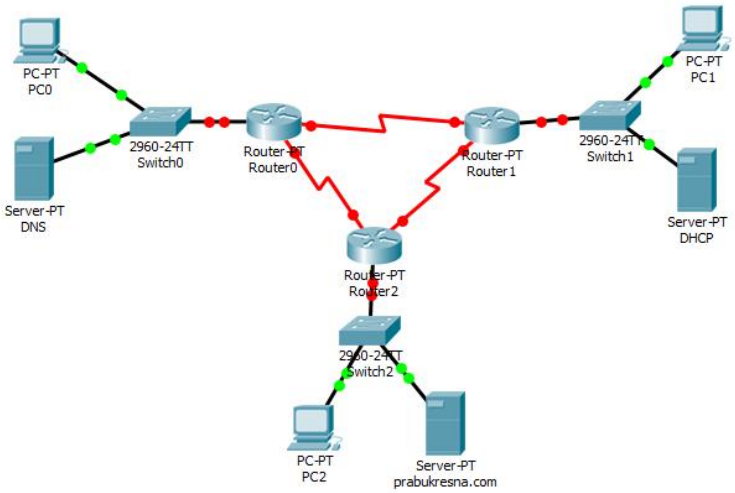
Nama : Roni Ardianzah
Nim : L200170073
Kelas : B

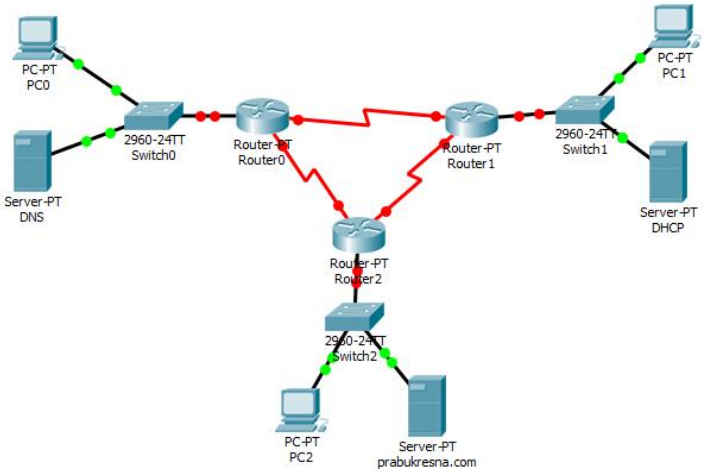
UJIAN AKHIR SEMESTER JARINGAN KOMPUTER



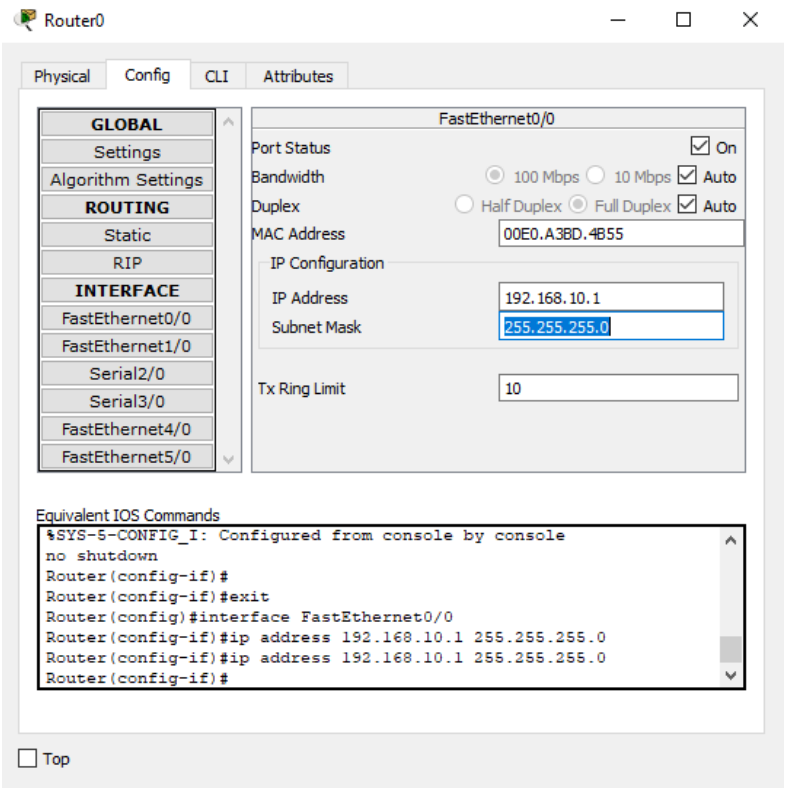
SOAL :

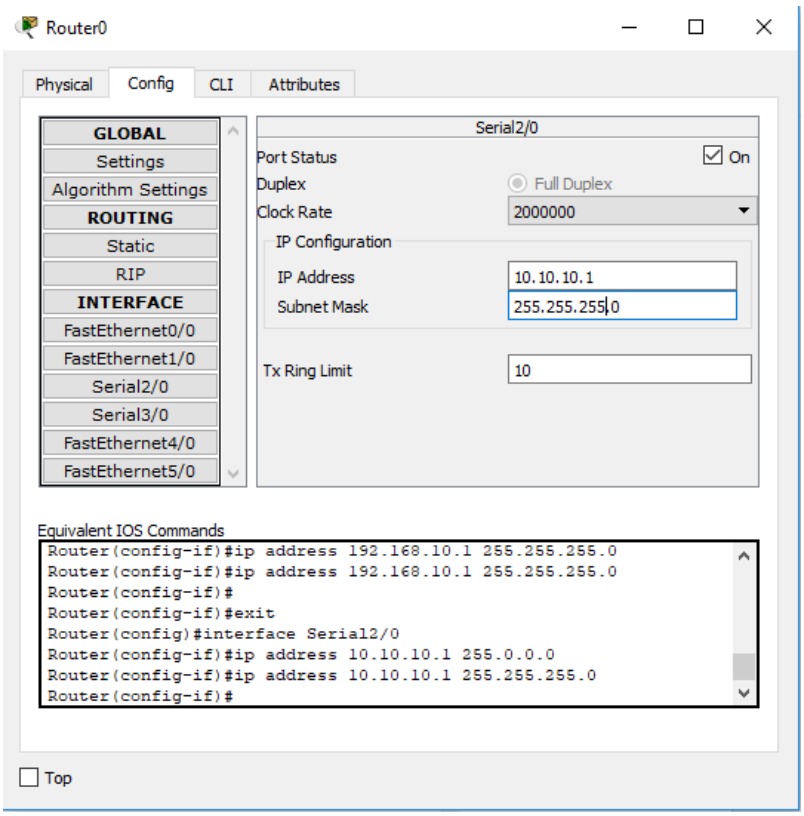
1. Buat Topologi Seperti Diatas
2. Konfigurasi IP terhadap Router 0,1,2 PC 0,1,2 dan Server 0,1,2
3. Konfirgurasi Routing Dinamis
4. Konfigurasi Routing Statis
5. Batasi Hanya 2 PC yang dapat mengakses Webserver

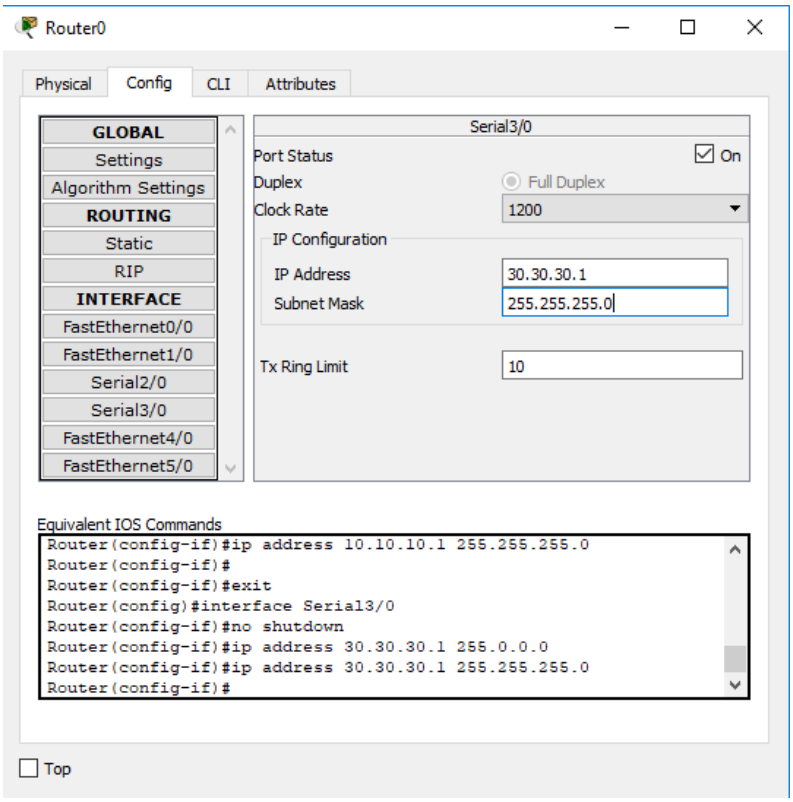
JAWAB :



- **Router 0**
  Fast Ethernet 0/0 : 192.168.10.1
  Serial 2/0 : 10.10.10.1
  Serial 3/0 : 30.30.30.1

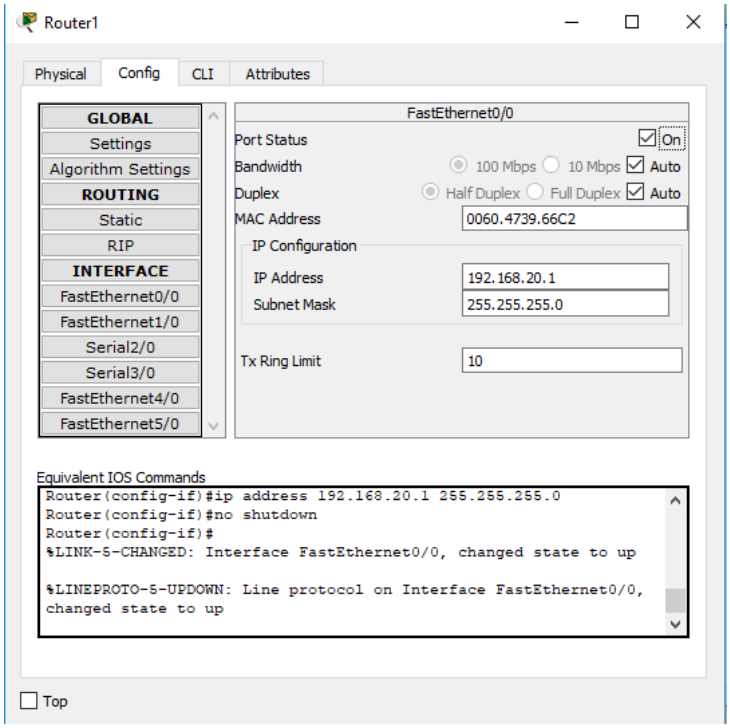

Router0
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
INTERFACE
FastEthernet0/0
FastEthernet1/0
Serial2/0
Serial3/0
FastEthernet4/0
FastEthernet5/0
FastEthernet0/0
Port Status
On
Bandwidth
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
00E0.A3BD.4B55
IP Configuration
IP Address
192.168.10.1
Subnet Mask
255.255.255.0
Tx Ring Limit
10
Equivalent IOS Commands
%SYS-5-CONFIG_I: Configured from console by console
no shutdown
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#
Top

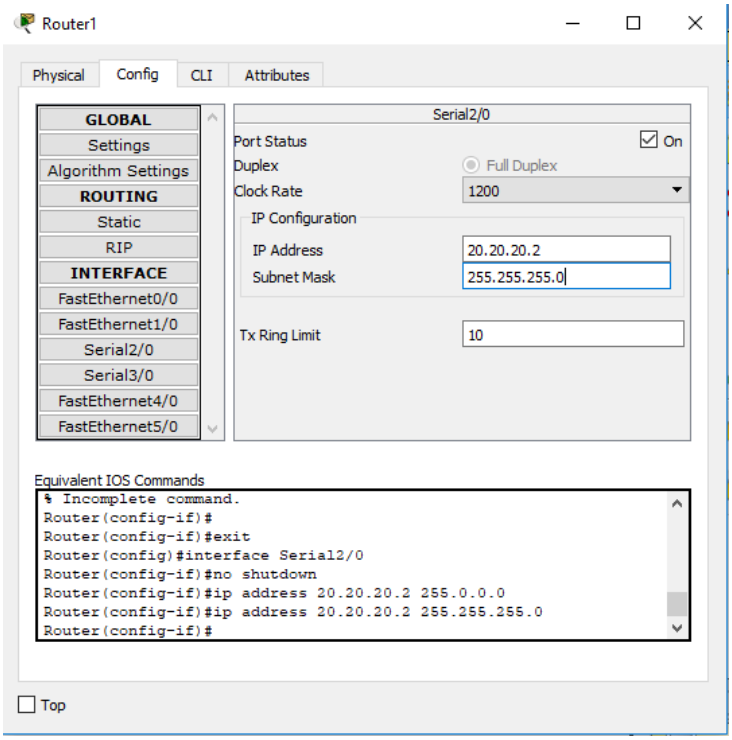

Router0
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
INTERFACE
FastEthernet0/0
FastEthernet1/0
Serial2/0
Serial3/0
FastEthernet4/0
FastEthernet5/0
Serial2/0
Port Status
On
Duplex
Full Duplex
Clock Rate
2000000
IP Configuration
IP Address
10.10.10.1
Subnet Mask
255.255.255.0
Tx Ring Limit
10
Equivalent IOS Commands
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#ip address 10.10.10.1 255.0.0.0
Router(config-if)#ip address 10.10.10.1 255.255.255.0
Router(config-if)#
Top

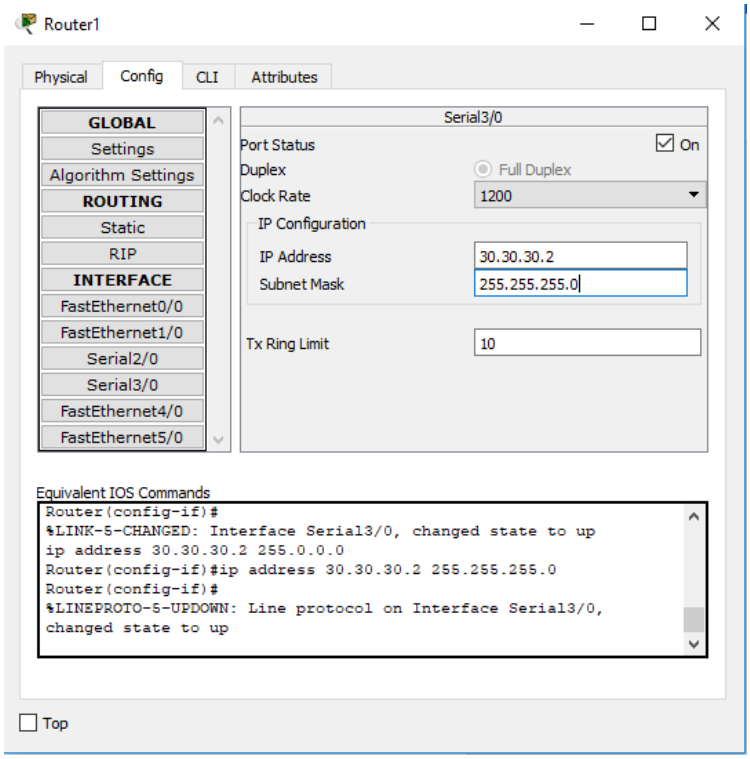

Router0
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
INTERFACE
FastEthernet0/0
FastEthernet1/0
Serial2/0
Serial3/0
FastEthernet4/0
FastEthernet5/0
Serial3/0
Port Status
On
Duplex
Full Duplex
Clock Rate
1200
IP Configuration
IP Address
30.30.30.1
Subnet Mask
255.255.255.0
Tx Ring Limit
10
Equivalent IOS Commands
Router(config-if)#ip address 10.10.10.1 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#no shutdown
Router(config-if)#ip address 30.30.30.1 255.0.0.0
Router(config-if)#ip address 30.30.30.1 255.255.255.0
Router(config-if)#
Top

- **Router 1**

  Fast Ethernet 0/0 : 192.168.20.1
  Serial 2/0 : 20.20.20.2
  Serial 3/0 : 30.30.30.2

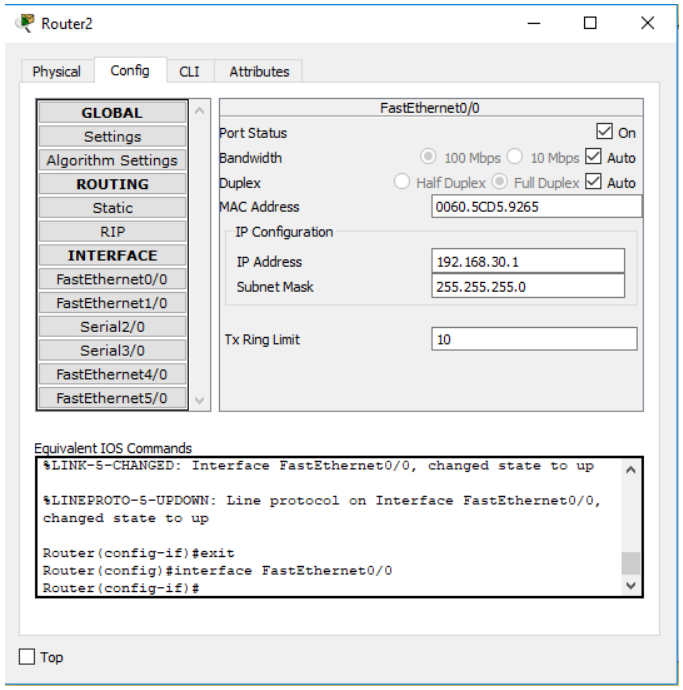


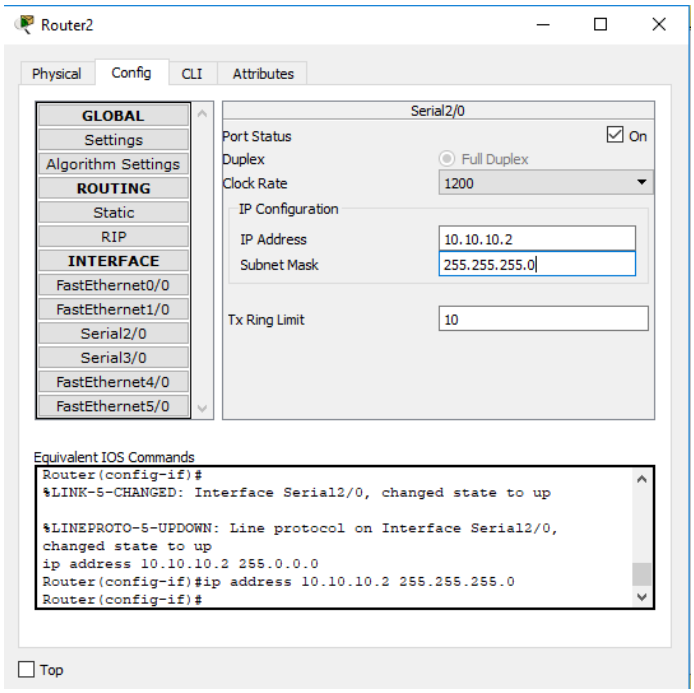


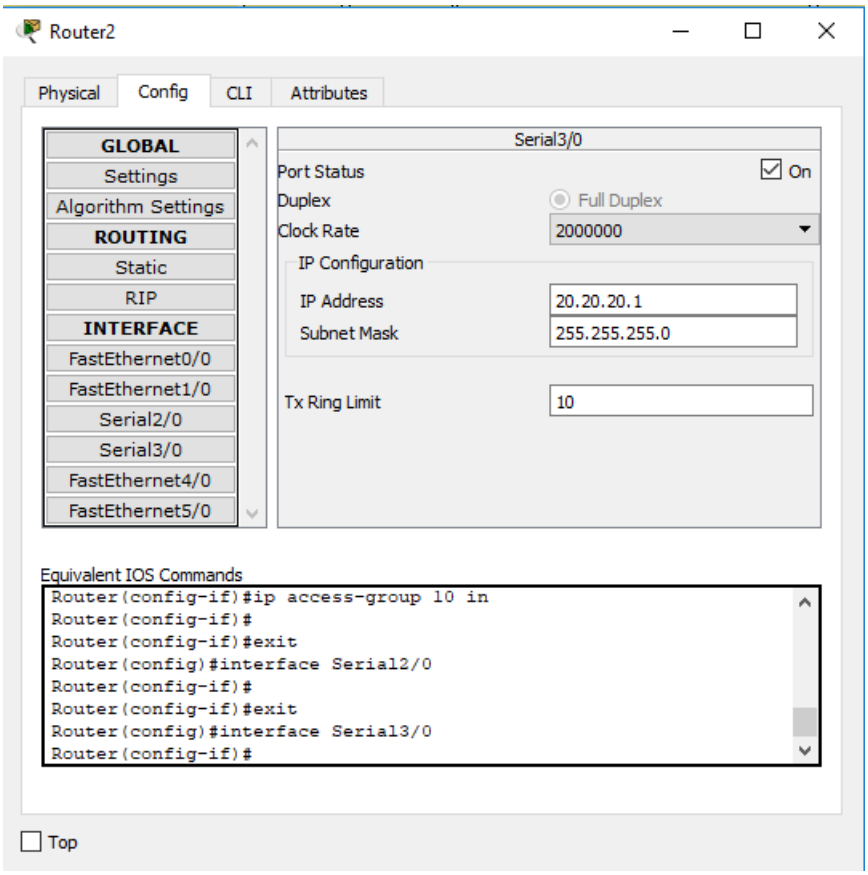

Router1
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
INTERFACE
FastEthernet0/0
FastEthernet1/0
Serial2/0
Serial3/0
FastEthernet4/0
FastEthernet5/0
Serial3/0
Port Status
On
Duplex
Full Duplex
Clock Rate
1200
IP Configuration
IP Address
30.30.30.2
Subnet Mask
255.255.255.0
Tx Ring Limit
10
Equivalent IOS Commands
Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up
ip address 30.30.30.2 255.0.0.0
Router(config-if)#ip address 30.30.30.2 255.255.255.0
Router(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0,
changed state to up
Top

- **Router 2**

  Fast Ethernet 0/0 : 192.168.30.1
  Serial 2/0 : 10.10.10.2
  Serial 3/0 : 20.20.20.1

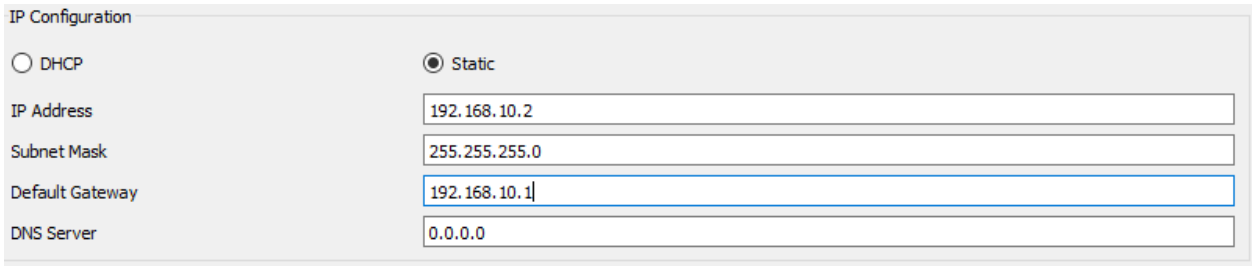


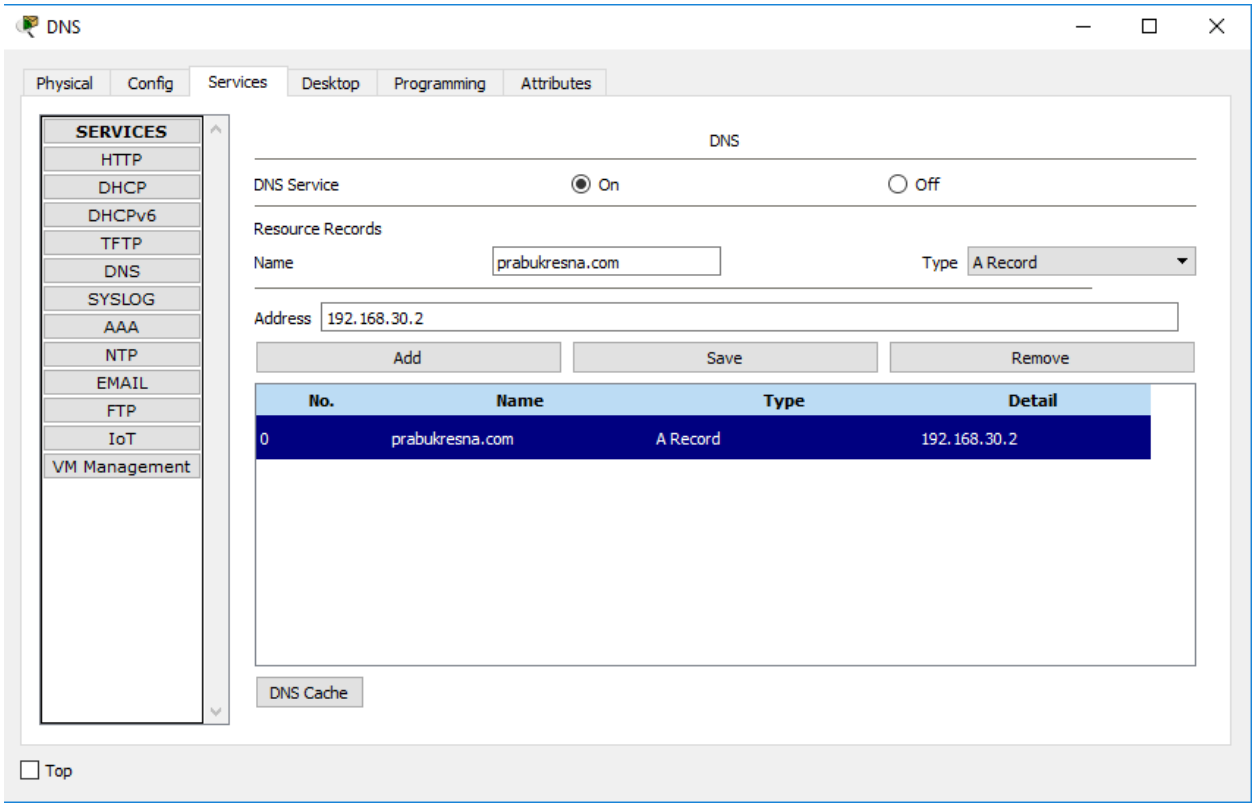




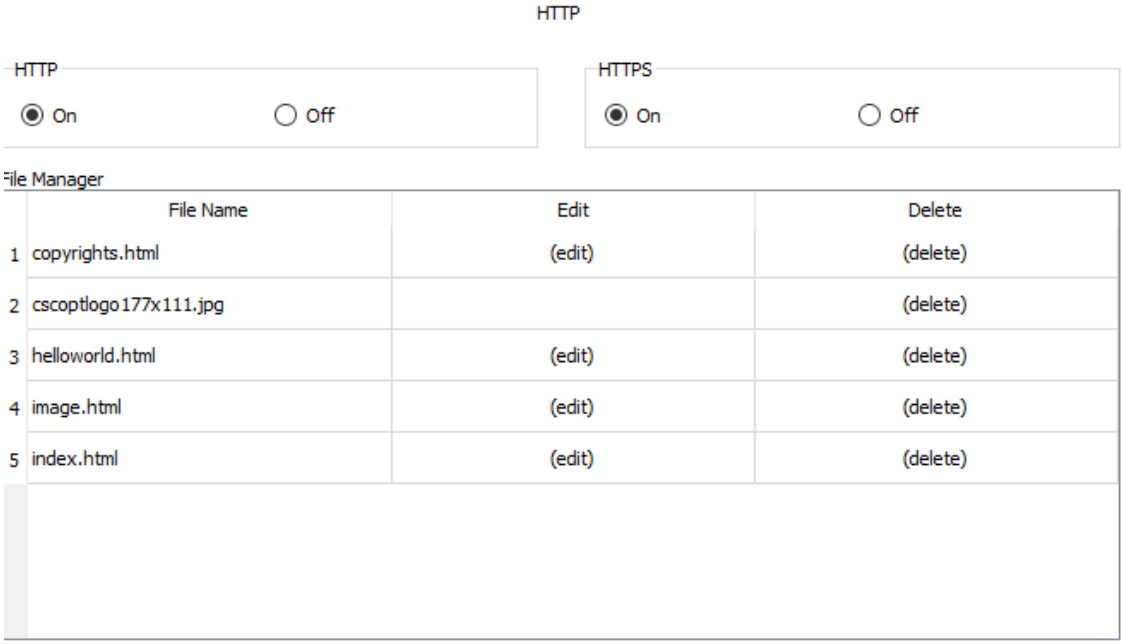
Kemudian Kita akan lakukan konfigurasi DHCP pada Server

- Server DNS





- Server prabukresna.com



File Name: index.html

```
<html>
<center><font size='+2' color='blue'>NDOROWATI PRABU KRESNA</font></center>
<hr>Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
<p>Quick Links:
<br><a href='helloworld.html'>A small page</a>
<br><a href='copyrights.html'>Copyrights</a>
<br><a href='image.html'>Image page</a>
<br><a href='cscoptlogo177x111.jpg'>Image</a>
</html>
```

File Manager | Save

- Server DHCP

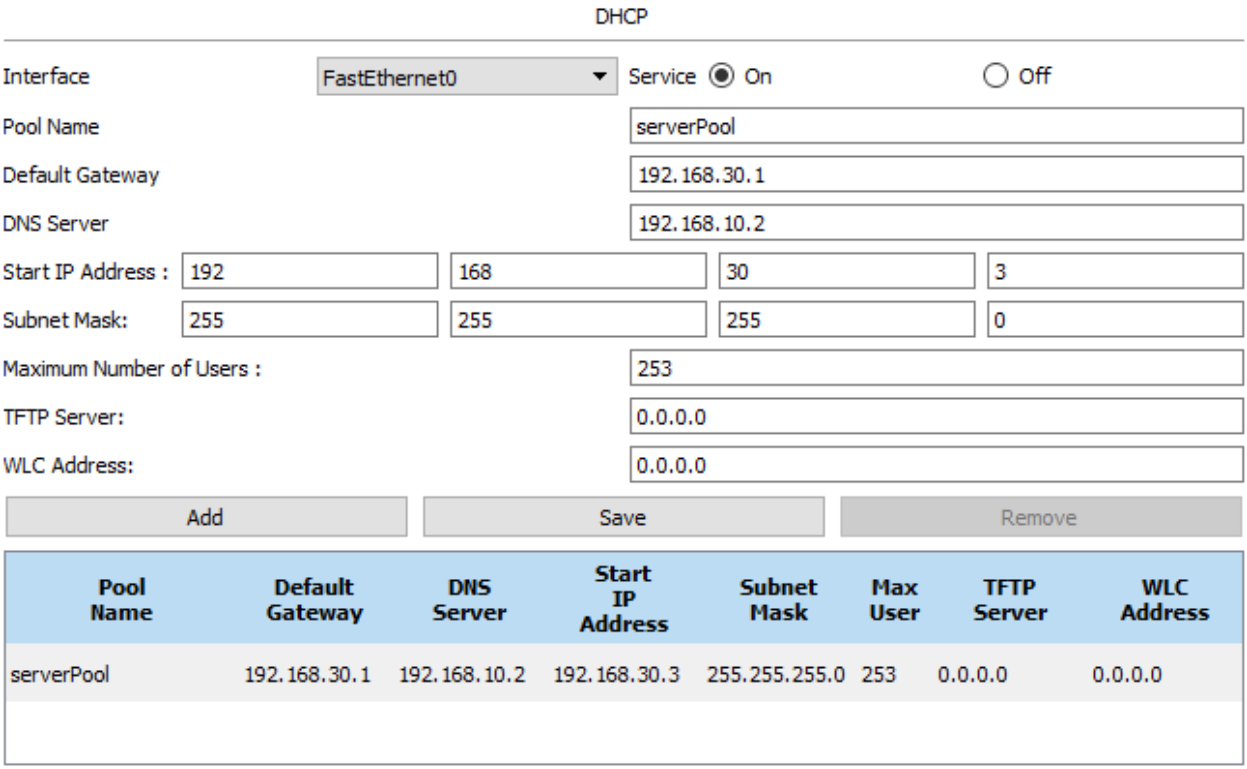
DHCP

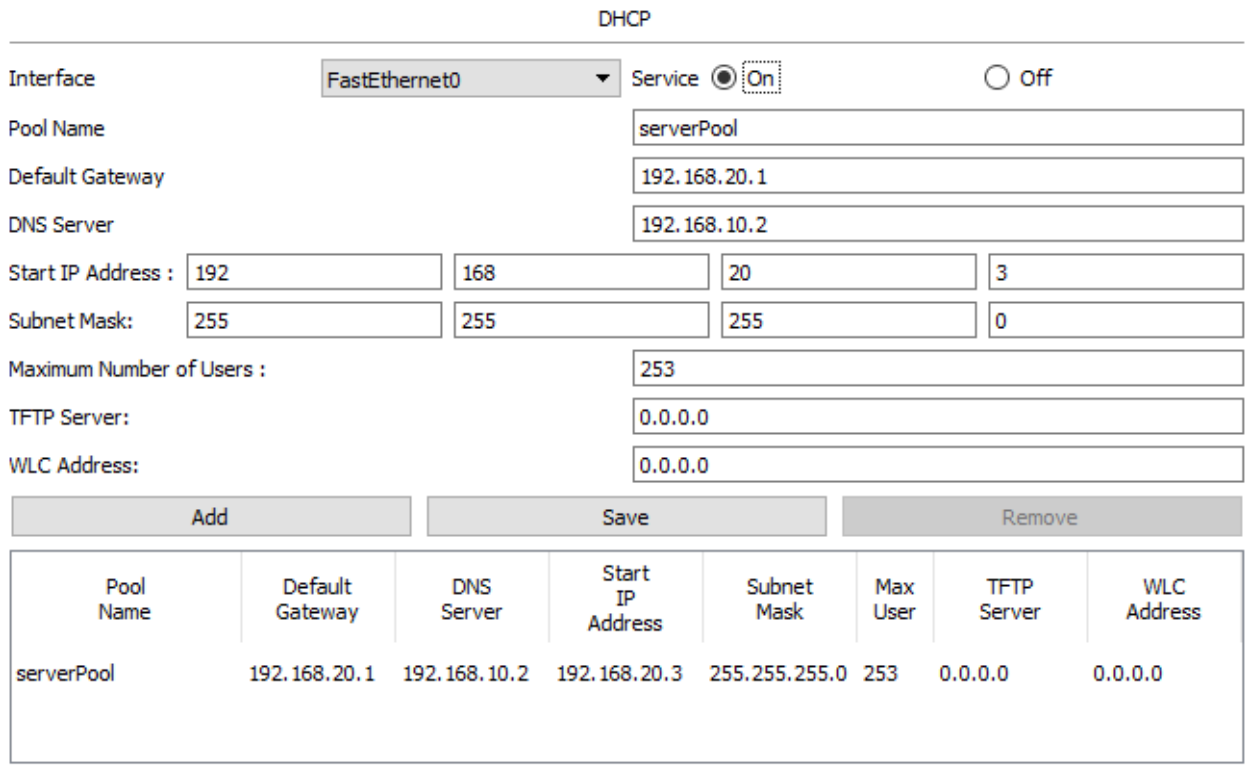
Interface: FastEthernet0 | Service: On / Off

Pool Name				serverPool
Default Gateway				192.168.10.1
DNS Server				192.168.10.2
Start IP Address :	192	168	10	3
Subnet Mask:	255	255	255	0
Maximum Number of Users :				253
TFTP Server:				0.0.0.0
WLC Address:				0.0.0.0

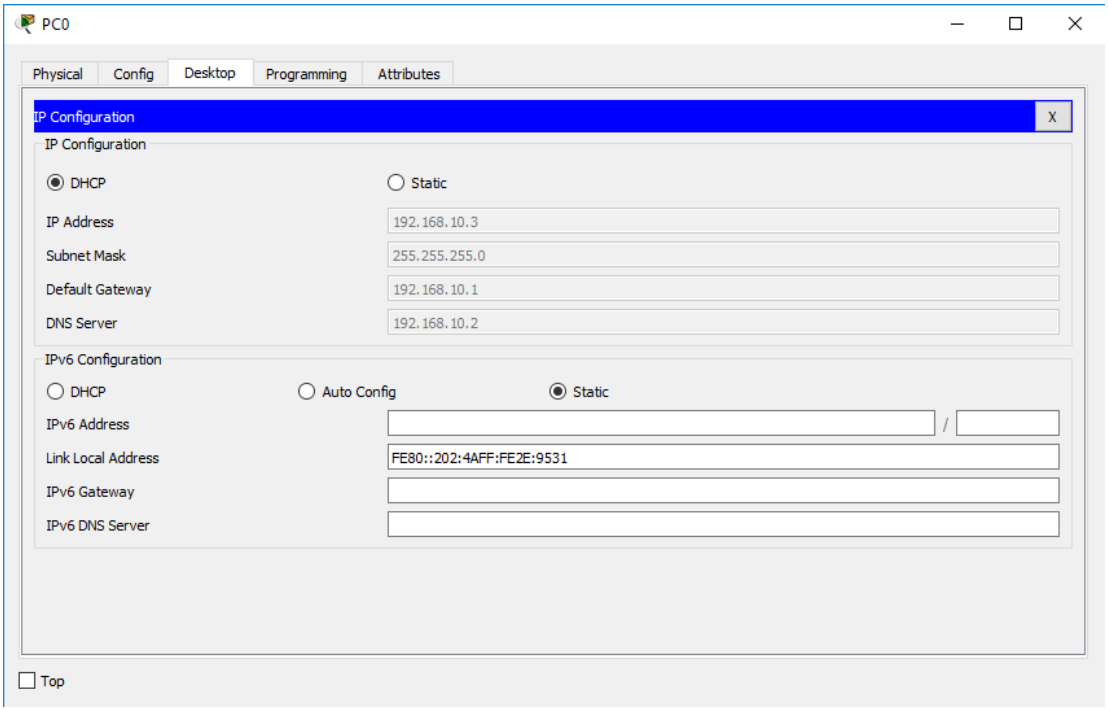
Add | Save | Remove

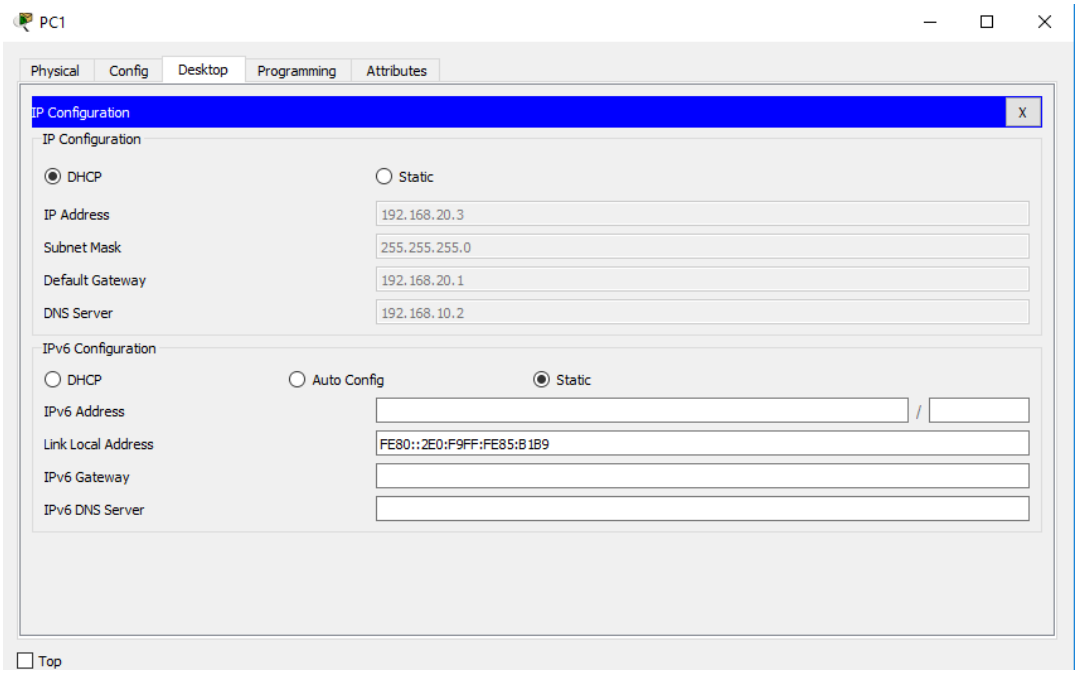
Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	192.168.10.1	192.168.10.2	192.168.10.3	255.255.255.0	253	0.0.0.0	0.0.0.0

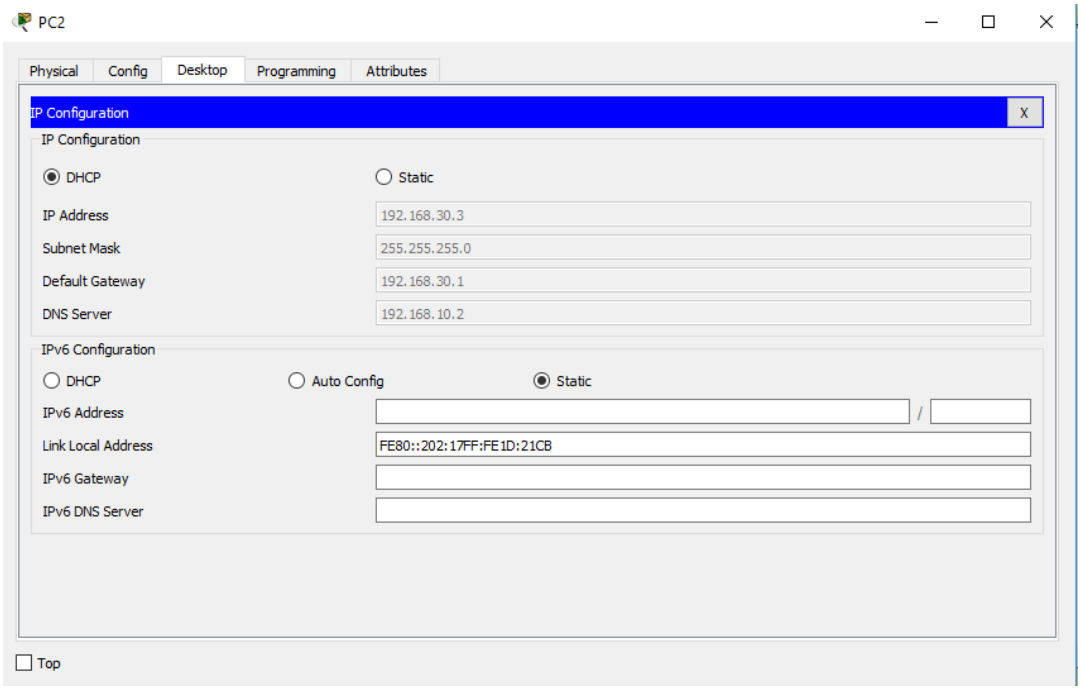




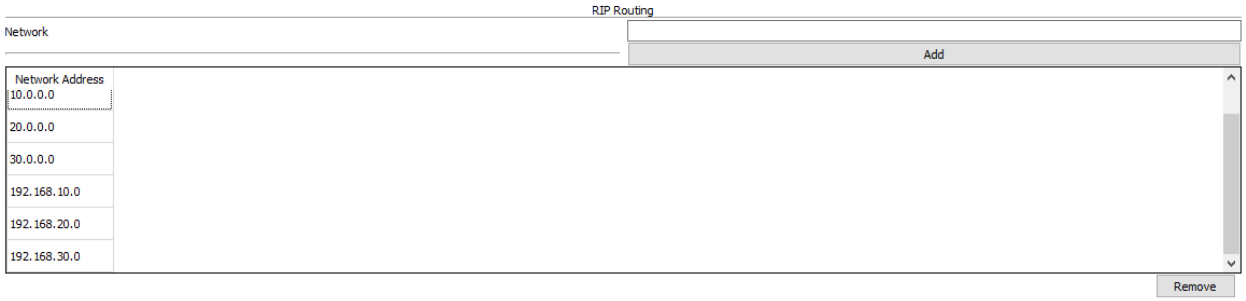
Kemudian apa Bila telah terkonfigurasi otomatis PC akan mendapatkan IP


PC0
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
IP Configuration
DHCP
Static
IP Address
192.168.10.3
Subnet Mask
255.255.255.0
Default Gateway
192.168.10.1
DNS Server
192.168.10.2
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::202:4AFF:FE2E:9531
IPv6 Gateway
IPv6 DNS Server
Top

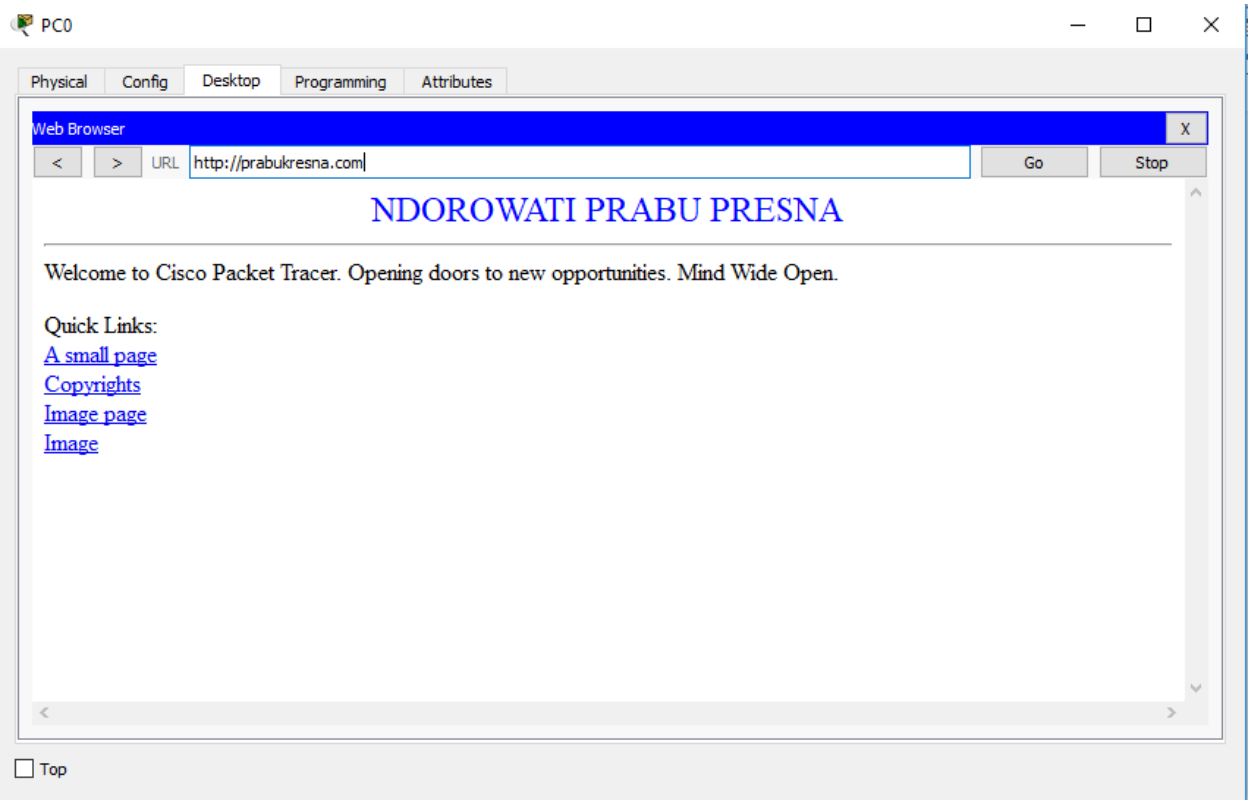

PC1
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
IP Configuration
DHCP
Static
IP Address
192.168.20.3
Subnet Mask
255.255.255.0
Default Gateway
192.168.20.1
DNS Server
192.168.10.2
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::2E0:F9FF:FE85:B1B9
IPv6 Gateway
IPv6 DNS Server
Top


PC2
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
IP Configuration
DHCP
Static
IP Address
192.168.30.3
Subnet Mask
255.255.255.0
Default Gateway
192.168.30.1
DNS Server
192.168.10.2
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
/
Link Local Address
FE80::202:17FF:FE1D:21CB
IPv6 Gateway
IPv6 DNS Server
Top

Kemudian agar PC bisa terhubung beda jaringan kita akan mencoba konfigurasi **routing DINAMIS pada Router 0,1,2 dengan seperti dibawah ini**



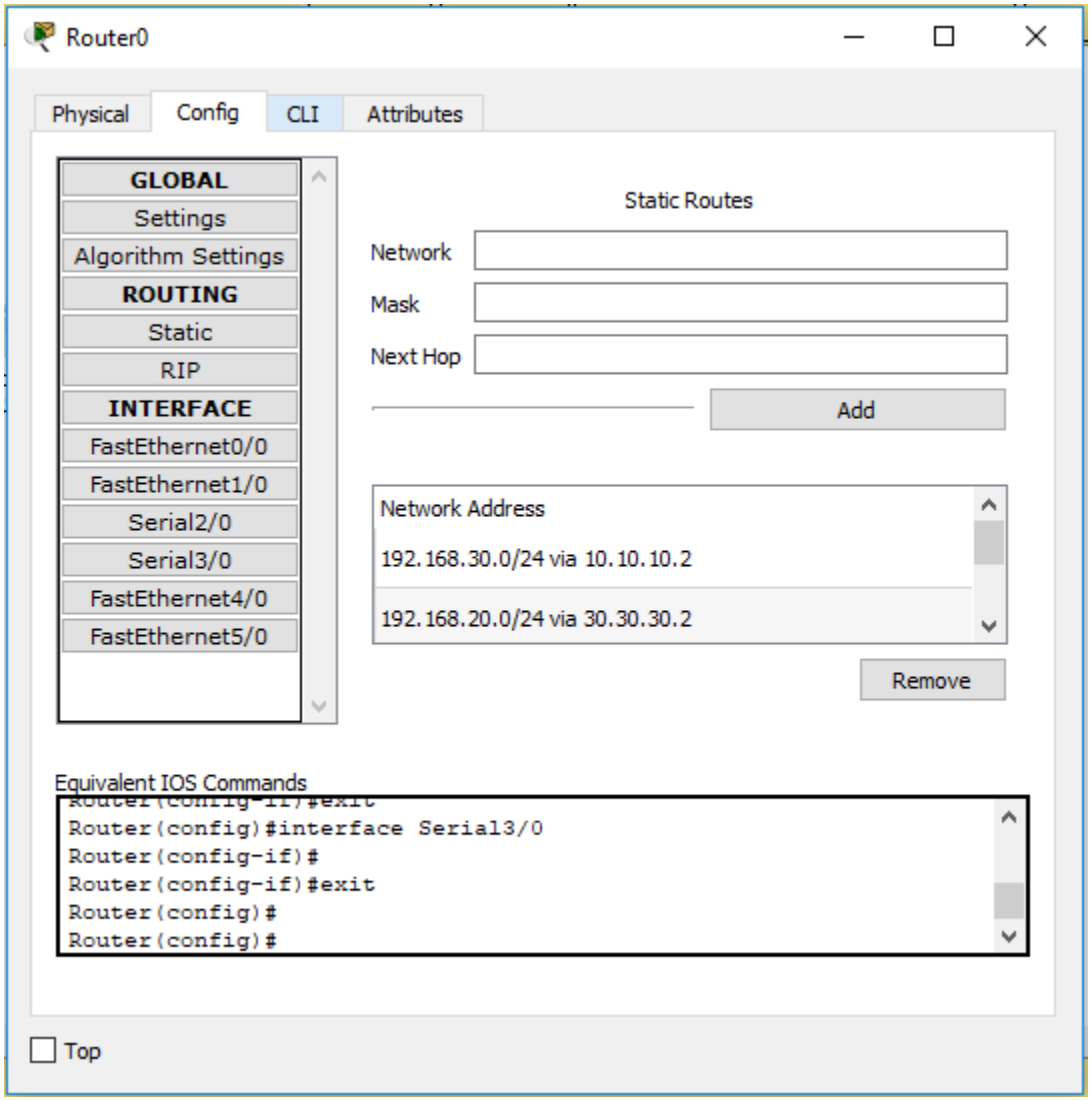
Kemudian kita tes koneksi dengan **PING** dan **MENGAKSES WEB** prabukresna.com dari PC :



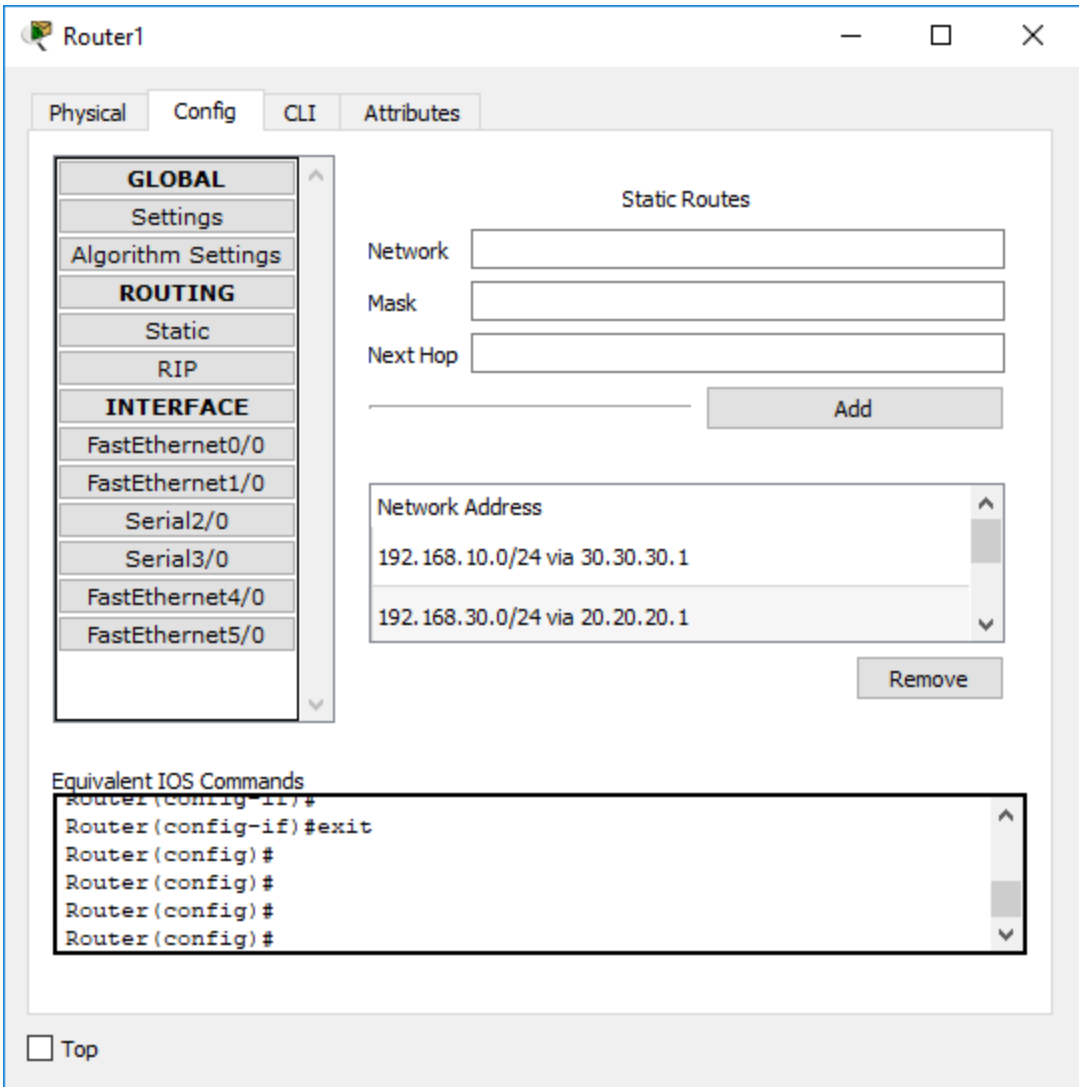

```
C:\>ping prabukresna.com

Pinging 192.168.30.2 with 32 bytes of data:

Reply from 192.168.30.2: bytes=32 time=1ms TTL=126
Reply from 192.168.30.2: bytes=32 time=1ms TTL=126
Reply from 192.168.30.2: bytes=32 time=2ms TTL=126
Reply from 192.168.30.2: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.30.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 2ms, Average = 1ms
```

Kemudian agar PC bisa terhubung beda jaringan kita akan mencoba konfigurasi **routing STATIS, konfigurasi sebelumnya dihapus pada Router 0,1,2 dengan seperti dibawah ini**

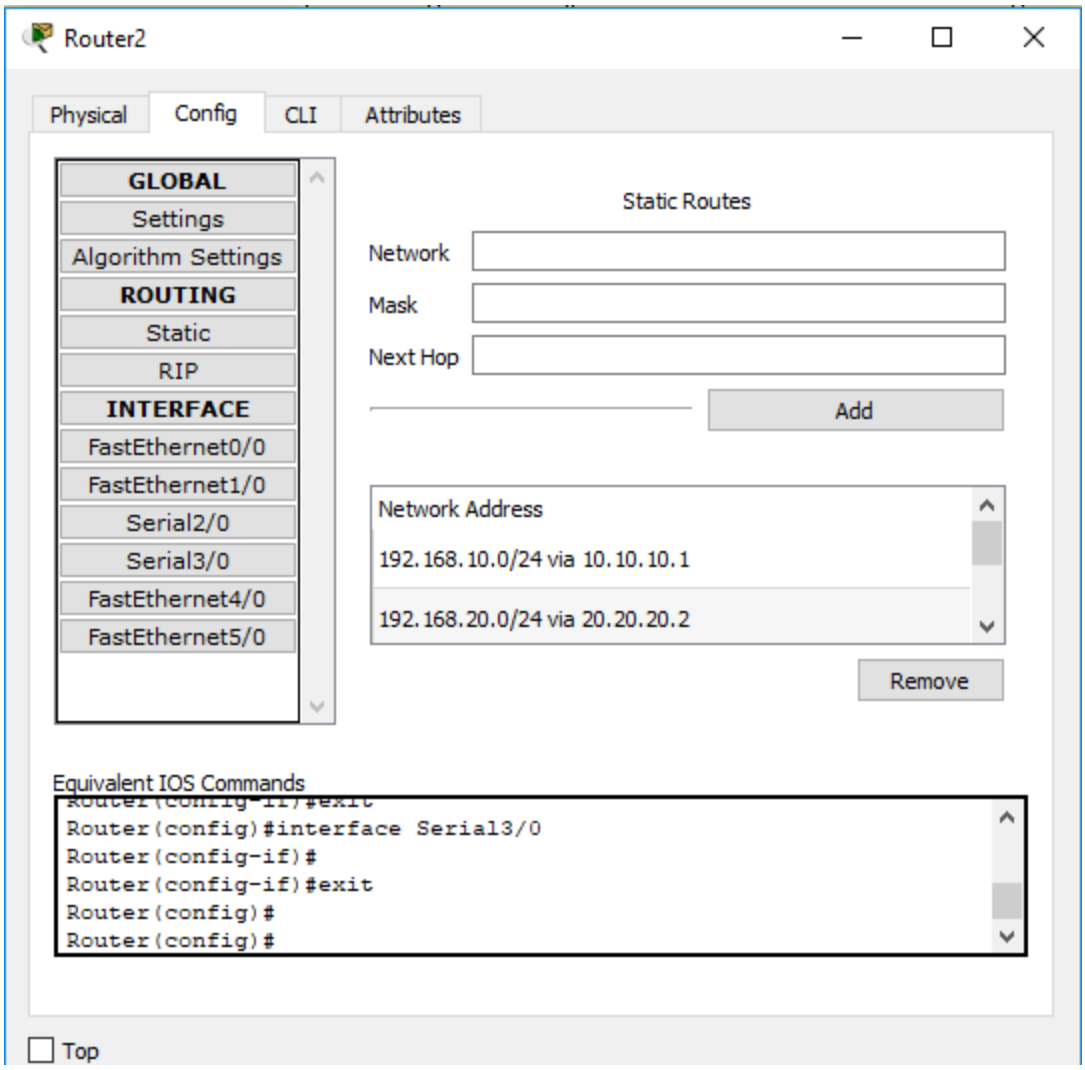
- **ROUTER 0**



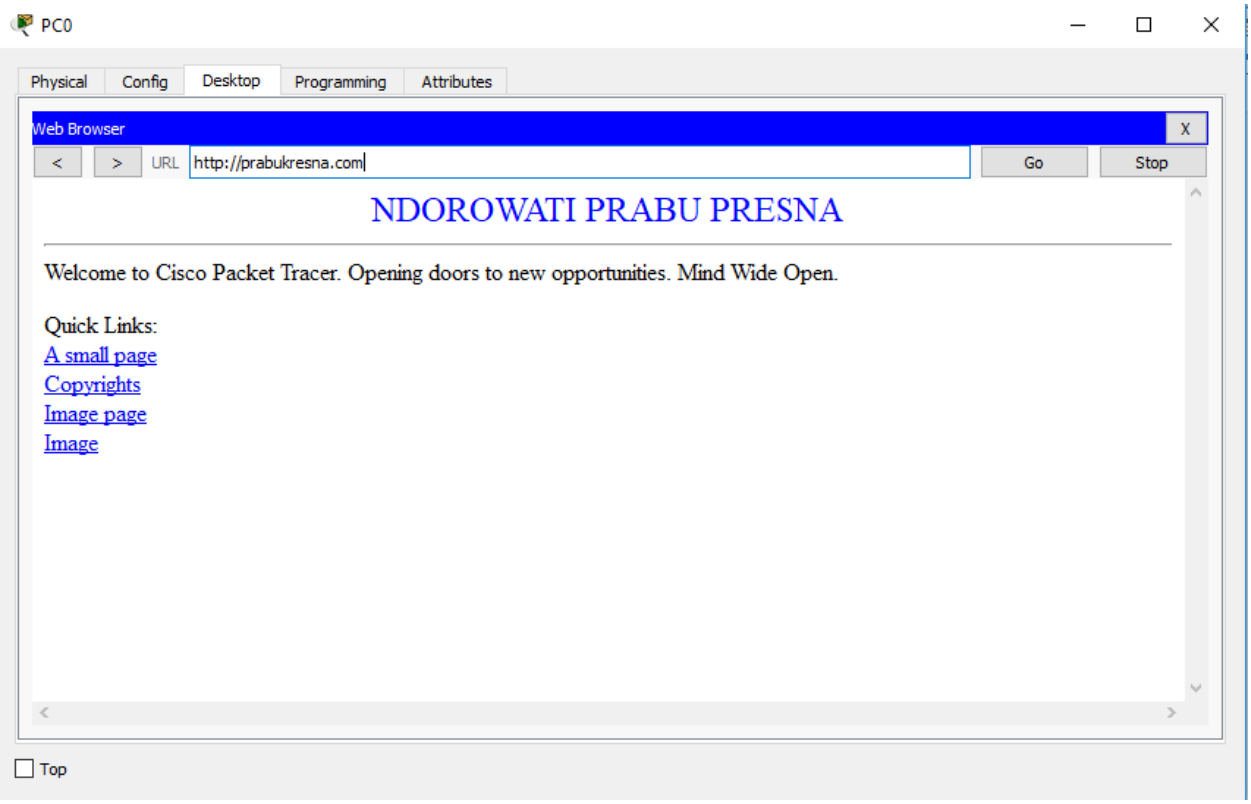
- **ROUTER 1**


Router1
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
INTERFACE
FastEthernet0/0
FastEthernet1/0
Serial2/0
Serial3/0
FastEthernet4/0
FastEthernet5/0
Static Routes
Network
Mask
Next Hop
Add
Network Address
192.168.10.0/24 via 30.30.30.1
192.168.30.0/24 via 20.20.20.1
Remove
Equivalent IOS Commands
Router(config-if)#exit
Router(config)#
Router(config)#
Router(config)#
Router(config)#
Top

- **ROUTER 2**



Kemudian kita tes koneksi dengan **PING** dan **MENGAKSES WEB** prabukresna.com dari PC :




```
C:\>ping prabukresna.com

Pinging 192.168.30.2 with 32 bytes of data:

Reply from 192.168.30.2: bytes=32 time=1ms TTL=126
Reply from 192.168.30.2: bytes=32 time=1ms TTL=126
Reply from 192.168.30.2: bytes=32 time=2ms TTL=126
Reply from 192.168.30.2: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.30.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 2ms, Average = 1ms
```

Setelah itu kita akan mencoba memblock koneksi host 192.168.10.3 dan 192.168.20.3, maka komputer yang dapat mengakses server prabukresna.com adalah SERVER DNS, SERVER DHCP, SERVER PRABUKRESNA.COM dan PC-2

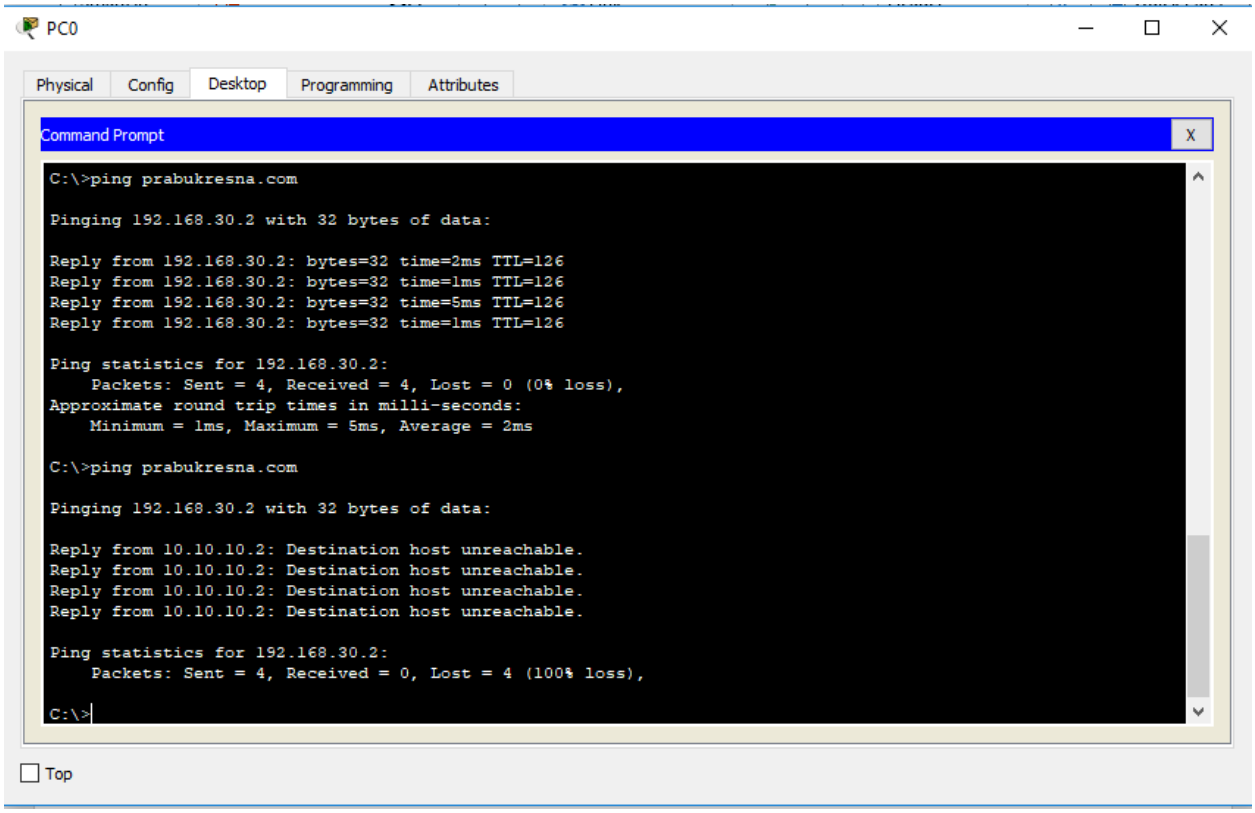
Pada ROUTER 2:

```
Router(config)#access-list 10 deny host 192.168.10.3
Router(config)#access-list 10 deny host 192.168.20.3
Router(config)#access-list 10 permit any
```

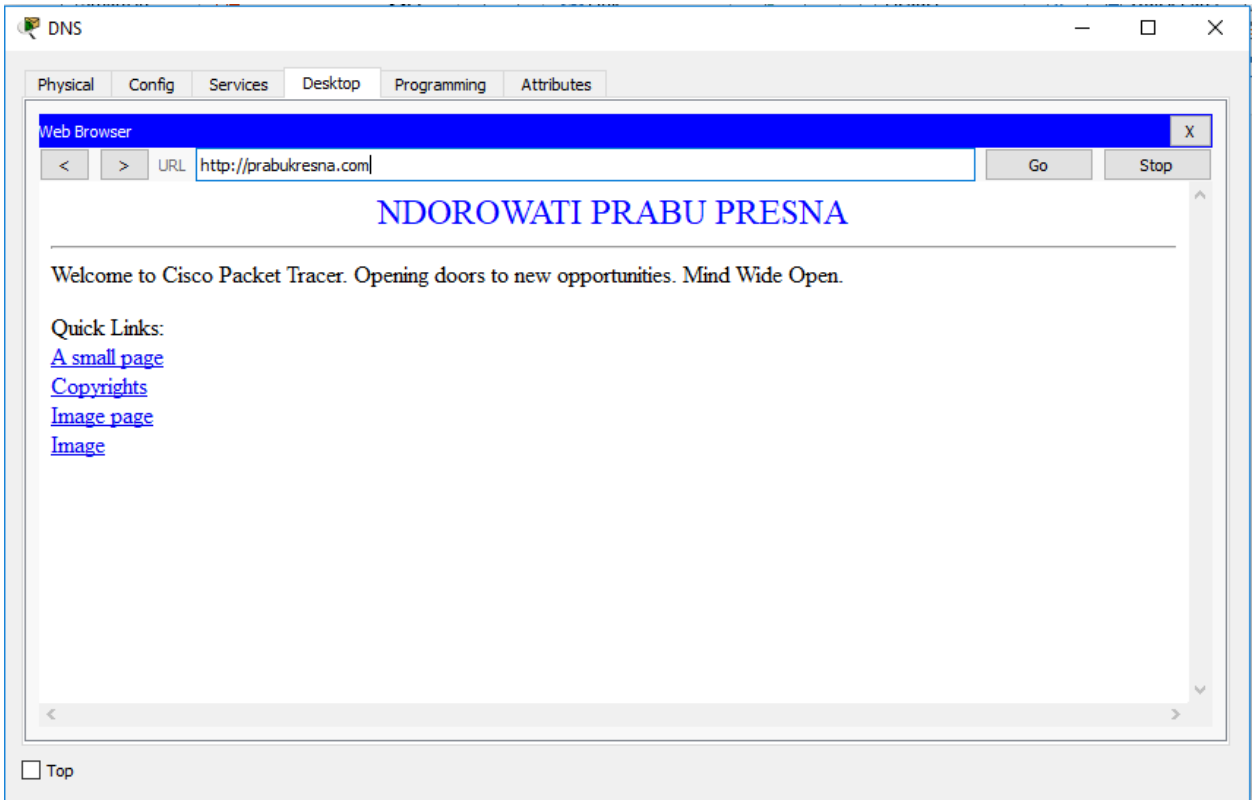
```
Router(config)#int
Router(config)#interface fa
Router(config)#interface fastEthernet 0/0
Router(config-if)#ip a
Router(config-if)#ip acc
Router(config-if)#ip access-group 10 out
Router(config-if)#
```

Kemudian Kita Uji coba dari PC 0

- PC 0



- Akses prabukresna.com dari SERVER DNS


DNS
Physical
Config
Services
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://prabukresna.com
Go
Stop
NDOROWATI PRABU PRESNA
Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
Quick Links:
A small page
Copyrights
Image page
Image
Top