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**Kelas : C**

1. ID Network 202.155.19.0/24 dengan subnet mask default 255.255.255.0 mempunyai 5 divisi/subnet yang berisi 25pc per divisi (kelas C)

Perhitungan:

Mencari subnet  $2^3$  dengan subnet mask 255.255.255.224/27 atau  
11111111.11111111.11111111.11100000 (mempunyai 5 host)

Mencari host  $2^5 - 2 = 30$  host, 2 terdiri dari 1NA dan 1BC

202.155.19.0	11001010.10011011.00010011.00000000
255.255.255.224	11111111.11111111.11111111.11100000 AND
202.155.19.0	11001010.10011011.00010011.00000000

SUBNET1

NA	202.155.19.0
Host/range	202.155.19.1 - 202.155.19.30
BC	202.155.19.31

SUBNET2

NA	202.155.19.32
Host/range	202.155.19.33 - 202.155.19.62
BC	202.155.19.63

SUBNET3

NA	202.155.19.64
Host/range	202.155.19.65 - 202.155.19.94
BC	202.155.19.95

SUBNET4

NA	202.155.19.96
Host/range	202.155.19.97 - 202.155.19.126
BC	202.155.19.127

SUBNET5

NA	202.155.19.128
Host/range	202.155.19.129 - 202.155.19.158
BC	202.155.19.159

2. ID Network 192.168.0.0 dengan subnet mask default 255.255.255.0

Perhitungan :

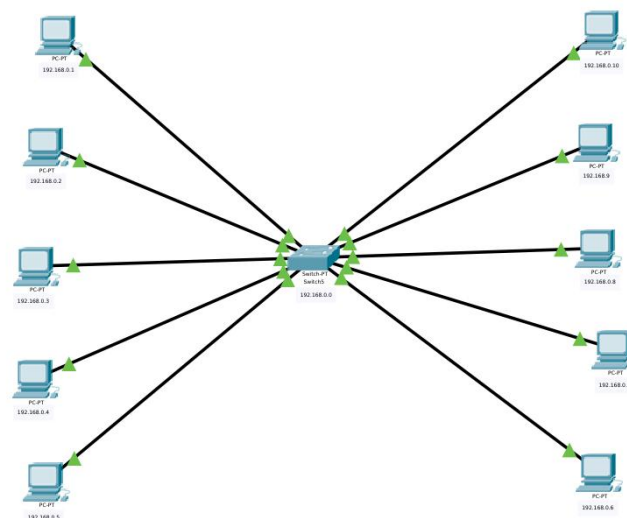
Mencari subnet  $2^2$  dengan subnet mask 255.255.255.192 atau  
11111111.11111111.11111111.11000000 (terdapat 6 host)

Mencari host  $2^6 - 2 = 62$

192.168.0.0      11000000.10101000.00000000.00000000  
 255.255.255.192 11111111.11111111.11111111.11000000 AND  
 192.168.0.0      11000000.10101000.00000000.00000000

## SUBNET1

NA      192.168.0.0  
 Host    192.168.0.1 - 192.168.0.62  
 BC      192.168.0.63



Dalam rangkaian pc harus dihubungkan ke switch dengan kabel copper-straight through pilih port 0/1 - 9/1

```
Switch>enable
Switch#
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface FastEthernet0/1
Switch(config-if)#en
% Ambiguous command: "en"
Switch(config)#vlan?
vlan
Switch(config)#vlan?
vlan
Switch(config)#vlan?
vlan
Switch(config)#vlan?
% Invalid input detected at '^' marker.
Switch(config)#
Switch(config)#
Switch(config)#
Switch(config)#show vlan
% Invalid input detected at '^' marker.
Switch(config)#show VLAN
% Invalid input detected at '^' marker.
Switch(config)#vlan 5
Switch(config-vlan)#name kiri
Switch(config-vlan)#ex
Switch(config-vlan)#vlan 10
Switch(config-vlan)#name kanan
Switch(config-vlan)#ex
Switch(config)#ex
Switch#
#SYS-5-CONFIG_I: Configured from console by console
show vlan

VLAN Name                Status Ports
-----
1    default                active Fa0/1, Fa1/1, Fa2/1, Fa3/1,
    Fa4/1, Fa5/1, Fa6/1, Fa7/1,
    Fa8/1, Fa9/1

5    kiri                    active 
10   kanan                    active 
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  BrgdMode Trans1 Trans2
-----
1    enet    1000001  1500    -      -      -    -      0      0
5    enet    100005  1500    -      -      -    -      0      0
10   enet    100010  1500    -      -      -    -      0      0
1002 fddi    101002  1500    -      -      -    -      0      0
1003 tr    101003  1500    -      -      -    -      0      0
1004 fddnet 101004  1500    -      -      -    ieee   0      0
1005 trnet 101005  1500    -      -      -    ibm    0      0
--None--
```

Setting switch dengan CLI, buat vlan 5 dan vlan 10 dengan nama kiri dan kanan

```

Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa0/1
Switch(config-if)#sw
% Incomplete command.
Switch(config-if)#switch
% Incomplete command.
Switch(config-if)#swi
% Incomplete command.
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 5
Switch(config-if)#ex
Switch(config)#interface fa1/1
Switch(config-if)#switch port mode access
Switch(config-if)#switch port mode access
^
% Invalid input detected at '^' marker.

Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 5
Switch(config-if)#ex
Switch(config)#interface fa2/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 5
Switch(config-if)#ex
Switch(config)#interface fa3/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 5
Switch(config-if)#ex
Switch(config)#interface fa4/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 5
Switch(config-if)#ex
Switch(config)#show vlan

% Invalid input detected at '^' marker.

Switch(config)#show vlan 5
^
% Invalid input detected at '^' marker.

Switch(config)#
Switch(config)#ex
Switch#
%SYS-5-CONFIG_I: Configured from console by console
show vlan

```

VLAN Name	Status	Ports
1 default	active	Fa5/1, Fa6/1, Fa7/1, Fa8/1
5 kiri	active	Fa9/1
10 kanan	active	Fa0/1, Fa1/1, Fa2/1, Fa3/1
1002 fddi-default	active	Fa4/1
1003 token-ring-default	active	
1004 fddinet-default	active	
1005 trnet-default	active	

```

Remote SPAN VLANs
-----
Primary Secondary Type Ports
-----
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa5/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#ex
Switch(config)#interface fa6/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#ex
Switch(config)#interface fa7/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#ex
Switch(config)#interface fa8/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#interface fa9/1
Switch(config-if)#switchpoet mode access
Switch(config-if)#switchpoet mode access
^
% Invalid input detected at '^' marker.

Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#ex
Switch(config)#ex
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#
Switch#show vlan

```

VLAN Name	Status	Ports
1 default	active	Fa0/1, Fa1/1, Fa2/1, Fa3/1
5 kiri	active	Fa4/1
10 kanan	active	Fa5/1, Fa6/1, Fa7/1, Fa8/1
1002 fddi-default	active	Fa9/1
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
5	enet	100005	1500	-	-	-	-	-	0	0
10	enet	100010	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	-	-	-	llm	-	0	0

--More--

Sambungkan port sisi kiri ke vlan 5 dan sebaliknya

```

Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.6

Pinging 192.168.0.6 with 32 bytes of data:

Reply from 192.168.0.6: bytes=32 time=20ms TTL=128
Reply from 192.168.0.6: bytes=32 time<1ms TTL=128
Reply from 192.168.0.6: bytes=32 time<1ms TTL=128
Reply from 192.168.0.6: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 20ms, Average = 5ms

C:\>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

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

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>

```

Hasil ping pc dengan ip address 192.168.0.9 ke pc 192.168.0.6 valid, karena sama-sama terletak pada vlan yang sama yaitu vlan 10 kanan

Hasil ping pc dengan ip address 192.168.0.9 ke pc 192.168.0.1 tidak valid, karena berbeda letak pada vlan. Ip address 192.168.0.9 terletak pada vlan 10 kanan, sedangkan ip address 192.168.0.1 terletak pada vlan 5 kiri

```

Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.3

Pinging 192.168.0.3 with 32 bytes of data:

Reply from 192.168.0.3: bytes=32 time=1ms TTL=128
Reply from 192.168.0.3: bytes=32 time=3ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms

C:\>ping 192.168.0.6

Pinging 192.168.0.6 with 32 bytes of data:

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

Ping statistics for 192.168.0.6:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>

```

Hasil ping pc dengan ip address 192.168.0.1 ke pc 192.168.0.3 valid, karena sama-sama terletak pada vlan yang sama yaitu vlan 5 kiri

Hasil ping pc dengan ip address 192.168.0.1 ke pc 192.168.0.6 tidak valid, karena berbeda letak pada vlan. Ip address 192.168.0.6 terletak pada vlan 10 kanan, sedangkan ip address 192.168.0.1 terletak pada vlan 5 kiri

## Hasil CLI pada Switch

%SYS-5-CONFIG\_I: Configured from console by console  
show vlan

### VLAN Name Status Ports

```
-----
1 default active Fa0/1, Fa1/1, Fa2/1, Fa3/1
Fa4/1, Fa5/1, Fa6/1, Fa7/1
Fa8/1, Fa9/1
5 kiri active
10 kanan active
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
5 enet 100005 1500 - - - - 0 0
10 enet 100010 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#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 5
Switch(config-if)#ex
Switch(config)#interface fa1/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 5
Switch(config-if)#ex
Switch(config)#interface fa2/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 5
Switch(config-if)#ex
Switch(config)#interface fa3/1
```

```

Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 5
Switch(config-if)#ex
Switch(config)#interface fa4/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 5
Switch(config-if)#ex
Switch(config)#ex
Switch#
%SYS-5-CONFIG_I: Configured from console by console
show vlan

```

#### VLAN Name Status Ports

```

-----
1 default active Fa5/1, Fa6/1, Fa7/1, Fa8/1
Fa9/1
5 kiri active Fa0/1, Fa1/1, Fa2/1, Fa3/1
Fa4/1
10 kanan active
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
5 enet 100005 1500 - - - - 0 0
10 enet 100010 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#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa5/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#ex
Switch(config)#interface fa6/1
Switch(config-if)#switchport mode access

```

```
Switch(config-if)#switchport access vlan 10
Switch(config-if)#ex
Switch(config)#interface fa7/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#ex
Switch(config)#interface fa8/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#interface fa9/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#ex
Switch(config)#ex
Switch#
%SYS-5-CONFIG_I: Configured from console by console
```

```
Switch#
Switch#show vlan
```

#### VLAN Name Status Ports

```
-----
1 default active
5 kiri active Fa0/1, Fa1/1, Fa2/1, Fa3/1
Fa4/1
10 kanan active Fa5/1, Fa6/1, Fa7/1, Fa8/1
Fa9/1
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
5 enet 100005 1500 - - - - 0 0
10 enet 100010 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 con0 is now available

Press RETURN to get started.