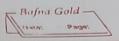


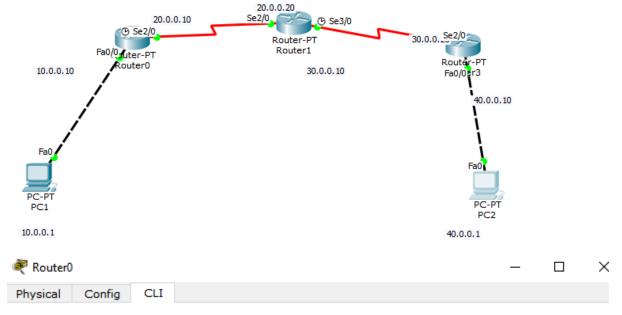
Routershongig) II interforce suiso \$10 Routed confag-4) # SP addres 200 0,0,10 255.00 landercompy of the mapsulation ppp Routed config-if H clock sale 64000 Pouter (rongog if) Ano shut Similarly, select Router 1->CLI & pues no ever Router (confeq if) troit Routerzenable Pouter H config to Radial config) Hinderfore seeral 2/0 Router (conforcy) # 3P address \$0.0.0.20 255.0.00 Routen Gorg - 4) Hencapeulation ppp Acutal config-ig) It no sheet Route (config-if) It evit Router (engig) # interface xerial 3/0 Route (conjug - 4) # 8P addres 30.0.0.10 255-0.0.0. Raeter (config-ig) It encapsulation ppp Pouted working eff dock rate 64000. Rower (iongig - if) # no sheet Pouter Crongia of the exist. & relect Routenz > CLI -type no pours enter Router Jenable Routefult Config t at an aut Parse (anzig) A interface serial 2/0 Reuter Congig - 1 7 8 address 30.0.0.20 255.0.0.0 config-if) # encapsulation ppp Routerbonging 18) It no shus Router leonfig-if) # crit Routerleantig) # interface fortethinnet 010 Routenberg-if) \$ 80 address 40.0.0.10 255:0.0.0 Router (config if) # no sheet Routellanting-if) to crit.



	Musa: bada:
(8)	select Router, CLI & when route is inconfigurede
	Router (config) Horates rip
	Router(config -nouta) Andrion 10.0.0.0
	Routed cooping - soules of retwork 20.0.0.0
	Router Ceongig - router of exit
	Routen (conbig) Herit
db)	such pouter 1, CAT, To was IP roud (initially)
	Router # show ip rout
	gottunay of cost is not set. 2000.000 is variably authoritid, 2 kelonde, 2 marks
	20.0.0.0/8 is directly corrected serial 2/0
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To all the	90.0.0.0/8 is variobly subnited, 2 subnites, 2 masters
	C 30.0.0.0/8 is directly connected, social 3/0
	C 30.0.0.20 32 as duictly cornected, revial 310.
ALC I	Router# config to a ser and Color of a series
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	Bouter Configrator H network 200.00
	Rowell config routen) # network 30.0.0.0
6	Contenting - evolutes) I no snort exit
	Route (config) # ence
	ruct Router 2, LAI
4	Pouter working) Hrowter rip
F	buten (config -radar) # network 30.0.0.0
6	lourestronging-router) I network 40.0.0.0
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	contintioning) Herrit
	To some the second state of the second state o
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	20.0.0.0/8 is durity connected, reviolato.

c 20.0.0.20/92 inductry connected, xuiol 2/0 2 30.0.0.0/2 [120] Tria 20.0.0.20, a ruiol 2/0 40.0.0.0/8 [120/2] via 20.0.0.20; 00:00:16 kg of similarly for Routers Routent shows nout. 10.0.0.0/8(120/1) via 20.0.0.10,00'.00: 21 suid 20.0.0.0/8 is directly connected, social 2/0 200.0.10/32 is desertly connected, service 200 30.0.0.0/8 is directly connected, sind 3/0 30.0.0.20 32 is directly connected, received 3/0 R HO. O. O. 0 8 [not 1] via 30. 0. 0. 20, 00,00,09 mini & select Partona. Routest show Ip soul R 10.0.0.0[8[120/2] via 30.0.0.10,00'00'16, serial 2/0 R 20.0.0.0 8 [120 1] via 30.0.0.10,00:00: 26,5lical 2/0 c 30.0.0.0/8 in disectly connected, perial 2/0 30.00,10/32 of directly connected, serial 2/0 (40.0.0.0/8 as directly connected y Pasterhunet 00 hing output (Unreachable com) Result :west pc 1 with &P adders 10.0.0.1 PC> ping 1000.0.1 with 32 byter of data Request simed out Reply from 40.0.0 1 "byles = 32 time=2mi TTL=125 Reply from 40.0.0.1. bytas c32 time 11th = Ryply from 40.0.0.1: bytuss time 9 ms ITLE stabilite for 40.0.0. Parkets : sent ett, Decined 23, Lost 2/ [25] loss eleverist. illim is seined fire bound stammentigh

Unimum = 2 ms, Marinerma IImi, Avelage = 7 ms PC> pring 100.0.0.1 progring Result : PC > ping Fis. 0.0:1 spalled 2MA pinging 40.0.0.1 with 32 bytes of data: Reply from tro. 0.0.1: hytes - 32 time= 2ms Rophy from +10.001' bytas=32 line.=2ms Reply from 40.0.0.1 bytes=32 time Paply from to. 0.0.1: bytes=32 time 2 ams 17/= 125 ping statistics for HO.O.O.I. portets ! sent & H, Received = H, Lost = 0101/ Loss Approximate nound trip times in milli-record Nonmer zams, Marmum = 27 mg, treage of me Similarly, peng from 40.0.0.1 to 10.0.0.1 relect PC2 -> duktop-compared prempt PC7 peing 10.0.0.1 pinging 10.0.0.1 with 32 bytes of data; Peply from 10.0.0.1: bytes = 32 time = 2mg Reply from 10:0.0.1: byle= 32 time = 7me TIL=125 Reply from 10.0.001; bytes=32 time=17ms TTL=12 Paply from 40.0.0.1: bytes = 32 time = 16 mg TTL= 1. ping statistics for 10.0.0.1. porkers; sent = H, Received = H, Lost 20 (01/600) appronunate round trop times in milli-seconds uninum ezne, manmum e 17 ms, Average = 10 ms



```
Continue with configuration dialog? [yes/no]: no
Press RETURN to get started!
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config) #interface fastethernet 0/0
Router(config-if)#ip address 10.0.0.10 255.0.0.0
Router(config-if) #no shut
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to
Router(config-if)#exit
Router(config) #interface serial 2/0
Router(config-if) #IP address 20.0.0.10 255.0.0.0
Router(config-if) #encapsulation ppp
Router(config-if)#clock rate 64000
Router(config-if) #no shut
%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Router(config-if) #exit
Router(config)#
```



Physical

CLI

Config

```
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed s
Router(config-if) #exit
Router(config) #interface serial 2/0
Router(config-if) #IP address 20.0.0.10 255.0.0.0
Router(config-if) #encapsulation ppp
Router(config-if)#clock rate 64000
Router(config-if) #no shut
%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Router(config-if) #exit
Router(config)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state t
Router(config) #router rip
Router(config-router) #network 10.0.0.0
Router(config-router) #network 20.0.0.0
Router(config-router) #no shut
% Invalid input detected at '^' marker.
Router(config-router) #exit
Router(config)#
```

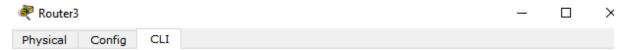


Physical

Config CLI

IOS Command Line Interface

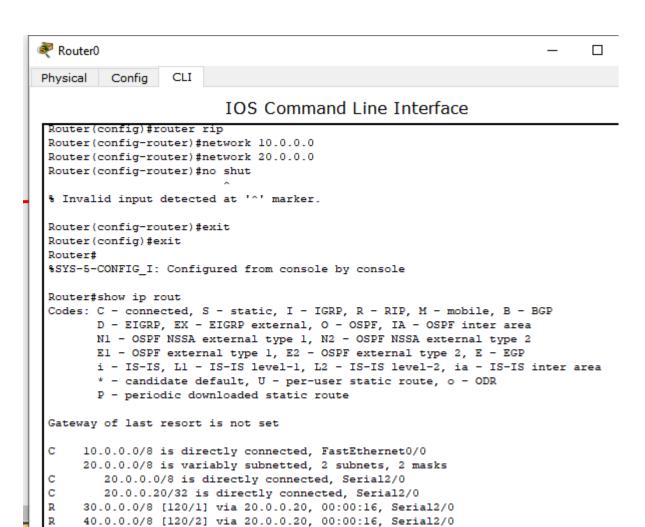
```
Continue with configuration dialog? [yes/no]: no
Press RETURN to get started!
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config) #interface serial 2/0
Router(config-if) #IP address 20.0.0.20 255.0.0.0
Router(config-if) #encapsulation ppp
Router(config-if) #no shut
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
Router(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
exit
Router(config) #interface serial 3/0
Router(config-if) #IP address 30.0.0.10 255.0.0.0
Router(config-if) #encapsulation ppp
Router(config-if)#clock rate 64000
Router(config-if) #no shut
%LINK-5-CHANGED: Interface Serial3/0, changed state to down
Router(config-if) #exit
Router(config)#
```



```
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config) #interface serial 2/0
Router(config-if) #IP address 30.0.0.20 255.0.0.0
Router(config-if) #encapsulation ppp
Router(config-if) #no shut
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
Router(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
Router(config) #interface fastethernet 0/0
Router(config-if) #IP address 40.0.0.10 255.0.0.0
Router(config-if) #no shut
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to
up
exit
Router(config) #router rip
Router(config-router) #network 30.0.0.0
Router(config-router) #network 40.0.0.0
Router(config-router) #exit
Douter(config)#
```



```
Press RETURN to get started!
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config) #interface serial 2/0
Router(config-if) #IP address 30.0.0.20 255.0.0.0
Router(config-if) #encapsulation ppp
Router(config-if) #no shut
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
Router(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
exit
Router(config) #interface fastethernet 0/0
Router(config-if) #IP address 40.0.0.10 255.0.0.0
Router(config-if) #no shut
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to
up
exit
Router(config)#
```



Router#

Router1		
Physical	Config	CLI

```
% Invalid input detected at '^' marker.
Router(config) #show ip route
% Invalid input detected at '^' marker.
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router#show ip rout
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       {\tt N1} - OSPF NSSA external type 1, {\tt 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
     20.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
С
        20.0.0.0/8 is directly connected, Serial2/0
С
        20.0.0.10/32 is directly connected, Serial2/0
     30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C
       30.0.0.0/8 is directly connected, Serial3/0
        30.0.0.20/32 is directly connected, Serial3/0
```



Physical

Config

CLI

IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to
up
exit
Router(config) #router rip
Router(config-router) #network 30.0.0.0
Router(config-router) #network 40.0.0.0
Router(config-router)#exit
Router(config) #exit
%SYS-5-CONFIG_I: Configured from console by console
Router#show ip rout
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
     10.0.0.0/8 [120/2] via 30.0.0.10, 00:00:26, Serial2/0
R
     20.0.0.0/8 [120/1] via 30.0.0.10, 00:00:26, Serial2/0 30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
R
С
         30.0.0.0/8 is directly connected, Serial2/0
C
         30.0.0.10/32 is directly connected, Serial2/0
     40.0.0.0/8 is directly connected, FastEthernet0/0
Router#
```

Command Prompt

```
X
```

```
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.1
Pinging 10.0.0.1 with 32 bytes of data:

Reply from 10.0.0.1: bytes=32 time=2ms TTL=125
Reply from 10.0.0.1: bytes=32 time=7ms TTL=125
Reply from 10.0.0.1: bytes=32 time=17ms TTL=125
Reply from 10.0.0.1: bytes=32 time=16ms TTL=125
Ping statistics for 10.0.0.1:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:

Minimum = 2ms, Maximum = 17ms, Average = 10ms
PC>
```

Command Prompt

```
PC>ping 40.0.0.1
Pinging 40.0.0.1 with 32 bytes of data:
Request timed out.
Reply from 40.0.0.1: bytes=32 time=2ms TTL=125
Reply from 40.0.0.1: bytes=32 time=11ms TTL=125
Reply from 40.0.0.1: bytes=32 time=9ms TTL=125
Ping statistics for 40.0.0.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 11ms, Average = 7ms
PC>ping 40.0.0.1
Pinging 40.0.0.1 with 32 bytes of data:
Reply from 40.0.0.1: bytes=32 time=2ms TTL=125
Reply from 40.0.0.1: bytes=32 time=2ms TTL=125
Reply from 40.0.0.1: bytes=32 time=21ms TTL=125
Reply from 40.0.0.1: bytes=32 time=27ms TTL=125
Ping statistics for 40.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 27ms, Average = 13ms
PC>
```