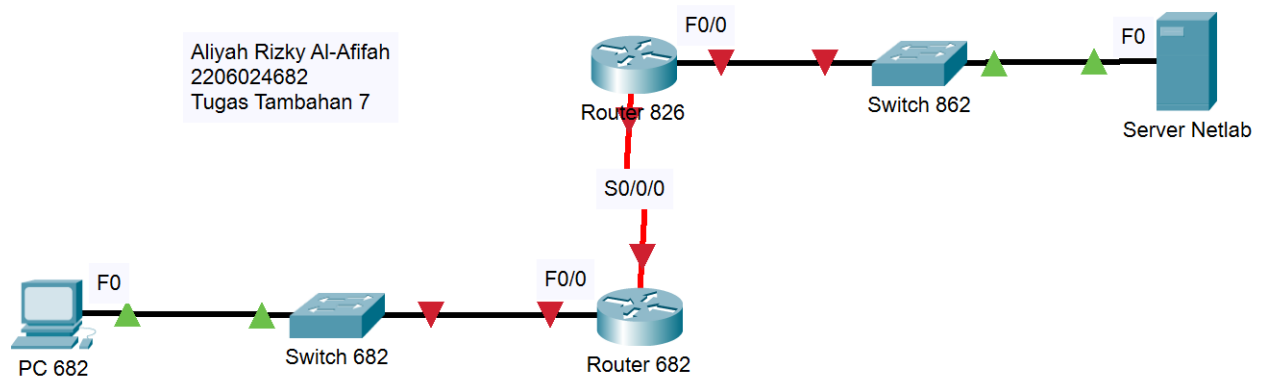


## PRAKTIKUM DESAIN DAN MANAJEMEN JARINGAN KOMPUTER

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### 1. Topologi jaringan.

X = 6; Y = 8; Z = 2.



### 2. Addressing table.

X = 6; Y = 8; Z = 2.

Device	Interface	IP Address	Subnet Mask	Default Gateway
Router 682	F0/0	11.68.2.1	/24	
	S0/0/0	10.8.2.1	/30	
Router 826	F0/0	22.82.6.1	/24	
	S0/0/0	10.8.2.2	/30	
PC 682	F0	11.68.2.254	/24	11.68.2.1
Server Netlab	F0	22.82.6.254	/24	22.82.6.1

Pengalamatan.

- Router682:

```
Router682(config)#int f0/0
Router682(config-if)#ip add 11.68.2.1 255.255.255.0
Router682(config-if)#no sh
Router682(config-if)#int s0/0/0
Router682(config-if)#ip add 10.8.2.1 255.255.255.252
Router682(config-if)#no sh
```

- Router826:

```
Router826(config)#int f0/0
Router826(config-if)#ip add 22.82.6.1 255.255.255.0
Router826(config-if)#no sh
Router826(config-if)#int s0/0/0
Router826(config-if)#ip add 10.8.2.2 255.255.255.252
Router826(config-if)#no sh
```

- End devices:

PC 682

Physical Config Desktop Programming Attributes

IP Configuration

Interface FastEthernet0

IP Configuration

☐ DHCP
☒ Static

IPv4 Address 11.68.2.254

Subnet Mask 255.255.255.0

Default Gateway 11.68.2.1

Server Netlab

Physical Config Services Desktop Programming

IP Configuration

IP Configuration

☐ DHCP
☒ Static

IPv4 Address 22.82.6.254

Subnet Mask 255.255.255.0

Default Gateway 22.82.6.1

### 3. Routing EIGRP.

- Router682:

```
Router682(config)#router eigrp 5
Router682(config-router)#net 11.68.2.0 0.0.0.255
Router682(config-router)#net 10.8.2.0 0.0.0.3
Router682(config-router)#passive f0/0
```

- Router826:

```
Router826(config)#router eigrp 5
Router826(config-router)#net 22.82.6.0 0.0.0.3
Router826(config-router)#net 10.8.2.0 0.0.0.3
Router826(config-router)#passive f0/0
```

- Tes konektivitas:

Successful PC 682 Server Netlab

#### 4. Konfigurasi SNMP.

*Community string* = aliyah682.

```
Router682(config)#snmp-server community aliyah682 rw
```

#### 5. Hasil GET pada MIB object.

OID: 
Operations:

Name/OID	Value	Type
.1.3.6.1.2.1.1.5.0 (.iso.org.dod.inter...)	Router682	OctetString

Name :

OID: 
Operations:

Name/OID	Value	Type
.1.3.6.1.2.1.1.1.0 (.iso.org.dod.inter...)	Cisco IOS Software, 1841 Software ...	OctetString

Name :

OID: 
Operations:

Name/OID	Value	Type
.1.3.6.1.2.1.1.2.0 (.iso.org.dod.inter...)	1.3.6.1.4.1.9.1.620	OID

Name :

OID: 
Operations:

Name/OID	Value	Type
.1.3.6.1.2.1.1.3.0 (.iso.org.dod.inter...)	0 hours 31 minutes 47 seconds	TimeTicks

Name :

OID: 
Operations:

Name/OID	Value	Type
.1.3.6.1.2.1.1.4.0 (.iso.org.dod.inter...)		OctetString

Name :

OID: 
Operations:

Name/OID	Value	Type
.1.3.6.1.2.1.1.6.0 (.iso.org.dod.inter...)		OctetString

Name :

## 6. Modifikasi MIB *object* melalui PC 682.

SNMP Set

OID

.1.3.6.1.2.1.1.4.0

Data Type

OctetString

Value

aliyah682

SNMP Set

OID

.1.3.6.1.2.1.1.6.0

Data Type

OctetString

Value

aliyah682

Hasil:

OID:

.1.3.6.1.2.1.1.4.0

Operations:

Set

GO

Result Table

Name/OID	Value	Type
.1.3.6.1.2.1.1.4.0 (.iso.org.dod.inter...)	aliyah682	OctetString

Name :

.sysContact

OID:

.1.3.6.1.2.1.1.6.0

Operations:

Set

GO

Result Table

Name/OID	Value	Type
.1.3.6.1.2.1.1.6.0 (.iso.org.dod.inter...)	aliyah682	OctetString

Name :

.sysLocation

## 7. Konfigurasi NetFlow.

```
Router826(config)#int s0/0/0
Router826(config-if)#ip flow ingress
Router826(config-if)#ip flow egress
Router826(config)#ip flow-export ver 9
```

## 8. Modifikasi MIB *object* melalui Server Netlab.

Server Netlab

SNMP Set

OID

.1.3.6.1.2.1.1.4.0

Data Type

OctetString

Value

aliyah682\_2

Server Netlab

SNMP Set

OID

.1.3.6.1.2.1.1.6.0

Data Type

OctetString

Value

aliyah682\_2

Hasil:

4

OID:	.1.3.6.1.2.1.1.4.0	OID:	.1.3.6.1.2.1.1.6.0
Operations:	Set	GO	Operations:
Result Table		Result Table	
Name/OID	Value	Type	Name/OID
.1.3.6.1.2.1.1.4.0 (.iso.org.dod.interne...	aliyah682_2	OctetString	.1.3.6.1.2.1.1.6.0 (.iso.org.dod.interne...
Name :		.sysContact	
Name :		.sysLocation	

## 9. Command show ip cache flow.

```
Router826#sh ip cache flow
IP packet size distribution (130 total packets):
 1-32  64  96 128 160 192 224 256 288 320 352 384 416 448 480
 .000 .946 .054 .000 .000 .000 .000 .000 .000 .000 .000 .000 .000 .000
    512 544 576 1024 1536 2048 2560 3072 3584 4096 4608
 .000 .000 .000 .000 .000 .000 .000 .000 .000 .000 .000

IP Flow Switching Cache, 278544 bytes
 1 active, 4095 inactive, 9 added
 7 aged polls, 0 flow alloc failures
 Active flows timeout in 30 minutes
 Inactive flows timeout in 15 seconds
IP Sub Flow Cache, 34056 bytes
 0 active, 1024 inactive, 0 added, 0 added to flow
 0 alloc failures, 0 force free
 1 chunk, 1 chunk added
 last clearing of statistics never
Protocol      Total    Flows    Packets Bytes  Packets Active(Sec) Idle(Sec)
-----
Flows        /Sec    /Flow  /Pkt    /Sec    /Flow    /Flow
UDP-SNMP      8       0.0      1     68      0.0      3.5     177.0
Total:        8       0.0      1     68      0.0      3.5     177.0
```

Setelah mengaktifkan netflow pada Router826 dan melakukan modifikasi MIB *object* melalui Server Netlab, terdapat paket SNMP yang terdeteksi oleh Router826. Ukuran distribusi paket yang tercatat (paket dengan protokol SNMP) lebih besar daripada paket biasa, misalnya paket dengan protokol ICMP. Hanya terdapat 1 aliran yang aktif, yaitu aliran untuk protokol SNMP. Router826 juga mencatat bahwa terdapat 8 aliran yang menggunakan protokol UDP-SNMP, aliran ini mencakup paket dengan tipe SetRequest.

```
SrcIf      SrcIPAddress  DstIf      DstIPAddress  Pr SrcP DstP  Pkts
Se0/0/0    10.8.2.1      Null       224.0.0.10    58 0000 0000 120
```

Selanjutnya, MIB object yang dimodifikasi adalah untuk Router682, karena itu *source interface*-nya adalah dari S0/0/0 dan *source IP address*-nya adalah alamat IP Router682 untuk *interface S0/0/0*. *Destination interface*-nya adalah null, karena paket dikirimkan secara *multicast*. Dan terakhir, terdapat 120 paket yang diamati dalam aliran ini.