

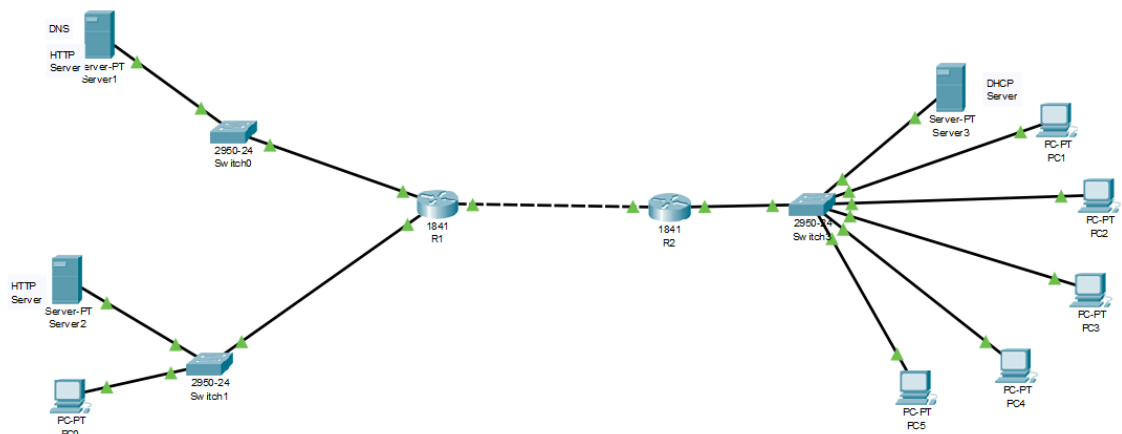
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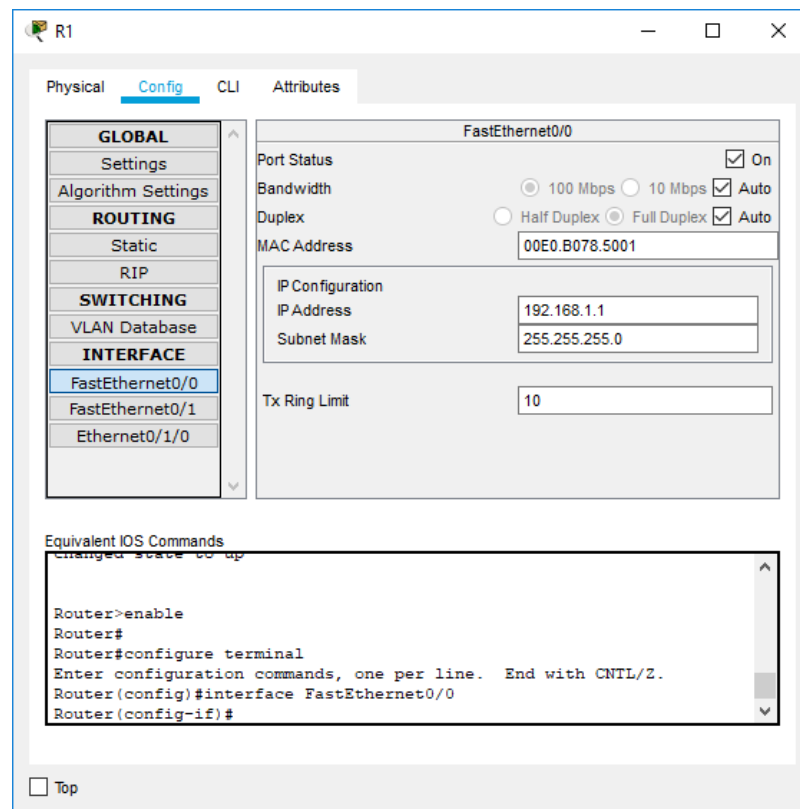
Kelas : D

## KUIS PRAKTIKUM JARKOM

1. Membuat topologi dengan tiga buah jaringan terdiri dari dua buah router, tiga buah server (DHCP, DNS, HTTP Server) dan enam buah PC Workstation



2. Konfigurasi pada Router 1 (R1)



R1

Physical **Config** CLI Attributes

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**SWITCHING**

VLAN Database

**INTERFACE**

FastEthernet0/0

**FastEthernet0/1**

Ethernet0/1/0

**FastEthernet0/1**

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 00E0.B078.5002

IP Configuration

IP Address 192.168.2.1

Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
```

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R1

Physical **Config** CLI Attributes

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**SWITCHING**

VLAN Database

**INTERFACE**

FastEthernet0/0

FastEthernet0/1

**Ethernet0/1/0**

**Ethernet0/1/0**

Port Status ☒ On

Bandwidth ☒ 10 Mbps ☐ 100 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 00D0.FFE3.112D

IP Configuration

IP Address 192.168.3.1

Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Ethernet0/1/0
Router(config-if)#
```

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### 3. Konfigurasi pada router 2 (R2)

R2

Physical **Config** CLI Attributes

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**SWITCHING**

VLAN Database

**INTERFACE**

FastEthernet0/0

FastEthernet0/1

**FastEthernet0/0**

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0005.5E9D.8E01

IP Configuration

IP Address 192.168.4.1

Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

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R2

Physical **Config** CLI Attributes

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**SWITCHING**

VLAN Database

**INTERFACE**

FastEthernet0/0

FastEthernet0/1

**FastEthernet0/1**

Port Status ☒ On

Bandwidth ☐ 100 Mbps ☒ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0005.5E9D.8E02

IP Configuration

IP Address 192.168.3.2

Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
```

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4. Konfigurasi pada server DHCP sehingga 5 buah workstation nanti dapat mendapatkan ip secara otomatis

Server3

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 0003.E4DA.6697

IP Configuration

☐ DHCP

☒ Static

IP Address 192.168.4.2

Subnet Mask 255.255.255.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

Link Local Address: FE80::203:E4FF:FEDA:6697

☐ Top

Server3

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 192.168.4.1

DNS Server 192.168.1.2

Start IP Address : 192 168 4 3

Subnet Mask: 255 255 255 0

Maximum Number of Users : 5

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	192.168.4.1	192.168.1.2	192.168.4.3	255.255.255.0	5	0.0.0.0	0.0.0.0

☐ Top

5. Konfigurasi pada 5 workstation agar mendapatkan ip secara otomatis

The screenshot shows the 'PC1' configuration window with the 'Desktop' tab selected. The 'IP Configuration' section is expanded, showing settings for the 'FastEthernet0' interface. The 'DHCP' radio button is selected under 'IP Configuration'. The 'IPv6 Configuration' section shows 'Static' as the selected option. The '802.1X' section has 'Use 802.1X Security' unchecked and 'Authentication' set to 'MD5'.

Interface	FastEthernet0	
<b>IP Configuration</b>		
<input checked="" type="radio"/> DHCP	<input type="radio"/> Static	
IP Address	192.168.4.3	
Subnet Mask	255.255.255.0	
Default Gateway	192.168.4.1	
DNS Server	192.168.1.2	
<b>IPv6 Configuration</b>		
<input type="radio"/> DHCP	<input type="radio"/> Auto Config	<input checked="" type="radio"/> Static
IPv6 Address		
Link Local Address	FE80::20C:85FF:FE23:902B	
IPv6 Gateway		
IPv6 DNS Server		
<b>802.1X</b>		
<input type="checkbox"/> Use 802.1X Security		
Authentication: MD5		

☐ Top

6. Konfigurasi pada Server 1 (DNS dan HTTP Server)

The screenshot shows the 'Server1' configuration window with the 'Config' tab selected. The 'FastEthernet0' interface is selected in the left sidebar. The 'Port Status' is 'On'. 'Bandwidth' is set to '100 Mbps' and 'Auto'. 'Duplex' is set to 'Full Duplex' and 'Auto'. The 'MAC Address' is '0060.7004.3EA2'. The 'IP Configuration' section shows 'Static' selected. The 'IPv6 Configuration' section shows 'Static' selected. The 'Link Local Address' is 'FE80::260:70FF:FE04:3EA2'.

Interface	FastEthernet0
<b>Port Status</b>	
<input checked="" type="checkbox"/> On	
<b>Bandwidth</b>	
<input checked="" type="radio"/> 100 Mbps <input type="radio"/> 10 Mbps <input checked="" type="checkbox"/> Auto	
<b>Duplex</b>	
<input type="radio"/> Half Duplex <input checked="" type="radio"/> Full Duplex <input checked="" type="checkbox"/> Auto	
<b>MAC Address</b>	
0060.7004.3EA2	
<b>IP Configuration</b>	
<input type="radio"/> DHCP	
<input checked="" type="radio"/> Static	
IP Address	192.168.1.2
Subnet Mask	255.255.255.0
<b>IPv6 Configuration</b>	
<input type="radio"/> DHCP	
<input type="radio"/> Auto Config	
<input checked="" type="radio"/> Static	
IPv6 Address	
Link Local Address	FE80::260:70FF:FE04:3EA2

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Server1

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	informatika.ums.com	A Record	192.168.1.2
1	ums.com	A Record	192.168.1.2

DNS Cache

Top

Server1

Physical

Config

Services

Desktop

Programming

Attributes

SERVICES

HTTP

DHCP

DHCPv6

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

IoT

VM Management

Radius EAP

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

## 7. Konfigurasi pada Server 3 (HTTP Server)

Server2

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.FFB8.9E88

IP Configuration

☐ DHCP

☒ Static

IP Address 192.168.2.2

Subnet Mask 255.255.255.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

Link Local Address: FE80::2D0:FFFF:FE88:9E88

☐ Top

Server2

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

**SERVICES**

HTTP

DHCP

DHCPv6

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

IoT

VM Management

Radius EAP

HTTP

☒ On ☐ Off

HTTPS

☒ On ☐ Off

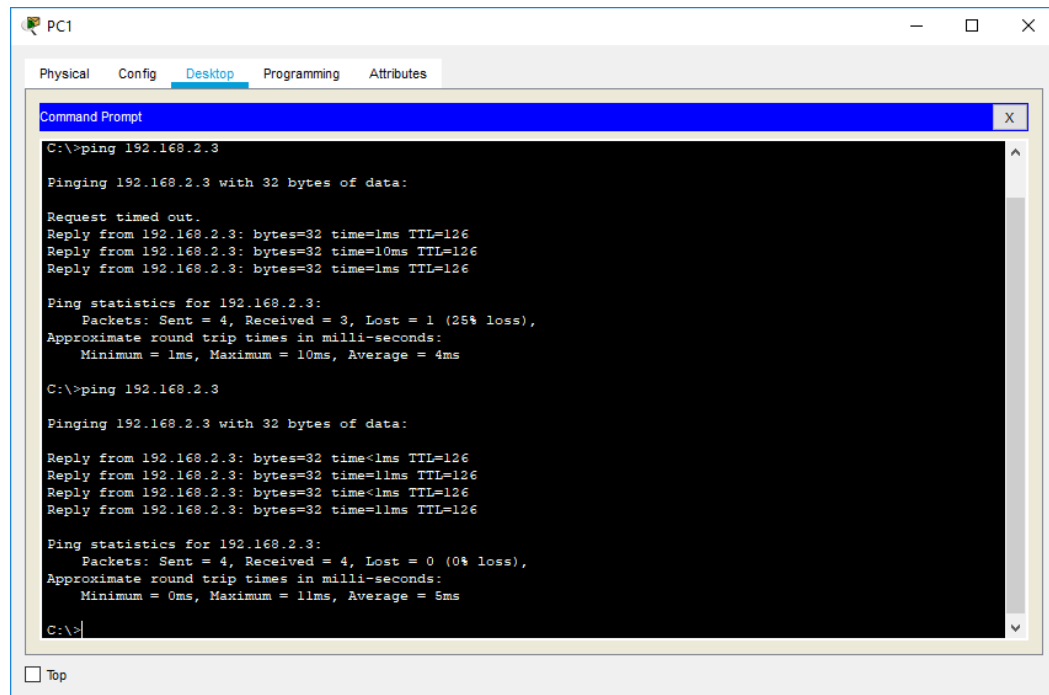
File Manager

	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)

☐ Top

New File Import

8. Uji jaringan dengan melakukan ping dari PC1 pada jaringan 3 menuju PC0 pada jaringan 2



The screenshot shows a Command Prompt window titled "PC1" with tabs for Physical, Config, Desktop, Programming, and Attributes. The "Desktop" tab is active. The Command Prompt displays the results of two ping commands to the IP address 192.168.2.3. The first command shows a 25% loss (1 out of 4 packets received) with round trip times between 1ms and 10ms. The second command shows 0% loss (4 out of 4 packets received) with round trip times between 0ms and 11ms.

```
C:\>ping 192.168.2.3

Pinging 192.168.2.3 with 32 bytes of data:

Request timed out.
Reply from 192.168.2.3: bytes=32 time=1ms TTL=126
Reply from 192.168.2.3: bytes=32 time=10ms TTL=126
Reply from 192.168.2.3: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 10ms, Average = 4ms

C:\>ping 192.168.2.3

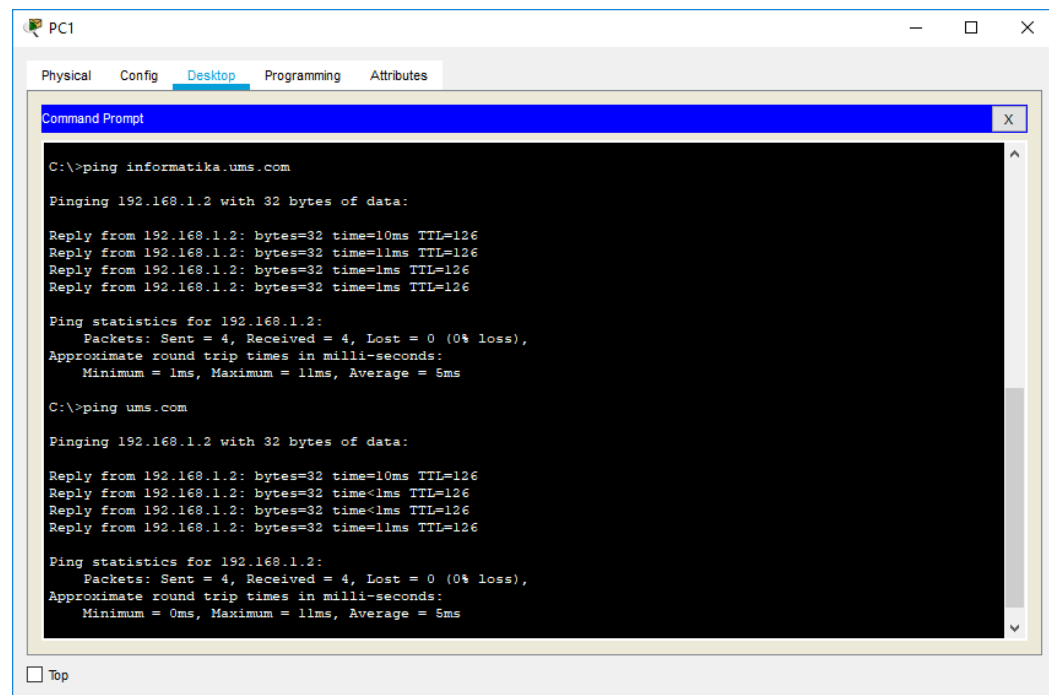
Pinging 192.168.2.3 with 32 bytes of data:

Reply from 192.168.2.3: bytes=32 time<1ms TTL=126
Reply from 192.168.2.3: bytes=32 time=11ms TTL=126
Reply from 192.168.2.3: bytes=32 time<1ms TTL=126
Reply from 192.168.2.3: bytes=32 time=11ms TTL=126

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 11ms, Average = 5ms

C:\>
```

9. Uji jaringan dengan melakukan ping dari PC1 pada jaringan 3 menuju DNS yang sudah dibuat yaitu informatika.ums.com dan ums.com pada jaringan 1



The screenshot shows a Command Prompt window titled "PC1" with tabs for Physical, Config, Desktop, Programming, and Attributes. The "Desktop" tab is active. The Command Prompt displays the results of two ping commands to domain names. The first command is for "informatika.ums.com" and the second is for "ums.com". Both commands show 0% loss (4 out of 4 packets received) with round trip times between 1ms and 11ms.

```
C:\>ping informatika.ums.com

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=10ms TTL=126
Reply from 192.168.1.2: bytes=32 time=11ms TTL=126
Reply from 192.168.1.2: bytes=32 time=1ms TTL=126
Reply from 192.168.1.2: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 11ms, Average = 5ms

C:\>ping ums.com

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=10ms TTL=126
Reply from 192.168.1.2: bytes=32 time<1ms TTL=126
Reply from 192.168.1.2: bytes=32 time<1ms TTL=126
Reply from 192.168.1.2: bytes=32 time=11ms TTL=126

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 11ms, Average = 5ms

C:\>
```



10. Uji jaringan dengan melakukan web surfing dari PC1 pada jaringan 3 menuju HTTP Server informatika.ums.com dan ums.com pada jaringan 1 dan 2

