CYVERO NETWORK PIONEERS CUP 2024 by EIM LABORATORY

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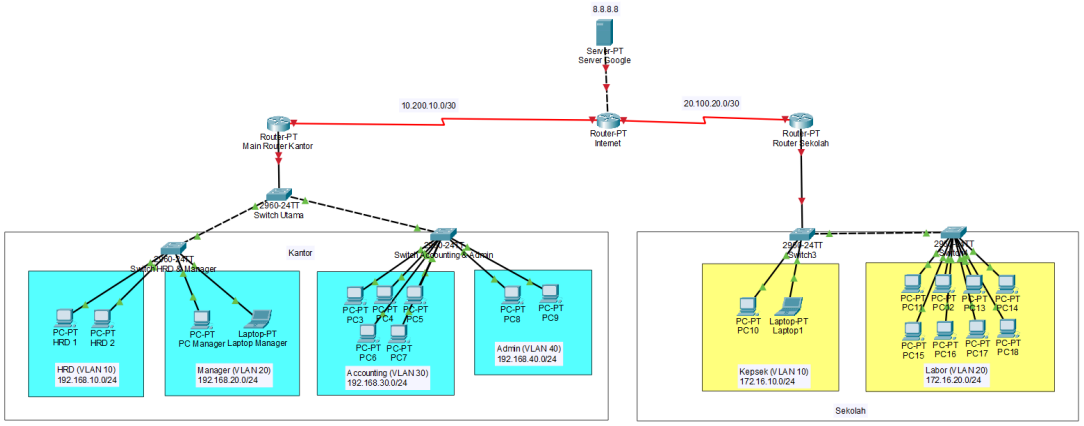
Instansi : Universitas Telkom

PENGUMPULAN

- **Waktu Pengerjaan Sabtu, 9 November 2024 Puku 12.00-23.59 WIB**
- **Mengumpulkan Write Up dan Screenshot hasil pengerjaan**
- **Konfigurasi dilakukan static , kecuali PC Labor menggunakan DHCP**
- **Screenshot hasil pengerjaan wajib menampilkan user profile, waktu/tanggal pada taskbar dan completion pada Cisco Packet Tracer**
- **Pastikan Screenshot pengerjaan pada Cisco Packet Tracer jelas dan tidak blur**
- **Berikan Setiap penjelasan singkat pada tiap konfigurasi**
- **Pengumpulan Write Up dalam format .pdf dan Screenshot pengerjaan dalam format.png/.jpg**
- **Format penamaan file Write Up : Asal instansi_Nama Tim.pdf**
- **Format penamaan Screenshot pengerjaan : Asal instansi_Nama Tim.png/.jpg**
- **Pengumpulan dilakukan di Link Pengumpulan dan di email eimcyvero@gmail.com.**
  Subject Email diisi dengan Asal instansi_Nama Tim

Pada topologi ini akan mambuat jaringan kantor dan sekolah terhubung ke internet. Setiap instansi, akan dibagi-bagi lagi jaringannya berdasarkan VLAN.

Topologi jaringannya adalah sebagai berikut:



Pada topologi ini terdapat 3 router, Router untuk terhubung ke internet, router milik Kantor dan router milik Sekolah. Kantor dan sekolah akan mendapatkan Alamat IP dari Router nya masing-masing.

Pada topologi jaringan ini, rinciannya adalah sebagai berikut:

A. Kantor
    1. HRD (VLAN 10): 201.28.10.0/24
    2. Manager (VLAN 20): 201.28.20.0/24
    3. Accounting (VLAN 30): 201.28.30.0/24
    4. Admin (VLAN 40): 201.28.40.0/24
B. Sekolah
    1. Kepala Sekolah (VLAN 10): 172.16.10.0/24
    2. Labor (VLAN 20): 172.16.20.0/24
C. Router Kantor – Internet: 10.200.10.0/30
D. Router Sekolah – Internet: 20.100.20.0/30

1. Konfigurasi Switch: Membuat VLAN pada Switch dan menentukan Port nya (trunk dan access).
   a. Untuk Kantor membuat VLAN 10, 20, 30 dan 40:

Konfigurasi:
VLAN 10 & 20 (Switch1):
Switch(config)#vlan 10
Switch(config-vlan)#name HRD
Switch(config-vlan)#vlan 20
Switch(config-vlan)#name Manager
Switch(config-vlan)#int range fa0/2-3
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 10
Switch(config-if-range)#int range fa0/4-5
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 20
Switch trunk :
Switch(config)#int fa0/1
Switch(config-if)#switchport mode trunk

VLAN 30 & 40 (Switch2):
Switch(config)#vlan 30
Switch(config-vlan)#name Accounting
Switch(config-vlan)#vlan 40
Switch(config-vlan)#name Admin
Switch(config-vlan)#int range fa0/2-6
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 30
Switch(config-if-range)#int range fa0/7-8
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 40
Switch trunk :
Switch(config)#int fa0/1
Switch(config-if)#switchport mode trunk

(Switch0):
Switch0 Trunk :
Switch(config)#int range fa0/2-3
Switch(config-if-range)#switchport mode trunk

Screenshoot:
Switch1:

```
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   HRD                               active    Fa0/2, Fa0/3
20   Manager                           active    Fa0/4, Fa0/5
1002 fddi-default                      active
1003 token-ring-default                active
1004 fddinet-default                   active
1005 trnet-default                     active
```

```
Switch(config-if)#do show int trunk
Port        Mode         Encapsulation  Status        Native vlan
Fa0/1       on           802.1q         trunking      1

Port        Vlans allowed on trunk
Fa0/1       1-1005

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

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

Switch2:

```
VLAN Name                              Status    Ports
---- --------------------------------- --------- -------------------------------
1    default                           active    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
30   Accounting                        active    Fa0/2, Fa0/3, Fa0/4, Fa0/5
                                                 Fa0/6
40   Admin                             active    Fa0/7, Fa0/8
1002 fddi-default                      active
1003 token-ring-default                active
1004 fddinet-default                   active
1005 trnet-default                     active
```

```
Switch(config-if)#do show int trunk
Port        Mode         Encapsulation  Status        Native vlan
Fa0/1       on           802.1q         trunking      1

Port        Vlans allowed on trunk
Fa0/1       1-1005

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

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

Switch0 :

```
Switch(config)#do show int tru
Port        Mode         Encapsulation  Status        Native vlan
Fa0/1       on           802.1q         trunking      1
Fa0/2       on           802.1q         trunking      1
Fa0/3       on           802.1q         trunking      1

Port        Vlans allowed on trunk
Fa0/1       1-1005
Fa0/2       1-1005
Fa0/3       1-1005

Port        Vlans allowed and active in management domain
Fa0/1       1,10,20,30,40
Fa0/2       1,10,20,30,40
Fa0/3       1,10,20,30,40

Port        Vlans in spanning tree forwarding state and not pruned
Fa0/1       1,10,20,30,40
Fa0/2       1,10,20,30,40
Fa0/3       1,10,20,30,40
```

b. Untuk Sekolah Membuat VLAN 10 dan VLAN 20:

Konfigurasi:

Sekolah VLAN 10 (Switch3):

Switch(config)#vlan 10

Switch(config-vlan)#name Kepsek

Switch(config-vlan)#int range fa0/2-3

Switch(config-if-range)#switchport mode access

Switch(config-if-range)#switchport access vlan 10

Switch trunk :

Switch(config)#int fa0/1

Switch(config-if)#switchport mode trunk

Sekolah vlan 20 (Switch 4):

Switch(config)#vlan 20

Switch(config-vlan)#name Labor

Switch(config-vlan)#int range fa0/2-9

Switch(config-if-range)#switchport mode access

Switch(config-if-range)#switchport access vlan 20

Switch trunk :

Switch(config)#int fa0/1

Switch(config-if)#switchport mode trunk

Screenshoot:

Switch3:

```
VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/1, 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
10   Kepsek                           active    Fa0/2, Fa0/3
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
```

```
Switch(config-if)#do show in tru
Port        Mode         Encapsulation  Status        Native vlan
Fa0/1       on           802.1q         trunking      1

Port        Vlans allowed on trunk
Fa0/1       1-1005

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

Port        Vlans in spanning tree forwarding state and not pruned
Fa0/1       1,10
```

Switch4:

```
VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/1, 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
20   Labor                            active    Fa0/2, Fa0/3, Fa0/4, Fa0/5
                                                Fa0/6, Fa0/7, Fa0/8, Fa0/9
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
```

```
Switch(config-if)#do show int tru
Port        Mode         Encapsulation  Status        Native vlan
Fa0/1       on           802.1q         trunking      1

Port        Vlans allowed on trunk
Fa0/1       1-1005

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

Port        Vlans in spanning tree forwarding state and not pruned
Fa0/1       none
```

2. Konfigurasi pengalamatan IP: Router Kantor
   a. Masukkan Alamat IP pada sub interface jaringan local, yaitu pada f0/0.10 – f0/0.40 dengan Alamat IP yang sudah ditentukan.

   Konfigurasi:

   Router(config)#int fa0/0.10

   Router(config-subif)#encapsulation dot1Q 10

   Router(config-subif)#ip address 201.28.10.1 255.255.255.0

   Router(config)#int fa0/0.20

   Router(config-subif)#encapsulation dot1Q 20

Router(config-subif)#ip address 201.28.20.1 255.255.255.0

Router(config-subif)#int fa0/0.30
Router(config-subif)#encapsulation dot1Q 30
Router(config-subif)#ip address 201.28.30.1 255.255.255.0

Router(config-subif)#int fa0/0.40
Router(config-subif)#encapsulation dot1Q 40
Router(config-subif)#ip address 201.28.40.1 255.255.255.0

Router(config-if)#int se2/0
Router(config-if)#ip address 10.200.10.2 255.255.255.252

Screenshoot:

```
Router(config-if)#do show ip int br
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/0        unassigned      YES unset  up                    up
FastEthernet0/0.10     201.28.10.1     YES manual up                    up
FastEthernet0/0.20     201.28.20.1     YES manual up                    up
FastEthernet0/0.30     201.28.30.1     YES manual up                    up
FastEthernet0/0.40     201.28.40.1     YES manual up                    up
FastEthernet1/0        unassigned      YES unset  administratively down down
Serial2/0              10.200.10.2     YES manual up                    up
Serial3/0              unassigned      YES unset  administratively down down
FastEthernet4/0        unassigned      YES unset  administratively down down
FastEthernet5/0        unassigned      YES unset  administratively down down
Router(config-if)#
```

b. Setelah konfigurasi IP pada Router, selanjutnya masukkan IP pada Host.
Manager:
Screenshoot:

```
FastEthernet0/0.20     201.28.20.1     YES manual up                    up
```

HRD:
Screenshoot:

```
FastEthernet0/0.10     201.28.10.1     YES manual up                    up
```

Accounting:
Screenshoot:

```
FastEthernet0/0.30     201.28.30.1     YES manual up                    up
```

Admin:
Screenshoot

```
FastEthernet0/0.40     201.28.40.1     YES manual up                    up
```

3. Konfigurasi pengalamatan IP: Router Sekolah
   a. Masukkan Alamat IP pada sub interface jaringan local, yaitu pada f0/0.10 – f0/0.20 dengan Alamat IP yang sudah ditentukan
   Konfigurasi:
   Router Sekolah :
   Router(config-subif)#int fa0/0.10
   Router(config-subif)#encapsulation dot1Q 10

```
Router(config-subif)#ip address 172.16.10.1 255.255.255.0
Router(config-subif)#int fa1/0.20
Router(config-subif)#encapsulation dot1Q 20
Router(config-subif)#ip address 172.16.20.1 255.255.255.0

Router(config-if)#int se2/0
Router(config-if)#ip address 20.100.20.2 255.255.255.252
```

Screenshoot:

```
Router#show ip int br
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/0        unassigned      YES manual up                    up
FastEthernet0/0.10     172.16.10.1     YES manual up                    up
FastEthernet1/0        unassigned      YES manual up                    up
FastEthernet1/0.20     172.16.20.1     YES manual up                    up
Serial2/0              20.100.20.2     YES manual up                    up
Serial3/0              unassigned      YES unset  administratively down down
FastEthernet4/0        unassigned      YES unset  administratively down down
FastEthernet5/0        unassigned      YES unset  administratively down down
Router#
```

b. Untuk labor ditambahkan konfigurasi DHCP untuk mendapat IP otomatis karena banyaknya host:

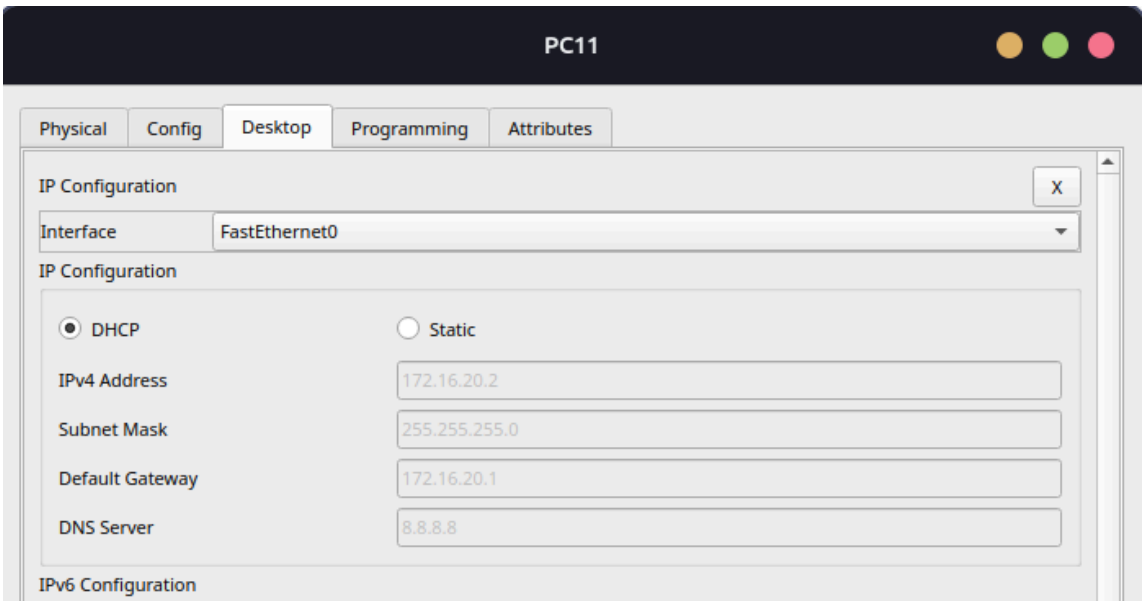
Screenshoot

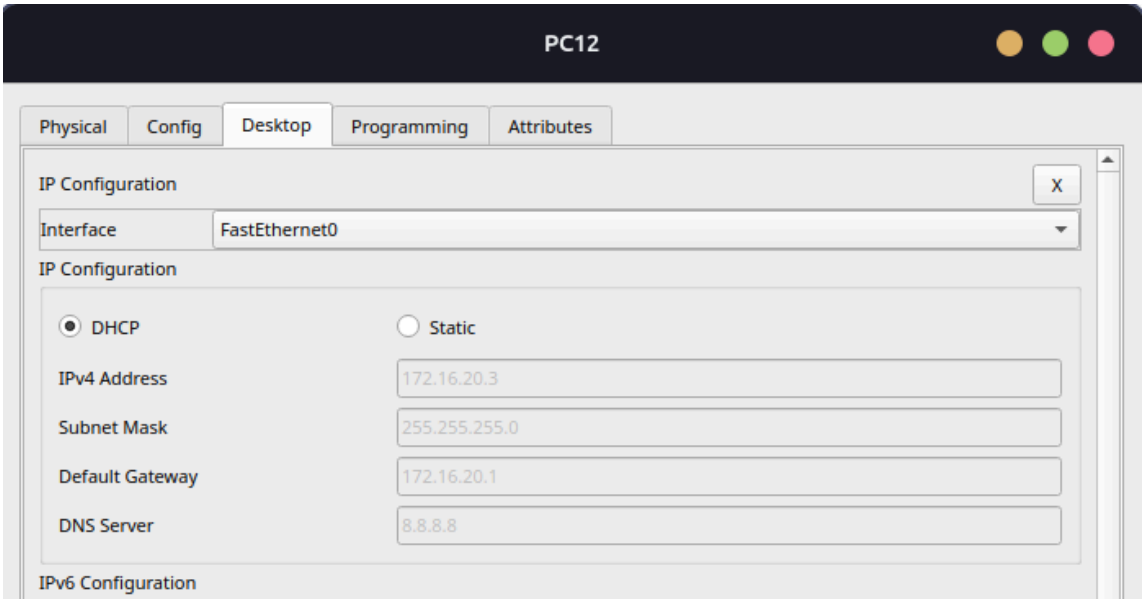
```
Pool Labor :
 Utilization mark (high/low)    : 100 / 0
 Subnet size (first/next)       : 0 / 0
 Total addresses                : 254
 Leased addresses               : 8
 Excluded addresses             : 0
 Pending event                  : none

 1 subnet is currently in the pool
 Current index        IP address range                  Leased/Excluded/Total
 172.16.20.1          172.16.20.1      - 172.16.20.254     8    / 0     / 254
Router(config-subif)#
```

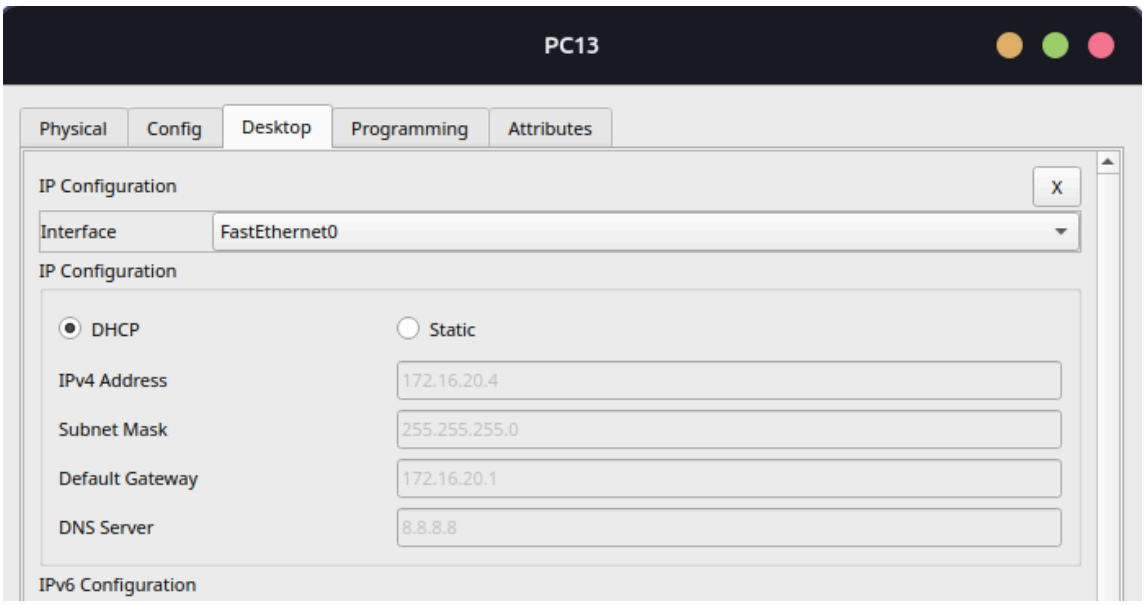
```
Pool Kepsek :
 Utilization mark (high/low)    : 100 / 0
 Subnet size (first/next)       : 0 / 0
 Total addresses                : 254
 Leased addresses               : 2
 Excluded addresses             : 0
 Pending event                  : none

 1 subnet is currently in the pool
 Current index        IP address range                  Leased/Excluded/Total
 172.16.10.1          172.16.10.1      - 172.16.10.254     2    / 0     / 254
Router(dhcp-config)#
```

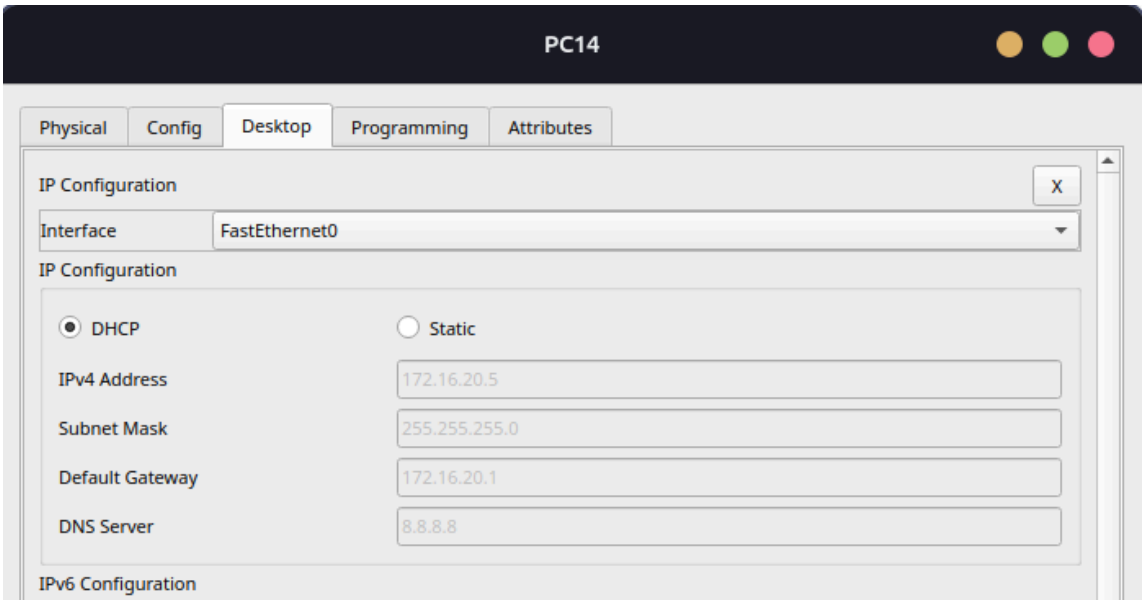
c. Hasil dari konfigurasi DHCP tiap PC Labor:

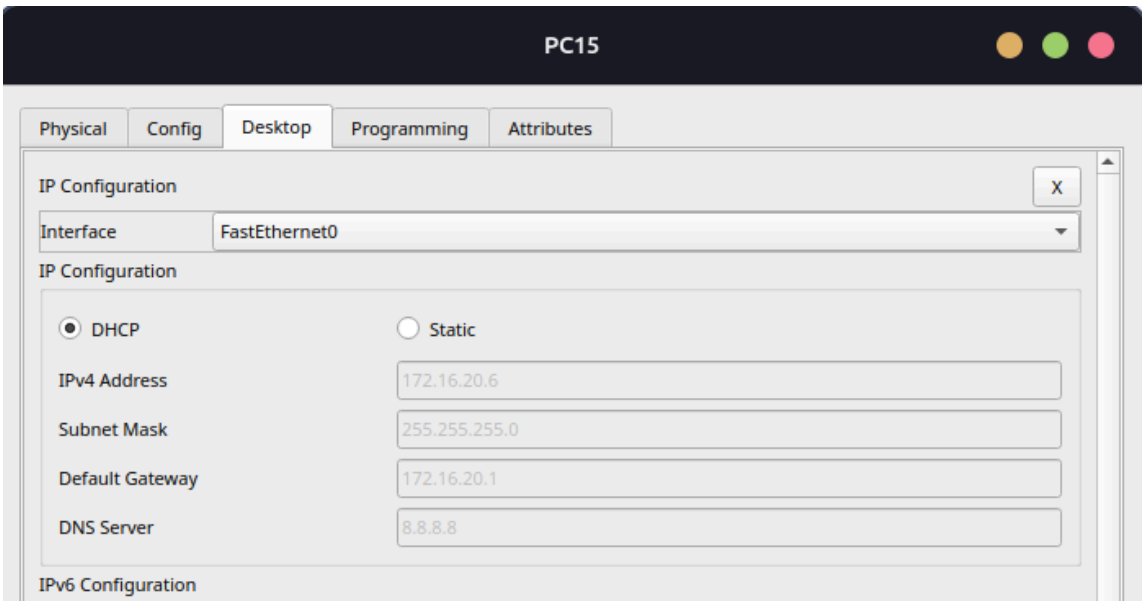
Screenshoot

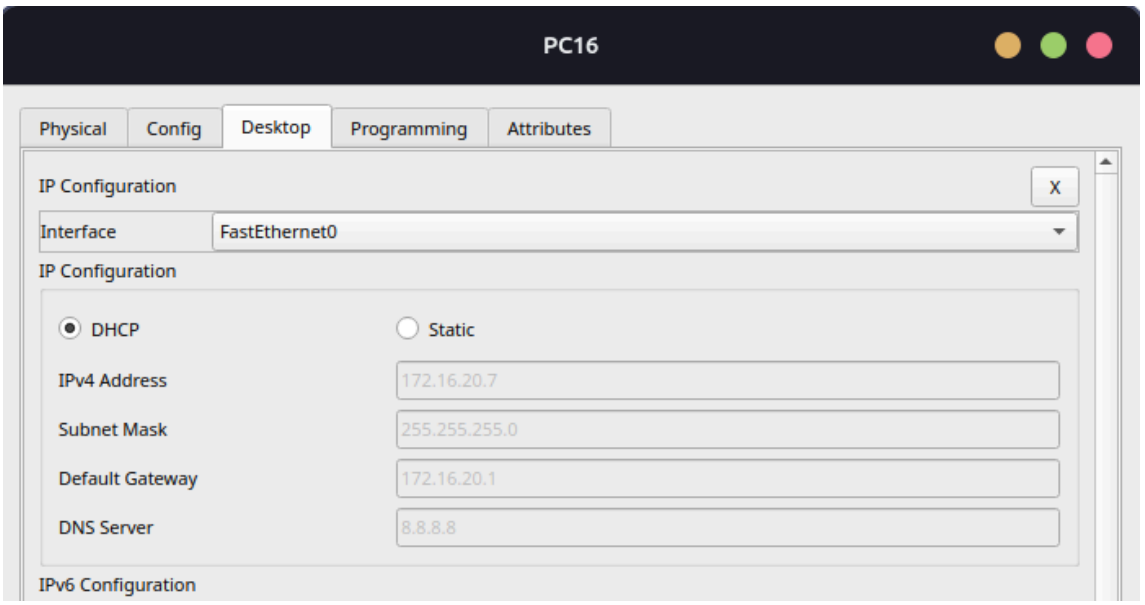

PC11
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
172.16.20.2
Subnet Mask
255.255.255.0
Default Gateway
172.16.20.1
DNS Server
8.8.8.8
IPv6 Configuration

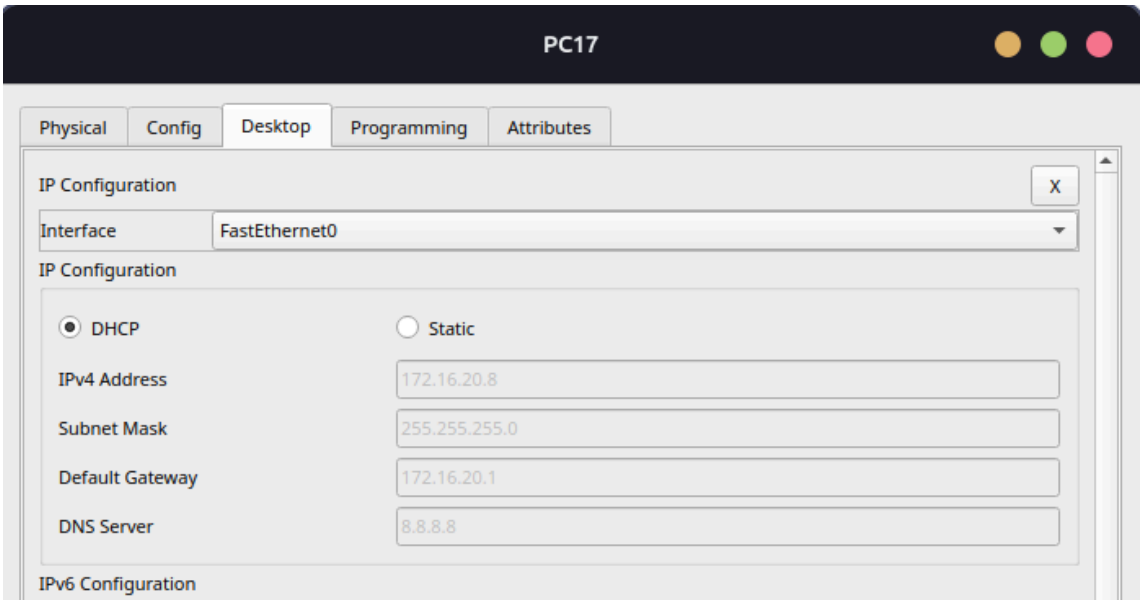

PC12
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
172.16.20.3
Subnet Mask
255.255.255.0
Default Gateway
172.16.20.1
DNS Server
8.8.8.8
IPv6 Configuration

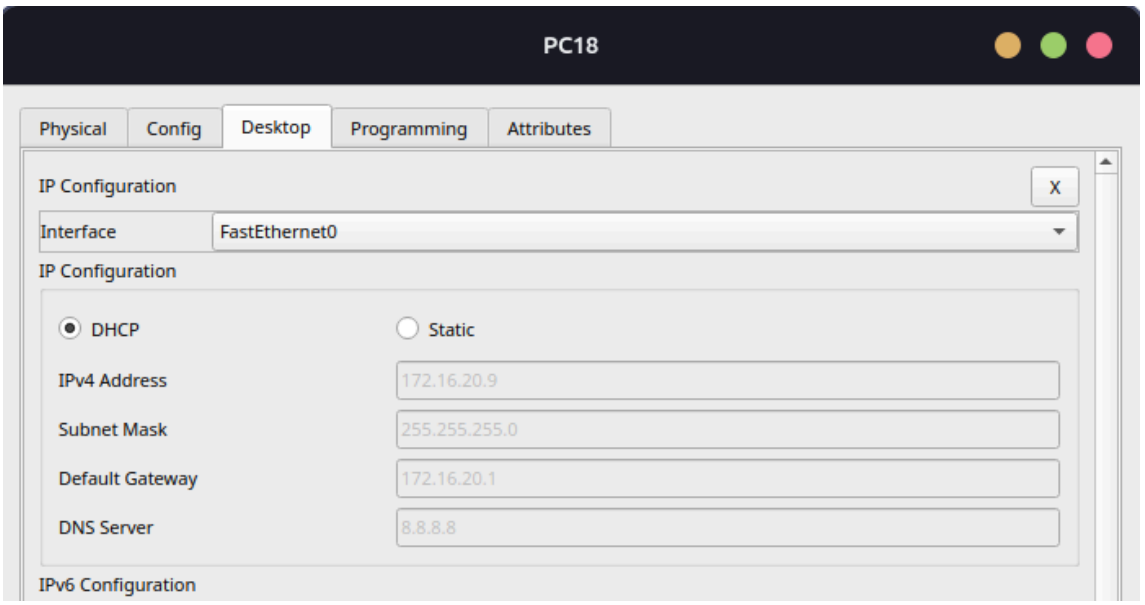

PC13
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
172.16.20.4
Subnet Mask
255.255.255.0
Default Gateway
172.16.20.1
DNS Server
8.8.8.8
IPv6 Configuration


PC14
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
172.16.20.5
Subnet Mask
255.255.255.0
Default Gateway
172.16.20.1
DNS Server
8.8.8.8
IPv6 Configuration

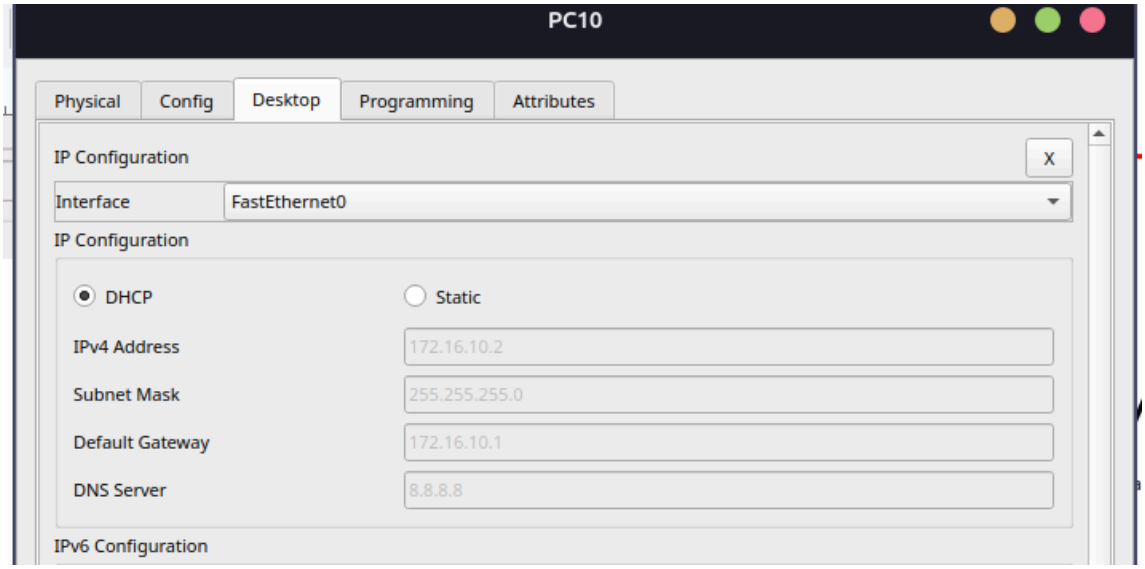

PC15
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
172.16.20.6
Subnet Mask
255.255.255.0
Default Gateway
172.16.20.1
DNS Server
8.8.8.8
IPv6 Configuration

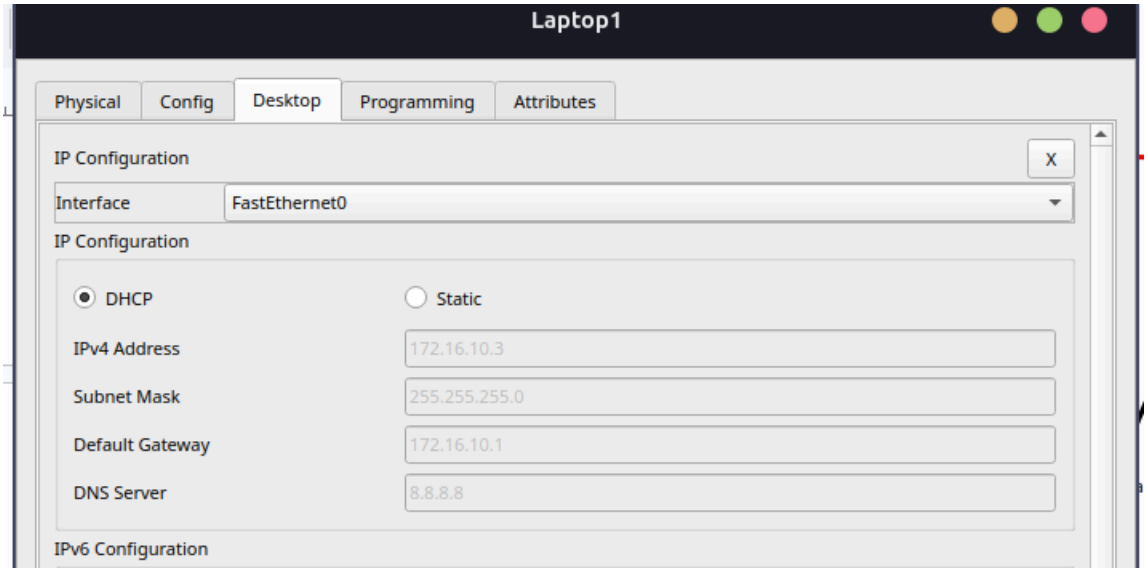

PC16
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
172.16.20.7
Subnet Mask
255.255.255.0
Default Gateway
172.16.20.1
DNS Server
8.8.8.8
IPv6 Configuration


PC17
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
172.16.20.8
Subnet Mask
255.255.255.0
Default Gateway
172.16.20.1
DNS Server
8.8.8.8
IPv6 Configuration


PC18
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
172.16.20.9
Subnet Mask
255.255.255.0
Default Gateway
172.16.20.1
DNS Server
8.8.8.8
IPv6 Configuration

d. IP pada host Kepsek:
Screenshoot





4. Konfigurasi Router Internet:
Hubungkan semua jaringan ini dengan konfigurasi Routing pada semua Router. Konfigurasi yang diterapkan pada jaringan ini yaitu Routing Dynamic OSPF.
Konfigurasi:
Router(config)#router ospf 1
Router(config-router)#network 8.8.8.0 0.0.0.255 area 0
Router(config-router)#network 10.200.10.0 0.0.0.3 area 0
Router(config-router)#network 20.100.20.0 0.0.0.3 area 0

Screenshoot:

```
Router(config)#do show run | sec osp
router ospf 1
 log-adjacency-changes
 network 10.200.10.0 0.0.0.3 area 0
 network 20.100.20.0 0.0.0.3 area 0
 network 8.8.8.0 0.0.0.255 area 0
```

```
Router(config)#do show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     8.0.0.0/24 is subnetted, 1 subnets
C       8.8.8.0 is directly connected, FastEthernet0/0
     10.0.0.0/30 is subnetted, 1 subnets
C       10.200.10.0 is directly connected, Serial2/0
     20.0.0.0/30 is subnetted, 1 subnets
C       20.100.20.0 is directly connected, Serial3/0
     172.16.0.0/24 is subnetted, 2 subnets
O       172.16.10.0 [110/65] via 20.100.20.2, 00:58:08, Serial3/0
O       172.16.20.0 [110/65] via 20.100.20.2, 00:58:08, Serial3/0
O    201.28.10.0/24 [110/65] via 10.200.10.2, 00:58:08, Serial2/0
O    201.28.20.0/24 [110/65] via 10.200.10.2, 00:58:08, Serial2/0
O    201.28.30.0/24 [110/65] via 10.200.10.2, 00:58:08, Serial2/0
O    201.28.40.0/24 [110/65] via 10.200.10.2, 00:58:08, Serial2/0
```

5. Konfigurasi Router Kantor:

Konfigurasi:

Router Kantor :

Router(config-router)#router ospf 1

Router(config-router)#network 10.200.10.0 0.0.0.3 area 0

Router(config-router)#network 201.28.10.0 0.0.0.255 area 0

Router(config-router)#network 201.28.20.0 0.0.0.255 area 0

Router(config-router)#network 201.28.30.0 0.0.0.255 area 0

Router(config-router)#network 201.28.40.0 0.0.0.255 area 0

Screenshoot:

```
Router(config)#do show run | sec osp
router ospf 1
 log-adjacency-changes
 network 10.200.10.0 0.0.0.3 area 0
 network 201.28.10.0 0.0.0.255 area 0
 network 201.28.20.0 0.0.0.255 area 0
 network 201.28.30.0 0.0.0.255 area 0
 network 201.28.40.0 0.0.0.255 area 0
```

```
Router(dhcp-config)#do show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     8.0.0.0/24 is subnetted, 1 subnets
O       8.8.8.0 [110/65] via 10.200.10.1, 00:14:03, Serial2/0
     10.0.0.0/30 is subnetted, 1 subnets
C       10.200.10.0 is directly connected, Serial2/0
     20.0.0.0/30 is subnetted, 1 subnets
O       20.100.20.0 [110/128] via 10.200.10.1, 00:58:42, Serial2/0
     172.16.0.0/24 is subnetted, 2 subnets
O       172.16.10.0 [110/129] via 10.200.10.1, 00:58:42, Serial2/0
O       172.16.20.0 [110/129] via 10.200.10.1, 00:58:42, Serial2/0
C    201.28.10.0/24 is directly connected, FastEthernet0/0.10
C    201.28.20.0/24 is directly connected, FastEthernet0/0.20
C    201.28.30.0/24 is directly connected, FastEthernet0/0.30
```

6. Konfigurasi Router Sekolah

Konfigurasi:

Router Sekolah :

Router(config)#router ospf 1

Router(config-router)#network 172.16.10.0 0.0.0.255 area 0

Router(config-router)#network 172.16.20.0 0.0.0.255 area 0

Router(config-router)#network 20.100.20.0 0.0.0.3 area 0

Screenshoot:

```
Router#show run | sec osp
router ospf 1
 log-adjacency-changes
 network 172.16.10.0 0.0.0.255 area 0
 network 172.16.20.0 0.0.0.255 area 0
 network 20.100.20.0 0.0.0.3 area 0
Router#
```

```
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#do show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     8.0.0.0/24 is subnetted, 1 subnets
O       8.8.8.0 [110/65] via 20.100.20.1, 00:15:12, Serial2/0
     10.0.0.0/30 is subnetted, 1 subnets
O       10.200.10.0 [110/128] via 20.100.20.1, 00:59:56, Serial2/0
     20.0.0.0/30 is subnetted, 1 subnets
C       20.100.20.0 is directly connected, Serial2/0
     172.16.0.0/24 is subnetted, 2 subnets
C       172.16.10.0 is directly connected, FastEthernet0/0.10
C       172.16.20.0 is directly connected, FastEthernet1/0.20
O    201.28.10.0/24 [110/129] via 20.100.20.1, 00:59:46, Serial2/0
O    201.28.20.0/24 [110/129] via 20.100.20.1, 00:59:46, Serial2/0
O    201.28.30.0/24 [110/129] via 20.100.20.1, 00:59:46, Serial2/0
O    201.28.40.0/24 [110/129] via 20.100.20.1, 00:59:46, Serial2/0
```

7. Hasil Koneksi dengan tes PING:

Konfigurasi:
Router(config)#do ping 8.8.8.8

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/1 ms

Router(config)#do ping 10.200.10.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.200.10.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 23/46/62 ms

Router(config)#do ping 20.100.20.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 20.100.20.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 33/51/78 ms

Router(config)#do ping 172.16.10.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.16.10.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 20/28/44 ms

Router(config)#do ping 172.16.20.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.16.20.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 25/44/66 ms

Router(config)#do ping 201.28.10.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 201.28.10.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 1/18/33 ms

Router(config)#do ping 201.28.20.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 201.28.20.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 1/21/40 ms

Router(config)#do ping 201.28.30.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 201.28.30.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 3/16/22 ms

Router(config)#do ping 201.28.40.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 201.28.40.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 19/23/34 ms

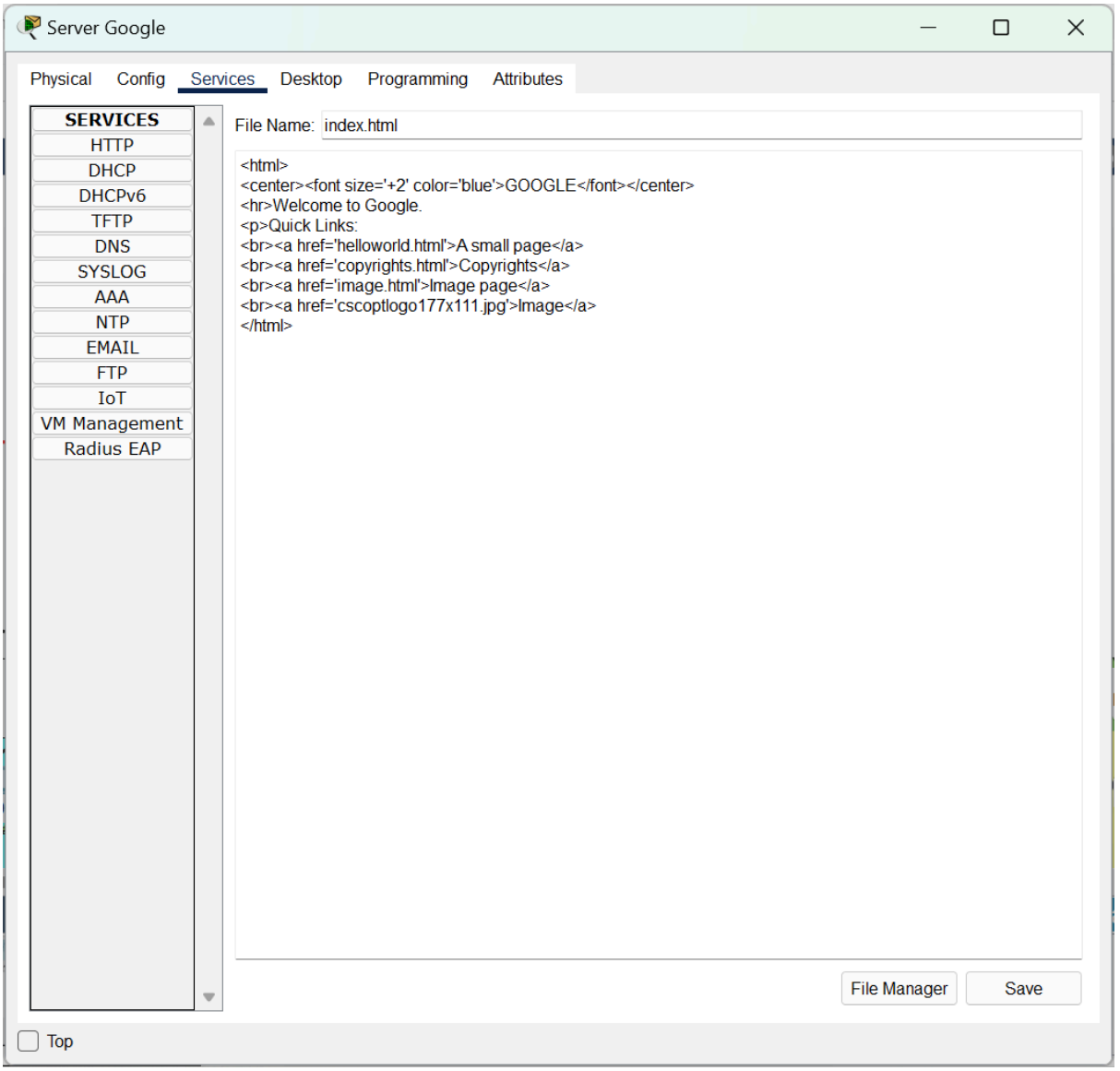
Screenshoot:

```
Router(config)#do ping 8.8.8.8

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/0 ms

Router(config)#do ping 10.200.10.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.200.10.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 29/32/38 ms

Router(config)#do ping 20.100.20.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 20.100.20.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 22/33/52 ms

Router(config)#do ping 172.16.10.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.16.10.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 9/28/41 ms

Router(config)#do ping 172.16.20.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.16.20.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 15/30/44 ms
```

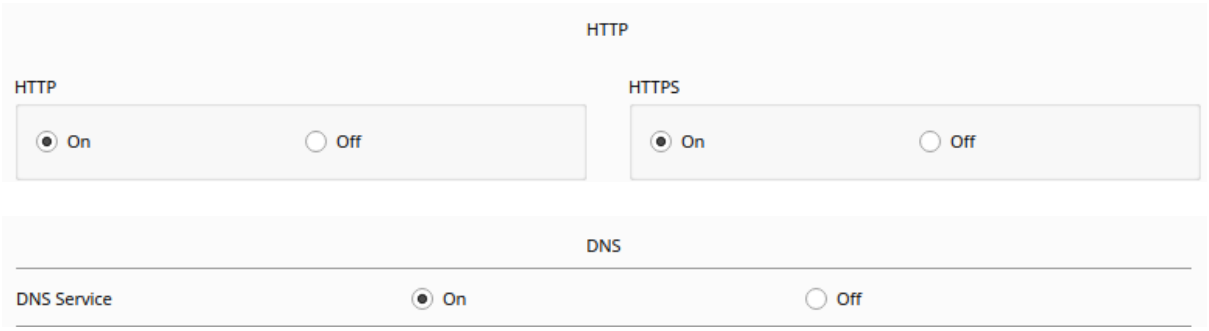

```
Router(config)#do ping 8.8.8.8

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/0 ms

Router(config)#do ping 10.200.10.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.200.10.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 29/32/38 ms

Router(config)#do ping 20.100.20.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 20.100.20.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 22/33/52 ms

Router(config)#do ping 172.16.10.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.16.10.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 9/28/41 ms

Router(config)#do ping 172.16.20.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.16.20.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 15/30/44 ms
```

```
Router(config)#do ping 201.28.10.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 201.28.10.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 1/18/33 ms

Router(config)#do ping 201.28.20.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 201.28.20.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 1/21/40 ms

Router(config)#do ping 201.28.30.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 201.28.30.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 3/16/22 ms

Router(config)#do ping 201.28.40.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 201.28.40.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 19/23/34 ms
```

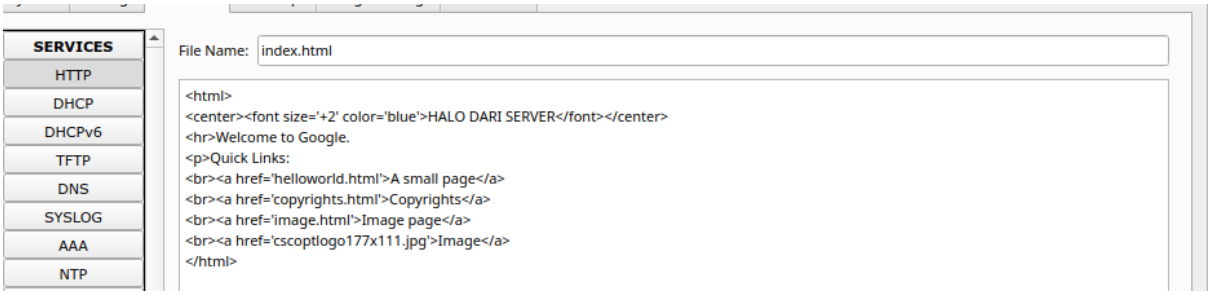
8. Tambahkan konfigurasi HTTP dan DNS pada Server Google.
   Untuk tampilan website adalah sebagai berikut: atau bisa sesuai kreatifitas masing-masing



Konfigurasi:

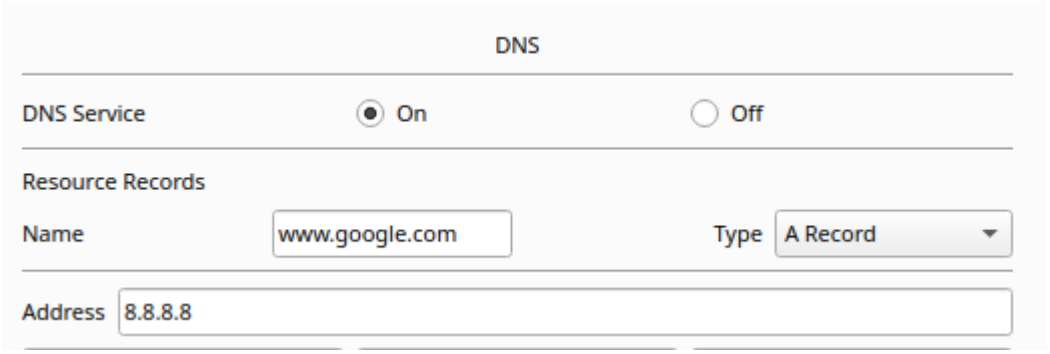


Screenshoot:

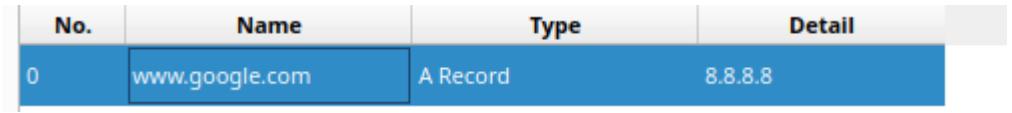


9. Tambahkan untuk DNS nya adalah sebagai berikut:
   DNS : 8.8.8.8
   Name : www.google.com
   Type : A Record

   Konfigurasi:



   Screenshoot:



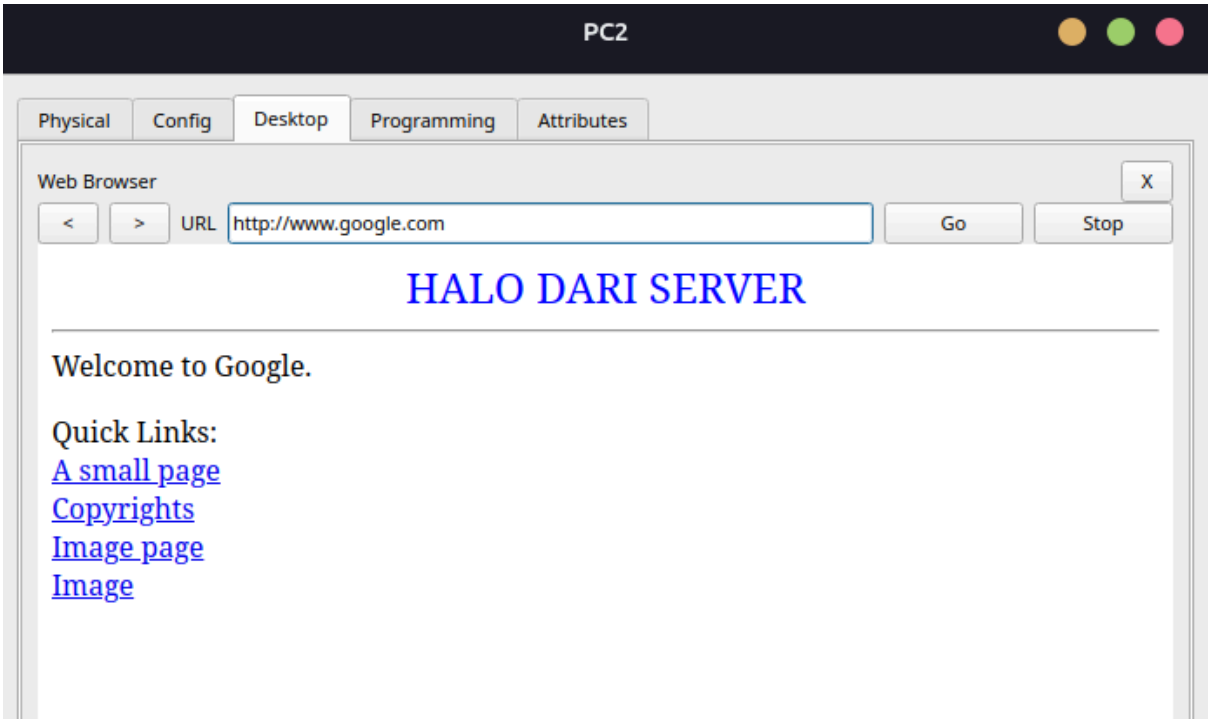
10. Hasil Cek Web dan DNS Google:
    Pada browser, jaringan Kantor dapat mengakses google dengan memasukkan domain www.google.com

    Konfigurasi:

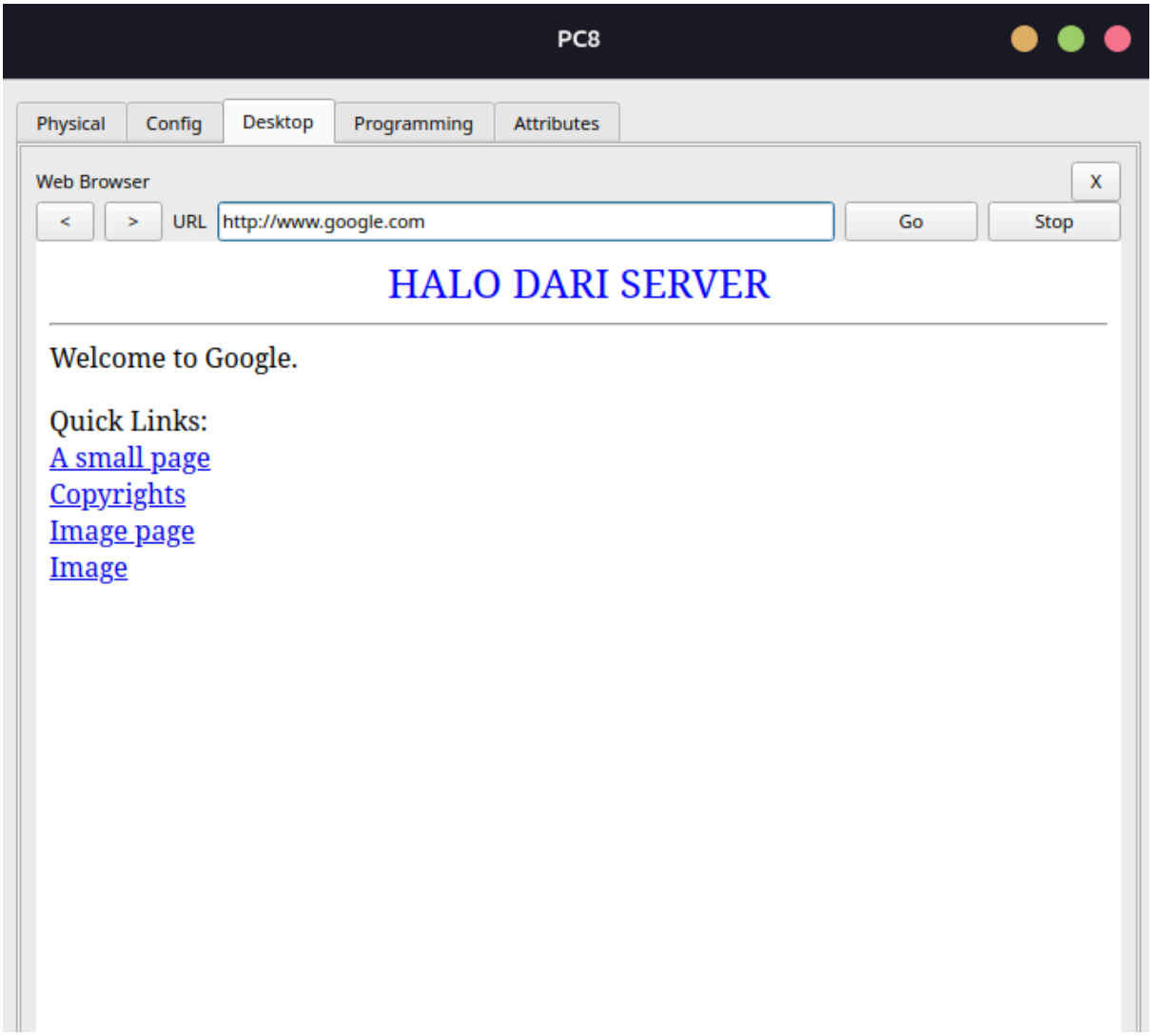
```
Router(dhcp-config)#do show run | sec dhcp
ip dhcp pool HRD
 network 201.28.10.0 255.255.255.0
 default-router 201.28.10.1
 dns-server 8.8.8.8
ip dhcp pool Manager
 network 201.28.20.0 255.255.255.0
 default-router 201.28.20.1
 dns-server 8.8.8.8
ip dhcp pool Accounting
 network 201.28.30.0 255.255.255.0
 default-router 201.28.30.1
 dns-server 8.8.8.8
ip dhcp pool Admin
 network 201.28.40.0 255.255.255.0
 default-router 201.28.40.1
 dns-server 8.8.8.8
```

Screenshoot:

vlan Manager



vlan Admin :


PC8
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://www.google.com
Go
Stop
HALO DARI SERVER
Welcome to Google.
Quick Links:
A small page
Copyrights
Image page
Image