



# KARACHI INSTITUTE OF ECONOMICS & TECHNOLOGY

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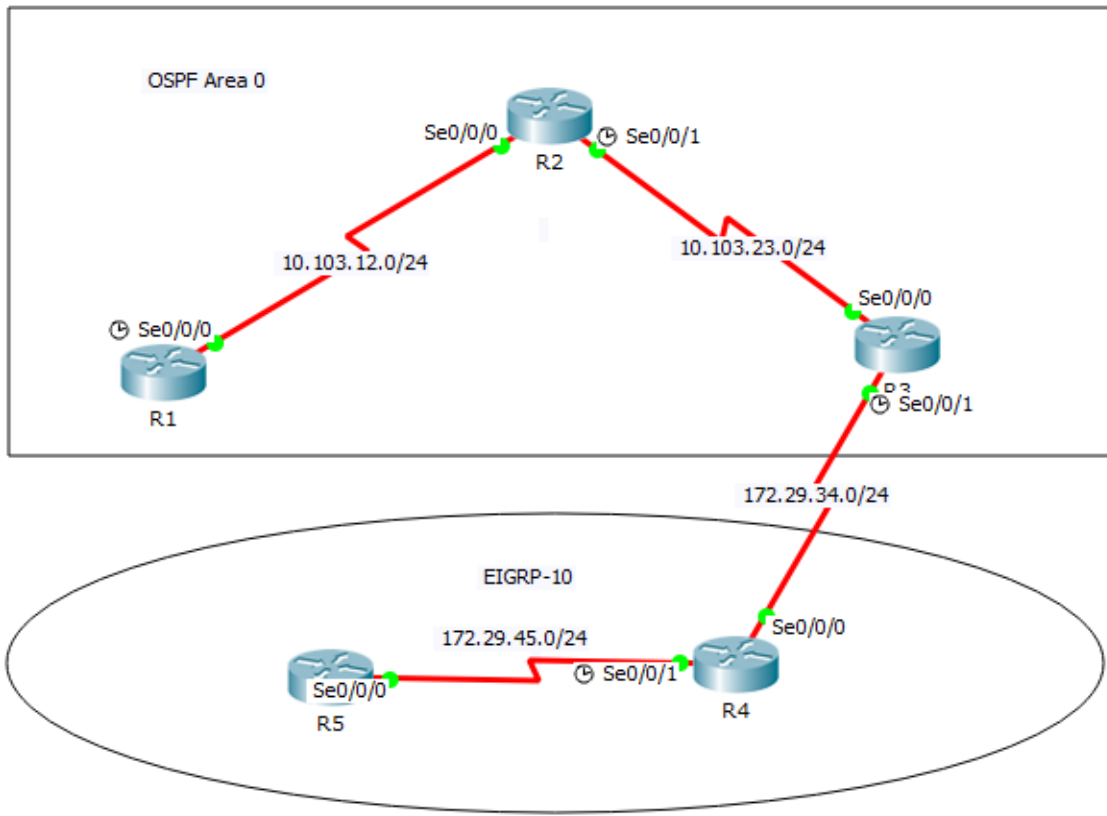
ST.ID : 63027

ASSIGNMENT : 02

SUBJECT : IIA

SUBMITTED TO : MISS HIRA BEENISH

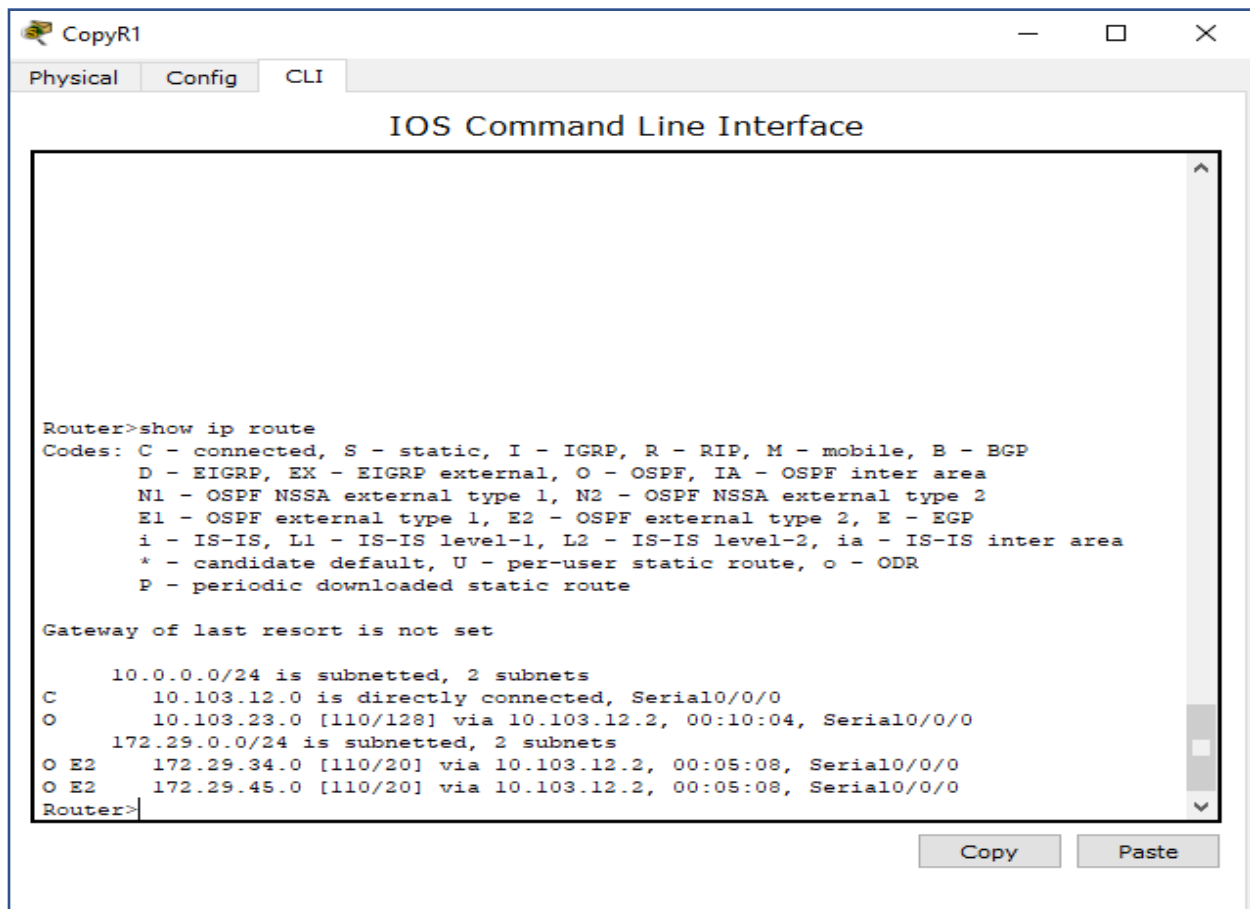
## ASSIGNMENT # 02



IP ADDRESS	SUBNET MASK	WILDCARD
10.103.12.0/24	255.255.255.0	0.0.0.255
10.103.23.0/24	255.255.255.0	0.0.0.255
172.29.34.0/24	255.255.255.0	0.0.0.255
172.29.45.0/24	255.255.255.0	0.0.0.255

## ROUTING TABLES:

### ROUTER 1:



The screenshot shows a window titled "CopyR1" with three tabs: "Physical", "Config", and "CLI". The "CLI" tab is active, displaying the "IOS Command Line Interface". The command "Router>show ip route" has been entered, and the output is displayed. The output includes a legend for route codes, a message about the gateway of last resort, and a list of routes. The routes are categorized by code: C (connected), O (OSPF), and O E2 (OSPF external type 2). The routes are for the 10.0.0.0/24 and 172.29.0.0/24 networks. The output is as follows:

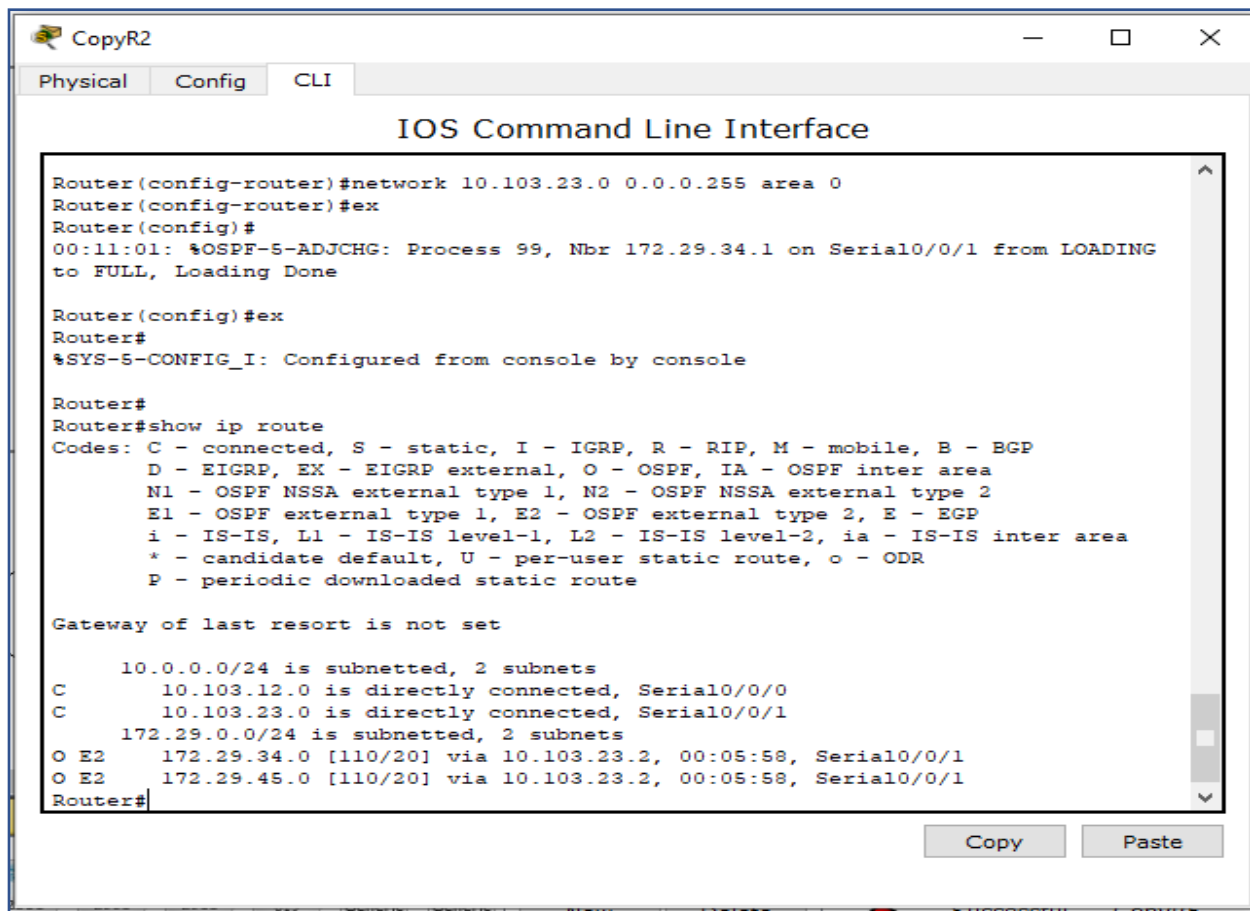
```
Router>show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

    10.0.0.0/24 is subnetted, 2 subnets
C       10.103.12.0 is directly connected, Serial0/0/0
O       10.103.23.0 [110/128] via 10.103.12.2, 00:10:04, Serial0/0/0
    172.29.0.0/24 is subnetted, 2 subnets
O E2    172.29.34.0 [110/20] via 10.103.12.2, 00:05:08, Serial0/0/0
O E2    172.29.45.0 [110/20] via 10.103.12.2, 00:05:08, Serial0/0/0
Router>
```

At the bottom right of the window, there are "Copy" and "Paste" buttons.

## ROUTER 2:



The screenshot shows a Cisco IOS Command Line Interface (CLI) window titled "CopyR2". The window has three tabs: "Physical", "Config", and "CLI". The "CLI" tab is active, displaying the following text:

```
IOS Command Line Interface

Router(config-router)#network 10.103.23.0 0.0.0.255 area 0
Router(config-router)#ex
Router(config)#
00:11:01: %OSPF-5-ADJCHG: Process 99, Nbr 172.29.34.1 on Serial0/0/1 from LOADING
to FULL, Loading Done

Router(config)#ex
Router#
%SYS-5-CONFIG_I: Configured from console by console

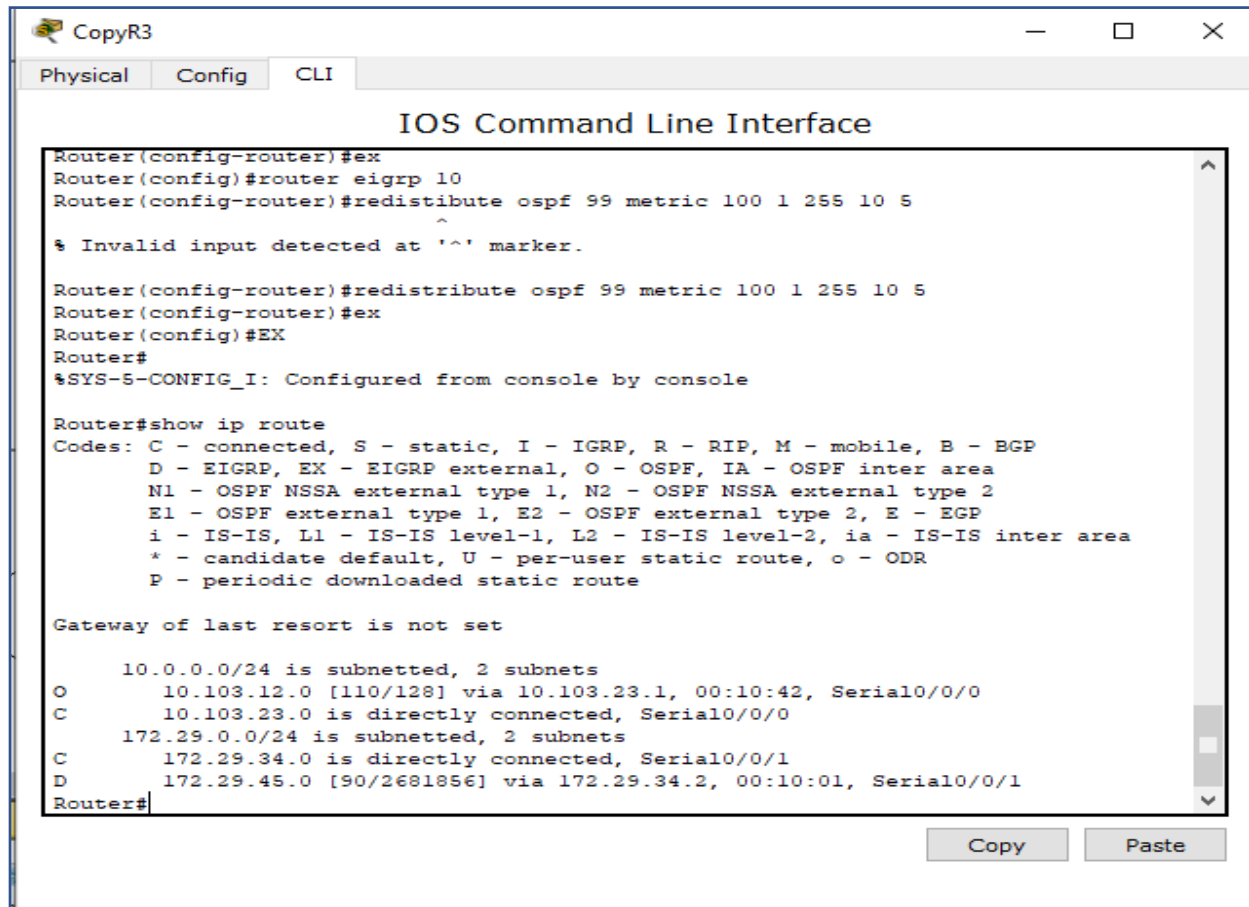
Router#
Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

      10.0.0.0/24 is subnetted, 2 subnets
C      10.103.12.0 is directly connected, Serial0/0/0
C      10.103.23.0 is directly connected, Serial0/0/1
      172.29.0.0/24 is subnetted, 2 subnets
O E2   172.29.34.0 [110/20] via 10.103.23.2, 00:05:58, Serial0/0/1
O E2   172.29.45.0 [110/20] via 10.103.23.2, 00:05:58, Serial0/0/1
Router#
```

At the bottom right of the window, there are "Copy" and "Paste" buttons. The status bar at the bottom of the window shows "NEW", "Errors", "SUCCESSFUL", and "COPIES".

## ROUTER 3: (REDISTRIBUTED ROUTER)



```
Router(config-router)#ex
Router(config)#router eigrp 10
Router(config-router)#redistribute ospf 99 metric 100 1 255 10 5
^
% Invalid input detected at '^' marker.
Router(config-router)#redistribute ospf 99 metric 100 1 255 10 5
Router(config-router)#ex
Router(config)#EX
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

  10.0.0.0/24 is subnetted, 2 subnets
O      10.103.12.0 [110/128] via 10.103.23.1, 00:10:42, Serial0/0/0
C      10.103.23.0 is directly connected, Serial0/0/0
  172.29.0.0/24 is subnetted, 2 subnets
C      172.29.34.0 is directly connected, Serial0/0/1
D      172.29.45.0 [90/2681856] via 172.29.34.2, 00:10:01, Serial0/0/1
Router#
```

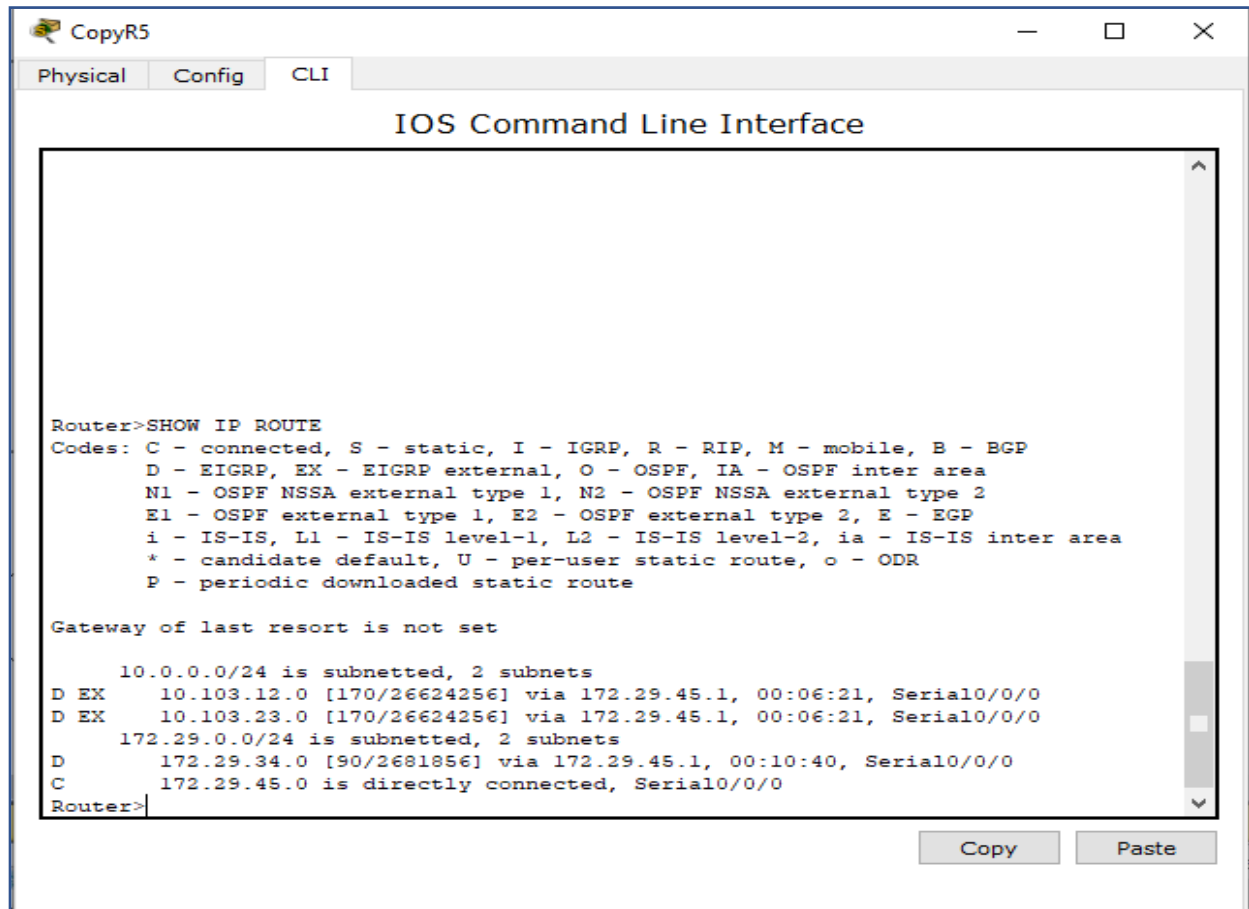
## ROUTER 4:

```
Router>SHOW IP ROUTE
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

  10.0.0.0/24 is subnetted, 2 subnets
D EX   10.103.12.0 [170/26112256] via 172.29.34.1, 00:06:02, Serial0/0/0
D EX   10.103.23.0 [170/26112256] via 172.29.34.1, 00:06:02, Serial0/0/0
  172.29.0.0/24 is subnetted, 2 subnets
C       172.29.34.0 is directly connected, Serial0/0/0
C       172.29.45.0 is directly connected, Serial0/0/1
Router>
```

## ROUTER 5:



```
Router>SHOW IP ROUTE
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

  10.0.0.0/24 is subnetted, 2 subnets
D EX   10.103.12.0 [170/26624256] via 172.29.45.1, 00:06:21, Serial0/0/0
D EX   10.103.23.0 [170/26624256] via 172.29.45.1, 00:06:21, Serial0/0/0
  172.29.0.0/24 is subnetted, 2 subnets
D      172.29.34.0 [90/2681856] via 172.29.45.1, 00:10:40, Serial0/0/0
C      172.29.45.0 is directly connected, Serial0/0/0
Router>
```

