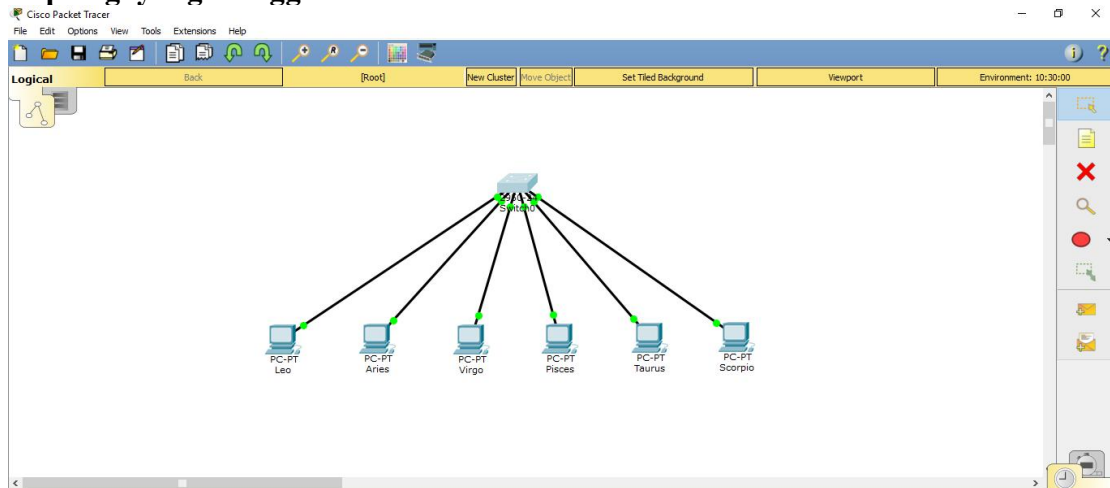


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Kelas A

Modul 4

KEGIATAN 1.

Topologi yang menggunakan switch 2950-24.



Keterangan alamat IP :

- Leo : 172.21.1.1/24
- Aries : 172.21.1.2/24
- Virgo : 172.21.1.3/24
- Pisces : 172.21.1.4/24
- Taurus : 172.21.1.5/24
- Scorpio : 172.21.1.6/24

Membuat VLAN dengan nama zodiak1, zodiak2, dan zodiak3

```
Switch>en
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
```

Konfigurasi port masing-masing PC ke VLAN

1. untuk zodiak1 = leo(port 0/1) dan libra(port 0/4)

```
Switch(config)#int fa 0/1
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#exit
Switch(config)#int fa 0/4
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#exit
Switch(config)#
```

2. untuk zodiak2 = aries (port 0/2) dan taurus (port 0/5)

```
Switch(config)#int fa 0/2
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#exit
Switch(config)#int fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#exit
Switch(config)#
```

3. untuk zodiak3 = virgo (port 0/3) dan scorpio (port 0/6)

```
Switch(config)#int fa 0/3
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#exit
Switch(config)#int fa 0/6
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#exit
Switch(config)#exit
```

Melihat hasil konfigurasi

1. Informasi VLAN keseluruhan

Switch0

Physical Config CLI Attributes

IOS Command Line Interface

```
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show vlan brief

VLAN Name                Status    Ports
-----
1    default                active    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
10   zodiak1                 active    Fa0/1, Fa0/4
20   zodiak2                 active    Fa0/2, Fa0/5
30   zodiak3                 active    Fa0/3, Fa0/6
1002 fddi-default          active
1003 token-ring-default    active
1004 fddinet-default       active
1005 trnet-default         active
Switch#
```

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☐ Top

2. Informasi vlan 10

```
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

Switch#
```

3. Informasi vlan 20

```
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

Switch#
```

4. Informasi vlan 30

```
Switch#show vlan id 30

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

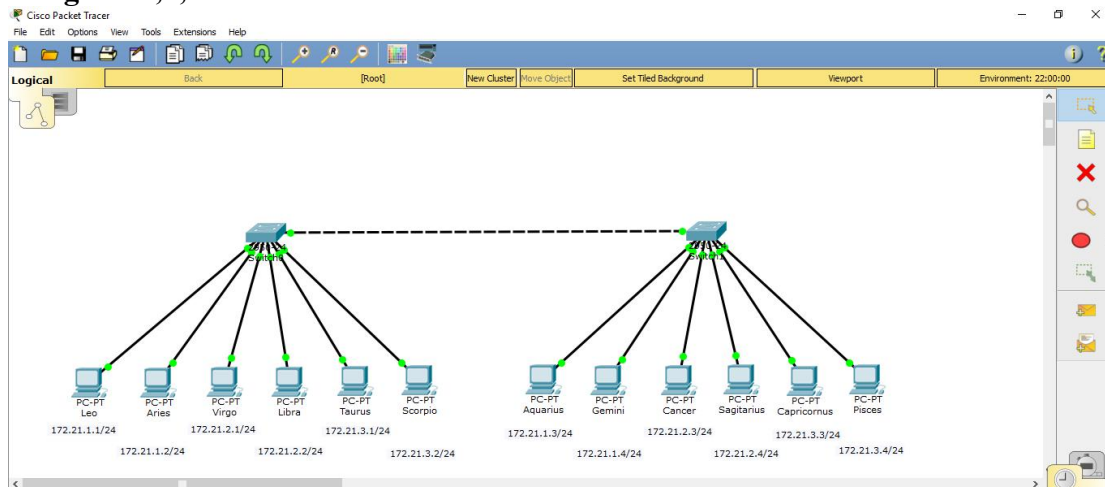
VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp    BrdgMode
Trans1 Trans2
-----
30    enet    100030    1500    -      -      -      -      -
0      0

Switch#
```

No.	Variable	nilai		
1	Nomor VLAN	10	20	30
2	Nama VLAN	zodiak1	zodiak2	zodiak3
3	Port	0/1,0/4	0/2,0/5	0/3,0/6
4	Status	active	active	active

KEGIATAN 2.

Topologi yang menggunakan switch 2950-24. Langkah 1,2,3 dan 4



Switch 2 :

```
Physical  Config  CLI  Attributes

IOS Command Line Interface

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7, changed state to up

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

Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#inter Fa 0/1
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport access vlan 10
Switch(config-if)#inter Fa 0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#int Fa 0/3
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#inter Fa 0/4
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#exit
Switch(config)#inter Fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
```

Konfigurasi VLAN trunking pada switch 1 dan melihat konfigurasinya

IOS Command Line Interface

```
Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa 0/7
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7, changed state to up

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

Switch#show interface trunk
Port      Mode      Encapsulation  Status      Native vlan
Fa0/7     on        802.1q         trunking    1

Port      Vlans allowed on trunk
Fa0/7     1-1005

Port      Vlans allowed and active in management domain
Fa0/7     1,10,20,30

Port      Vlans in spanning tree forwarding state and not pruned
Fa0/7     1,10,20,30

Switch#show vlan

VLAN Name                Status    Ports
-----
1    default                active    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    Fa0/1, Fa0/4
```

Physical Config CLI Attributes

IOS Command Line Interface

```
Switch#show interface trunk
Port      Mode      Encapsulation  Status      Native vlan
Fa0/7     on        802.1q         trunking    1

Port      Vlans allowed on trunk
Fa0/7     1-1005

Port      Vlans allowed and active in management domain
Fa0/7     1,10,20,30

Port      Vlans in spanning tree forwarding state and not pruned
Fa0/7     1,10,20,30

Switch#show vlan

VLAN Name                Status    Ports
-----
1    default                active    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    Fa0/1, Fa0/4
20   zodiak2                 active    Fa0/2, Fa0/5
30   zodiak3                 active    Fa0/3, Fa0/6
1002 fddi-default          active
1003 token-ring-default   active
1004 fddinet-default      active
1005 trnet-default        active

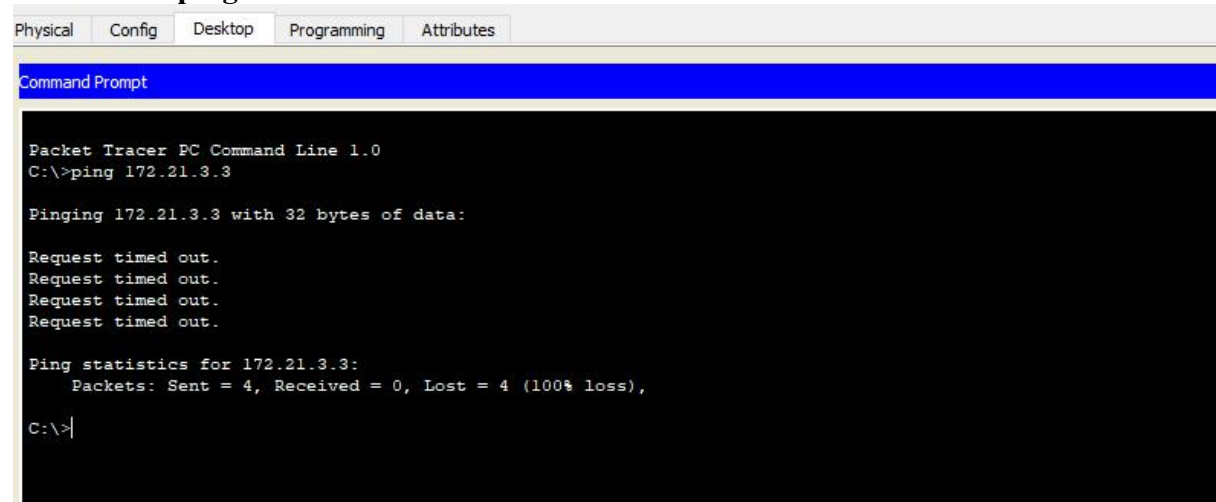
VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp    BrdgMode Trans1 Trans2
-----
1    enet     100001   1500   -      -      -      -      -      0      0
10   enet     100010   1500   -      -      -      -      -      0      0
20   enet     100020   1500   -      -      -      -      -      0      0
30   enet     100030   1500   -      -      -      -      -      0      0
--More--
```

Ctrl+F6 to exit CLI focus

Tugas 7A:

Hasil yang diperoleh pada mode privileged pada switch 1 yaitu pada vlans allowed on trunk mempunyai nilai 1-1005 pada port fa 0/7 yang artinya menggunakan jaringan skala kecil dan menengah. Vlan allowed and active in management domain (config untuk manajemen switch) memiliki nilai 1,10,20,30. vlans spanning tree forwarding state and not pruned mempunyai nilai 1,10,20,30. Mempunyai status trunking mode on, encapsulation 802.1q (protokol umum yang didukung oleh banyak vektor)

Melakukan ping dari PC Leo ke PC Pisces



```
Physical  Config  Desktop  Programming  Attributes
Command Prompt

Packet Tracer PC Command Line 1.0
C:\>ping 172.21.3.3

Pinging 172.21.3.3 with 32 bytes of data:

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

Ping statistics for 172.21.3.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```

Tugas 8A:

Hasil ping dari pc leo ke pc pisces bukanlah reply, tetapi request timed out (RTO), karena permintaan koneksi yang lama dan subnet address nya sudah berbeda.

Konfigurasi VLAN trunking pada switch 1 dan melihat konfigurasinya

```
Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa 0/7
Switch(config-if)#sw mode trunk
Switch(config-if)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#
```

```
Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa 0/7
Switch(config-if)#sw mode trunk
Switch(config-if)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console
```

```
Switch#show vlan
```

VLAN	Name	Status	Ports
1	default	active	Fa0/6, 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	Fa0/1, Fa0/2
20	zodiak2	active	Fa0/3, Fa0/4
30	zodiak3	active	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

--More--

Ctrl+F6 to exit CLI focus

Physical
Config
CLI
Attributes

IOS Command Line Interface

```

Switch#show interface trunk
Port      Mode           Encapsulation  Status        Native vlan
Fa0/7     on              802.1q          trunking      1

Port      Vlans allowed on trunk
Fa0/7     1-1005

Port      Vlans allowed and active in management domain
Fa0/7     1,10,20,30

Port      Vlans in spanning tree forwarding state and not pruned
Fa0/7     1,10,20,30

Switch#show vlan

VLAN Name                Status    Ports
-----
1    default                active    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    Fa0/1, Fa0/4
20   zodiak2                 active    Fa0/2, Fa0/5
30   zodiak3                 active    Fa0/3, Fa0/6
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
--More--

```

Ctrl+F6 to exit CLI focus

Tugas 10A:

Hasil yang diperoleh pada mode privileged pada switch 1 yaitu pada vlans allowed on trunk mempunyai nilai 1-1005 pada port fa 0/7 yang artinya menggunakan jaringan skala kecil dan menengah. Vlan allowed and active in management domain (config untuk manajemen switch) memiliki nilai 1,10,20,30. vlans spanning tree forwarding state and not pruned mempunyai nilai 1,10,20,30. Mempunyai status trunking mode on, encapsulation 802.1q (protokol umum yang didukung oleh banyak vektor)

Konfigurasi port-port switch ke dalam VLAN zodiak1, zodiak2, dan zodiak3

Physical	Config	CLI	Attributes
----------	--------	-----	------------

IOS Command Line Interface

```
*LINEPROTO-S=UPDOWN: Line protocol on Interface FastEthernet0/6, changed state to up

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)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#exit
Switch(config)#int Fa 0/2
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#int Fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#exit
Switch(config)#int Fa 0/3
Switch(config-if)#sw mode access vlan 30'
^
% Invalid input detected at '^' marker.

Switch(config-if)#sw mode access vlan 30
^
% Invalid input detected at '^' marker.

Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#int Fa 0/6
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show id 10
^
% Invalid input detected at '^' marker.
```

Ctrl+F6 to exit CLI focus

Melakukan ping

1. Ping dari Leo ke Aries

```
C:\>ping 172.21.1.2

Pinging 172.21.1.2 with 32 bytes of data:

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

Ping statistics for 172.21.1.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>|
```

2. Ping dari Leo ke Aquarius

```
C:\>ping 172.21.1.3

Pinging 172.21.1.3 with 32 bytes of data:

Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 172.21.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>|
```

3. Ping dari 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),

C:\>|
```

4. Ping dari Libra ke Cancer

```
Packet Tracer PC Command Line 1.0
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),

C:\>|
```

5. Ping dari Libra ke Leo

```
C:\>ping 172.21.1.1

Pinging 172.21.1.1 with 32 bytes of data:

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

Ping statistics for 172.21.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>|
```

Tugas 12A:

Hasil ping PC leo ke PC pisces adalah request time out permintaan koneksi yang lama dan karena subnet address nya sudah berbeda.