

**PRAKTIKUM
JARINGAN KOMPUTER
(Computer Networking)**

**LAPORAN TUGAS
MODUL 6**

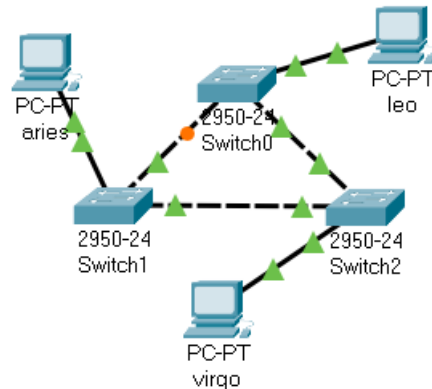


**Nama : Shafa Bani Saputra
NIM : L200190151
Kelas : D**

**PROGRAM STUDI INFORMATIKA
FAKULTAS KOMUNIKASI DAN INFORMATIKA
UNIVERSITAS MUHAMMADIYAH
SURAKARTA**

Kegiatan 1

Topologi



show spanning-tree (switch0, switch1, switch2)

Switch0

Physical Config CLI Attributes

IOS Command Line Interface

```

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

Switch>
Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address    0001.63EA.52EE
            Cost        19
            Port        23(FastEthernet0/23)
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
            Address    00E0.B063.E32A
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
            Aging Time  20

Interface Role Sts Cost Prio.Nbr Type
-----
Fa0/1     Desg FWD 19   128.1  P2p
Fa0/24    Altn BLK 19   128.24 P2p
Fa0/23    Root FWD 19   128.23 P2p
          
```

Switch#

Switch1

Physical Config CLI Attributes

IOS Command Line Interface

```

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

Switch>
Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address    0001.63EA.52EE
            Cost        19
            Port        24(FastEthernet0/24)
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
            Address    0005.5E6C.C2C6
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
            Aging Time  20

Interface Role Sts Cost Prio.Nbr Type
-----
Fa0/23    Desg FWD 19   128.23 P2p
Fa0/24    Root FWD 19   128.24 P2p
Fa0/1     Desg FWD 19   128.1  P2p
          
```

Switch#

Switch2

Physical Config CLI Attributes

IOS Command Line Interface

```

state to up

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

Switch>
Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address    0001.63EA.52EE
            This bridge is the root
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
            Address    0001.63EA.52EE
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
            Aging Time  20

Interface Role Sts Cost Prio.Nbr Type
-----
Fa0/1     Desg FWD 19   128.1  P2p
Fa0/23    Desg FWD 19   128.23 P2p
Fa0/24    Desg FWD 19   128.24 P2p
          
```

Switch#

Switch0

No	Variable	Nilai
1	Root ID	32769 0001 63EA 52EE
2	Priority	32769
3	MAC address	0001.63EA.52EE
4	Bridge ID	32769 00E0 B063 E32A
5	Cost (tiap Fa)	Fa 0/1 = 19 Fa 0/23 = 19 Fa 0/24 = 19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward delay	15 sec

Switch1

No	Variable	Nilai
1	Root ID	32769 0001 63EA 52EE
2	Priority	32769
3	MAC address	0001.63EA.52EE
4	Bridge ID	32769 0005 5E6C C2C6
5	Cost (tiap Fa)	Fa 0/1 = 19 Fa 0/23 = 19 Fa 0/24 = 19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward delay	15 sec

Switch2

No	Variable	Nilai
1	Root ID	32769 0001 63EA 52EE
2	Priority	32769
3	MAC address	0001.63EA.52EE
4	Bridge ID	32769 0001 63EA 52EE
5	Cost (tiap Fa)	Fa 0/1 = 19 Fa 0/23 = 19 Fa 0/24 = 19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward delay	15 sec

Root bridge

- Switch2

Designated bridge

- Switch1
- Switch0

Root port

- Switch0 = fa 0/23
- Switch1 = fa 0/24

Designated port

- Switch0 = fa 0/1
- Switch1 = fa 0/1, fa 0/23
- Switch2 = fa 0/1, fa 0/23, fa 0/24

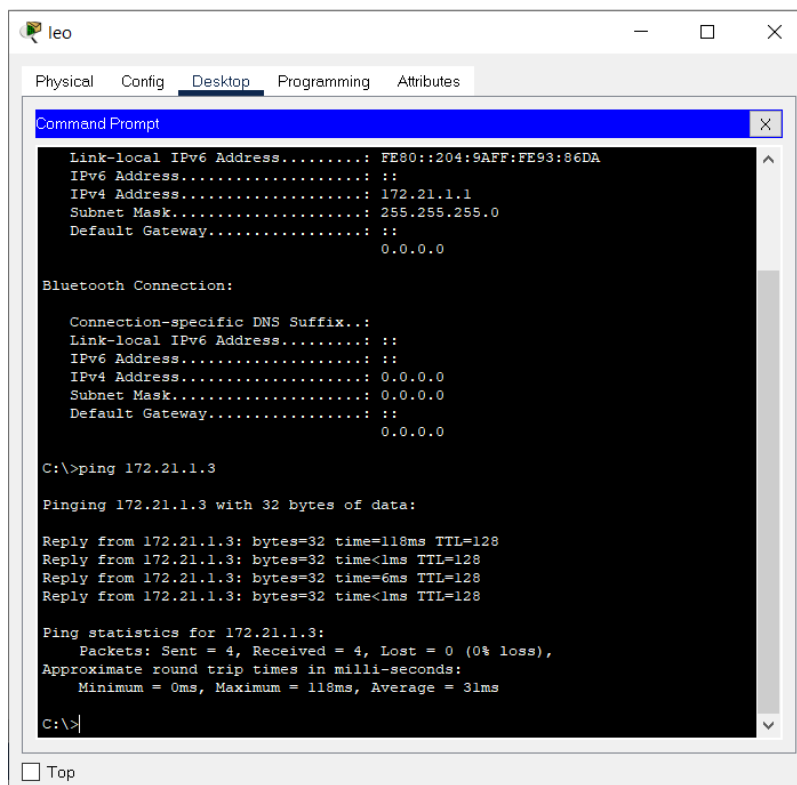
Forwarding condition

- Switch0 = fa 0/1, fa 0/23
- Switch1 = fa 0/1, fa 0/23, fa 0/24
- Switch2 = fa 0/1, fa 0/23, fa 0/24

blocking condition

- Switch0 = fa 0/24
- Switch1 = -
- Switch2 = -

Ping PC le oke PC virgo



```
leo
Physical Config Desktop Programming Attributes
Command Prompt
Link-local IPv6 Address.....: FE80::204:9AFF:FE93:86DA
IPv6 Address.....: ::
IPv4 Address.....: 172.21.1.1
Subnet Mask.....: 255.255.255.0
Default Gateway.....: ::
0.0.0.0

Bluetooth Connection:

Connection-specific DNS Suffix...:
Link-local IPv6 Address.....: ::
IPv6 Address.....: ::
IPv4 Address.....: 0.0.0.0
Subnet Mask.....: 0.0.0.0
Default Gateway.....: ::
0.0.0.0

C:\>ping 172.21.1.3

Pinging 172.21.1.3 with 32 bytes of data:

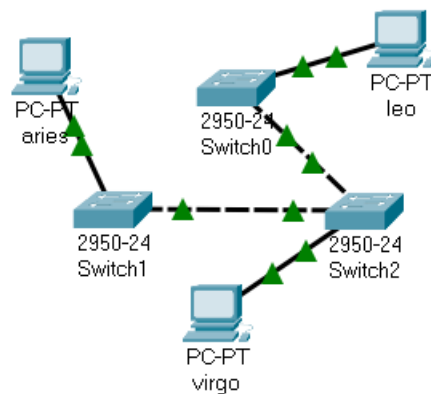
Reply from 172.21.1.3: bytes=32 time=118ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time=6ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128

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 = 118ms, Average = 31ms

C:\>
```

Kegiatan 2

Topologi



Show spanning-tree (switch0, switch1, switch2)

Switch0

Physical Config CLI Attributes

IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/23, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address    0001.63EA.52EE
            Cost        19
            Port        23(FastEthernet0/23)
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
            Address    00E0.B063.E32A
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
            Aging Time  20

Interface Role Sts Cost Prio.Nbr Type
-----
Fa0/1      Desg FWD 19   128.1  P2p
Fa0/23     Root FWD 19   128.23 P2p

Switch#
```

Switch1

Physical Config CLI Attributes

IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/24, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address    0001.63EA.52EE
            Cost        19
            Port        24(FastEthernet0/24)
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
            Address    0005.5E6C.C2C6
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
            Aging Time  20

Interface Role Sts Cost Prio.Nbr Type
-----
Fa0/24     Root FWD 19   128.24 P2p
Fa0/1      Desg FWD 19   128.1  P2p

Switch#
```

Switch2

Physical Config CLI Attributes

IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/24, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address    0001.63EA.52EE
            This bridge is the root
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
            Address    0001.63EA.52EE
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
            Aging Time  20

Interface Role Sts Cost Prio.Nbr Type
-----
Fa0/1      Desg FWD 19   128.1  P2p
Fa0/23     Desg FWD 19   128.23 P2p
Fa0/24     Desg FWD 19   128.24 P2p

Switch#
```

Switch0

No	Variable	Nilai
1	Root ID	32769 0001 63EA 52EE
2	Priority	32769
3	MAC address	0001.63EA.52EE
4	Bridge ID	32769 00E0 B063 E32A
5	Cost (tiap Fa)	Fa 0/1 = 19 Fa 0/23 = 19 Fa 0/24 = 19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward delay	15 sec

Switch1

No	Variable	Nilai
1	Root ID	32769 0001 63EA 52EE
2	Priority	32769
3	MAC address	0001.63EA.52EE
4	Bridge ID	32769 0005 5E6C C2C6
5	Cost (tiap Fa)	Fa 0/1 = 19 Fa 0/23 = 19 Fa 0/24 = 19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward delay	15 sec

Switch2

No	Variable	Nilai
1	Root ID	32769 0001 63EA 52EE
2	Priority	32769
3	MAC address	0001.63EA.52EE
4	Bridge ID	32769 0001 63EA 52EE
5	Cost (tiap Fa)	Fa 0/1 = 19 Fa 0/23 = 19 Fa 0/24 = 19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward delay	15 sec

Root bridge

- Switch2

Designated bridge

- Switch1
- Switch0

Root port

- Switch0 = fa 0/23
- Switch1 = fa 0/24

Designated port

- Switch0 = fa 0/1
- Switch1 = fa 0/1
- Switch2 = fa 0/1, fa 0/23, fa 0/24

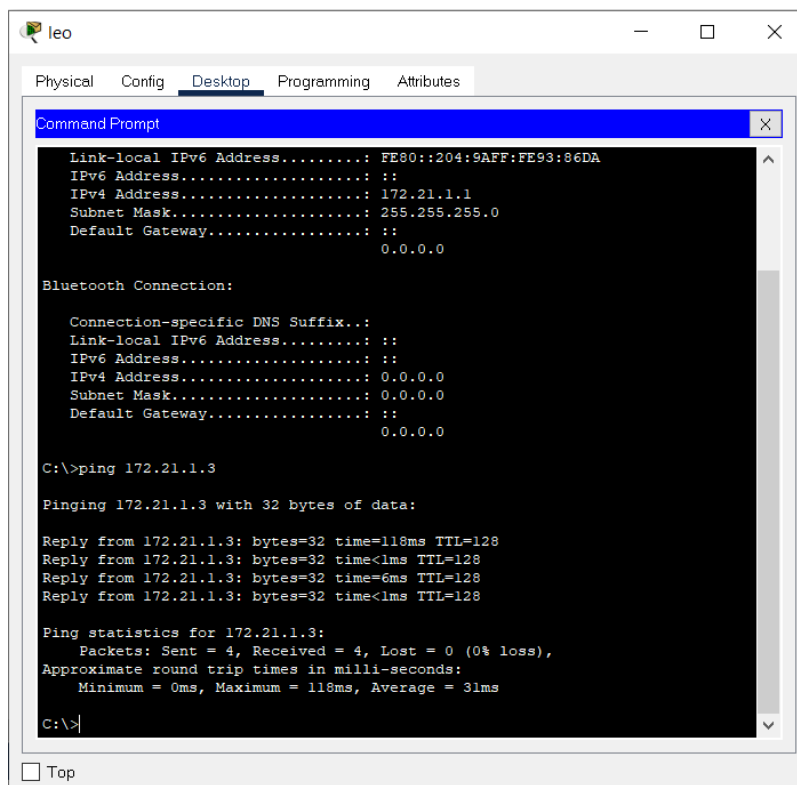
Forwarding condition

- Switch0 = fa 0/1, fa 0/23
- Switch1 = fa 0/1, fa 0/24
- Switch2 = fa 0/1, fa 0/23, fa 0/24

blocking condition

- Switch0 = -
- Switch1 = -
- Switch2 = -

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```
leo
Physical Config Desktop Programming Attributes
Command Prompt
Link-local IPv6 Address..... FE80::204:9AFF:FE93:86DA
IPv6 Address..... ::
IPv4 Address..... 172.21.1.1
Subnet Mask..... 255.255.255.0
Default Gateway..... ::
0.0.0.0

Bluetooth Connection:

Connection-specific DNS Suffix...
Link-local IPv6 Address..... ::
IPv6 Address..... ::
IPv4 Address..... 0.0.0.0
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0.0.0.0

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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 = 118ms, Average = 31ms

C:\>
```