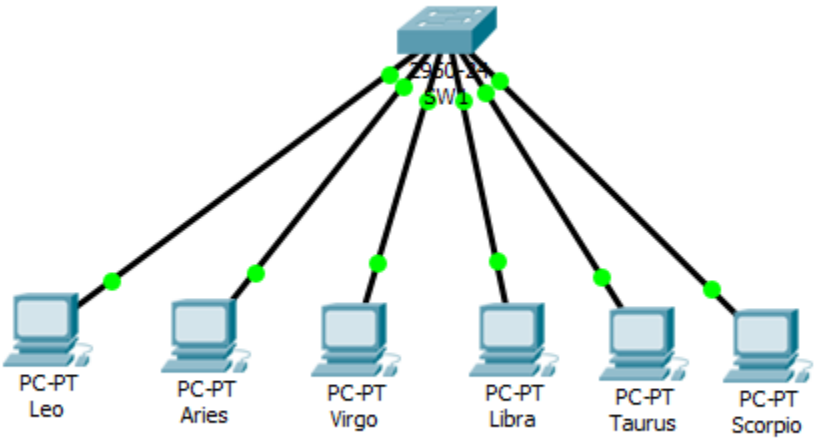
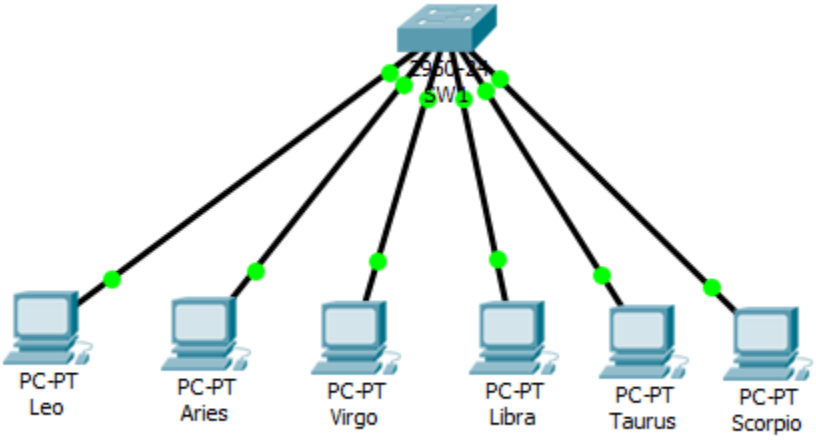
Nama : Tomy Satmoko Aji
Nim : L200180057
Kelas : B

Kegiatan Topologi 1

A. Menggunakan packet tracker buat topologi berikut

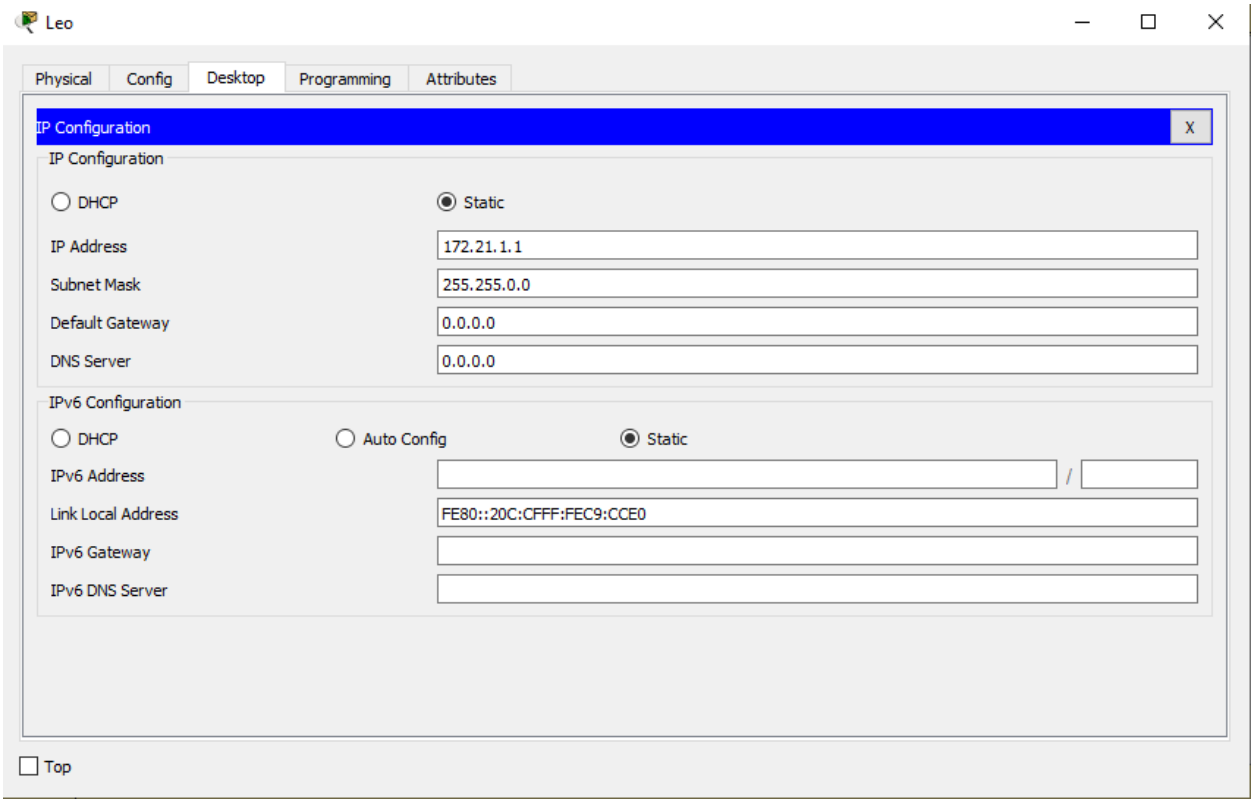


B. Beri nama masing masing perangkat

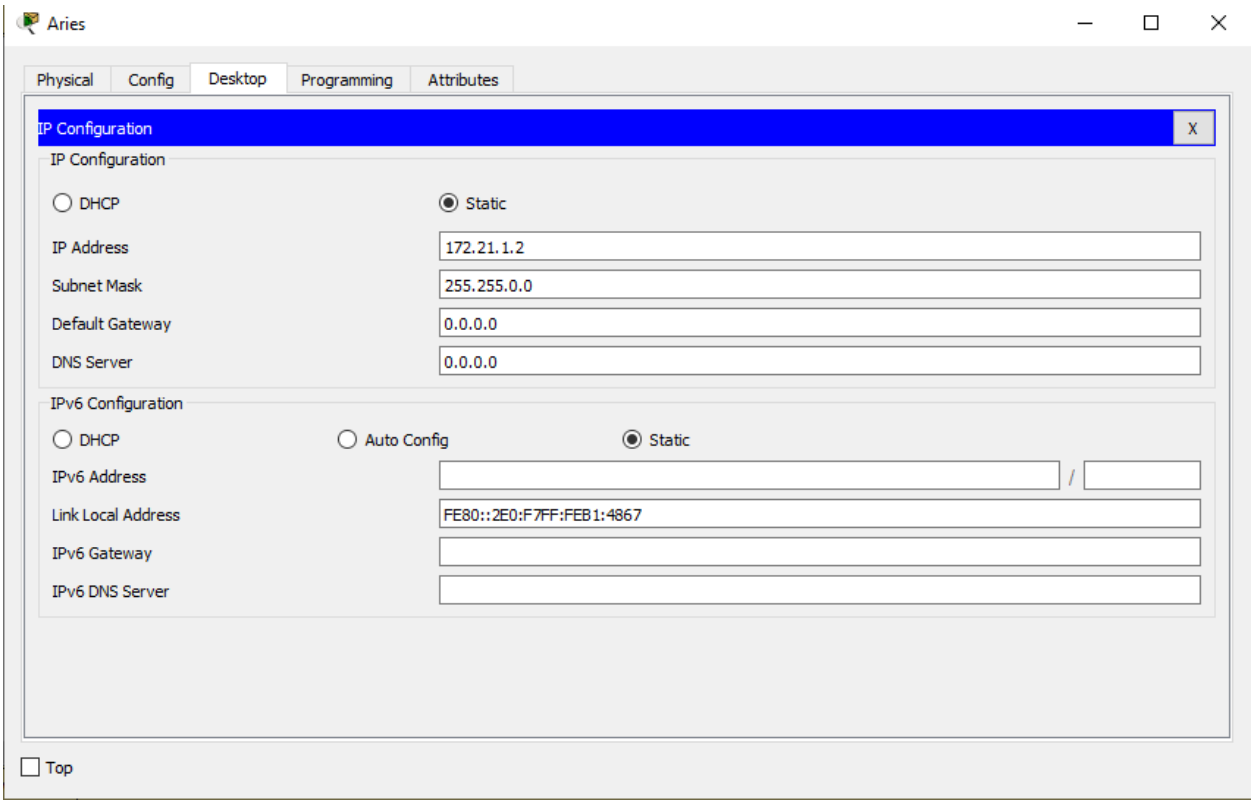


C. Konfigurasi masing-masing PC dengan nama dan alamat IP

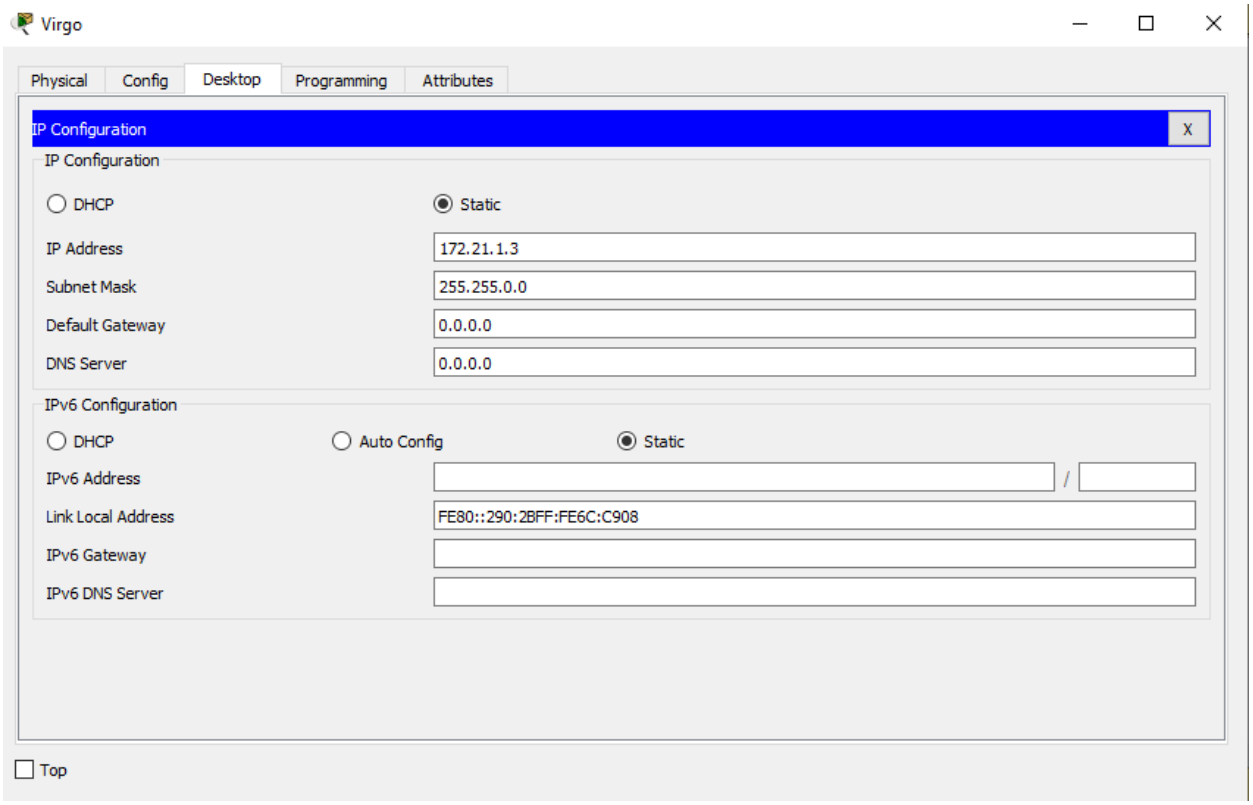
a. Leo = 172.21.1.1/24



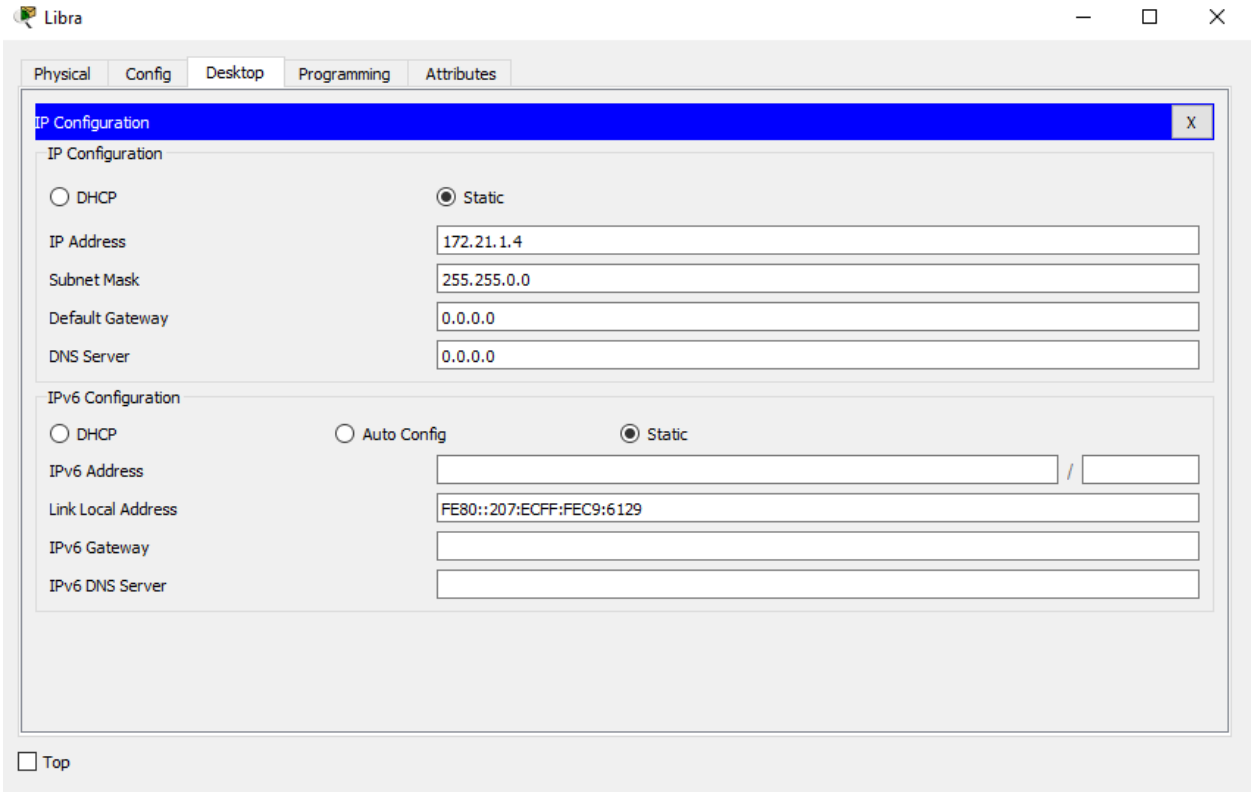
b. Aries = 172.21.1.2/24



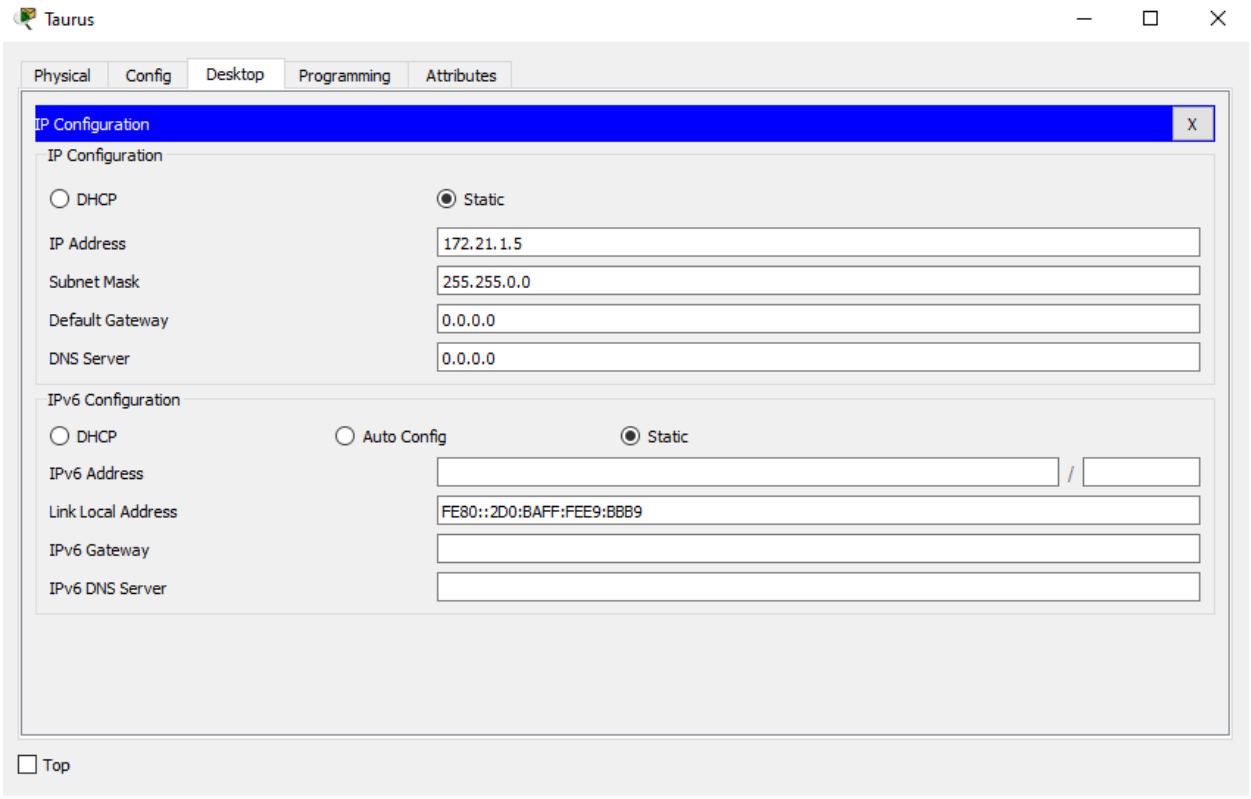
c. Virgo = 172.21.1.3/24



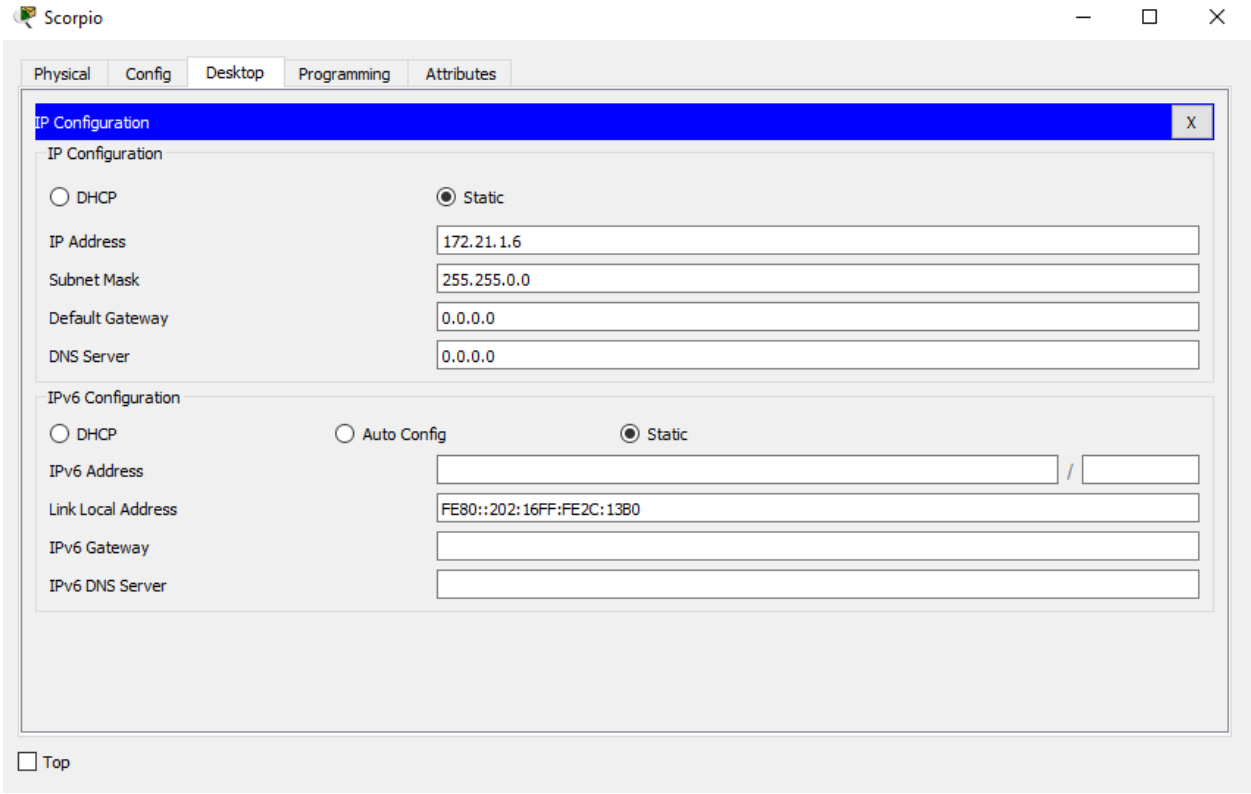
d. Libra = 172.21.1.4/24



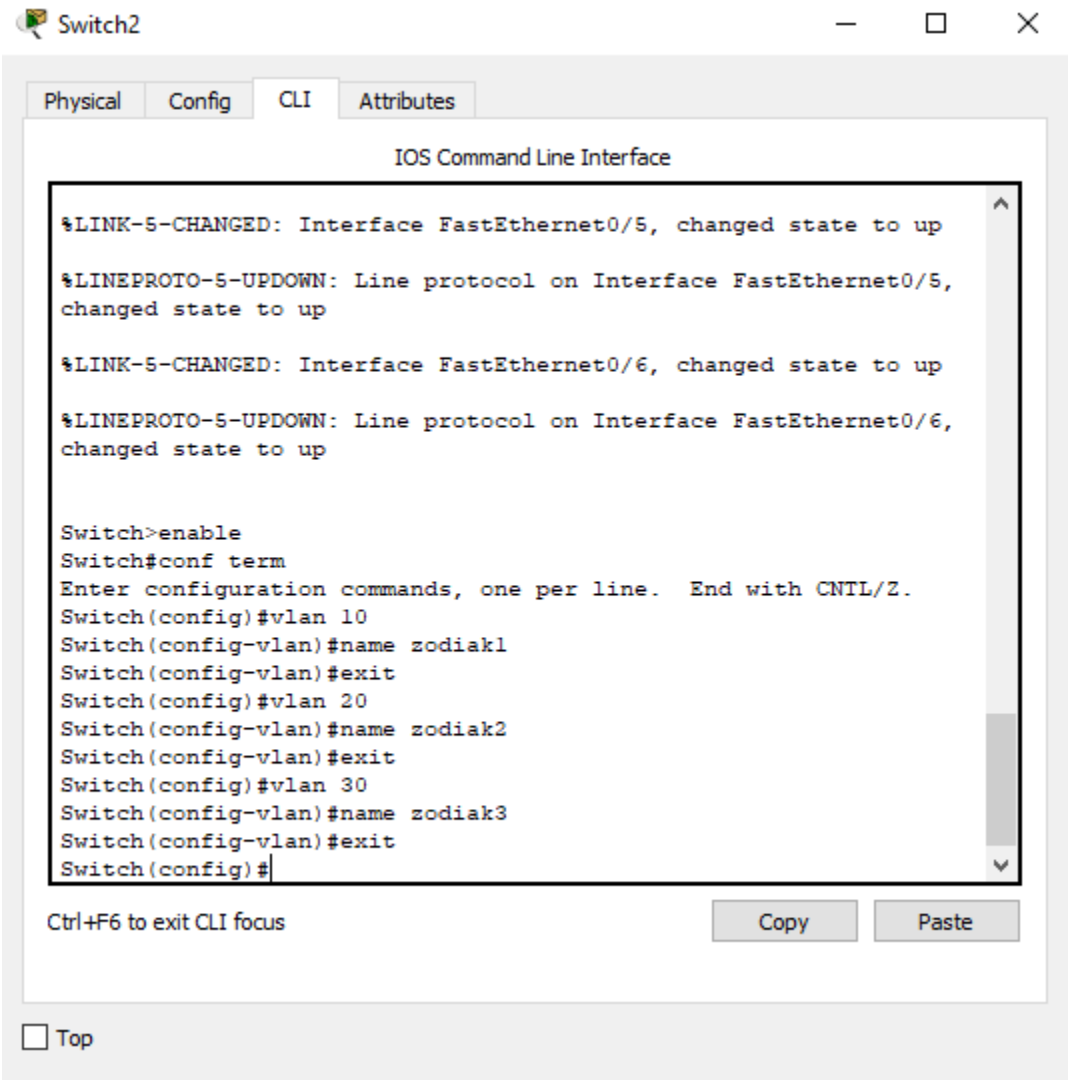
e. Taurus = 172.21.1.5/24



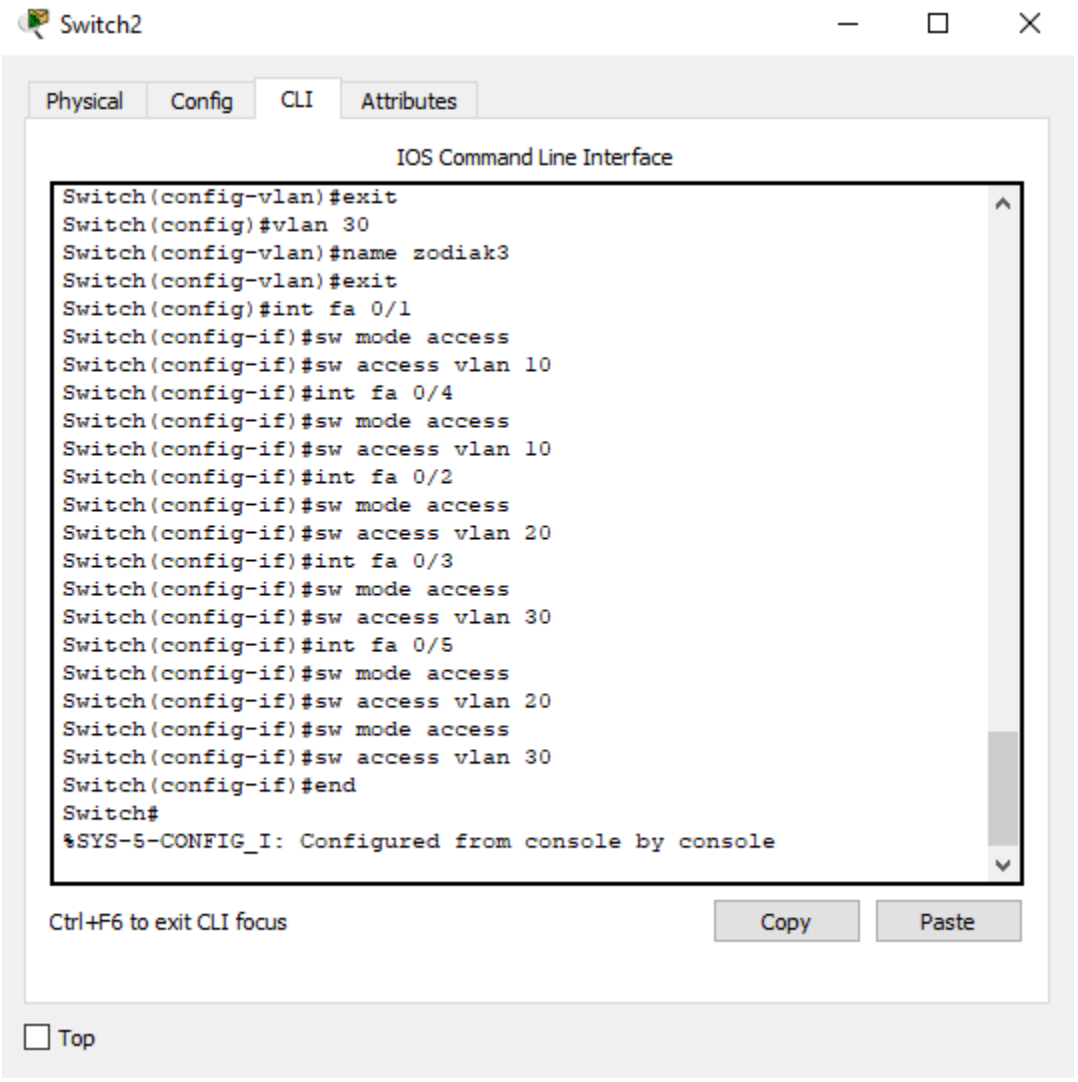
f. Scorpio = 172.21.1.6/24



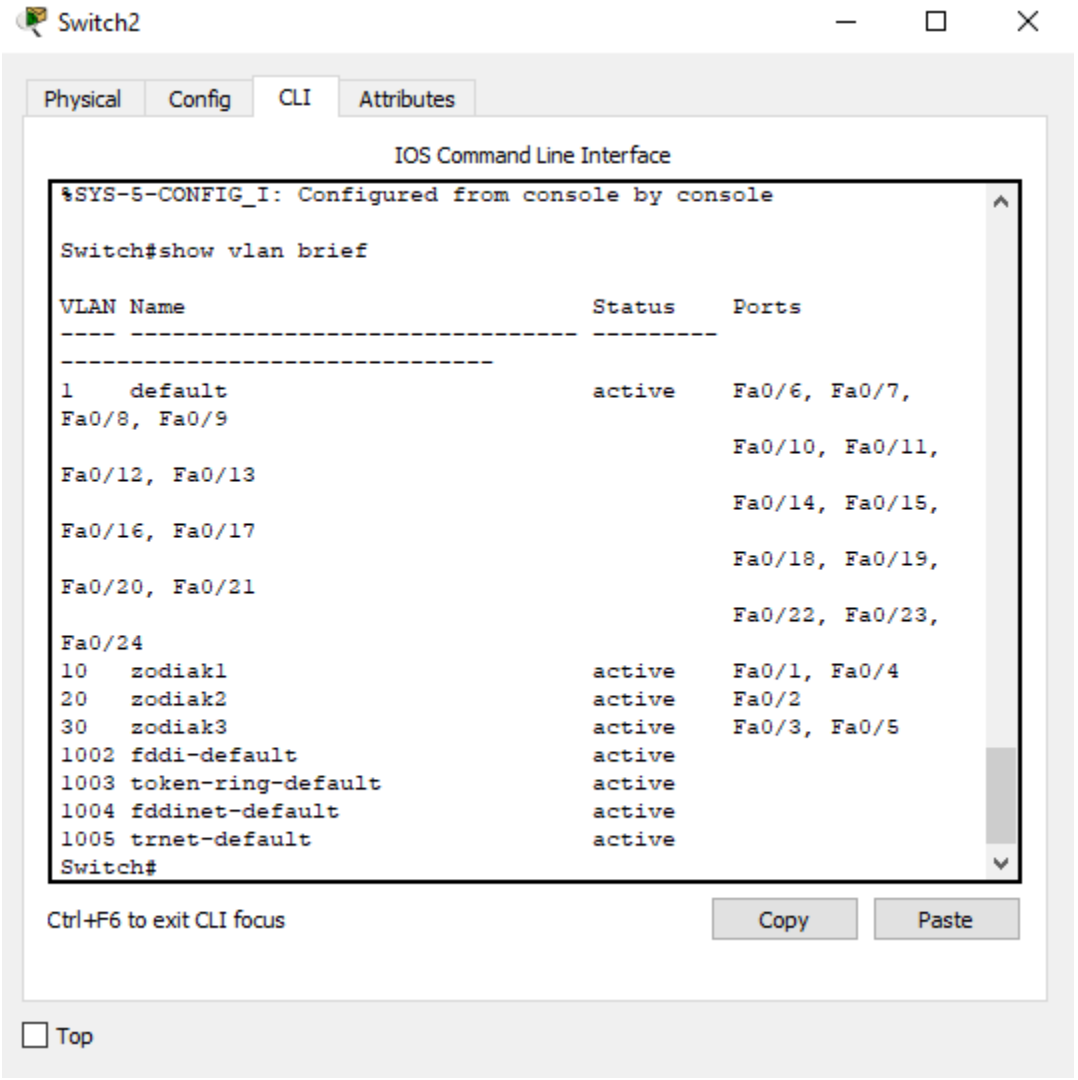
D. Kofigurasi pada switch dengan mode user atau mode privileged



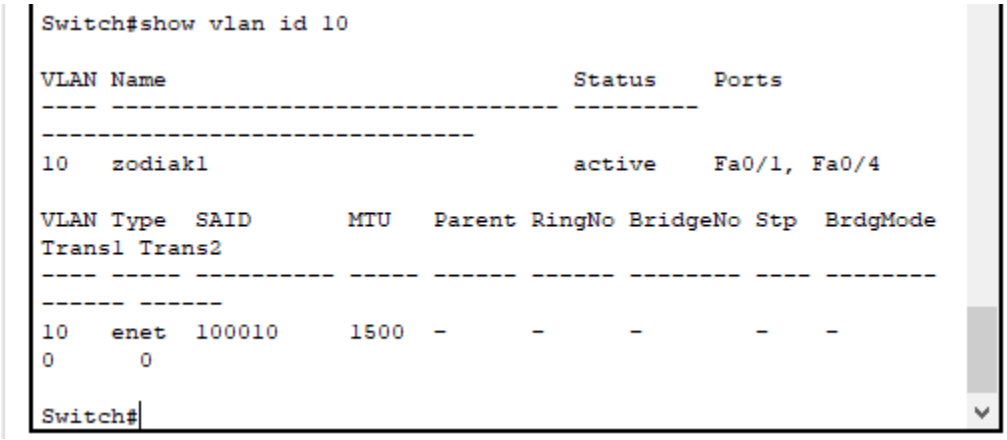
E. Pad amode configuration, konfigurasi port-port switch ke dalam vlan zodiak1, zodiak2, zodiak3



F. Pada mode user , lihat konfigurasi vlan yang telah dibuat.



a. Informasi VLAN 10



Tugas 6A

No	Variable	Nilai
1	Nomor VLAN	10
2	Nama VLAN	Zodiak1
3	Port	Fa0/1, Fa0/4
4	Status	Active

b. Informasi VLAN 20

```
Switch#show vlan id 20

VLAN Name                              Status    Ports
---- --------------------------------- ---------
-------------------------------
20   zodiak2                           active    Fa0/2

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- --------
------ ------
20   enet  100020     1500  -      -      -        -    -
0      0

Switch#
```

c. Tugas 6A

No	Variable	Nilai
1	Nomor VLAN	20
2	Nama VLAN	Zodiak2
3	Port	Fa0/2
4	Status	Active

Informasi VLAN 30

```
Switch#show vlan id 30

VLAN Name                              Status    Ports
---- --------------------------------- ---------
-------------------------------
30   zodiak3                           active    Fa0/3, Fa0/5

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- --------
------ ------
30   enet  100030     1500  -      -      -        -    -
0      0

Switch#
```

Tugas 6A

No	Variable	Nilai
1	Nomor VLAN	30
2	Nama VLAN	Zodiak3
3	Port	Fa0/3, Fa0/5
4	Status	Active

Tugas 6B

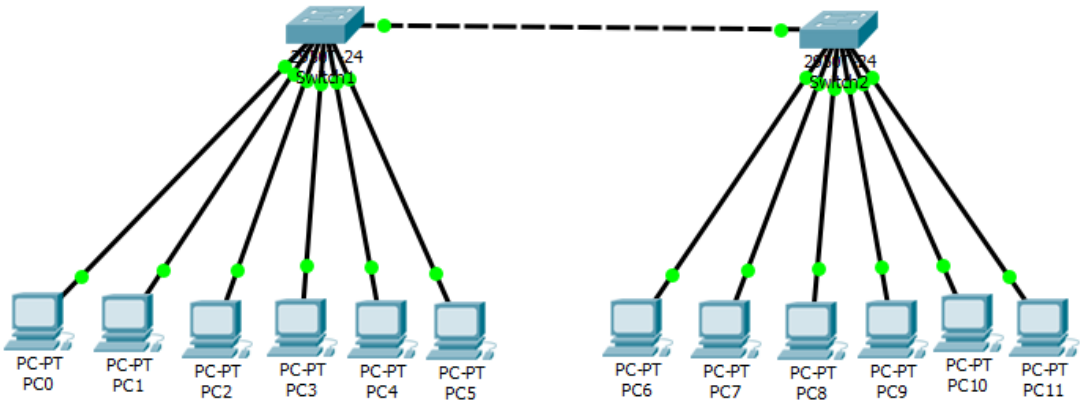
a. Dalam VLAN ID, status vlan menjadi active

b. Identitas VLAN(1,2,3) sesuai dari pembuatan nama VLAN dengan nama zodiak1, zodiak2, zodiak3

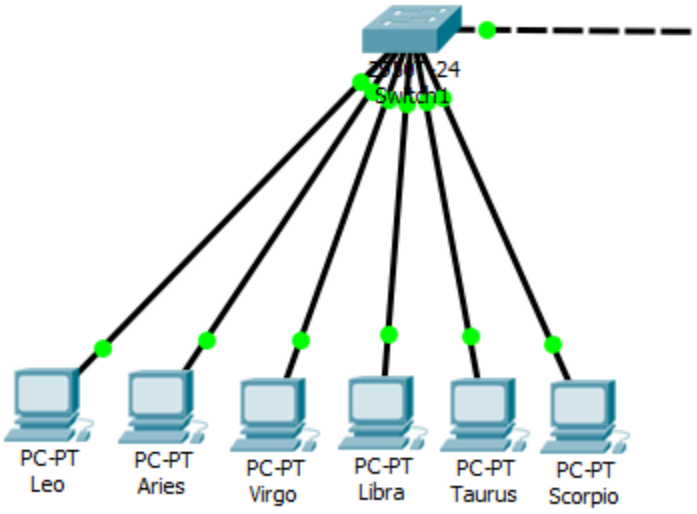
c. Por yang terdaftar dalam VLAN sesuai dengan konfigurasi yang telah dilakukan sebelumnya.

Kegiatan 2Topologi 2

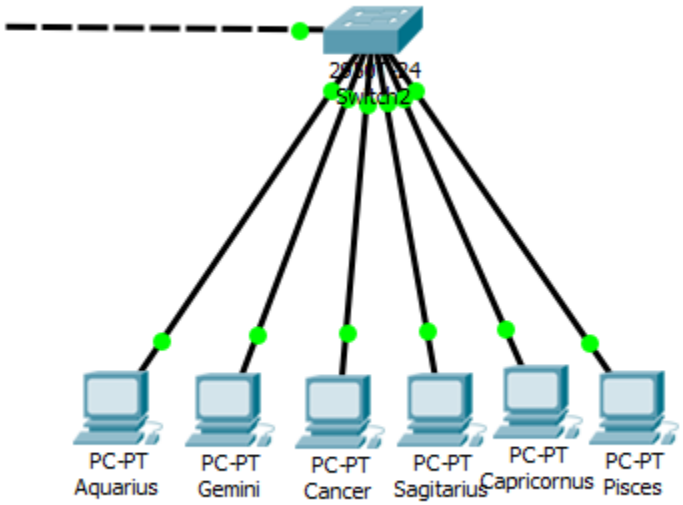
A. Buat topologi berikut dengan menggunakan switch 2950



B. Beri nama masing-masing

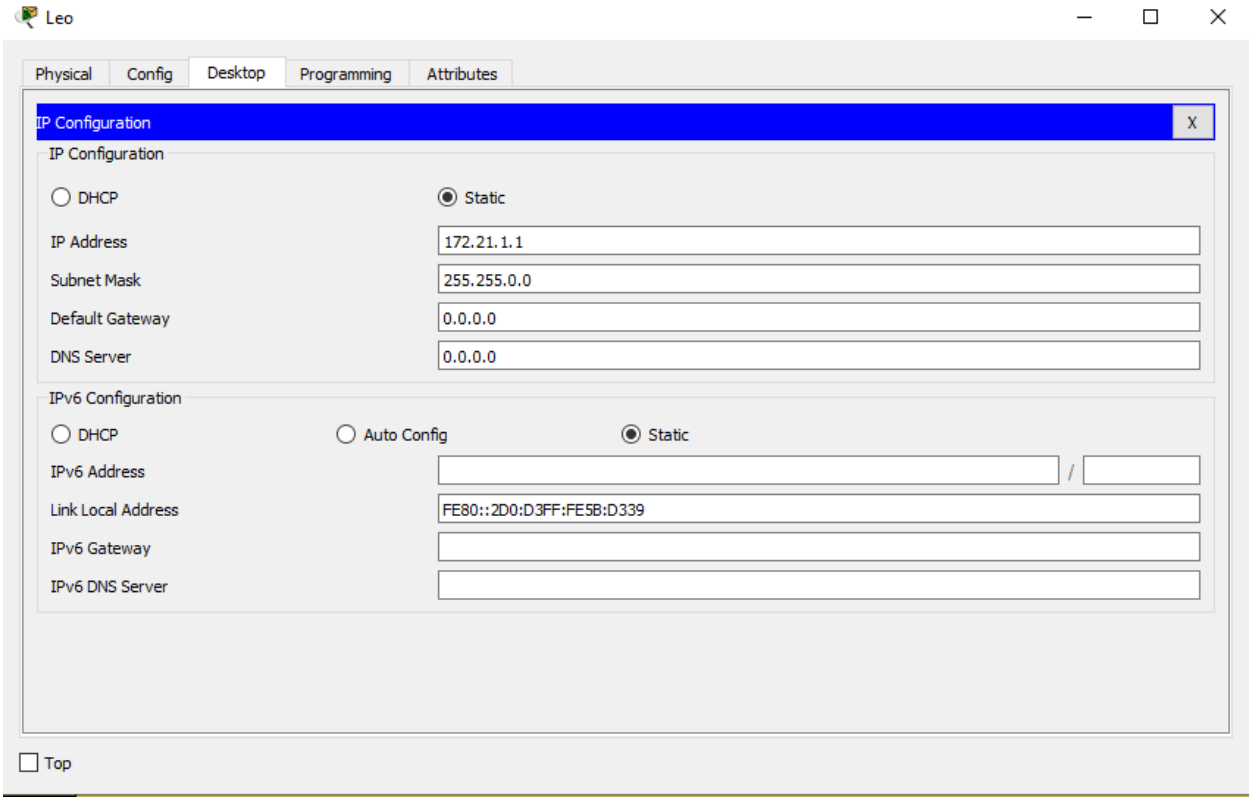


C. Beri nama masing-masing

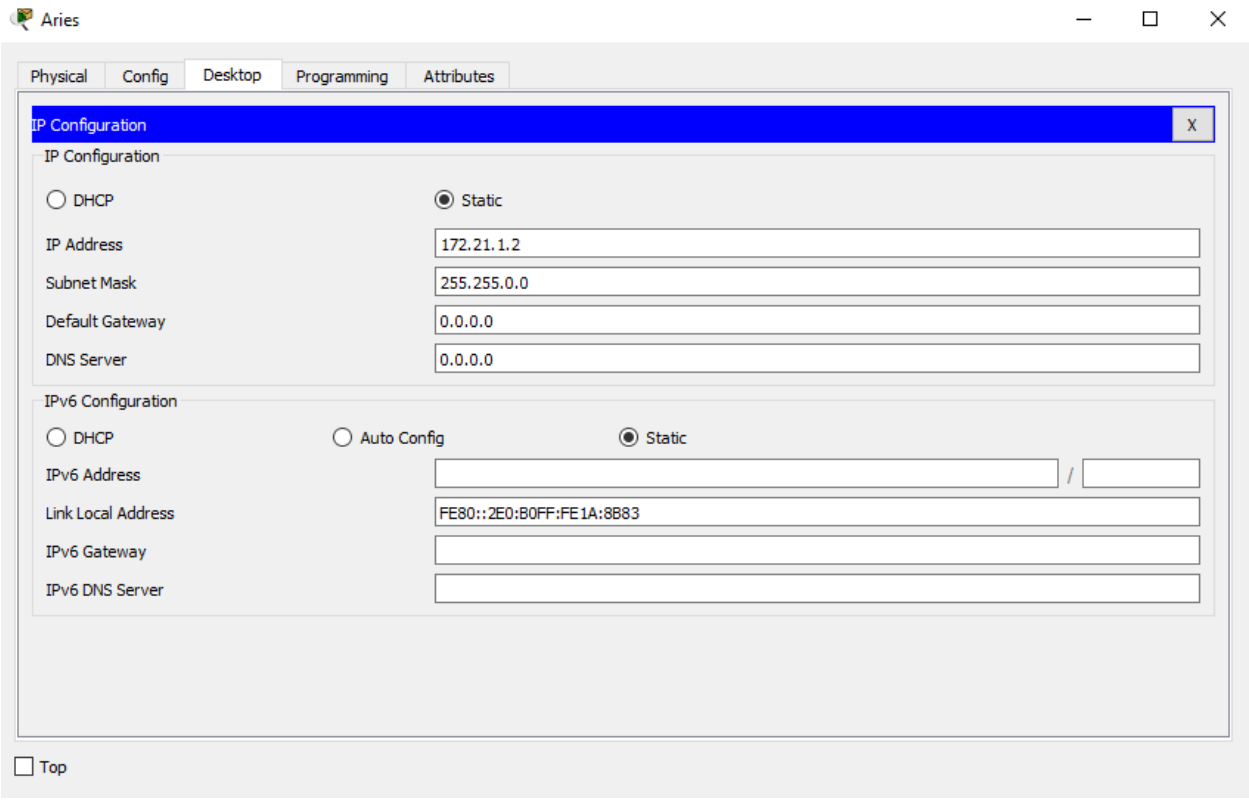


D. Kofigurasi masing-masing PC dengan alamat IP

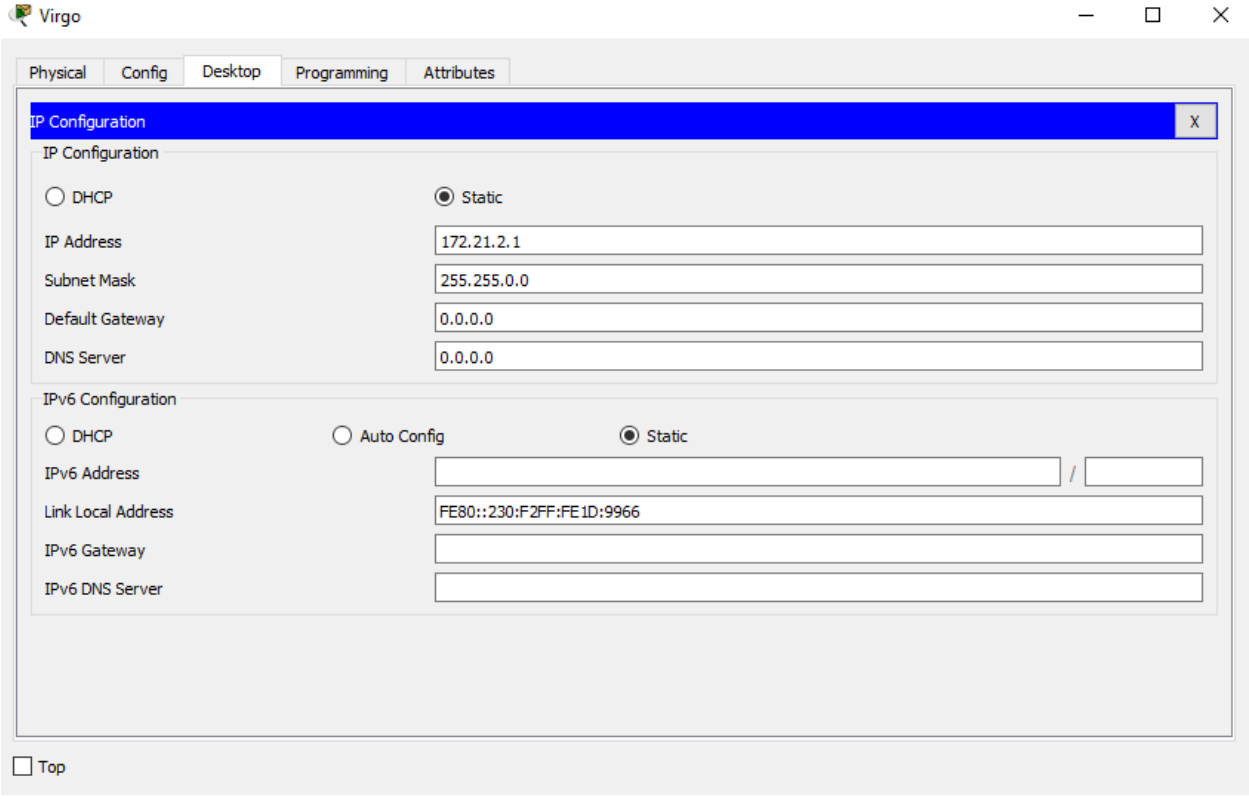
a. Leo = 172.21.1.1/24



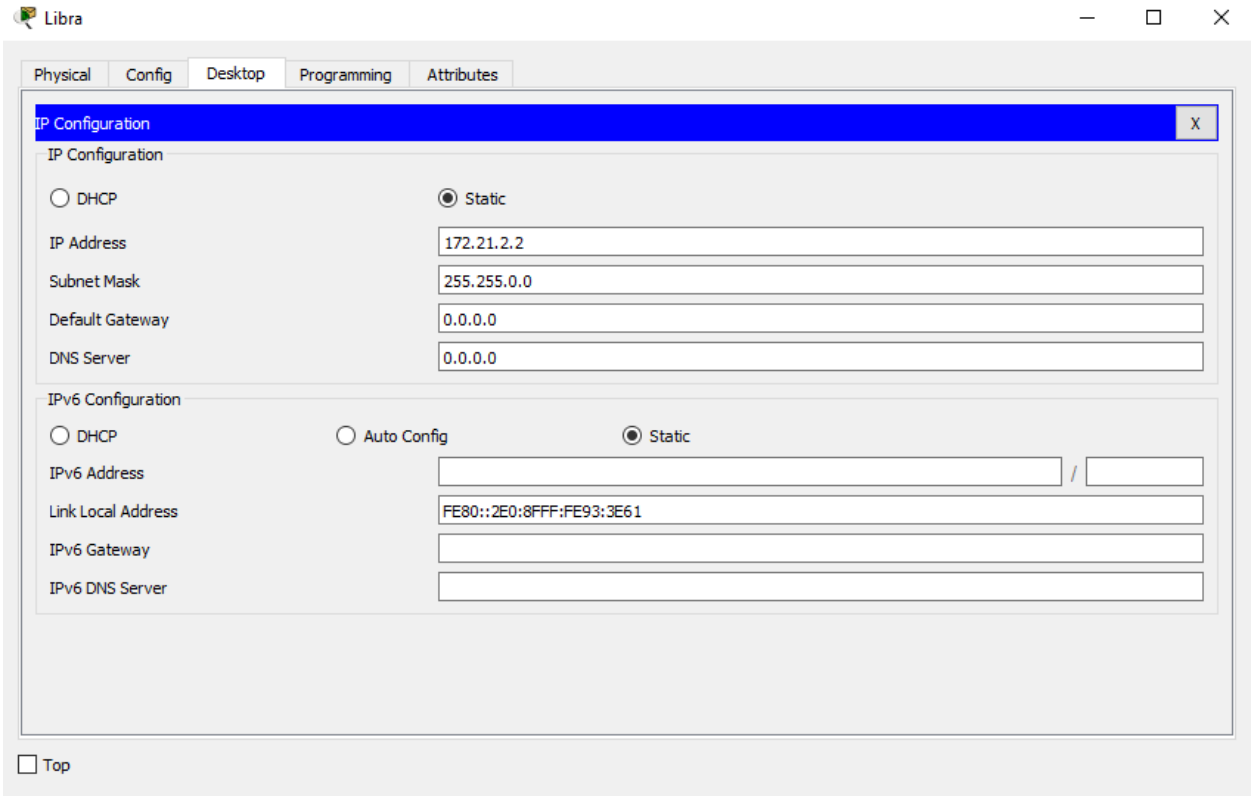
b. Aries = 172.21.1.2/24



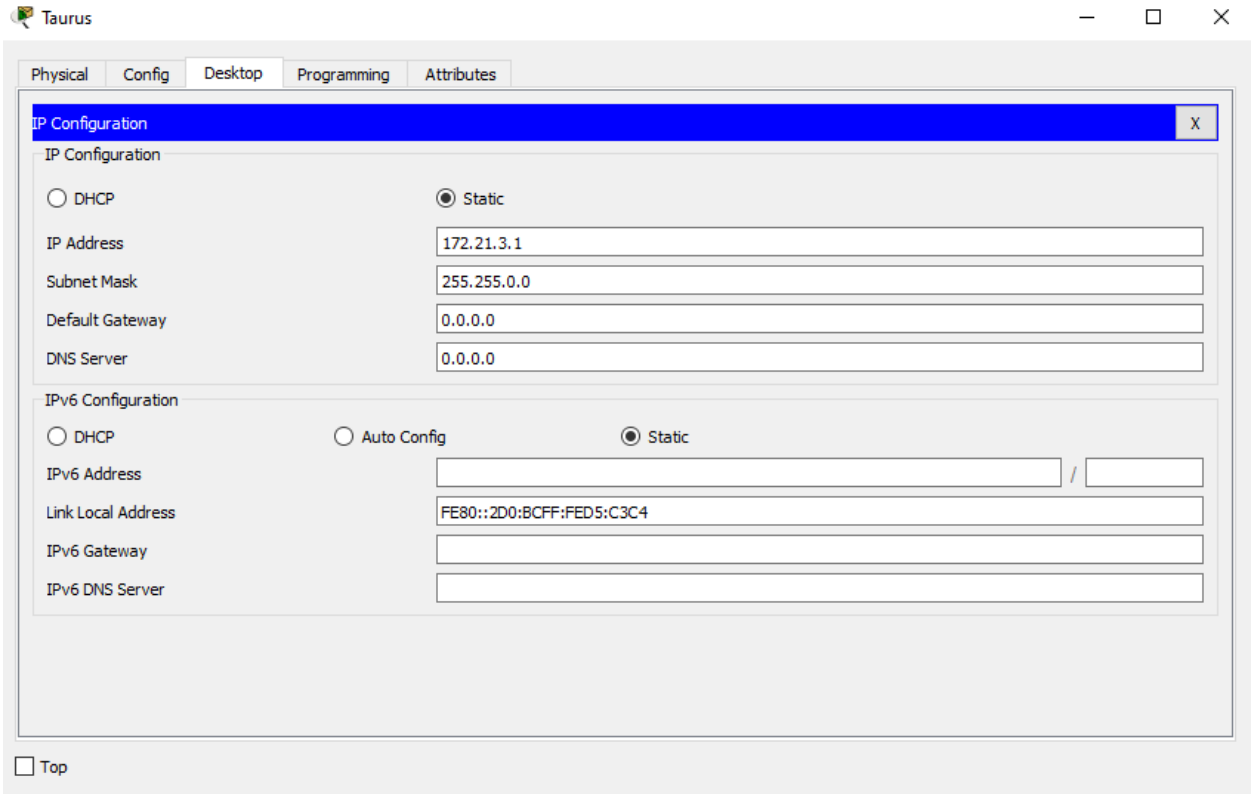
c. Virgo = 172.21.2.1/24



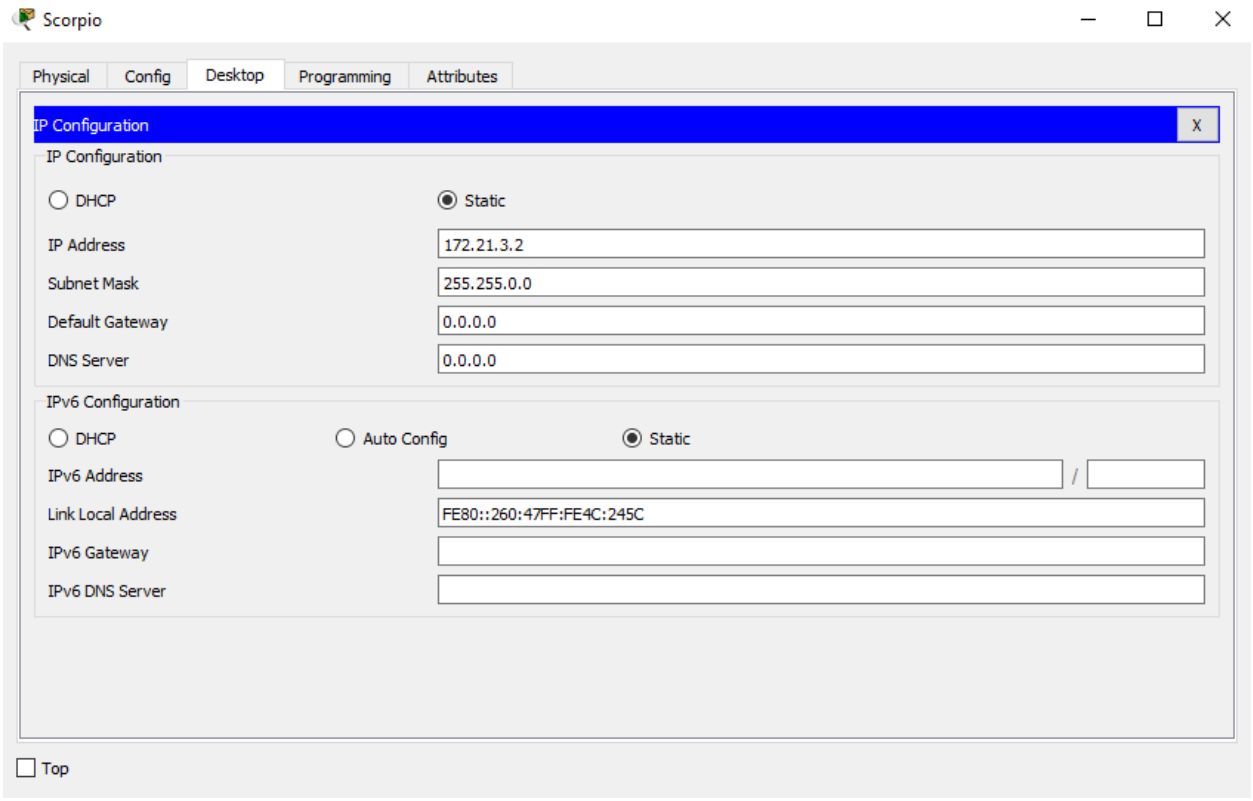
d. Libra = 172.21.2.2/24



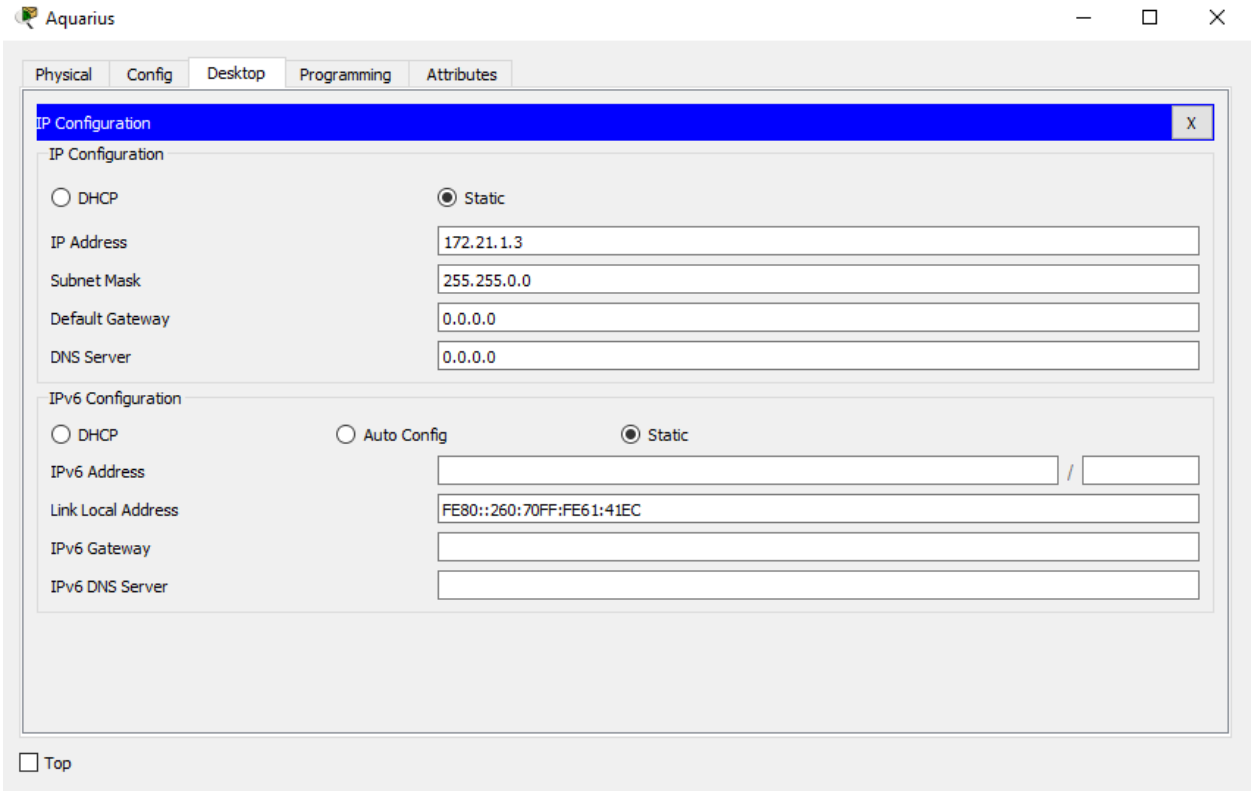
e. Taurus = 172.21.3.1/24



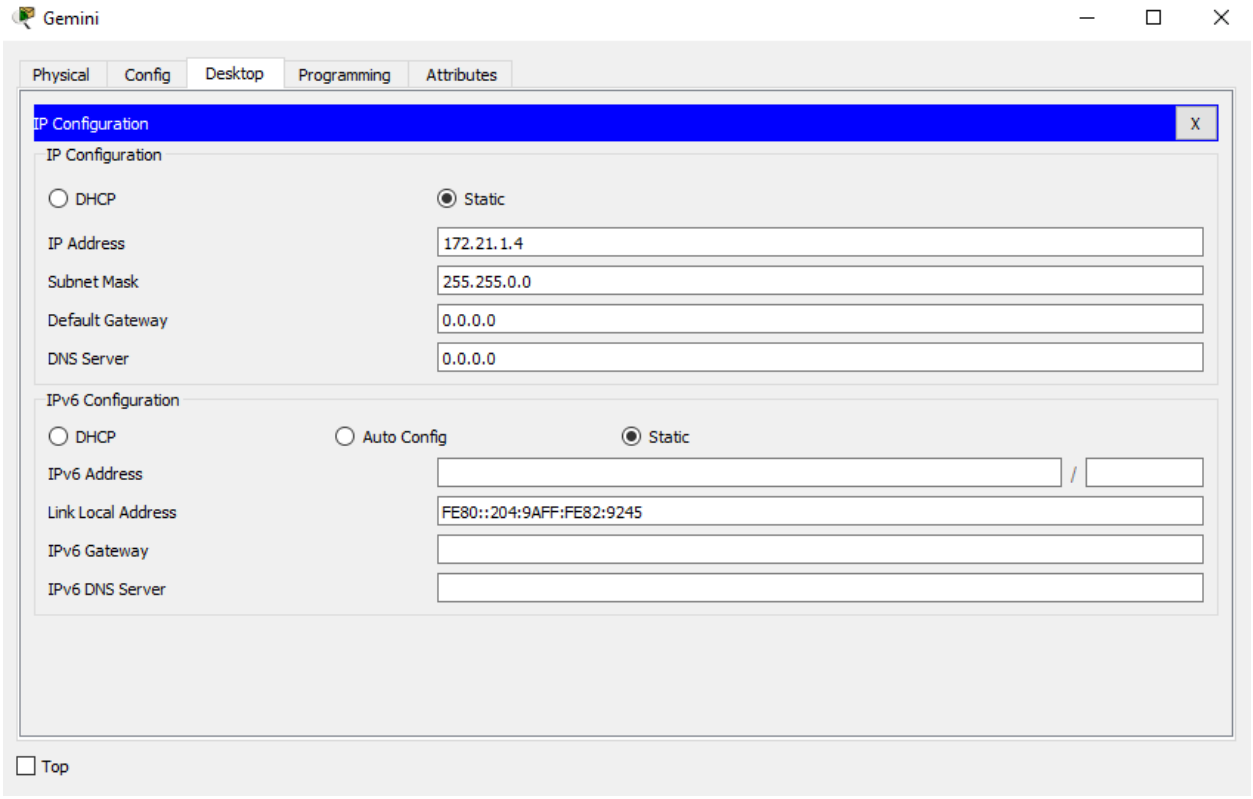
f. Scorpio = 172.21.3.2/24



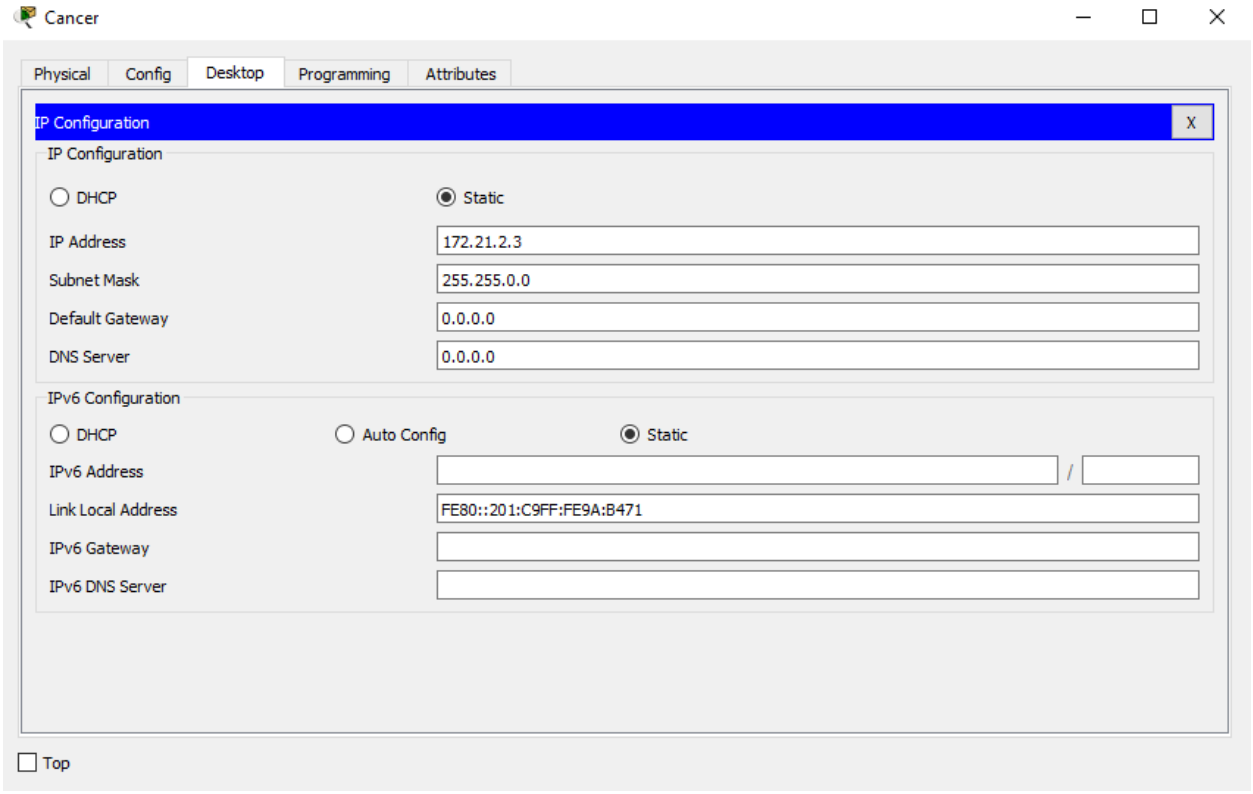
g. Aquarius = 172.21.1.3/24



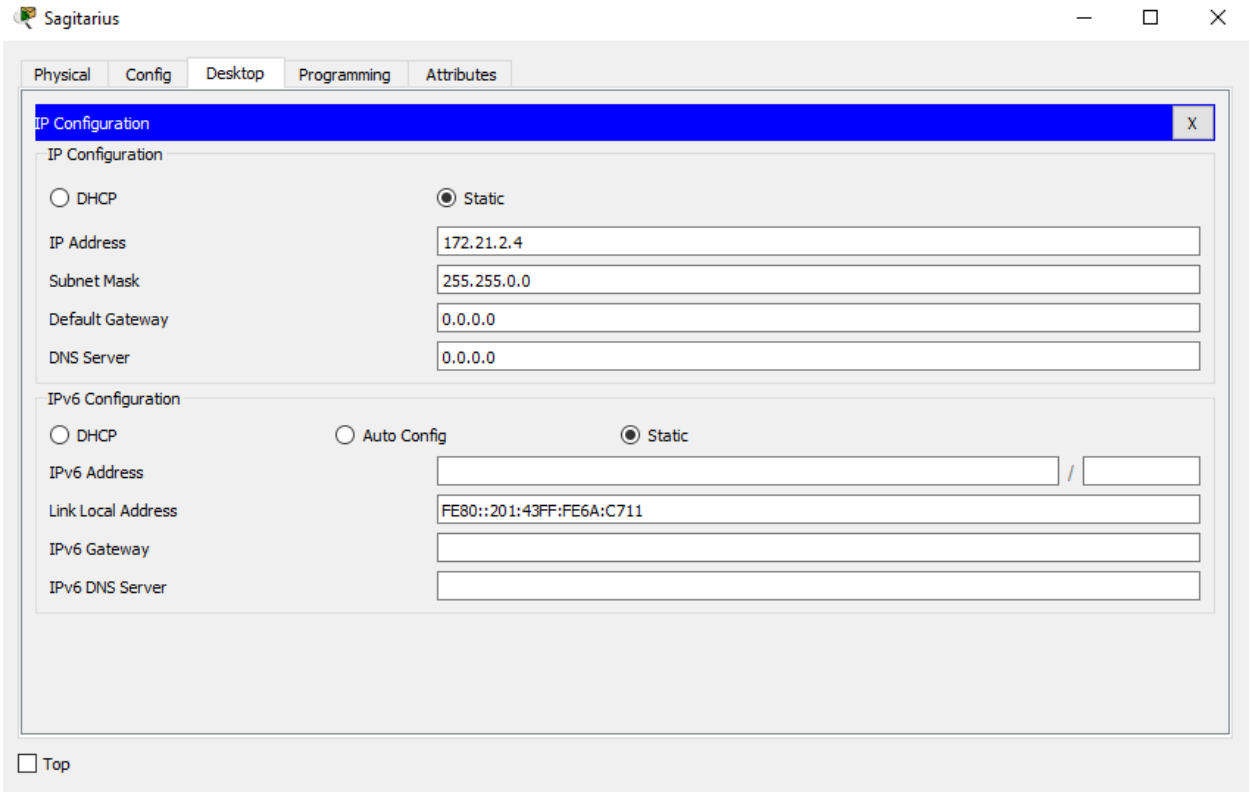
h. Gemini = 172.21.1.4/24



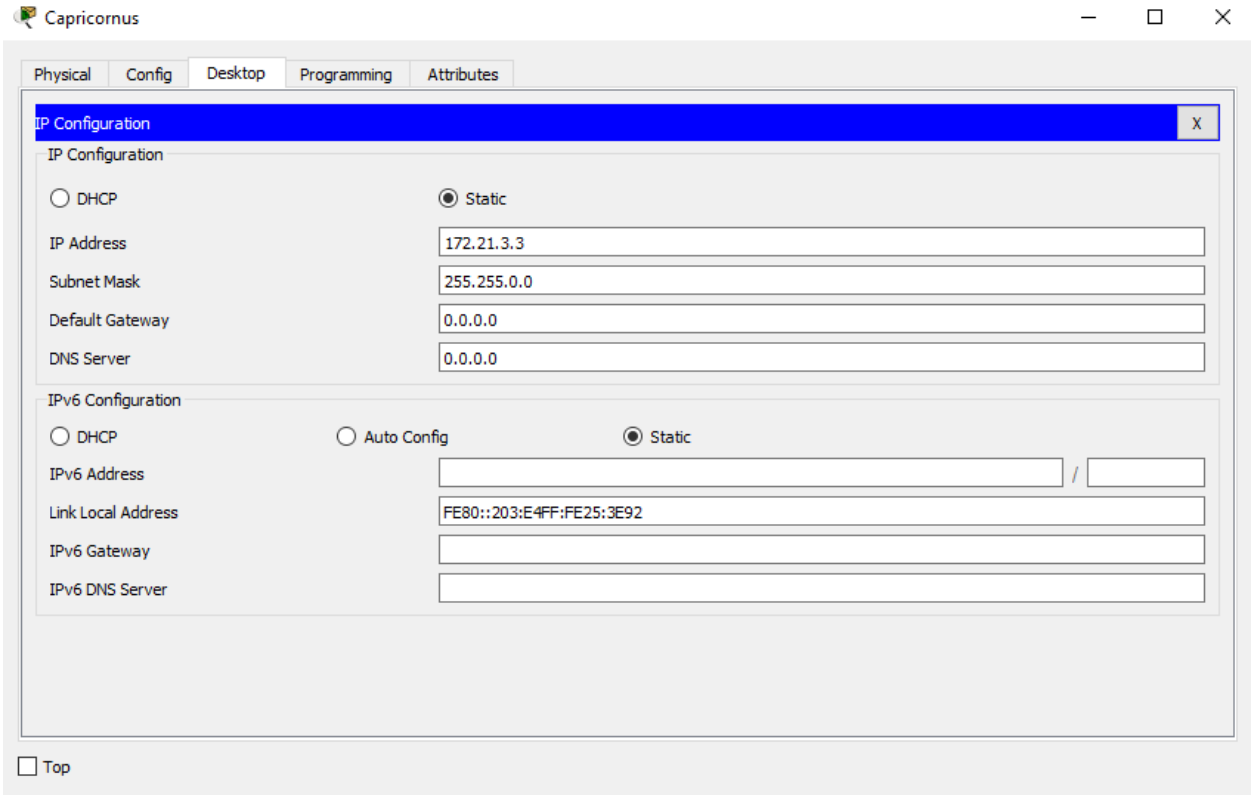
i. Cancer = 172.21.2.3/24



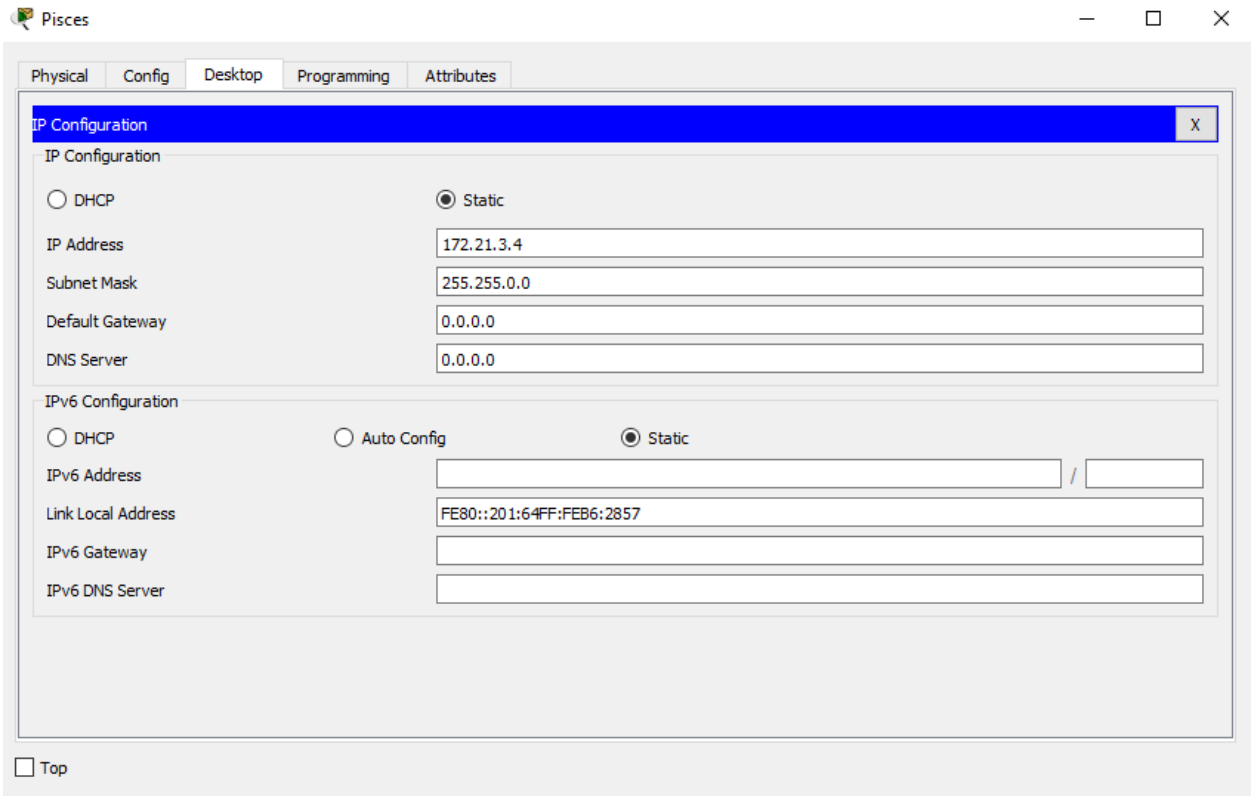
j. Sagitarius = 172.21.2.4/24



k. Capriconus = 172.21.3.3/24



I. Pisces = 172.21.3.4/24



E. Lakukan langkah 4 dan 5 lab 1 untuk switch 1

```
Switch>enable
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name zodiak1
Switch(config-vlan)#exit
Switch(config)#vlan20
                  ^
% Invalid input detected at '^' marker.

Switch(config)#vlan 20
Switch(config-vlan)#name zodiak2
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
Switch(config)#int fa 0/1
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/4
Switch(config-if)#int fa 0/4
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/2
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#int fa 0/3
Switch(config-if)#int fa 0/3
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#int fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#end
Switch#
%SYS-5-CONFIG_I: Configured from console by console
```

F. Lakukan konfigurasi VLAN trunking pada swtch 1

```
Switch#
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#int fa 0/1
Switch(config-if)#sw mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to up

Switch(config-if)#exit
Switch(config)#
```

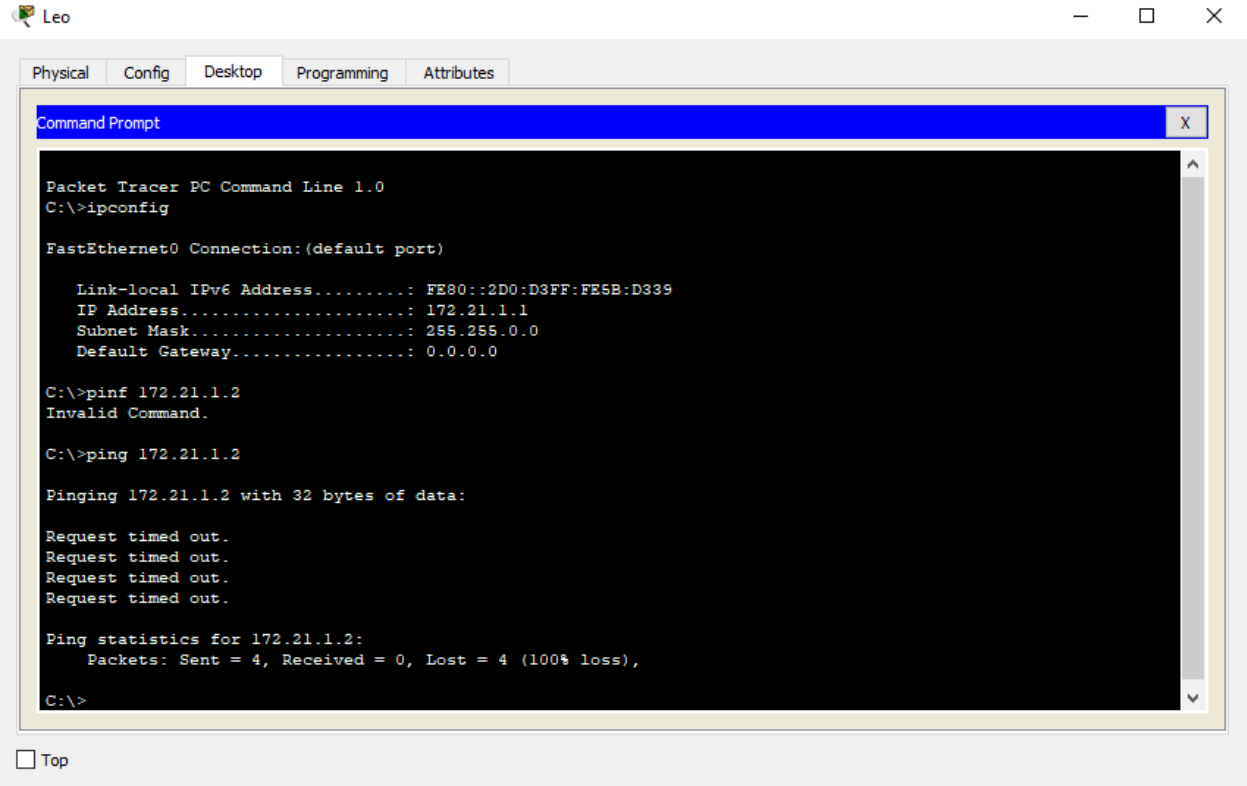
G. Pada mode user lihat konfigurasi tunking yang telah dibuat

```
Switch#show interface fastethernet 0/1 switchport
Name: Fa0/1
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: Off
Access Mode VLAN: 10 (zodiak1)
Trunking Native Mode VLAN: 1 (default)
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk private VLANs: none
Operational private-vlan: none
Trunking VLANs Enabled: All
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL
Protected: false
 --More--
```

```
Switch#show vlan

VLAN Name                              Status    Ports
---- --------------------------------- --------- -------------------------------
1    default                           active    Fa0/6, Fa0/7, Fa0/8, Fa0/9
                                                 Fa0/10, Fa0/11, Fa0/12, Fa0/13
                                                 Fa0/14, Fa0/15, Fa0/16, Fa0/17
                                                 Fa0/18, Fa0/19, Fa0/20, Fa0/21
                                                 Fa0/22, Fa0/23, Fa0/24, Gig0/1
                                                 Gig0/2
10   zodiak1                           active    Fa0/4
20   zodiak2                           active    Fa0/2
30   zodiak3                           active    Fa0/3, Fa0/5
1002 fddi-default                      active
1003 token-ring-default                active
1004 fddinet-default                   active
1005 trnet-default                     active

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
10   enet  100010     1500  -      -      -        -    -        0      0
20   enet  100020     1500  -      -      -        -    -        0      0
30   enet  100030     1500  -      -      -        -    -        0      0
1002 fddi  101002     1500  -      -      -        -    -        0      0
1003 tr    101003     1500  -      -      -        -    -        0      0
1004 fdnet 101004     1500  -      -      -        ieee -        0      0
1005 trnet 101005     1500  -      -      -        ibm  -        0      0

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------

Remote SPAN VLANs
------------------------------------------------------------------------------

Primary Secondary Type              Ports
------- --------- ----------------- ------------------------------------------
Switch#
```

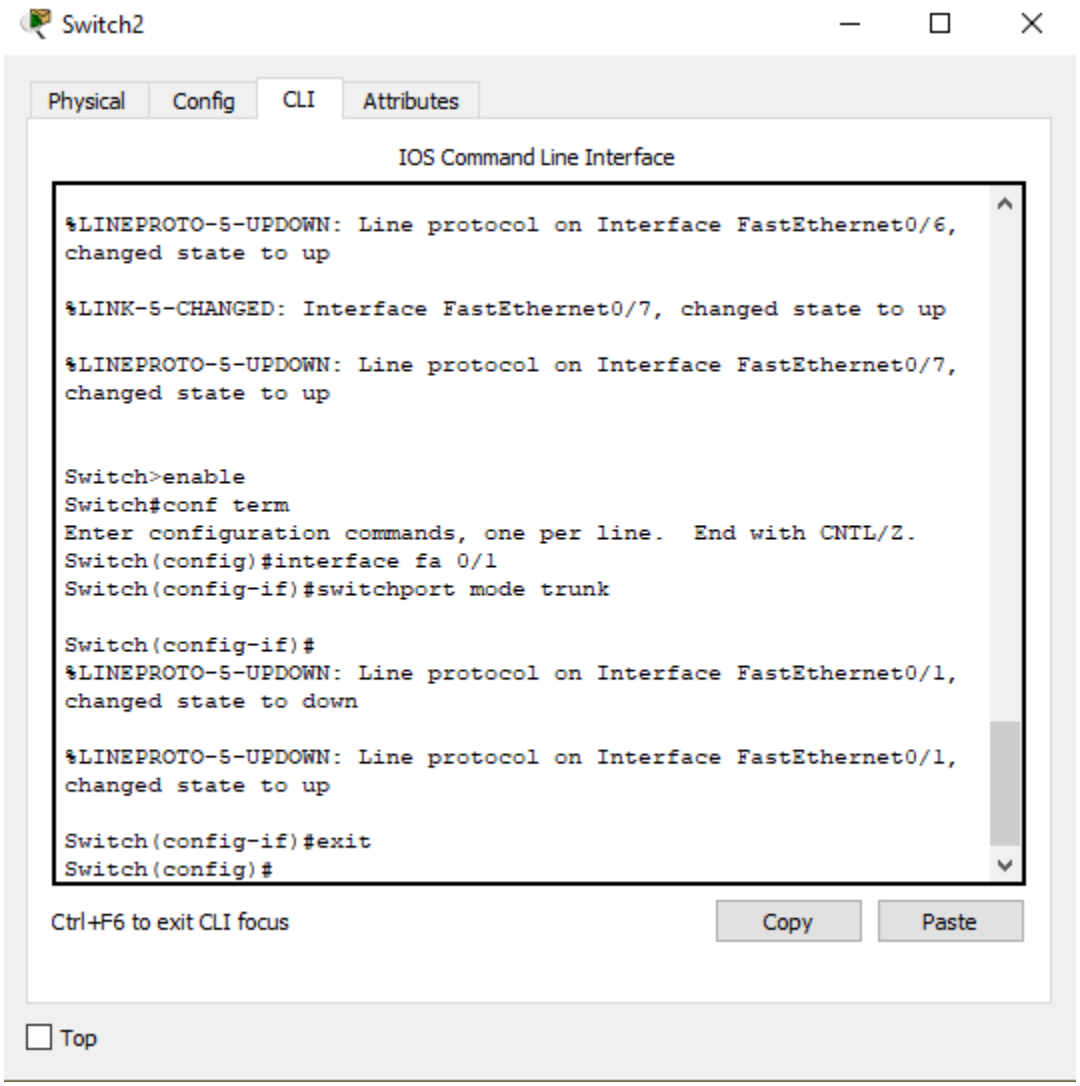
Tugas 7A : mengaktifkan switch port fa0/1(port yang digunakan untuk trunk), Administrative mode menjadi trunk dan juga operational mode trunk.

H. Lakukan ping dari pc leo ke pc pisces



ping dari PC leo ke PC pisces mendapatkan RTo karena keduanya berada pada jaringan yang berbeda dan dalam kondisi VLAN keduanya berada dalam VLAN yang berbeda

I. Lakukan konfigurasi vlan trunking pada switch2

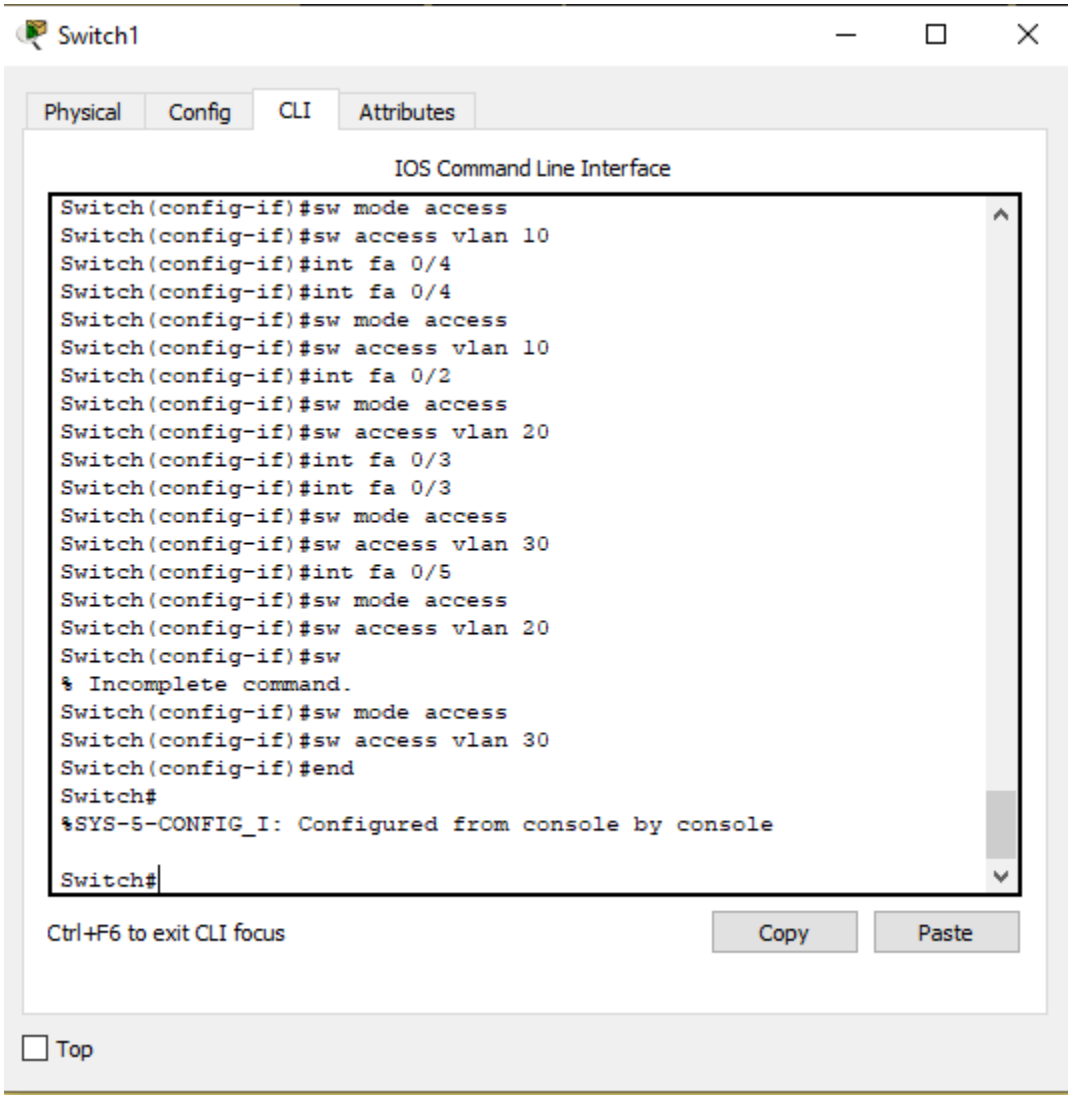


J. Lihat konfigurasi VLAN pada switch2

```
% Invalid input detected at '^' marker.

Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show vlan

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/2, Fa0/3, Fa0/4, Fa0/5
                                                Fa0/6, Fa0/7, Fa0/8, Fa0/9
                                                Fa0/10, Fa0/11, Fa0/12, Fa0/13
                                                Fa0/14, Fa0/15, Fa0/16, Fa0/17
                                                Fa0/18, Fa0/19, Fa0/20, Fa0/21
                                                Fa0/22, Fa0/23, Fa0/24, Gig0/1
                                                Gig0/2
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
1002 fddi  101002     1500  -      -      -        -    -        0      0
1003 tr    101003     1500  -      -      -        -    -        0      0
1004 fdnet 101004     1500  -      -      -        ieee -        0      0
1005 trnet 101005     1500  -      -      -        ibm  -        0      0

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------

Remote SPAN VLANs
------------------------------------------------------------------------------

Primary Secondary Type              Ports
------- --------- ----------------- ------------------------------------------
Switch#
```

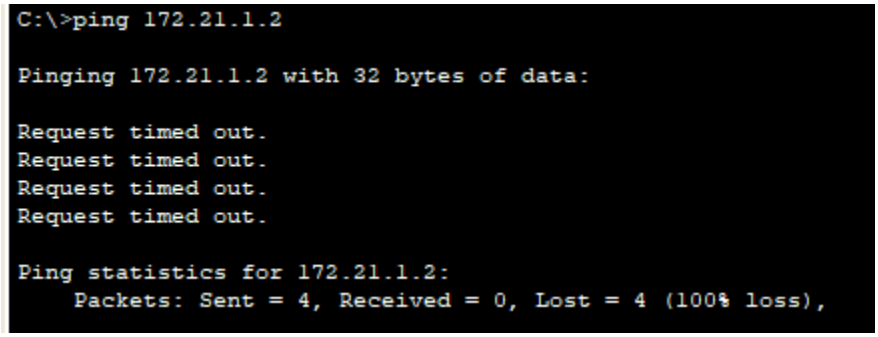
Dapat disimpulkan bahwa pad konfigurasi trunking sudah dilakkan dan dalam switc menunjukan konfigurasi trunking sudah berjalan. Port yang telah didaftarkan dalam trunking memiliki kapasitas untuk memanaged beberapa hal yang berkaitan dengan domain

K. Pada mode configuration, konfigurasi port-port switch ke dalam VLAN



L. Lakukan ping dari:

a. Leo ke Aries



b. Leo ke Aquarius

```
C:\>ping 172.21.1.3

Pinging 172.21.1.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.1.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

c. Leo ke Pisces

```
C:\>ping 172.21.3.4

Pinging 172.21.3.4 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.3.4:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

d. Libra ke Cancer

```
C:\>ping 172.21.2.3

Pinging 172.21.2.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.2.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

e. Libra ke Leo

```
Packet Tracer PC Command Line 1.0
C:\>ping 172.21.1.1

Pinging 172.21.1.1 with 32 bytes of data:

Reply from 172.21.1.1: bytes=32 time=49ms TTL=128
Reply from 172.21.1.1: bytes=32 time<1ms TTL=128
Reply from 172.21.1.1: bytes=32 time<1ms TTL=128
Reply from 172.21.1.1: bytes=32 time=13ms TTL=128

Ping statistics for 172.21.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 49ms, Average = 15ms
```

Tugas 12A:

I. **Dari langkah 8 dapat disimpulkan bahwa seluruh drvice yang sudah dikonfigurasi hasil dari pengujian koneksi menunjukan bahwa device yang dalam jaringan yang sama namun memiliki perbedaan VLAN menunjukan hasil RTO, dalam network yang sama namun dalam VLAN berbeda juga menunjukan RTO.**

II. **Untuk hasil pengujian koneksi yang reply hanyalah dalam device dengan spesifikasi jaringan yang sama dan dalam VLAN yang sama.perlu adanya konfigurasi gateway dalam switch agar dalam setiap device dapat terkoneksi satu dengan yang lainnya.**