Network Security Lab 3: Packet Tracer Configuring IPv6 Addressing

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I. Configure IPv6 Addressing on the Router

A. Enable the router to forward IPv6 packets

a. Enter the ipv6 unicast-routing global configuration command. This command must be configured to enable the router to forward IPv6 packets.

```
# ipv6 unicast-routing
```

B. Configure IPv6 addressing on GigabitEthernet0/0

d. We configure the IPv6 of R1 address with the following command:

```
# ipv6 address 2001:DB8:1:1::1/64
```

e. We configure the link-local IPv6 address with the following command.

```
# ipv6 address FE80::1link-local
```

C. Configure IPv6 addressing on GigabitEthernet0/1

Do the same as before except the change the IP address. For this router, the interfaces are described in Fig. 1.

```
# ipv6 address 2001:DB8:1:2::1/64
```

D. Configure IPv6 addressing on Serial0/0/0

Here, we configure the serial interface of the router.

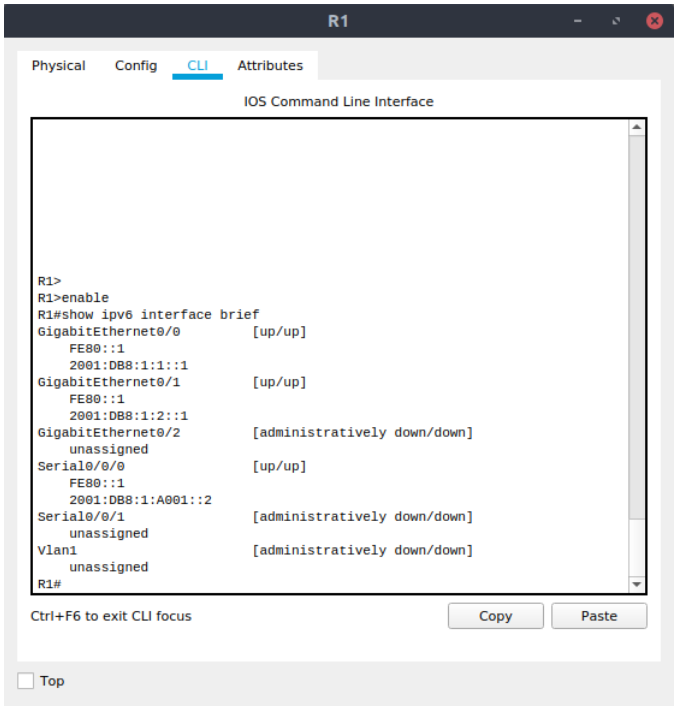

Fig. 1. IPV6 configuration for R1 interfaces

II. Configure IPv6 Addressing on the Servers

Set the IPv6 Address to 2001:DB8:1:1::4 with a prefix of /64. Set the IPv6 Gatewayto the link-local address, FE80::1. The configuration is shown in Fig. 2.

We do the same for the CAD server which is printed in Fig. 3.

III. Configure IPv6 AddressingOn the Clients

A. Configure IPv6 addressing on the Sales and Billing Clients

Set the IPv6 Address to 2001:DB8:1:1::3 with a prefix of /64 and set the IPv6 Gateway to the link-local address, FE80::1. This is shown in Fig. 4. Same for the sales client in Fig. 5.

B. Configure IPv6 Addressing on theEngineering and Design Clients

Set the IPv6 Address to 2001:DB8:1:2::3 with a prefix of /64 and the IPv6 Gateway to the link-local address, FE80::1. Result is on Fig. 6. Same for the design client shown in Fig.

IV. Test and Verify Network Connectivity

A. Open the server web pages from the clients

Go to accounting and CAD websites from sales desktop in Fig. 8 and Fig 9.

Same for the design desktop in Fig. 10 and 11.

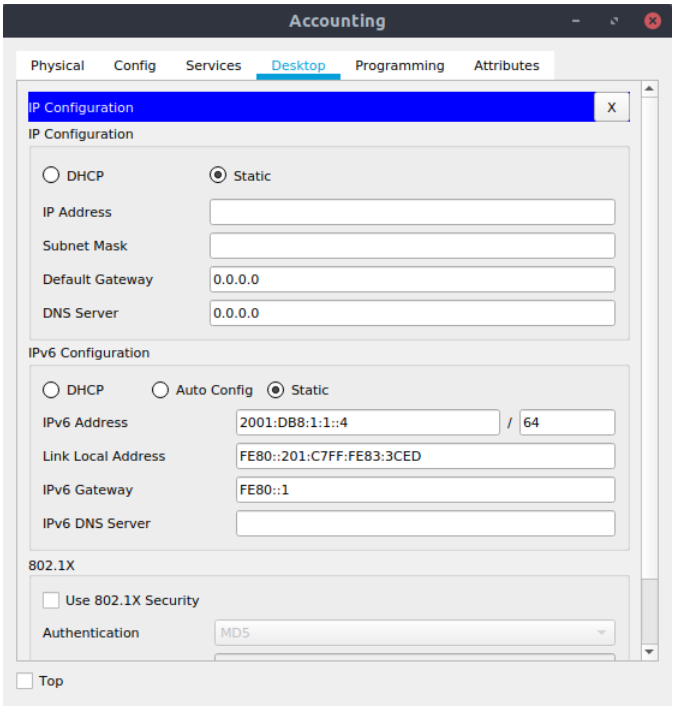

Fig. 2. Configuration of the accounting server

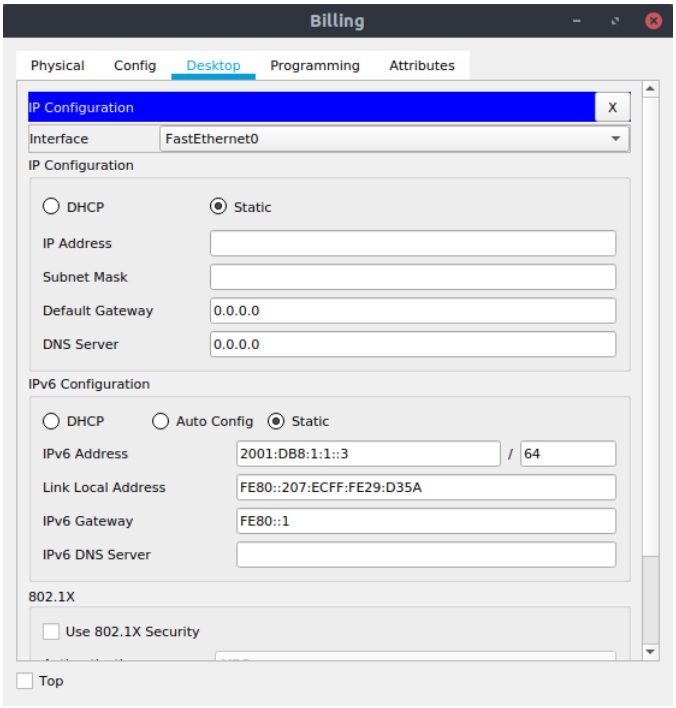

Fig. 4. Configuration of the billing client

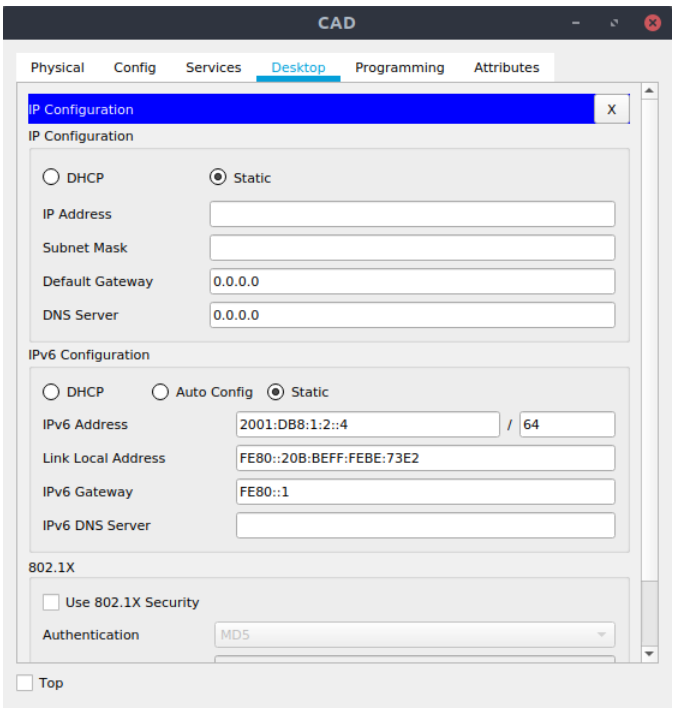

Fig. 3. Configuration of the CAD server

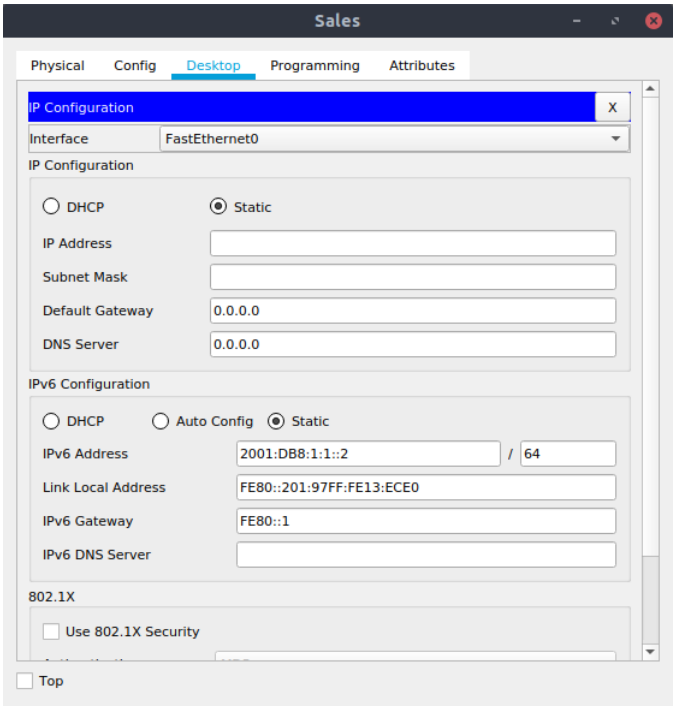

Fig. 5. Configuration of the sales client

B. Ping the ISP

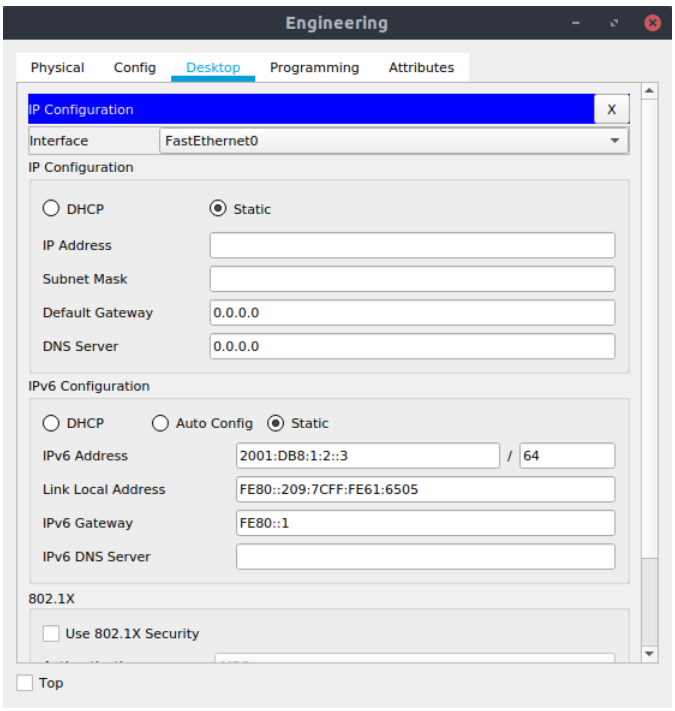

Fig. 6. Configuration of the engineering client

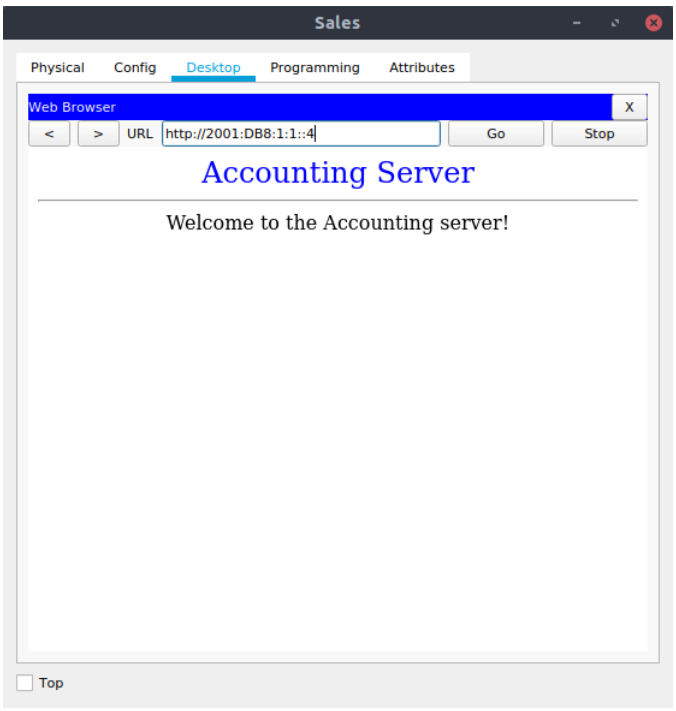

Fig. 8. Go to Accounting website

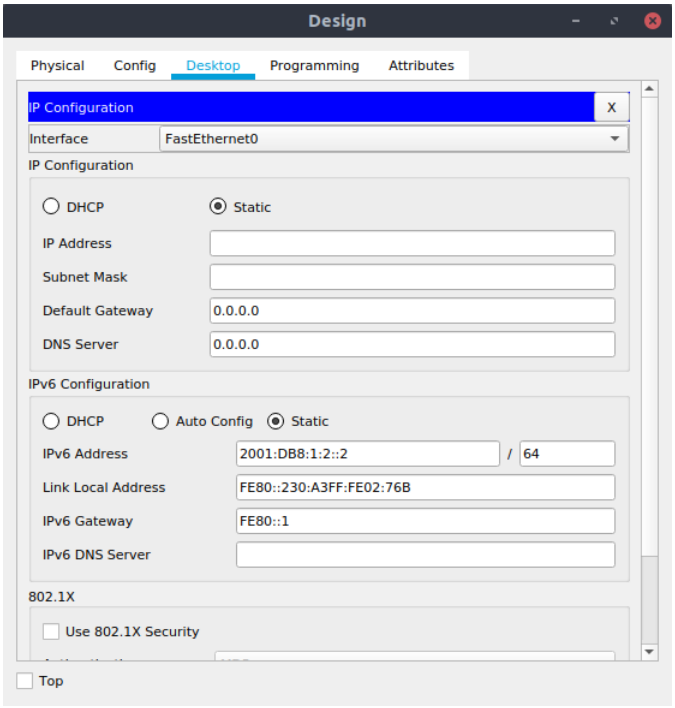

Fig. 7. Configuration of the design client

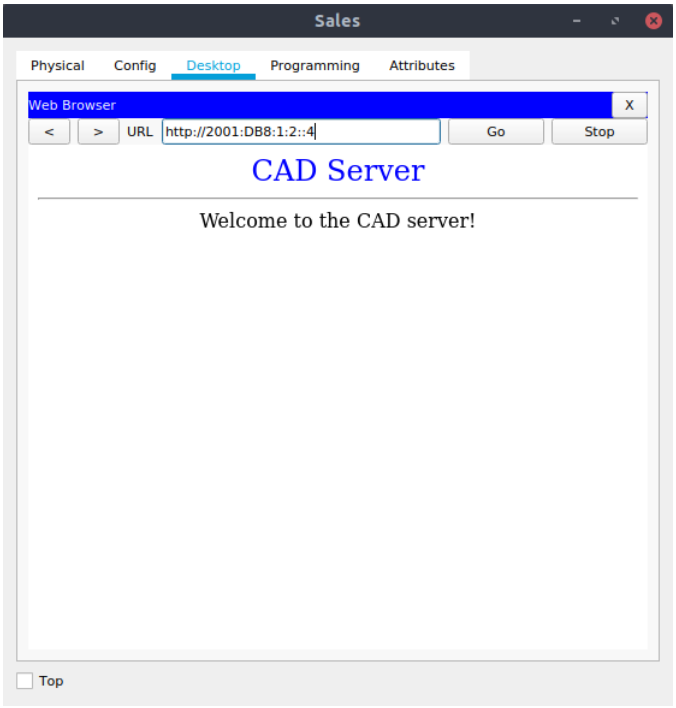

Fig. 9. Go to CAD website.

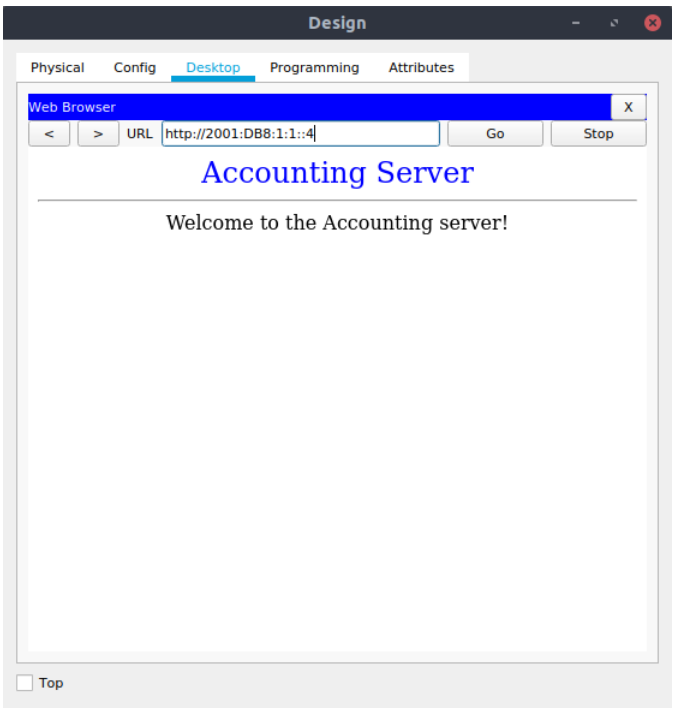

Fig. 10. Go to Accounting website

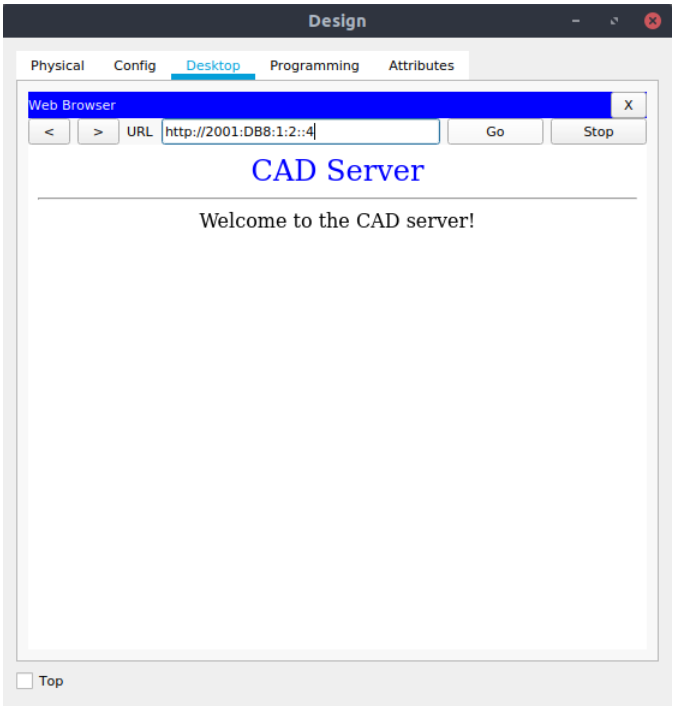

Fig. 11. Go to CAD website.

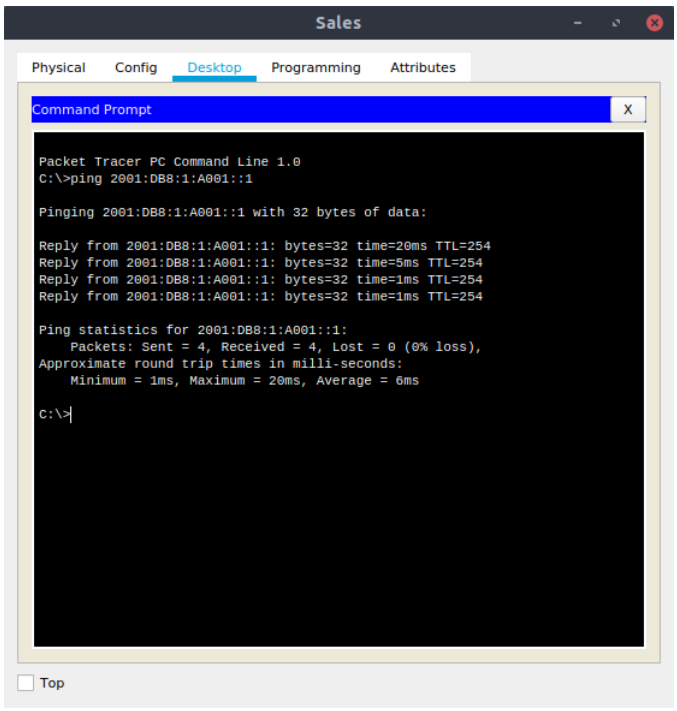

Fig. 12. Ping the ISP from Sales laptop.

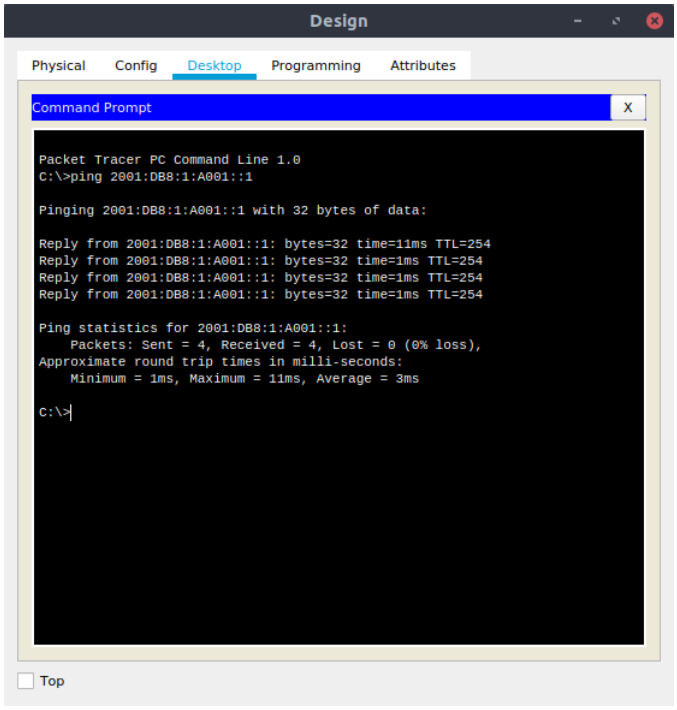

Fig. 13. Ping the ISP from Design laptop.