

DYNAMIC ROUTING



CISCO

45

Simak video berikut ini



Dynamic routing (RIP)

TUJUAN PEMBELAJARAN

1. Siswa dapat melakukan konfigurasi dynamic routing menggunakan Packet tracer
2. Siswa dapat menjelaskan cara kerja routing information protocol (RIP)
3. Siswa dapat menjelaskan perintah – perintah yang digunakan pada konfigurasi router

Topologi Jaringan Pertama

Pada praktikum, topologi yang digunakan adalah gabungan dari topologi star dan peer-to-peer. Topologi star digunakan untuk menghubungkan router1 dan router 2 dengan personal

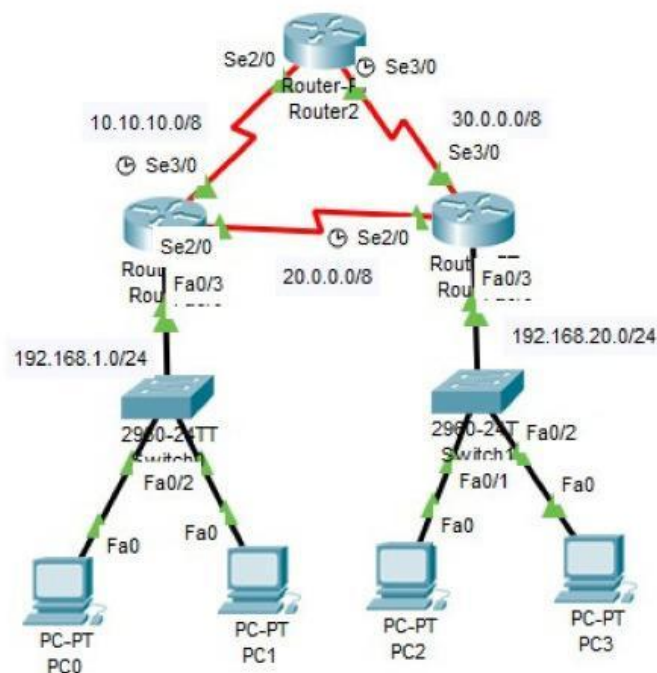
komputer masing-masing menggunakan switch sebagai node. Peer-to-peer digunakan untuk mengubungkan router1 dengan router2 . Media trasmisi yang digunakan untuk mengirim data adalah kabel UTP tipe straight untuk menyambungkan router dengan switch dan personal komputer dengan switch, Kabel Serial untuk mengubungkan antar router.

PRATIUM

Alat dan Bahan Percobaan

1. Laptop
2. Packet Tracer

Perangkat yang Digunakan



Topologi Jaringan Pertama

Spesifikasi masing-masing perangkat adalah sebagai berikut :

Router0 Router2 Gw : 192.168.1.1
 IP Se3/0 : 10.10.10.1/8 IP Se3/0 : 30.0.0.2/8
 IP Se2/0 : 20.0.0.2 /8 IP Se2/0 : 10.0.0.2/8 PC2
 IP Fa : 192.168.1.1/24 IP : 192.168.20.2/24
 PC0 Gw : 192.168.20.1
 Router1 IP : 192.168.1.2/24
 IP Se3/0 : 30.0.0.1/8 Gw : 192.168.1.1 PC3
 IP Se2/0 : 20.0.0.1/8 IP : 192.168.20.3/24
 IP Fa : 192.168.2.1/24 PC1 Gw : 192.168.20.1
 IP : 192.168.1.3/24

Langkah Percobaan

1. Buatlah topologi seperti pada gambar 1 menggunakan simulator Packet tracer, dimana perangkat yang dibutuhkan yaitu :
 d. End devices : PC

e. Network devices : Switch 2960, Router-PT

f. Connections : Copper Straight-Through, Serial DCE

8. Lakukan konfigurasi IP address, subnetmask, dan default gateway pada semua PC

PC0 configuration window showing the Desktop tab. The IP Address is 192.168.1.2, Subnet Mask is 255.255.255.0, and Default Gateway is 192.168.1.1. The DNS Server is 0.0.0.0. The IPv6 Configuration section shows Static selected, with IPv6 Address, Link Local Address (FE80:202:17FF:FE39:3080), IPv6 Gateway, and IPv6 DNS Server fields. The 802.1X section shows Use 802.1X Security unchecked, Authentication set to MD5, and Username and Password fields.

Konfigurasi PC0

PC1 configuration window showing the Desktop tab. The IP Address is 192.168.1.3, Subnet Mask is 255.255.255.0, and Default Gateway is 192.168.1.1. The DNS Server is 0.0.0.0. The IPv6 Configuration section shows Static selected, with IPv6 Address, Link Local Address (FE80:200:5CFF:FE8D:E5E2), IPv6 Gateway, and IPv6 DNS Server fields. The 802.1X section shows Use 802.1X Security unchecked, Authentication set to MD5, and Username and Password fields.

Konfigurasi PC1

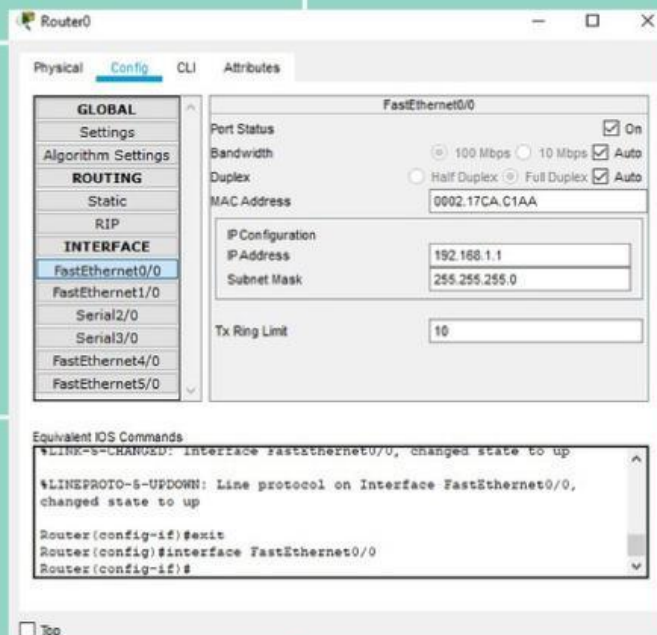
PC2 configuration window showing the Desktop tab. The IP Address is 192.168.20.2, Subnet Mask is 255.255.255.0, and Default Gateway is 192.168.20.1. The DNS Server is 0.0.0.0. The IPv6 Configuration section shows Static selected, with IPv6 Address, Link Local Address (FE80:200:47FF:FE50:1C45), IPv6 Gateway, and IPv6 DNS Server fields. The 802.1X section shows Use 802.1X Security unchecked, Authentication set to MD5, and Username and Password fields.

Konfigurasi PC2

PC3 configuration window showing the Desktop tab. The IP Address is 192.168.20.3, Subnet Mask is 255.255.255.0, and Default Gateway is 192.168.20.1. The DNS Server is 0.0.0.0. The IPv6 Configuration section shows Static selected, with IPv6 Address, Link Local Address (FE80:290:21FF:FEAB:C6C3), IPv6 Gateway, and IPv6 DNS Server fields. The 802.1X section shows Use 802.1X Security unchecked, Authentication set to MD5, and Username and Password fields.

Konfigurasi PC 3

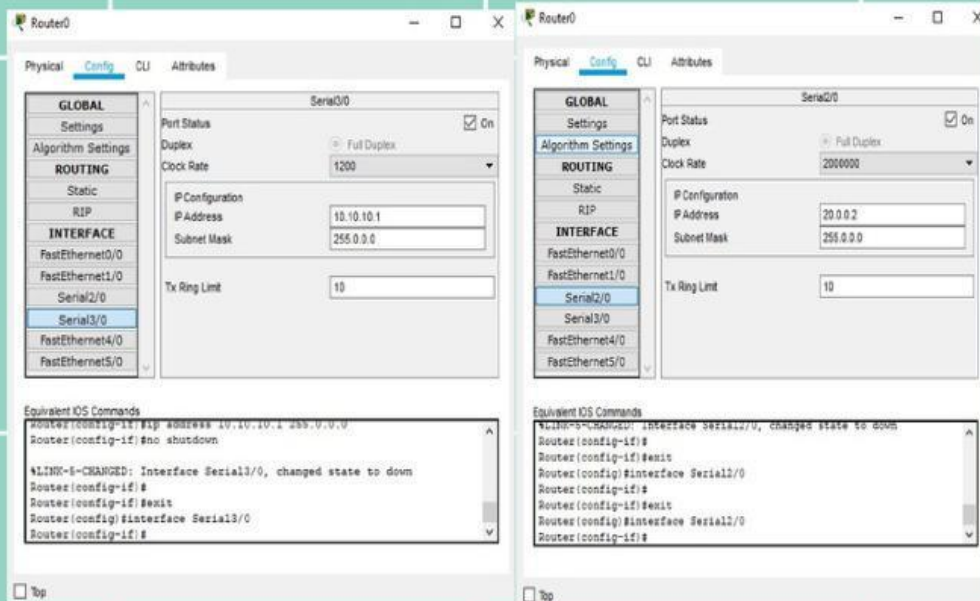
9. Lakukan konfigurasi *interface* pada semua *router* baik melalui CLI atau *router config*



The screenshot shows the configuration window for Router0, specifically for the FastEthernet0/0 interface. The window has tabs for Physical, Config, CLI, and Attributes. The Config tab is active, showing a tree view on the left with categories: GLOBAL (Settings, Algorithm Settings), ROUTING (Static, RIP), and INTERFACE (FastEthernet0/0, FastEthernet1/0, Serial2/0, Serial3/0, FastEthernet4/0, FastEthernet5/0). The FastEthernet0/0 interface is selected. The configuration fields on the right include: Port Status (On), Bandwidth (100 Mbps), Duplex (Full Duplex), MAC Address (0002.17CA.C1AA), IP Configuration (IP Address: 192.168.1.1, Subnet Mask: 255.255.255.0), and Tx Ring Limit (10). Below these fields is a text area for Equivalent IOS Commands, which contains the following commands:

```
%LINK-S-LINK%: interface FastEthernet0/0, changed state to up  
%LINKPROTO-S-UPDOWN: Line protocol on Interface FastEthernet0/0,  
changed state to up  
Router(config-if)#exit  
Router(config)#interface FastEthernet0/0  
Router(config-if)#
```

Konfigurasi FastEthernet Router0



The image shows two screenshots of the Router0 configuration window. The left screenshot shows the configuration for the Serial3/0 interface. The configuration fields include: Port Status (On), Duplex (Full Duplex), Clock Rate (1200), IP Configuration (IP Address: 10.10.10.1, Subnet Mask: 255.0.0.0), and Tx Ring Limit (10). The Equivalent IOS Commands text area contains the following commands:

```
Router(config-if)#ip address 10.10.10.1 255.0.0.0  
Router(config-if)#no shutdown  
%LINK-S-LINK%: Interface Serial3/0, changed state to down  
Router(config-if)#  
Router(config-if)#exit  
Router(config)#interface Serial3/0  
Router(config-if)#
```

 The right screenshot shows the configuration for the Serial2/0 interface. The configuration fields include: Port Status (On), Duplex (Full Duplex), Clock Rate (2000000), IP Configuration (IP Address: 20.0.0.2, Subnet Mask: 255.0.0.0), and Tx Ring Limit (10). The Equivalent IOS Commands text area contains the following commands:

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

Konfigurasi Serial Router0