PRAKTIKUM
JARINGAN KOMPUTER
(Computer Networking)

LAPORAN TUGAS
MODUL 4

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PROGRAM STUDI INFORMATIKA

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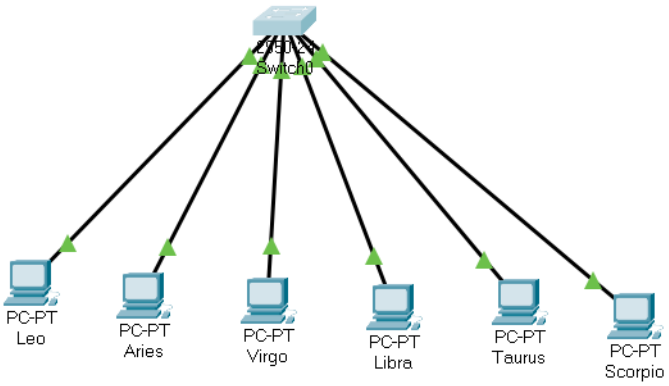
SURAKARTA

Kegiatan 1

topologi



Konfigurasi VLAN

Switch0

Physical Config CLI Attributes

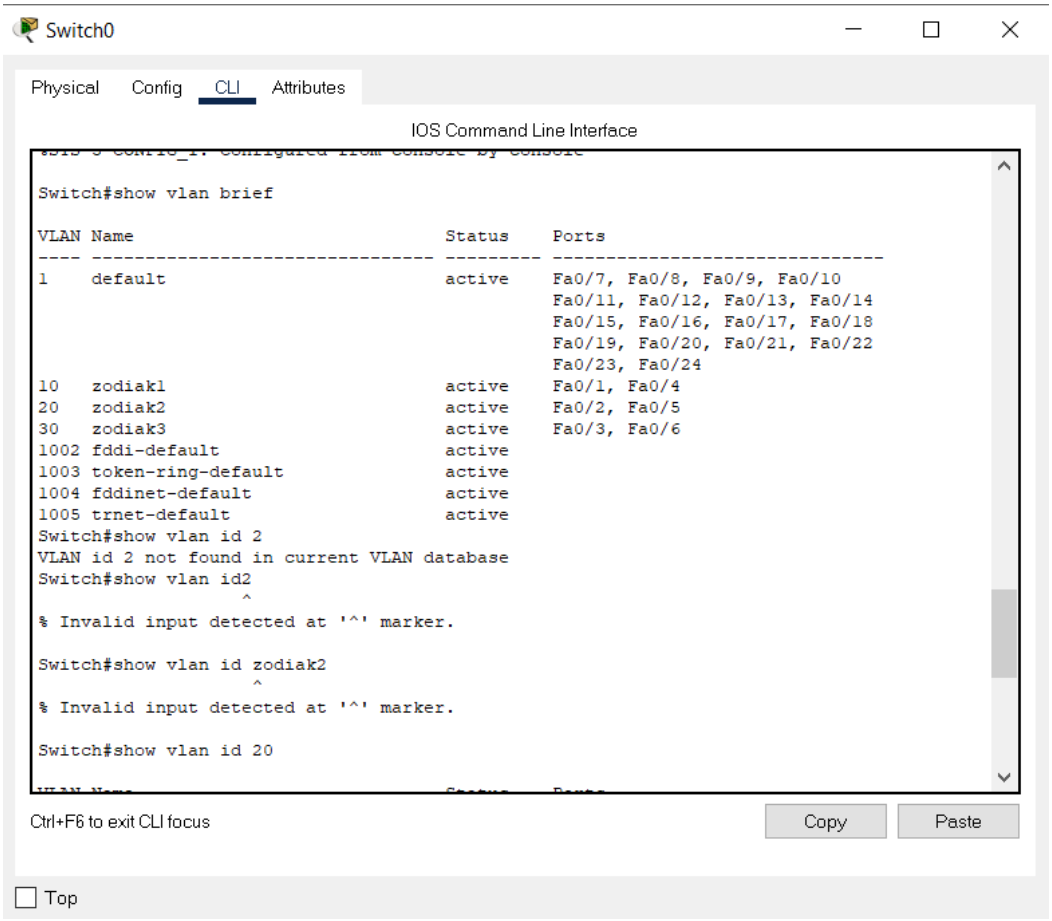
IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/6, changed state to up


Switch>enable
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#vlan zodiakl
                    ^
% Invalid input detected at '^' marker.

Switch(config)#vlanl0
                   ^
% Invalid input detected at '^' marker.

Switch(config)#vlan 10
Switch(config-vlan)#nam
% Incomplete command.
Switch(config-vlan)#name zodiakl
Switch(config-vlan)#exit
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)#
Switch(config)#interface Fastethernet 0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#interface Fastethernet 0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#interface Fastethernet 0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#interface Fastethernet 0/5
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#interface Fastethernet 0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#interface Fastethernet 0/6
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console
```

Ctrl+F6 to exit CLI focus

Copy Paste

Menampilkan VLAN brief (informasi VLAN keseluruhan



Tugas 6A

No	Variabel	Nilai
1.	Nomor VLAN	10
2.	Nama VLAN	zodiak1
3.	Port	Fa0/1, Fa0/4
4.	Status	active

```
Switch#show vlan id 10

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
10   zodiak1                          active    Fa0/1, Fa0/4

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
10   enet  100010     1500  -      -      -        -    -        0      0
```

No	Variabel	Nilai
1.	Nomor VLAN	20
2.	Nama VLAN	zodiak2
3.	Port	Fa0/2, Fa0/5
4.	Status	active

```
Switch#show vlan id 20

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
20   zodiak2                          active    Fa0/2, Fa0/5

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

No	Variabel	Nilai
1.	Nomor VLAN	30
2.	Nama VLAN	zodiak3
3.	Port	Fa0/3, Fa0/6
4.	Status	active

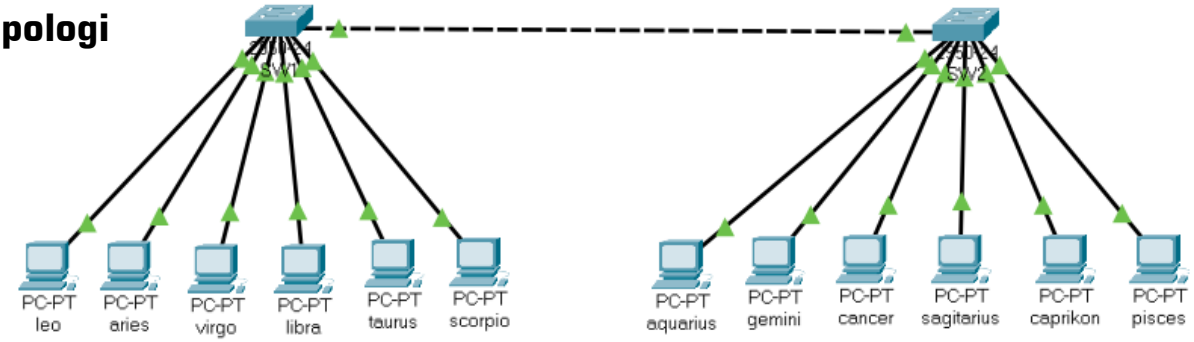
```
Switch#show vlan id 30

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
30   zodiak3                          active    Fa0/3, Fa0/6

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

Tugas 6B

Dari hasil praktikum diatas didapatkan beberapa VLAN yang menampung beberapa port dimana port yang terbagi tersebut hanya bisa berhubungan dengan sesama port yang berada pada VLAN yang sama dan tentunya dengan alamat IP yang sama juga.

Kegiatan 2

Topologi



Konfigurasi VLAN

SW1

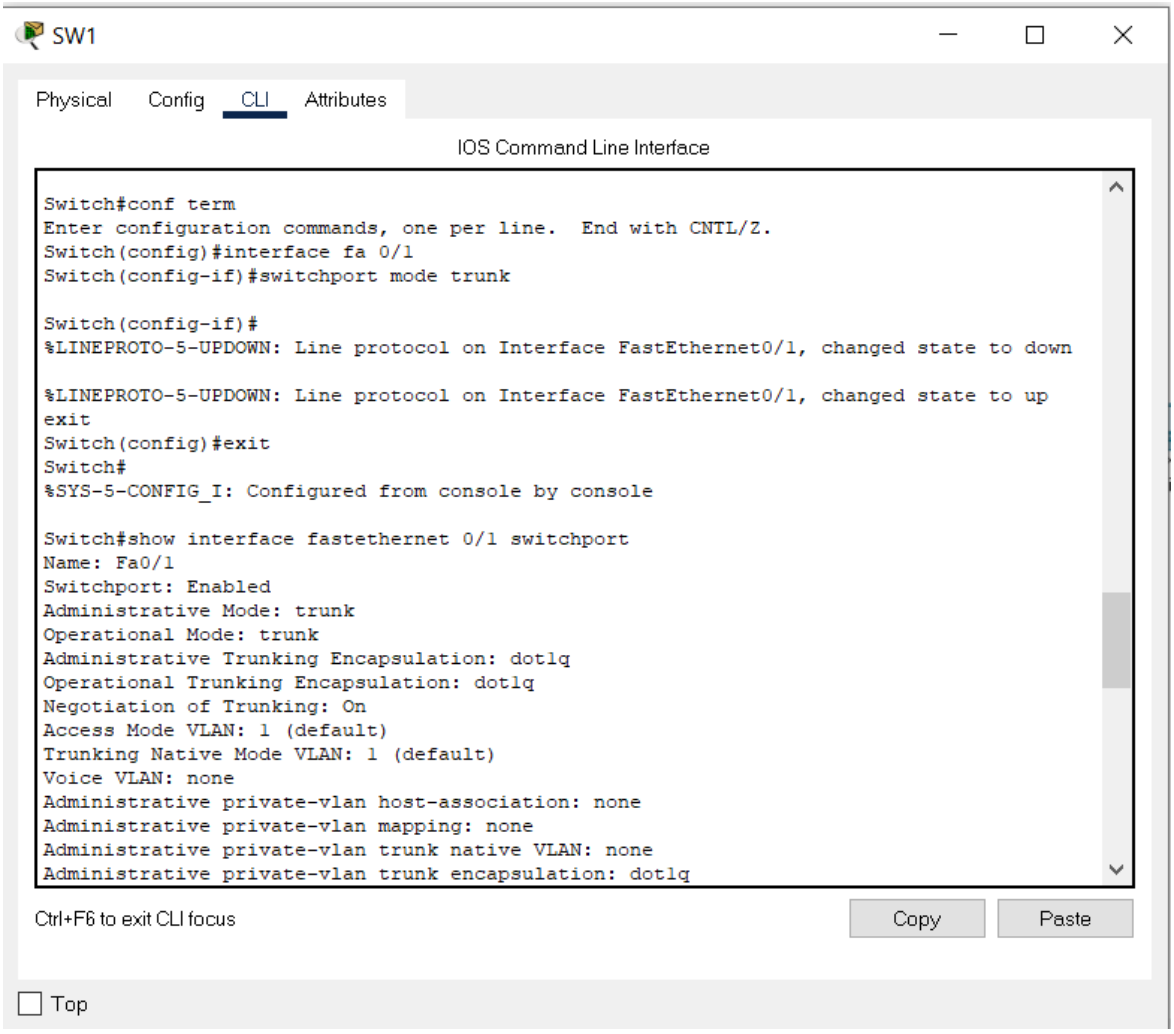
Physical Config CLI Attributes

IOS Command Line Interface

```
Switch>enable
Switch#vlan 10
           ^
% Invalid input detected at '^' marker.

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)#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)#
Switch(config)#interface Fastethernet 0/2;
                                         ^
% Invalid input detected at '^' marker.

Switch(config)#interface Fastethernet 0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#interface Fastethernet 0/5
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#interface Fastethernet 0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#interface Fastethernet 0/6
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#interface Fastethernet 0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#interface Fastethernet 0/7
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#
Switch(config)#
```

Ctrl+F6 to exit CLI focus Copy Paste

Konfigurasi VLAN trunking



Menampilkan interface port trunking

```
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: On
Access Mode VLAN: 1 (default)
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
Appliance trust: none
```

Melihat konfigurasi VLAN

```
Switch#show vlan

VLAN Name                              Status    Ports
---- --------------------------------- --------- -------------------------------
1    default                           active    Fa0/1, 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
10   zodiak1                           active    Fa0/2, Fa0/5
20   zodiak2                           active    Fa0/3, Fa0/6
30   zodiak3                           active    Fa0/4, Fa0/7
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#
Switch#
Switch#
```

Tugas 7A

Pada hasil praktikum Langkah 7 didapat no VLAN baru yaitu 10,20,30 yang diberi nama zodiak1, zodiak2, zodiak3 dimana pada setiap VLAN terdapat beberapa port saya ambil contoh untuk zodiak2 terdapat port Fa0/3, dan Fa0/6.

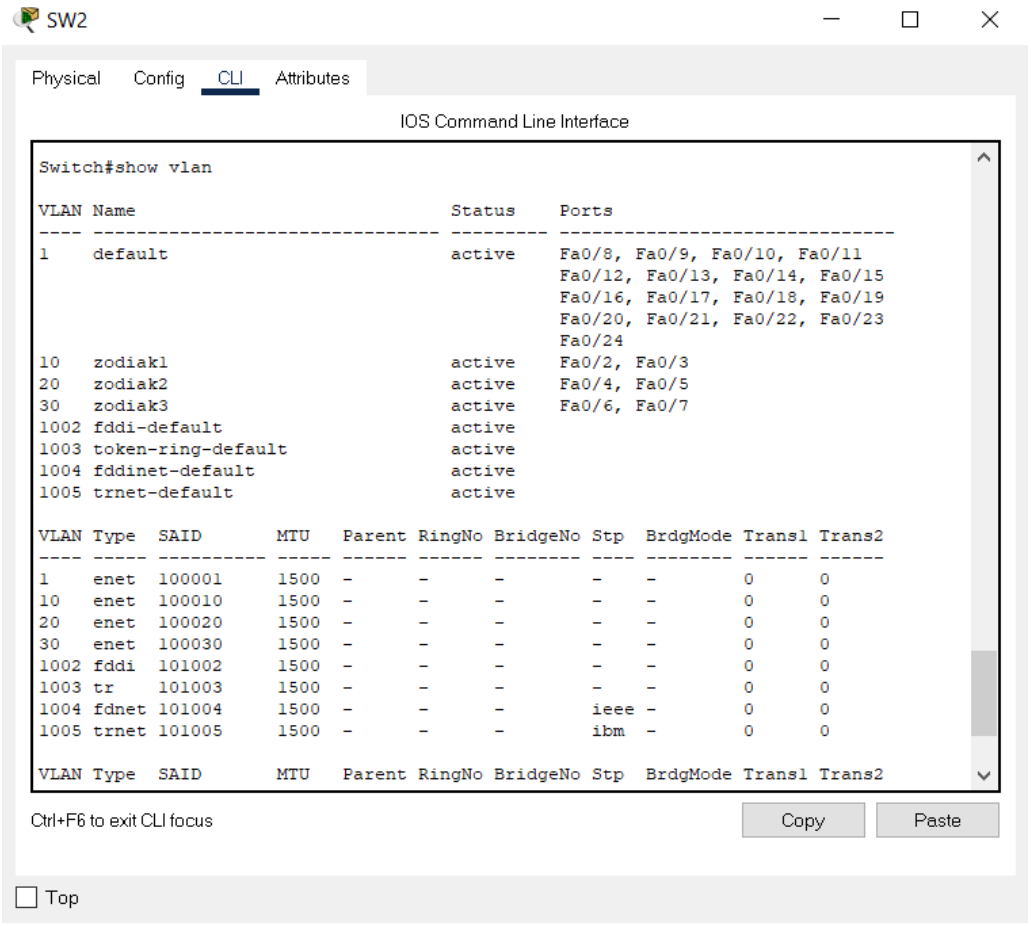
Ping PC leo ke PC pisces

```
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),

C:\>
```

Tugas 8A

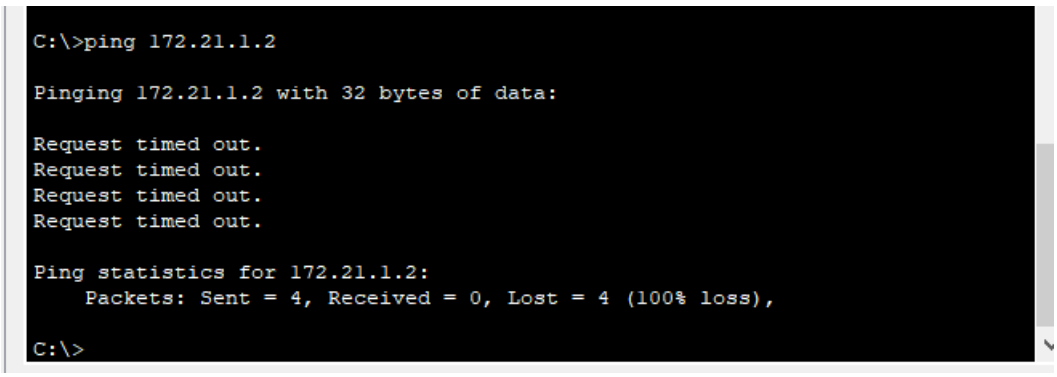
pada hasil Langkah 8 didapatkan bahwa hasil dari ping koneksi adalah Rto (request time out) hal ini terjadi karena alamat ip address atai id yang digunakan tidak sama, sehingga tidak terjadi koneksi, dimana pc leo menggunakan ip 172.21.1.1 dan pc pisces menggunakan ip 172.21.3.4

konfigurasi VLAN SW2

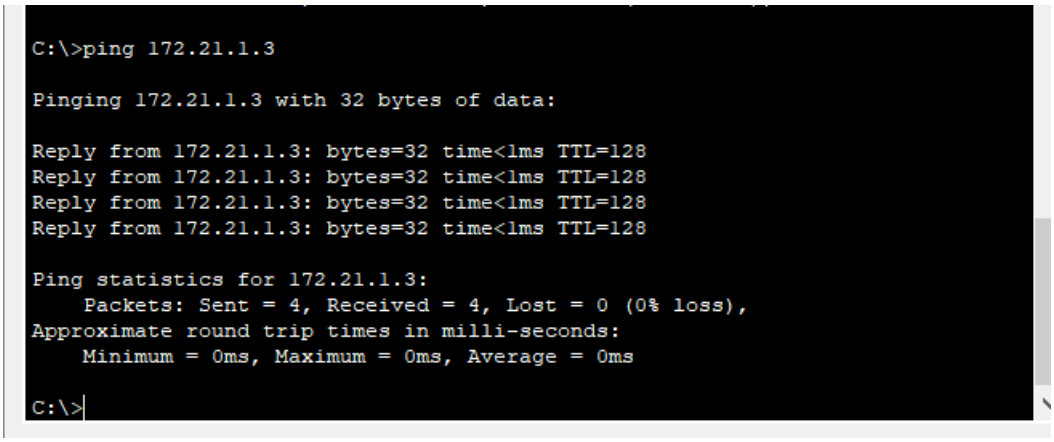


Melakukan test koneksi

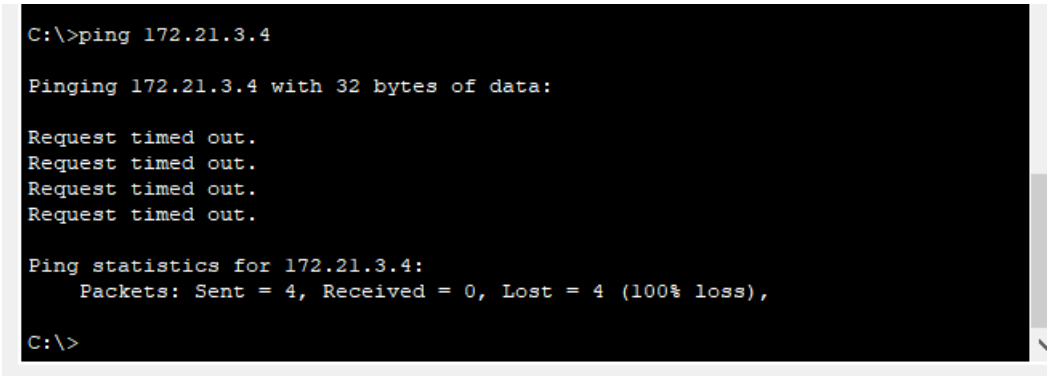
PC leo > PC aries



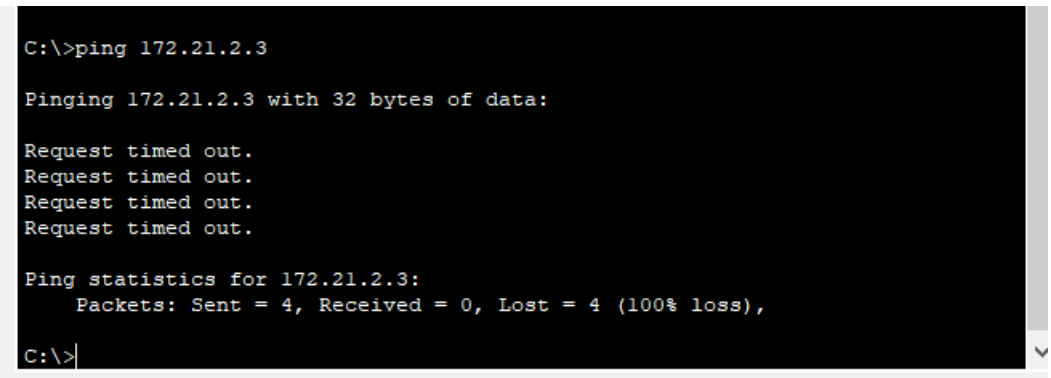
PC leo > PC aquarius



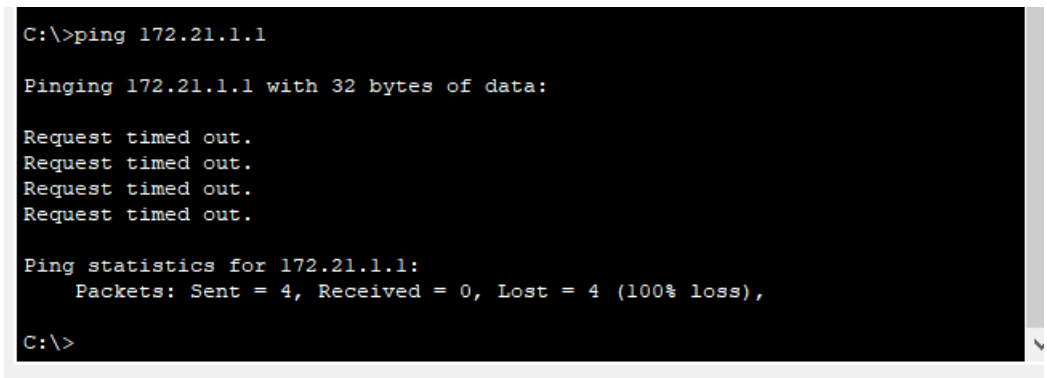
PC leo > PC pisces



PC libra > PC cancer



PC libra > PC leo



Tugas 12A

Dari hasil praktikum Langkah diatas diperoleh hasil PC leo dapat terhubung dengan PC aquarius karena kedua PC terdapat dalam VLAN yang sama dan menggunakan alamat IP yang sama juga, untuk PC lain nya kenapa terjadi RTo atau request time out, hal tersebut disebabkan karena alamat IP yang digunakan berbeda dan jalur VLAN yang dipakai juga berbeda sehingga koneksi tidak dapat terjadi.