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Configuring RIPng

Отчет по лабораторной работе № 3
по дисциплине «Компьютерные сети»
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Device	Interface	IPv6 Address/Prefix
R1	G0/0	2001:DB8:1:1::1/64
	S0/0/0	2001:DB8:1:A001::1/64
R2	G0/0	2001:DB8:1:2::1/64
	S0/0/0	2001:DB8:1:A001::2/64
	S0/0/1	2001:DB8:1:A002::1/64
R3	G0/0	2001:DB8:1:3::1/64
	S0/0/1	2001:DB8:1:A002::2/64

Part 1: Configure RIPng

Step 1: Configure RIPng on R1.

a. Enable IPv6 routing on **R1**.

```
R1(config)# ipv6 unicast-routing
```

b. Enter RIPng protocol configuration mode.

```
R1(config)# ipv6 router rip CISCO
```

c. Enable RIPng for the networks that connect to **R1**.

```
R1(config-rtr)# int g0/0
R1(config-if)# ipv6 rip CISCO enable
R1(config-if)# int s0/0/0
R1(config-if)# ipv6 rip CISCO enable
```

d. Save the configuration.

```
R1>
R1>ena
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#ipv6 unicast-routing
R1(config)#ipv6 router rip CISCO
R1(config-rtr)#int g0/0
R1(config-if)#ipv6 rip CISCO enable
R1(config-if)#int s0/0/0
R1(config-if)#ipv6 rip CISCO enable
R1(config-if)#do wr me
Building configuration...
```

Step 2: Configure RIPng on R2 and R3

Repeat Step 1a to Step 1d on **R2** and **R3**.

```
R2>ena
R2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#ipv6 unicast-routing
R2(config)#ipv6 router rip CISCO
R2(config-rtr)#int s0/0/1
R2(config-if)#ipv6 rip CISCO enable
R2(config-if)#int g0/0
R2(config-if)#ipv6 rip CISCO enable
R2(config-if)#int s0/0/0
R2(config-if)#ipv6 rip Cisco enable
```

```
R3>ena
R3#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R3(config)#ipv6 unicast-routing
R3(config)#ipv6 routing rip CISCO
                    ^
% Invalid input detected at '^' marker.

R3(config)#ipv6 router rip CISCO
R3(config-rtr)#int g0/0/1
%Invalid interface type and number
R3(config)#int s0/0/1
R3(config-if)#ipv6 rip CISCO enable
R3(config-if)#int int g0/0/
               ^
% Invalid input detected at '^' marker.

R3(config-if)#int int g0/0
               ^
% Invalid input detected at '^' marker.

R3(config-if)#int g0/0
R3(config-if)#ipv6 rip CISCO enable
R3(config-if)#
```

Part 2: Verify Configurations and Connectivity

Step 1: View routing tables of R1, R2, and R3.

a. Use the appropriate command to view the routing table for **R1**. RIPng (R) now appear with connected (C) and local (L) routes in the routing table. All networks have an entry.

b. Verify that the appropriate interfaces are using RIPng.

```
R1# show ipv6 protocols
```

c. View the running configuration of **R1**. RIPng entries are present.

d. Repeat Step 1a to Step 1c with **R2** and **R3** to verify that they were properly configured.

```
R1>ena
R1#show ipv6 protocols
IPv6 Routing Protocol is "connected"
IPv6 Routing Protocol is "ND"
IPv6 Routing Protocol is "rip CISCO"
  Interfaces:
    GigabitEthernet0/0
    Serial0/0/0
  Redistribution:
    None
```

```
R2#show ipv6 protocols
IPv6 Routing Protocol is "connected"
IPv6 Routing Protocol is "ND"
IPv6 Routing Protocol is "rip CISCO"
  Interfaces:
    Serial0/0/1
    GigabitEthernet0/0
    Serial0/0/0
  Redistribution:
    None
```

```
R3#show ipv6 protocols
IPv6 Routing Protocol is "connected"
IPv6 Routing Protocol is "ND"
IPv6 Routing Protocol is "rip CISCO"
  Interfaces:
    Serial0/0/1
    GigabitEthernet0/0
  Redistribution:
    None
```