

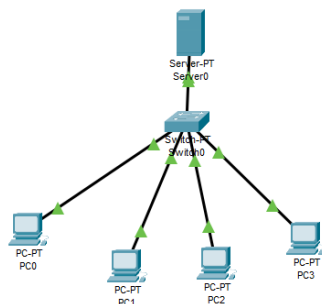
Nama : MuchFatan Rahmadan  
NIM : L200180063  
Kelas : B

## MODUL 5

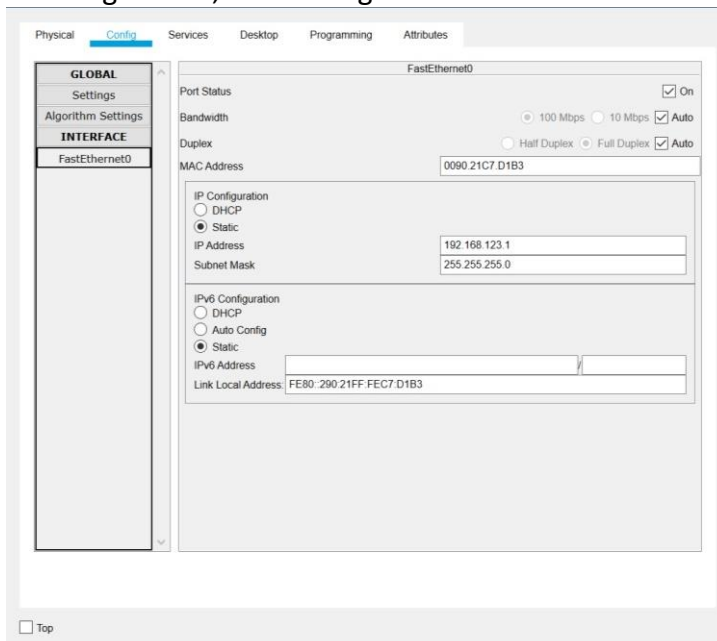
### Kegiatan Praktikum

#### 1. Praktikum 1 membuat DHCP Server

Menyusun komponen-komponen pada rancangan, yaitu terdiri dari 1 server, 1 switch, dan 4 PC



Double klik Server0, memilih config. Pada menu Interface, pilih Fast-Ethernet. Pada bagian IP Configuration, isikan dengan IP Address server.



Untuk konfigurasi DHCP Server pada jendela properties server 0 pada services, DHCP. Pastikan service DHCP On. Isikan blok IP Address yang akan diberikan ke PC client. Pada start IP Address isikan dengan 192.168.123.19 dan pada maximum number of users = 5.

Physical Config **Services** Desktop Programming Attributes

**SERVICES**

- HTTP
- DHCP**
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

**DHCP**

Interface: FastEthernet0 Service: ☒ On ☐ Off

Pool Name: serverPool

Default Gateway: 192.168.123.1

DNS Server: 0.0.0.0

Start IP Address: 192.168.123.19

Subnet Mask: 255.255.255.0

Maximum Number of Users: 5

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

Buttons: Add Save Remove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	192.168.123.1	0.0.0.0	192.168.123.19	255.255.255.0	5	0.0.0.0	0.0.0.0

☐ Top

Pada sisi client konfigurasi dilakukan dengan cara double klik pada PC, pilih tab desktop, pada menu yang ada, pilih menu IP Configuration. Pastikan pilihan radio button pada pilihan DHCP. Setelah konfigurasi selesai, silakan cek IP pada PC tersebut.

## PC0

Physical Config **Desktop** Programming Attributes

**IP Configuration** X

Interface: FastEthernet0

**IP Configuration**

☒ DHCP ☐ Static

IP Address: 192.168.123.19

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.123.1

DNS Server: 0.0.0.0

**IPv6 Configuration**

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::260:2FFF:FE11:468C

IPv6 Gateway:

IPv6 DNS Server:

**802.1X**

☐ Use 802.1X Security

Authentication: MD5

Username:

Password:

☐ Top

## PC1

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface: FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IP Address: 192.168.123.21

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.123.1

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::202:18FF:FE55:89BE

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MDS

Username:

Password:

☐ Top

PC2

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface: FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IP Address: 192.168.123.22

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.123.1

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::204:9AFF:FE31:291E

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

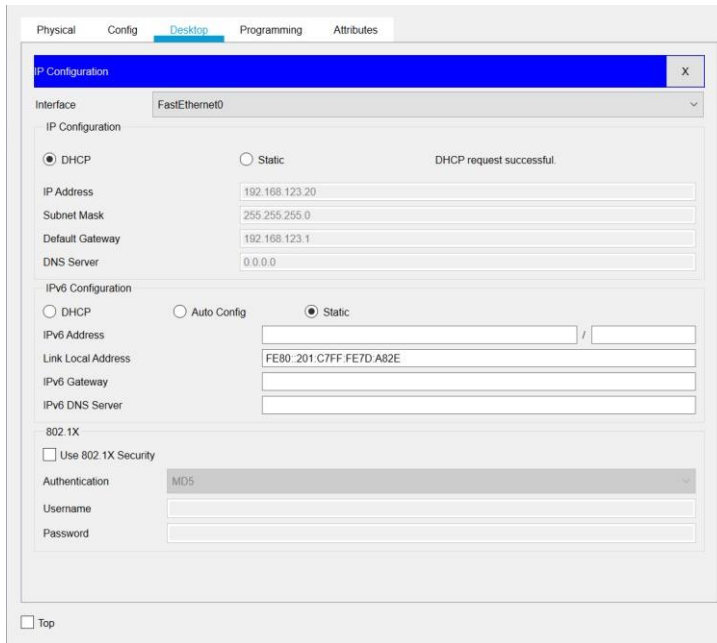
Authentication: MDS

Username:

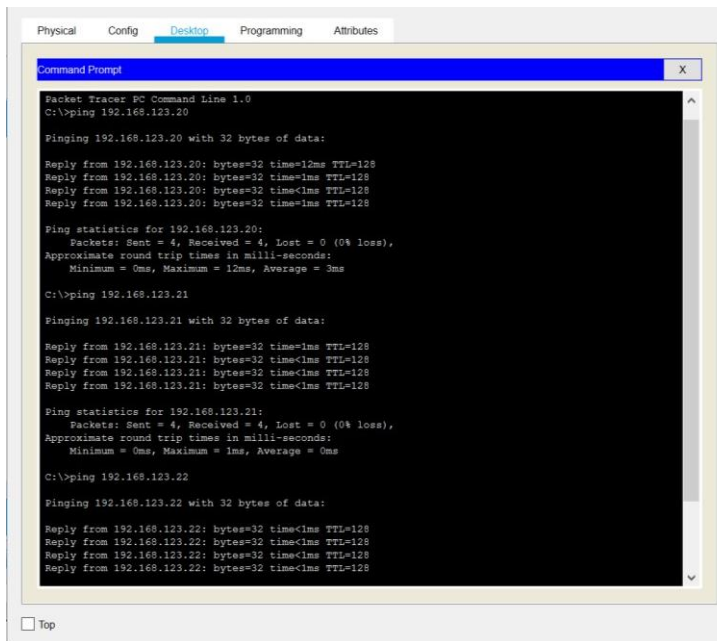
Password:

☐ Top

PC3



Setelah selesai konfigurasi semua, ping ke semua PC yang terhubung dengan server DHCP PC0



PC1

Physical Config **Desktop** Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.123.19

Pinging 192.168.123.19 with 32 bytes of data:

Reply from 192.168.123.19: bytes=32 time=1ms TTL=128
Reply from 192.168.123.19: bytes=32 time=1ms TTL=128
Reply from 192.168.123.19: bytes=32 time=3ms TTL=128
Reply from 192.168.123.19: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.123.19:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 3ms, Average = 1ms

C:\>ping 192.168.123.21

Pinging 192.168.123.21 with 32 bytes of data:

Reply from 192.168.123.21: bytes=32 time=6ms TTL=128
Reply from 192.168.123.21: bytes=32 time=1ms TTL=128
Reply from 192.168.123.21: bytes=32 time=1ms TTL=128
Reply from 192.168.123.21: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.123.21:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 6ms, Average = 1ms

C:\>ping 192.168.123.22

Pinging 192.168.123.22 with 32 bytes of data:

Reply from 192.168.123.22: bytes=32 time=1ms TTL=128
Reply from 192.168.123.22: bytes=32 time=1ms TTL=128
Reply from 192.168.123.22: bytes=32 time=1ms TTL=128
Reply from 192.168.123.22: bytes=32 time=1ms TTL=128
```

☐ Top

PC2

Physical Config **Desktop** Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.123.19

Pinging 192.168.123.19 with 32 bytes of data:

Reply from 192.168.123.19: bytes=32 time=1ms TTL=128
Reply from 192.168.123.19: bytes=32 time=1ms TTL=128
Reply from 192.168.123.19: bytes=32 time=1ms TTL=128
Reply from 192.168.123.19: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.123.19:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 192.168.123.20

Pinging 192.168.123.20 with 32 bytes of data:

Reply from 192.168.123.20: bytes=32 time=1ms TTL=128
Reply from 192.168.123.20: bytes=32 time=1ms TTL=128
Reply from 192.168.123.20: bytes=32 time=1ms TTL=128
Reply from 192.168.123.20: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.123.20:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 192.168.123.22

Pinging 192.168.123.22 with 32 bytes of data:

Reply from 192.168.123.22: bytes=32 time=5ms TTL=128
Reply from 192.168.123.22: bytes=32 time=5ms TTL=128
Reply from 192.168.123.22: bytes=32 time=2ms TTL=128
Reply from 192.168.123.22: bytes=32 time=1ms TTL=128
```

☐ Top

PC3

```
Physical Config Desktop Programming Attributes
Command Prompt
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.123.19

Pinging 192.168.123.19 with 32 bytes of data:

Reply from 192.168.123.19: bytes=32 time=1ms TTL=128
Reply from 192.168.123.19: bytes=32 time<1ms TTL=128
Reply from 192.168.123.19: bytes=32 time<1ms TTL=128
Reply from 192.168.123.19: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.123.19:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 192.168.123.21

Pinging 192.168.123.21 with 32 bytes of data:

Reply from 192.168.123.21: bytes=32 time=1ms TTL=128
Reply from 192.168.123.21: bytes=32 time=1ms TTL=128
Reply from 192.168.123.21: bytes=32 time<1ms TTL=128
Reply from 192.168.123.21: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.123.21:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

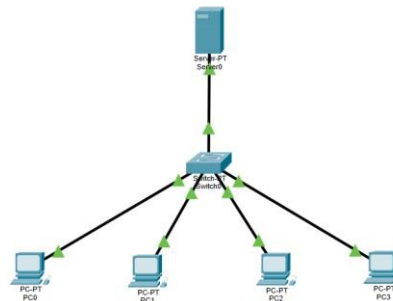
C:\>ping 192.168.123.22

Pinging 192.168.123.22 with 32 bytes of data:

Reply from 192.168.123.22: bytes=32 time=1ms TTL=128
Reply from 192.168.123.22: bytes=32 time<1ms TTL=128
Reply from 192.168.123.22: bytes=32 time<1ms TTL=128
Reply from 192.168.123.22: bytes=32 time=3ms TTL=128
```

## 2. Praktikum 2 membuat Web Server

Menyusun komponen-komponen pada rancangan, yaitu terdiri dari 1 server, 1 switch, dan 4 PC



Double klik Server0, memilih config. Pada menu Interface, pilih Fast-Ethernet. Pada bagian IP Configuration, isikan dengan IP Address server.

Physical **Config** Services Desktop Programming Attributes

**GLOBAL**  
Settings  
Algorithm Settings  
**INTERFACE**  
FastEthernet0

### FastEthernet0

Port Status ☒ On  
Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto  
Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto  
MAC Address 0002.17EA.2A17  
IP Configuration  
☐ DHCP  
☒ Static  
IP Address 192.168.1.2  
Subnet Mask 255.255.255.0  
IPv6 Configuration  
☐ DHCP  
☐ Auto Config  
☒ Static  
IPv6 Address  
Link Local Address FE80::202:17FF:FEAA:2A17

☐ Top

Memastikan radio button service HTTP pada pilihan on

Physical Config **Services** Desktop Programming Attributes

**SERVICES**  
HTTP  
DHCP  
DHCPv6  
TFTP  
DNS  
SYSLOG  
AAA  
NTP  
EMAIL  
FTP  
IoT  
VM Management  
Radius EAP

### HTTP

HTTP  
☒ On ☐ Off

HTTPS  
☒ On ☐ Off

File Manager

File Name	Edit	Delete
1 copyrights.html	(edit)	(delete)
2 cscoptlogo177x111.jpg		(delete)
3 helloworld.html	(edit)	(delete)
4 image.html	(edit)	(delete)
5 index.html	(edit)	(delete)

New File
Import

☐ Top

Mengatur pada service DHCP

Physical Config **Services** Desktop Programming Attributes

**SERVICES**

- HTTP
- DHCP**
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

**DHCP**

Interface: **FastEthernet0** Service: ☒ On ☐ Off

Pool Name: **serverPool**

Default Gateway: **192.168.1.1**

DNS Server: **192.168.1.2**

Start IP Address: **192** **168** **1** **50**

Subnet Mask: **255** **255** **255** **0**

Maximum Number of Users: **206**

TFTP Server: **0.0.0.0**

WLC Address: **0.0.0.0**

**Add** **Save** **Remove**

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	192.168.1.1	192.168.1.2	192.168.1.50	255.255.255.0	206	0.0.0.0	0.0.0.0

☐ Top

## Mengatur pada service DNS

Physical Config **Services** Desktop Programming Attributes

**SERVICES**

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS**
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

**DNS**

DNS Service: ☒ On ☐ Off

Resource Records

Name:  Type: **A Record**

Address:

**Add** **Save** **Remove**

No.	Name	Type	Detail
0	kegiatan2.com	A Record	192.168.1.2

**DNS Cache**

☐ Top

Pada sisi client konfigurasi dilakukan dengan cara double klik pada PC, pilih tab desktop, pada menu yang ada, pilih menu IP Configuration. Pastikan pilihan radio button pada pilihan DHCP. Setelah konfigurasi selesai, silakan cek IP pada PC tersebut.

PC0



Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IP Address 192.168.1.52

Subnet Mask 255.255.255.0

Default Gateway 192.168.1.1

DNS Server 192.168.1.2

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80: 210 11FF FEB3 CB2

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

☐ Top

PC1

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IP Address 192.168.1.53

Subnet Mask 255.255.255.0

Default Gateway 192.168.1.1

DNS Server 192.168.1.2

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80: 209 7CFF FE40 7D63

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

☐ Top

PC2

Physical Config **Desktop** Programming Attributes

**IP Configuration** X

Interface: FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IP Address: 192.168.1.51

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

DNS Server: 192.168.1.2

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::2D0:58FF:FE2C:72AE

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

Username:

Password:

☐ Top

PC3

Physical Config **Desktop** Programming Attributes

**IP Configuration** X

Interface: FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IP Address: 192.168.1.50

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

DNS Server: 192.168.1.2

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::2D0:BCFF:FE55:B756

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

Username:

Password:

☐ Top

Setelah selesai konfigurasi semua, ping ke semua PC yang terhubung dengan server DHCP

Physical Config Desktop Programming Attributes

Command Prompt X

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.51

Pinging 192.168.1.51 with 32 bytes of data:

Reply from 192.168.1.51: bytes=32 time=1ms TTL=128
Reply from 192.168.1.51: bytes=32 time=3ms TTL=128
Reply from 192.168.1.51: bytes=32 time<1ms TTL=128
Reply from 192.168.1.51: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.51:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms

C:\>ping 192.168.1.52

Pinging 192.168.1.52 with 32 bytes of data:

Reply from 192.168.1.52: bytes=32 time=8ms TTL=128
Reply from 192.168.1.52: bytes=32 time=5ms TTL=128
Reply from 192.168.1.52: bytes=32 time=3ms TTL=128
Reply from 192.168.1.52: bytes=32 time<1ms TTL=128

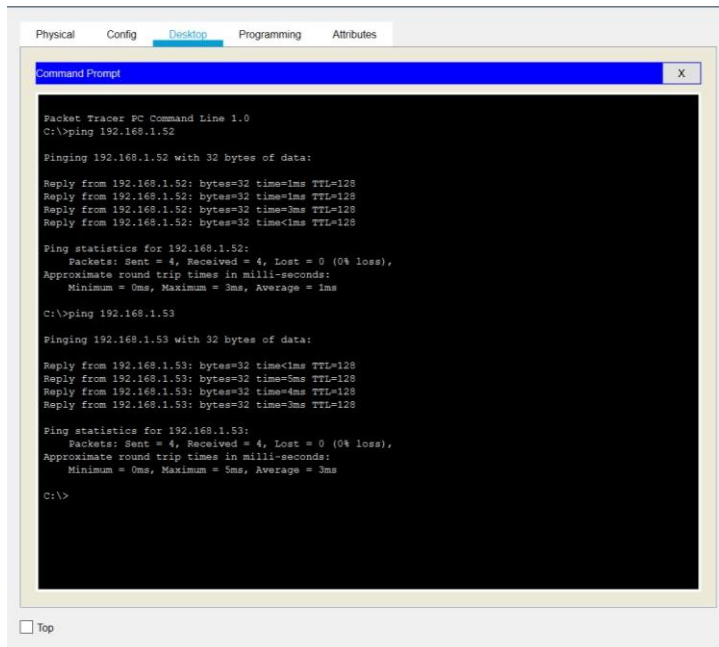
Ping statistics for 192.168.1.52:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 8ms, Average = 4ms

C:\>ping 192.168.1.53

Pinging 192.168.1.53 with 32 bytes of data:

Reply from 192.168.1.53: bytes=32 time=2ms TTL=128
Reply from 192.168.1.53: bytes=32 time=3ms TTL=128
Reply from 192.168.1.53: bytes=32 time<1ms TTL=128
Reply from 192.168.1.53: bytes=32 time<1ms TTL=128
```

☐ Top



Physical Config **Desktop** Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.52

Pinging 192.168.1.52 with 32 bytes of data:

Reply from 192.168.1.52: bytes=32 time=1ms TTL=128
Reply from 192.168.1.52: bytes=32 time=1ms TTL=128
Reply from 192.168.1.52: bytes=32 time=3ms TTL=128
Reply from 192.168.1.52: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.52:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms

C:\>ping 192.168.1.53

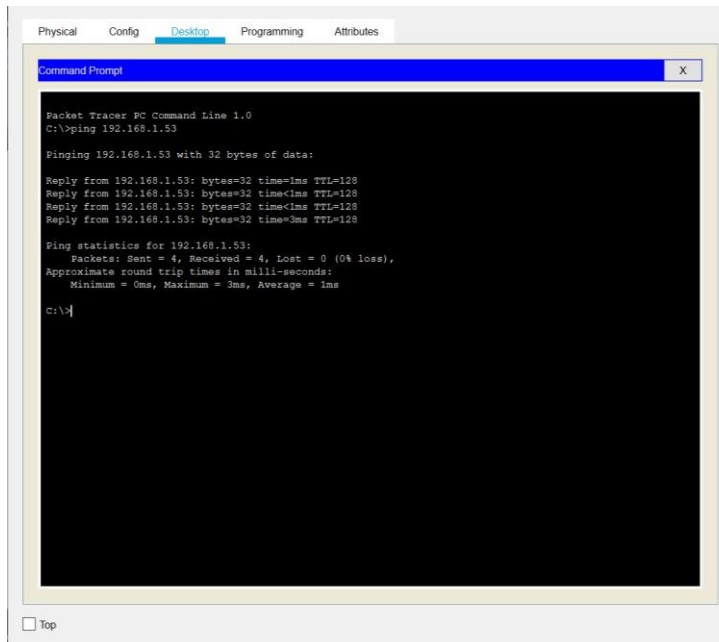
Pinging 192.168.1.53 with 32 bytes of data:

Reply from 192.168.1.53: bytes=32 time=1ms TTL=128
Reply from 192.168.1.53: bytes=32 time=5ms TTL=128
Reply from 192.168.1.53: bytes=32 time=1ms TTL=128
Reply from 192.168.1.53: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.1.53:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 5ms, Average = 3ms

C:\>
```

☐ Top



Physical Config **Desktop** Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.53

Pinging 192.168.1.53 with 32 bytes of data:

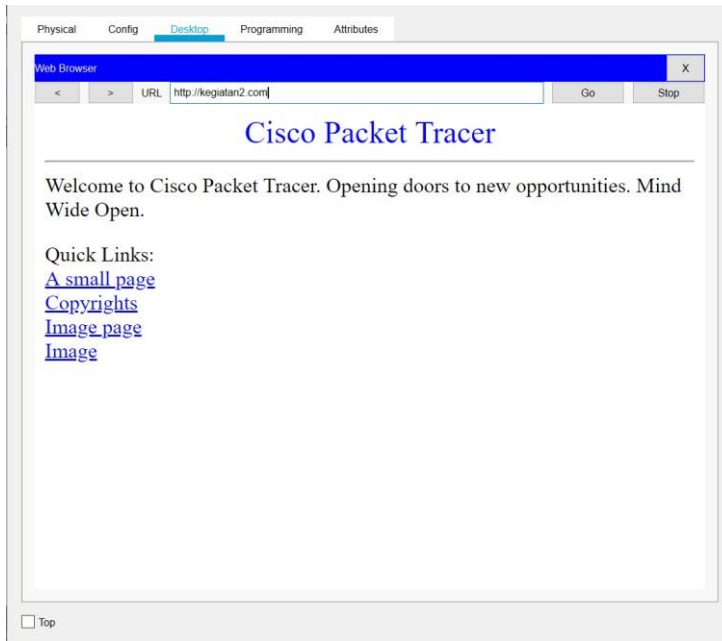
Reply from 192.168.1.53: bytes=32 time=1ms TTL=128
Reply from 192.168.1.53: bytes=32 time=1ms TTL=128
Reply from 192.168.1.53: bytes=32 time=1ms TTL=128
Reply from 192.168.1.53: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.1.53:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms

C:\>
```

☐ Top

Melakukan browsing HTTP dengan cara double klik PC0 sehingga muncul jendela properties PC0. Pilih tab desktop, pada daftar menu, pilih web browser. Ketika jendela web browser muncul, ketikkan kegiatan2.com Sesaat setelah itu akan dihasilkan halaman web pada Server0 di web browser PC0.

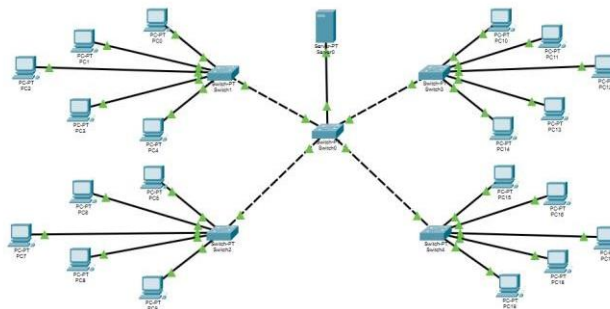


## Tugas

1. Buatlah DHCP Server dengan packet tracer dengan client terdiri dari 20 PC!

Jawab:

Menyusun komponen – komponen yang terdiri dari 1 server, 5 switch, dan 20 PC



Double klik Server0, memilih config. Pada menu Interface, pilih Fast-Ethernet. Pada bagian IP Configuration, isikan dengan IP Address server.

Physical **Config** Services Desktop Programming Attributes

**GLOBAL**  
Settings  
Algorithm Settings

**INTERFACE**  
FastEthernet0

FastEthernet0

Port Status ☒ On

Bandwidth ☐ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 00D0 BA6B 153D

IP Configuration  
☐ DHCP  
☒ Static

IP Address 192.168.123.1

Subnet Mask 255.255.255.0

IPv6 Configuration  
☐ DHCP  
☐ Auto Config  
☒ Static

IPv6 Address

Link Local Address FE80:2D0:BAFF:FE6B:153D

☐ Top

Untuk konfigurasi DHCP Server pada jendela properties server 0 pada services, DHCP. Pastikan service DHCP On. Isikan blok IP Address yang akan diberikan ke PC client. Pada start IP Address isikan dengan 192.168.123.19 dan pada maximum number of users = 20.

Physical **Config** **Services** Desktop Programming Attributes

**SERVICES**  
HTTP  
DHCP  
DHCPv6  
TFTP  
DNS  
SYSLOG  
AAA  
NTP  
EMAIL  
FTP  
IoT  
VM Management  
Radius EAP

DHCP

Interface FastEthernet0 Service ☒ On ☐ Off

Pool Name serverPool

Default Gateway 192.168.123.1

DNS Server 0.0.0.0

Start IP Address : 192 168 123 19

Subnet Mask 255 255 255 0

Maximum Number of Users : 20

TFTP Server: 0.0.0.0

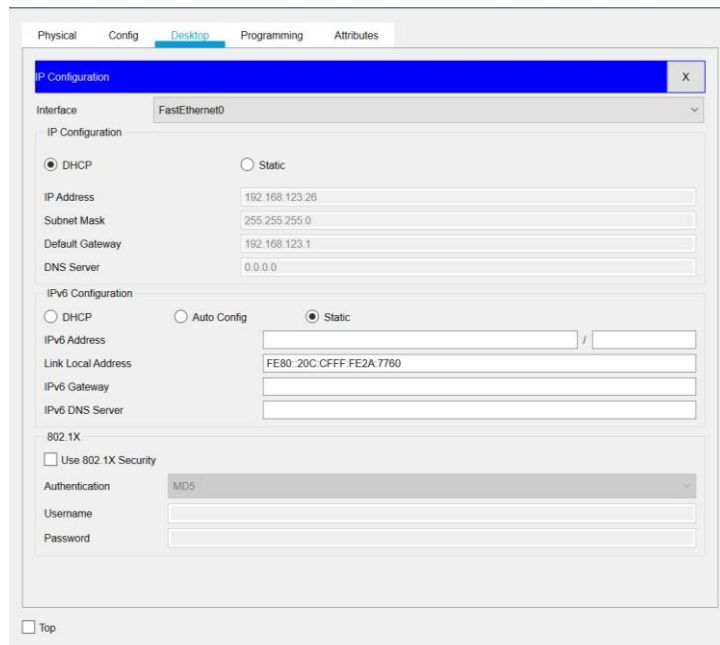
WLC Address: 0.0.0.0

Add Save Remove

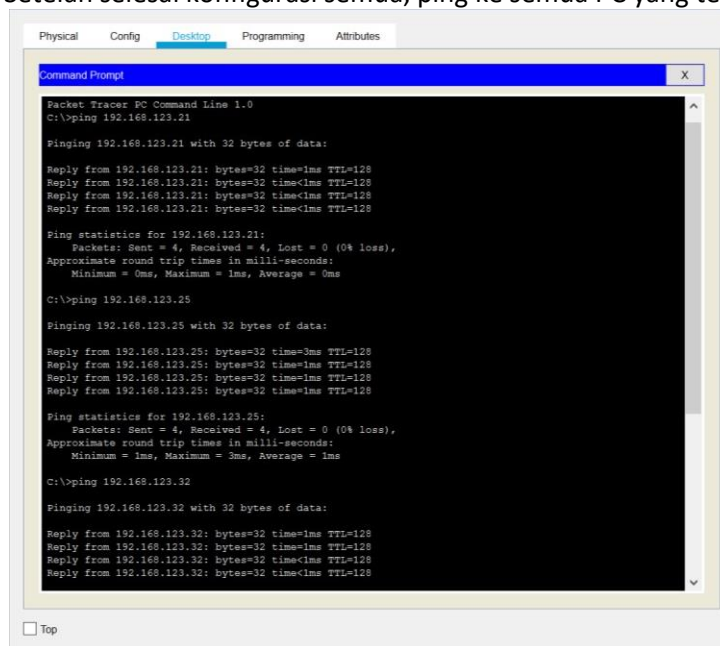
Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	192.168.123.1	0.0.0.0	192.168.123.19	255.255.255.0	20	0.0.0.0	0.0.0.0

☐ Top

Pada sisi client konfigurasi dilakukan dengan cara double klik pada PC, pilih tab desktop, pada menu yang ada, pilih menu IP Configuration. Pastikan pilihan radio button pada pilihan DHCP. Setelah konfigurasi selesai, silakan cek IP pada PC tersebut.



Setelah selesai konfigurasi semua, ping ke semua PC yang terhubung dengan server DHCP

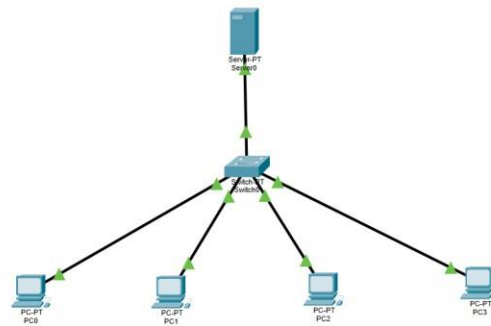


2. Buatlah web server pada packet tracer, dengan mengubah tampilan pada web tersebut dengan isi :

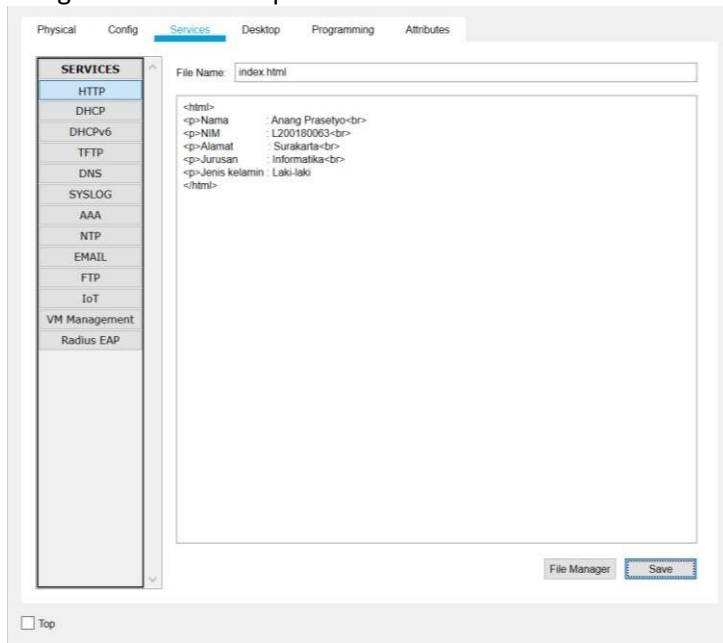
- a. Nama
- b. NIM
- c. Alamat
- d. Jurusan
- e. Jenis Kelamin

Jawab :

## Merancang DHCP Server



## Mengubah index.html pada HTTP



Berikut adalah screenshot tampilan pada web browser :



