

**LAPORAN PRAKTIKUM  
ADMINISTRASI DAN KEAMANAN JARINGAN**

**Routing**

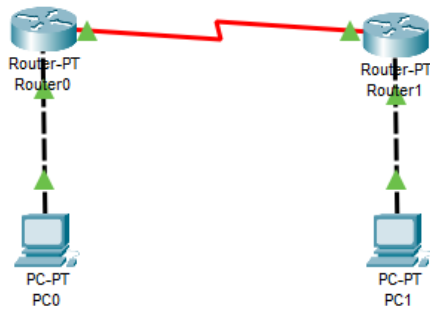


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**JURUSAN TEKNOLOGI INFORMASI  
POLITEKNIK NEGERI MALANG  
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## Langkah-Langkah Praktikum

### 1. Topologi



### 2. Langkah 2

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface f0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#interface s0/0
%Invalid interface type and number
Router(config)#interface s0/0/0
^
% Invalid input detected at '^' marker.

Router(config)#interface se2/0
Router(config-if)#ip address 192.168.3.1 255.255.255.252
Router(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Router(config-if)#exit
Router(config)#

Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface Fa0/0
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#interface Se2/0
Router(config-if)#ip address 192.168.3.2 255.255.255.252
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
```

### 3. Langkah 3

```
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.3.2
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.3.1
```

### 4. Langkah 4

```

Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=7ms TTL=128
Reply from 192.168.1.2: bytes=32 time=7ms TTL=128
Reply from 192.168.1.2: bytes=32 time=8ms TTL=128
Reply from 192.168.1.2: bytes=32 time=9ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 7ms, Maximum = 9ms, Average = 7ms

C:\>
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time<1ms TTL=128
Reply from 192.168.2.2: bytes=32 time<1ms TTL=128
Reply from 192.168.2.2: bytes=32 time<1ms TTL=128
Reply from 192.168.2.2: bytes=32 time=9ms TTL=128

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 9ms, Average = 2ms

C:\>

```

## 5. Langkah 5

```

R1(config)#router rip
R1(config-router)#version 2
R1(config-router)#network 192.168.1.0
R1(config-router)#network 192.168.3.0
R1(config-router)#
R2(config)#router rip
R2(config-router)#version 2
R2(config-router)#network 192.168.2.0
R2(config-router)#network 192.168.3.0
R2(config-router)#

```

## Uji Konektivitas

<pre> Cisco Packet Tracer PC Command Line 1.0 C:\&gt;ping 192.168.1.2  Pinging 192.168.1.2 with 32 bytes of data:  Reply from 192.168.1.2: bytes=32 time=4ms TTL=128 Reply from 192.168.1.2: bytes=32 time=13ms TTL=128 Reply from 192.168.1.2: bytes=32 time=9ms TTL=128 Reply from 192.168.1.2: bytes=32 time=7ms TTL=128  Ping statistics for 192.168.1.2:     Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds:     Minimum = 4ms, Maximum = 13ms, Average = 8ms  C:\&gt; </pre>	<pre> Cisco Packet Tracer PC Command Line 1.0 C:\&gt;ping 192.168.2.2  Pinging 192.168.2.2 with 32 bytes of data:  Reply from 192.168.2.2: bytes=32 time&lt;1ms TTL=128 Reply from 192.168.2.2: bytes=32 time=5ms TTL=128 Reply from 192.168.2.2: bytes=32 time=16ms TTL=128 Reply from 192.168.2.2: bytes=32 time=8ms TTL=128  Ping statistics for 192.168.2.2:     Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds:     Minimum = 0ms, Maximum = 16ms, Average = 7ms  C:\&gt; </pre>
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## 6. Langkah 6

```

R1(config)#router ospf 1
R1(config-router)#network 192.168.1.0 0.0.0.255 area 0
R1(config-router)#network 192.168.3.0 0.0.0.3 area 0
R1(config-router)#
R2(config)#router ospf 1
R2(config-router)#network 192.168.2.0 0.0.0.255 area 0
R2(config-router)#network 192.168.3.0 0.0.0.3 area 0
R2(config-router)#

```

## Uji Konektivitas

<pre> Cisco Packet Tracer PC Command Line 1.0 C:\&gt;ping 192.168.1.2  Pinging 192.168.1.2 with 32 bytes of data:  Reply from 192.168.1.2: bytes=32 time=9ms TTL=128 Reply from 192.168.1.2: bytes=32 time=5ms TTL=128 Reply from 192.168.1.2: bytes=32 time=8ms TTL=128 Reply from 192.168.1.2: bytes=32 time&lt;1ms TTL=128  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 = 9ms, Average = 5ms  C:\&gt; </pre>	<pre> Cisco Packet Tracer PC Command Line 1.0 C:\&gt;ping 192.168.2.2  Pinging 192.168.2.2 with 32 bytes of data:  Reply from 192.168.2.2: bytes=32 time=3ms TTL=128 Reply from 192.168.2.2: bytes=32 time&lt;1ms TTL=128 Reply from 192.168.2.2: bytes=32 time=14ms TTL=128 Reply from 192.168.2.2: bytes=32 time=3ms TTL=128  Ping statistics for 192.168.2.2:     Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds:     Minimum = 0ms, Maximum = 14ms, Average = 5ms  C:\&gt; </pre>
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## 7. Langkah 7

```
R1(config)#router bgp 65001
R1(config-router)#neighbor 10.0.0.2 remote-as 65002
R1(config-router)#network 192.168.1.0 mask 255.255.255.0
R2(config)#router bgp 65002
R2(config-router)#neighbor 10.0.0.1 remote-as 65001
R2(config-router)#network 192.168.2.0 mask 255.255.255.0
R2(config-router)#
```

### Uji konektifitas

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=3ms TTL=128
Reply from 192.168.1.2: bytes=32 time=8ms TTL=128
Reply from 192.168.1.2: bytes=32 time=5ms TTL=128
Reply from 192.168.1.2: bytes=32 time=7ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 3ms, Maximum = 8ms, Average = 5ms

C:\>
```

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.2.2

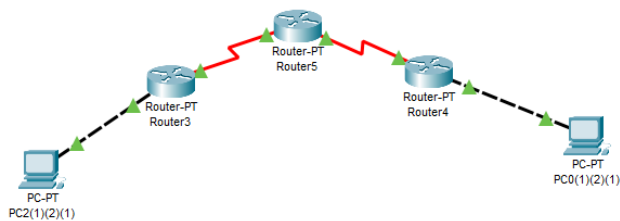
Pinging 192.168.2.2 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time=4ms TTL=128
Reply from 192.168.2.2: bytes=32 time=8ms TTL=128
Reply from 192.168.2.2: bytes=32 time<1ms TTL=128
Reply from 192.168.2.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 8ms, Average = 3ms

C:\>
```

## 8. Tugas Mandiri



### Uji Konektivitas

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Reply from 192.168.1.1: Destination host unreachable.
Reply from 192.168.1.1: Destination host unreachable.
Request timed out.
Reply from 192.168.1.1: Destination host unreachable.

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```