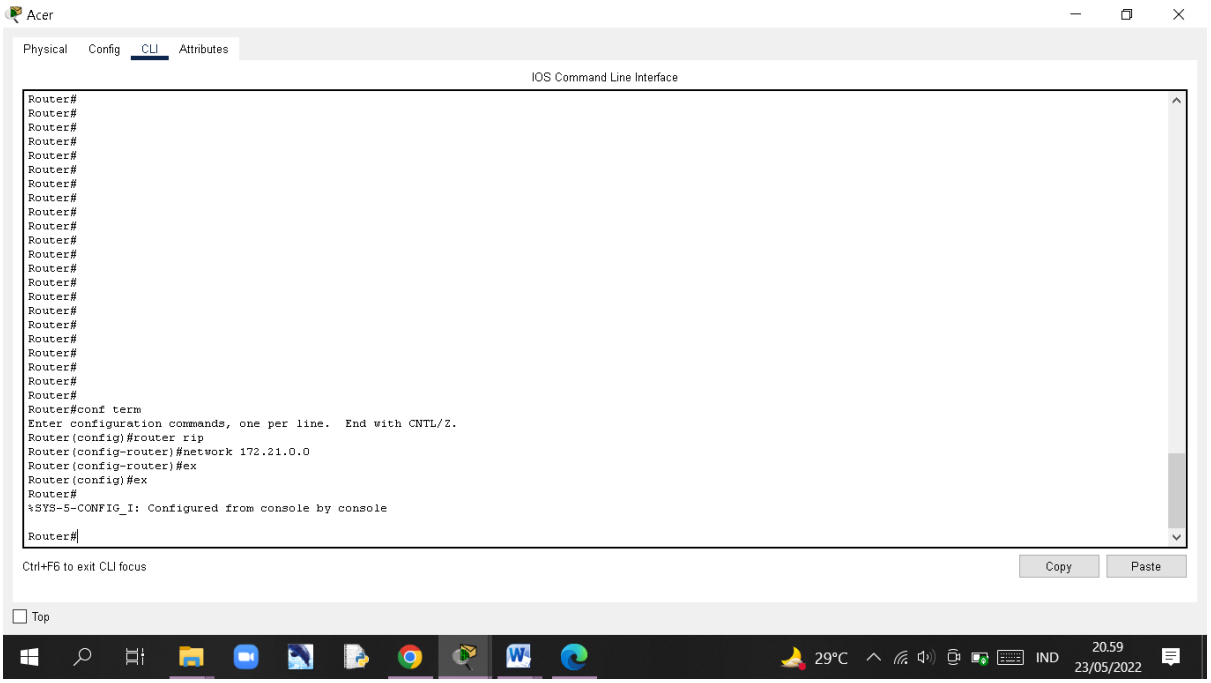


f. Konfigurasi RIP

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Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#network 172.21.0.0
Router(config-router)#ex
Router(config)#ex
Router#
%SYS-5-CONFIG_I: Configured from console by console
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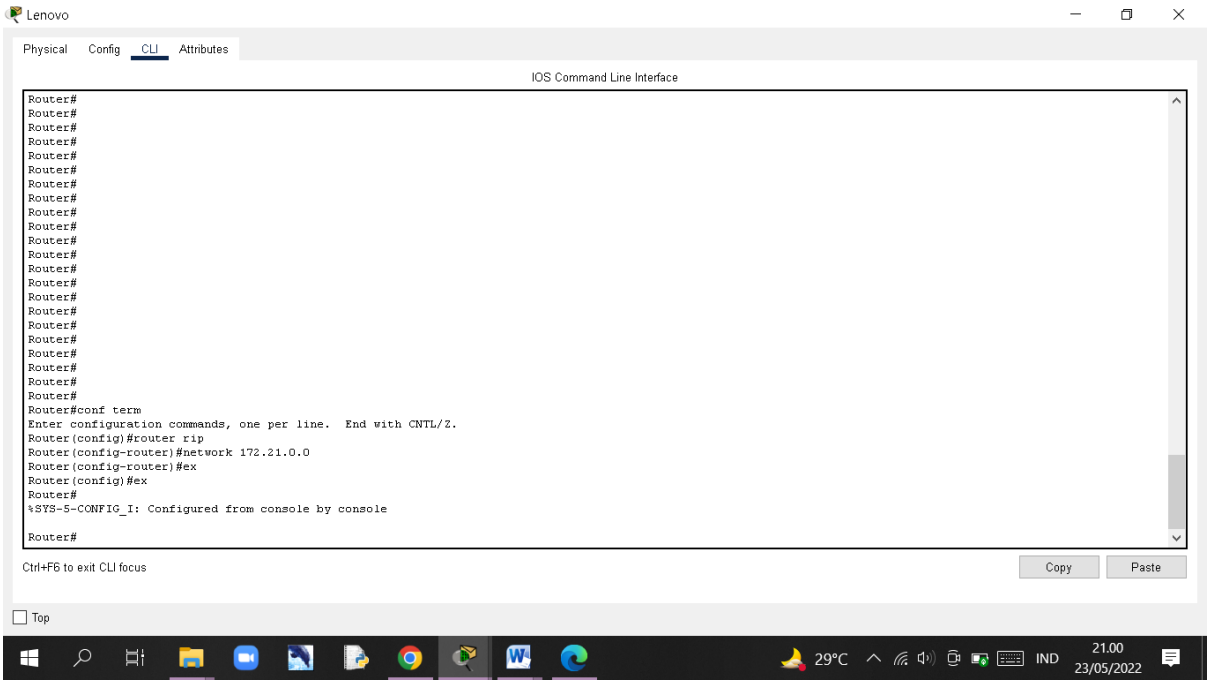
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Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#network 172.21.0.0
Router(config-router)#ex
Router(config)#ex
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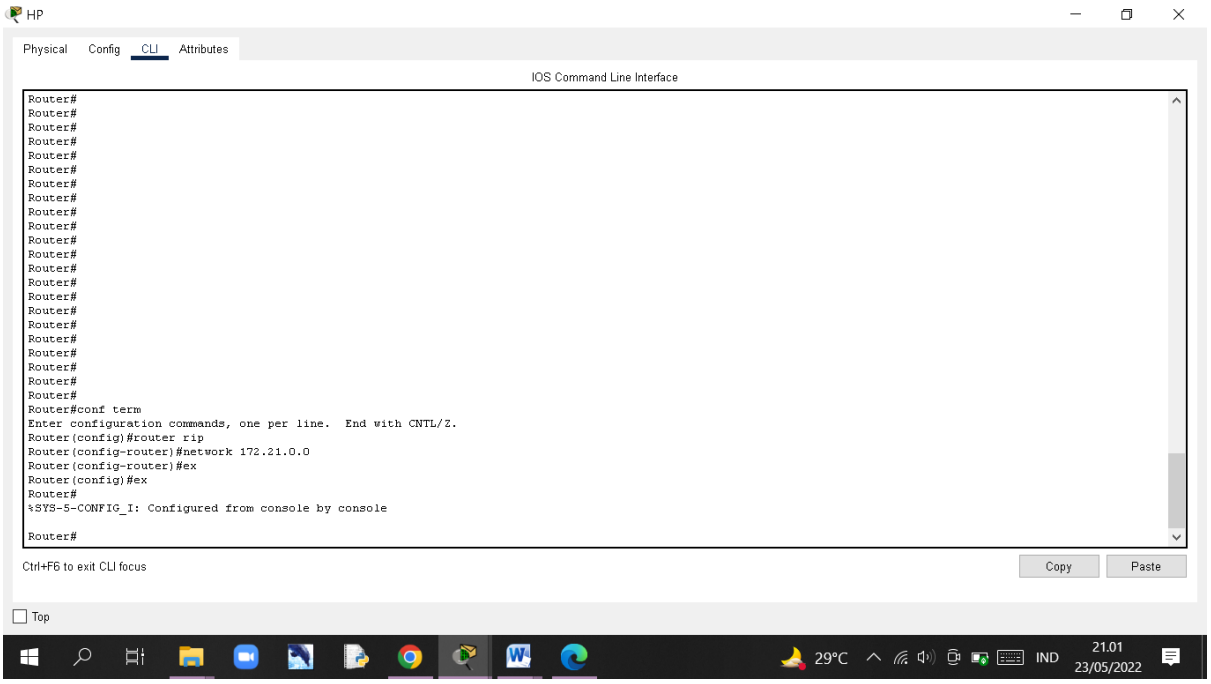
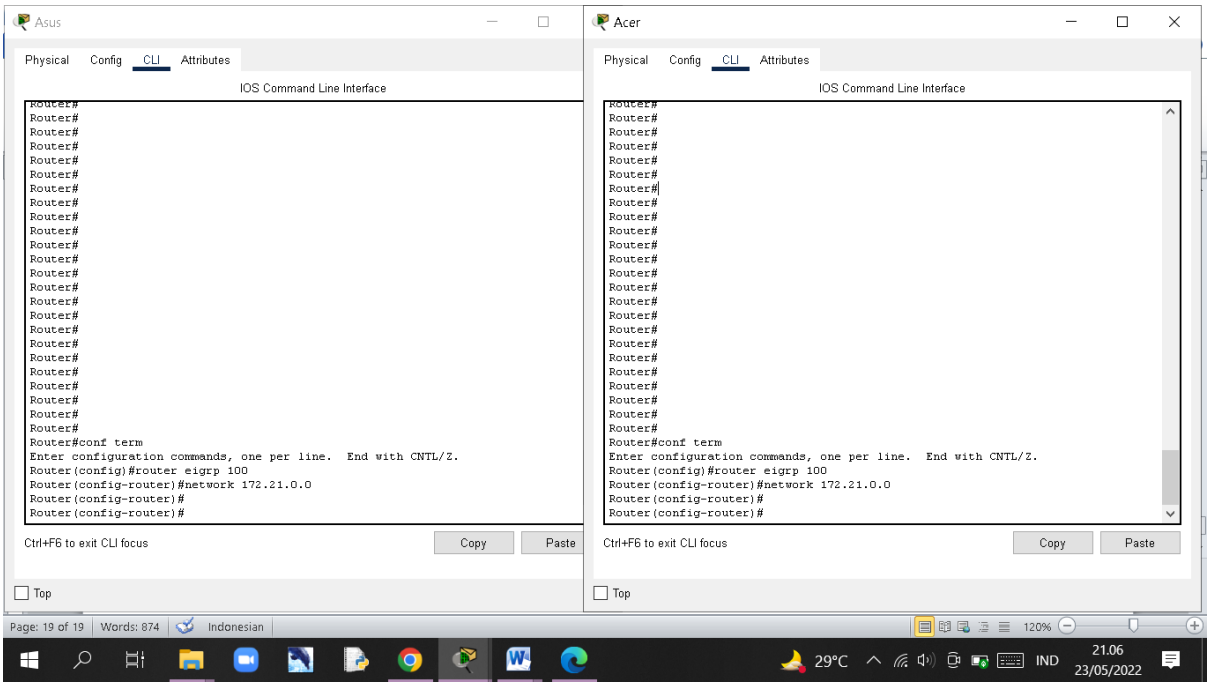
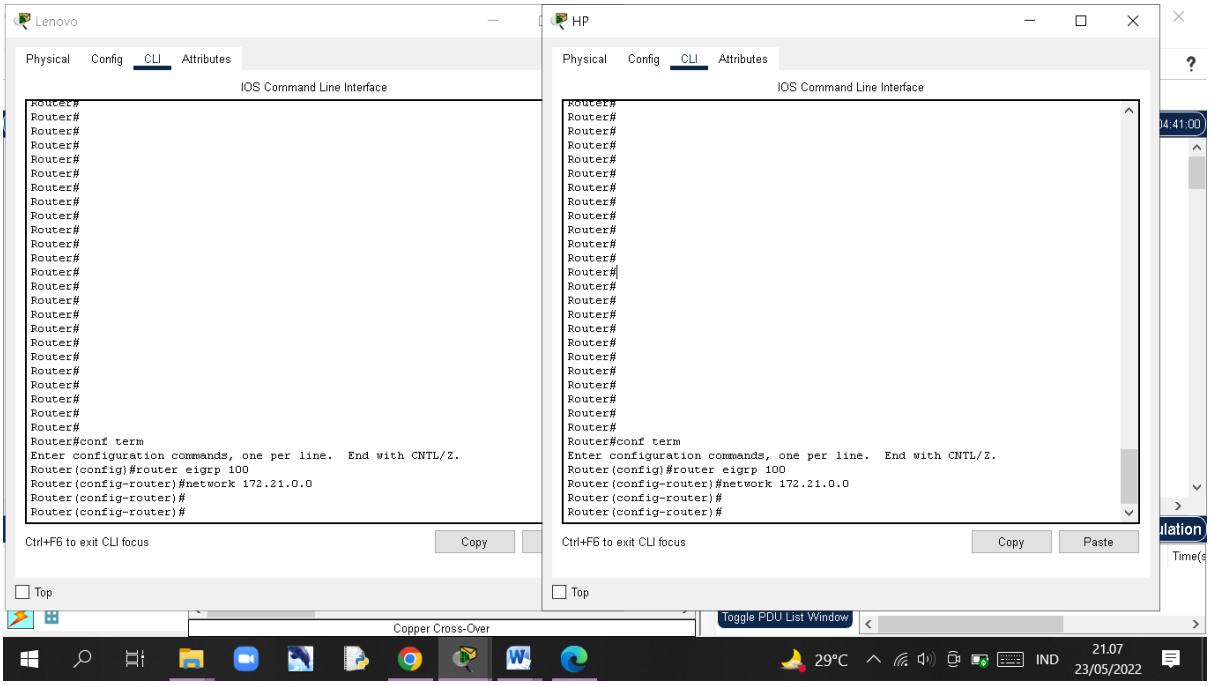


g. Konfigurasi IGRP

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Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router eigrp 100
Router(config-router)#network 172.21.0.0
Router(config-router)#
Router(config-router)#
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Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router eigrp 100
Router(config-router)#network 172.21.0.0
Router(config-router)#
Router(config-router)#
Ctrl+F6 to exit CLI focus
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