



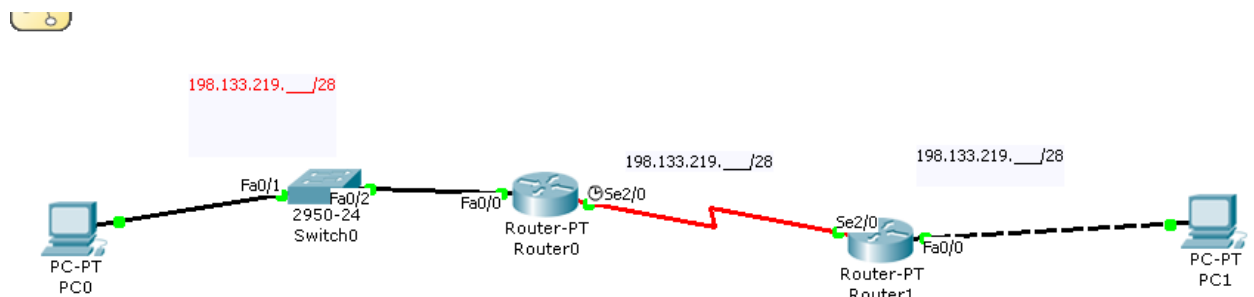
COMSATS University Islamabad
Islamabad Campus
ECE 6B

Subject: Data Communications & Computer Networks
Exam: Lab Sessional-1
Instructor: Asad Ali Malik

Marks: 20
Time: 60 Minutes
Dated: 1st April 1, 2021

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Topology Diagram



Given an IP address of 198.133.X.0/24 ('X' will be registration number of each student, e.g, if reg no. is FA16-ECE-102 the X will be 102), with 4 bits borrowed for subnets, fill in the following information in the table below. (Hint: fill in first three and last)

#	Subnet	First host address	Last host address	Broadcast Address
1	198.133.90.0	198.133.90.1	198.133.90.14	198.133.90.15
2	198.133.90.16	198.133.90.17	198.133.90.30	198.133.90.31
3	198.133.90.32	198.133.90.33	198.133.90.46	198.133.90.47
Last	198.133.90.240	198.133.90.241	198.133.90.254	198.133.90.255

Addressing table

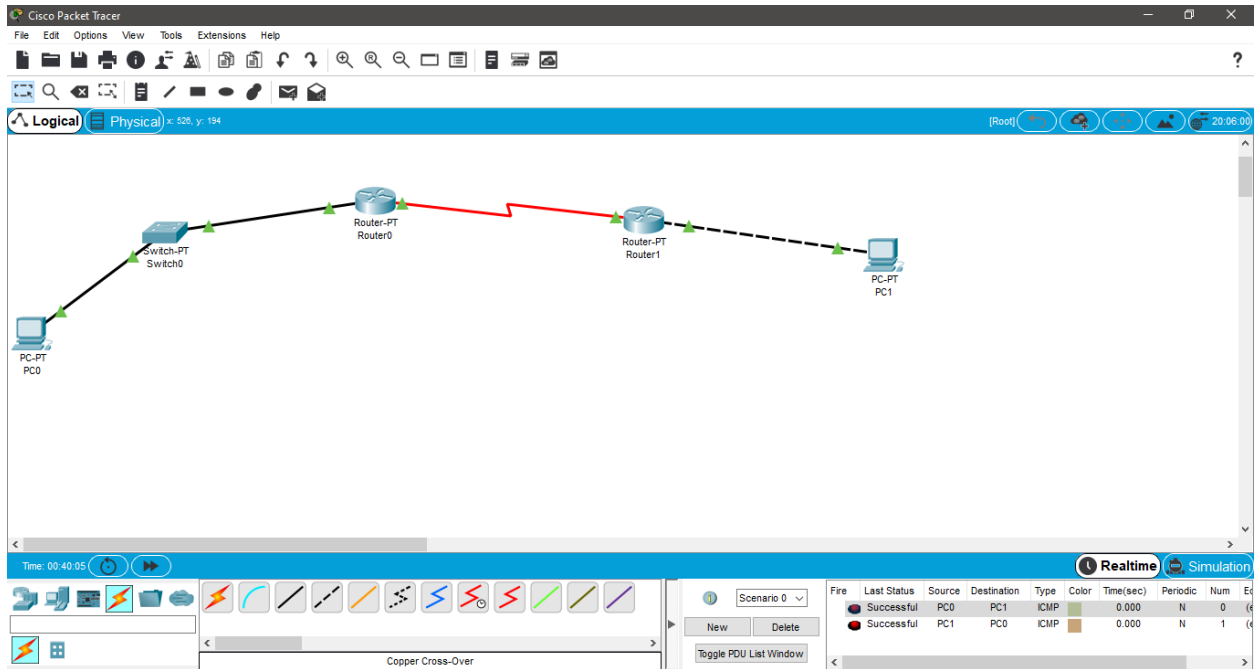
Device	Interface	Ip Address	Subnet Mask	Default Gateway
R1	Fast Ethernet	198.133.90.2	255.255.255.240	N/A
	Serial interface	198.133.90.17	255.255.255.240	N/A
R2	Fast Ethernet	198.133.90.35	255.255.255.240	N/A
	Serial interface	198.133.90.18	255.255.255.240	N/A
PC 1	N/A	198.133.90.6	255.255.255.240	
PC 2	N/A	198.133.90.34	255.255.255.240	

Tasks

- Implement above network in Packet Tracer
- Perform basic configuration tasks on each router
- Configure and activate Ethernet interfaces
- Ping PC0 to PC1 and vice versa.

Email the results of screen shots after Ping to and from each PC including ‘the show ip interface brief command’ and running configuration results in this word file (after completing both tables) on asadalimalik@comsats.edu.pk. Email subject will be ‘DCCN Lab Sessional-1’ and file name will be the each student’s registration number.

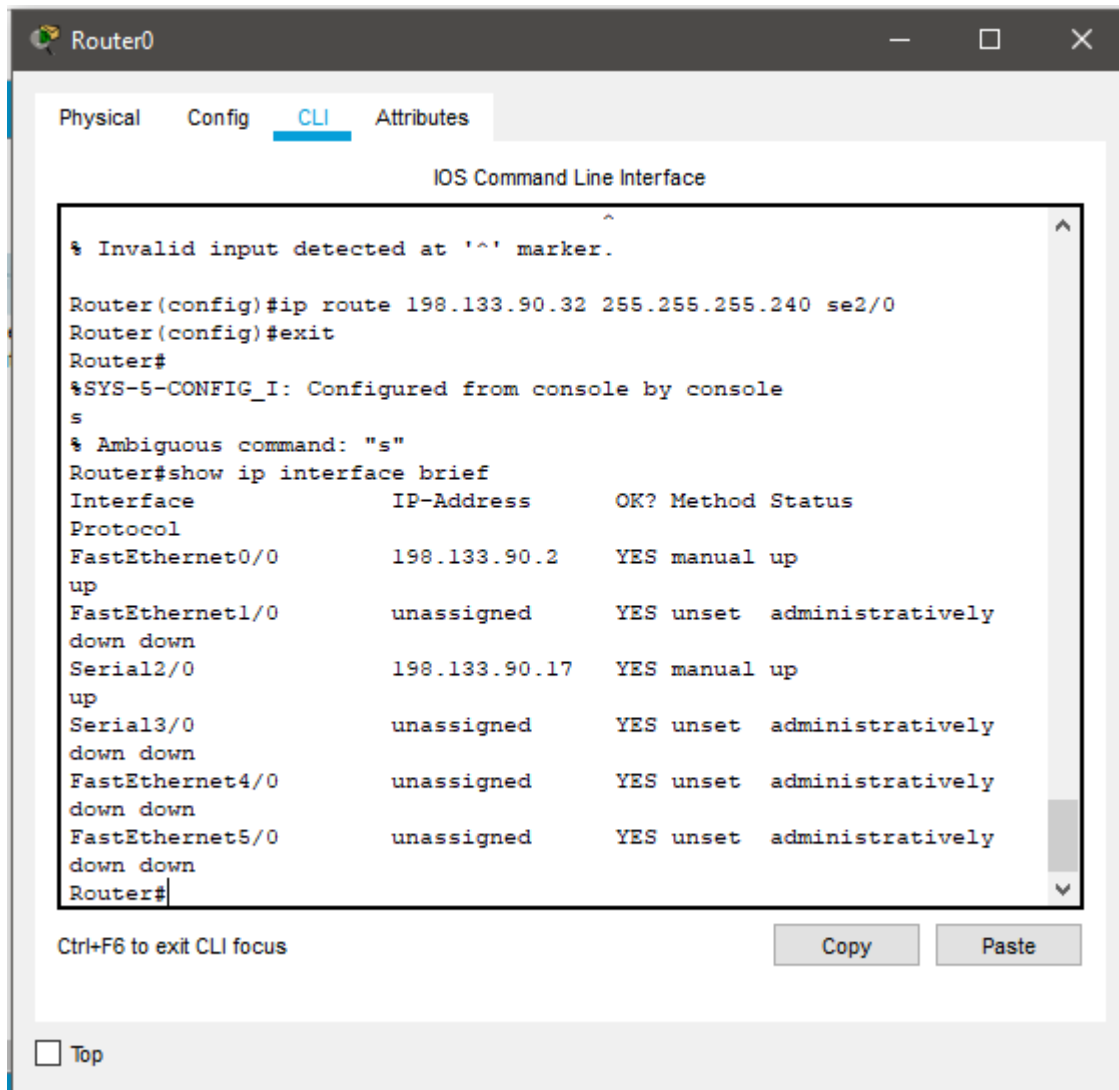
DIAGRAM:



Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit
	Successful	PC0	PC1	ICMP		0.000	N	0	(edit)
	Successful	PC1	PC0	ICMP		0.000	N	1	(edit)

Router 1:

Show ip interface brief:



The screenshot shows a window titled "Router0" with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the "IOS Command Line Interface". The command history shows the user entering 'ip route 198.133.90.32 255.255.255.240 se2/0', exiting to the Router prompt, and then entering 'show ip interface brief'. The output is a table with columns: Interface, IP-Address, OK?, Method, and Status. The table lists several interfaces, including FastEthernet0/0, FastEthernet1/0, Serial2/0, Serial3/0, FastEthernet4/0, and FastEthernet5/0. Below the table, there are buttons for "Copy" and "Paste", and a "Top" link.

```
% Invalid input detected at '^' marker.

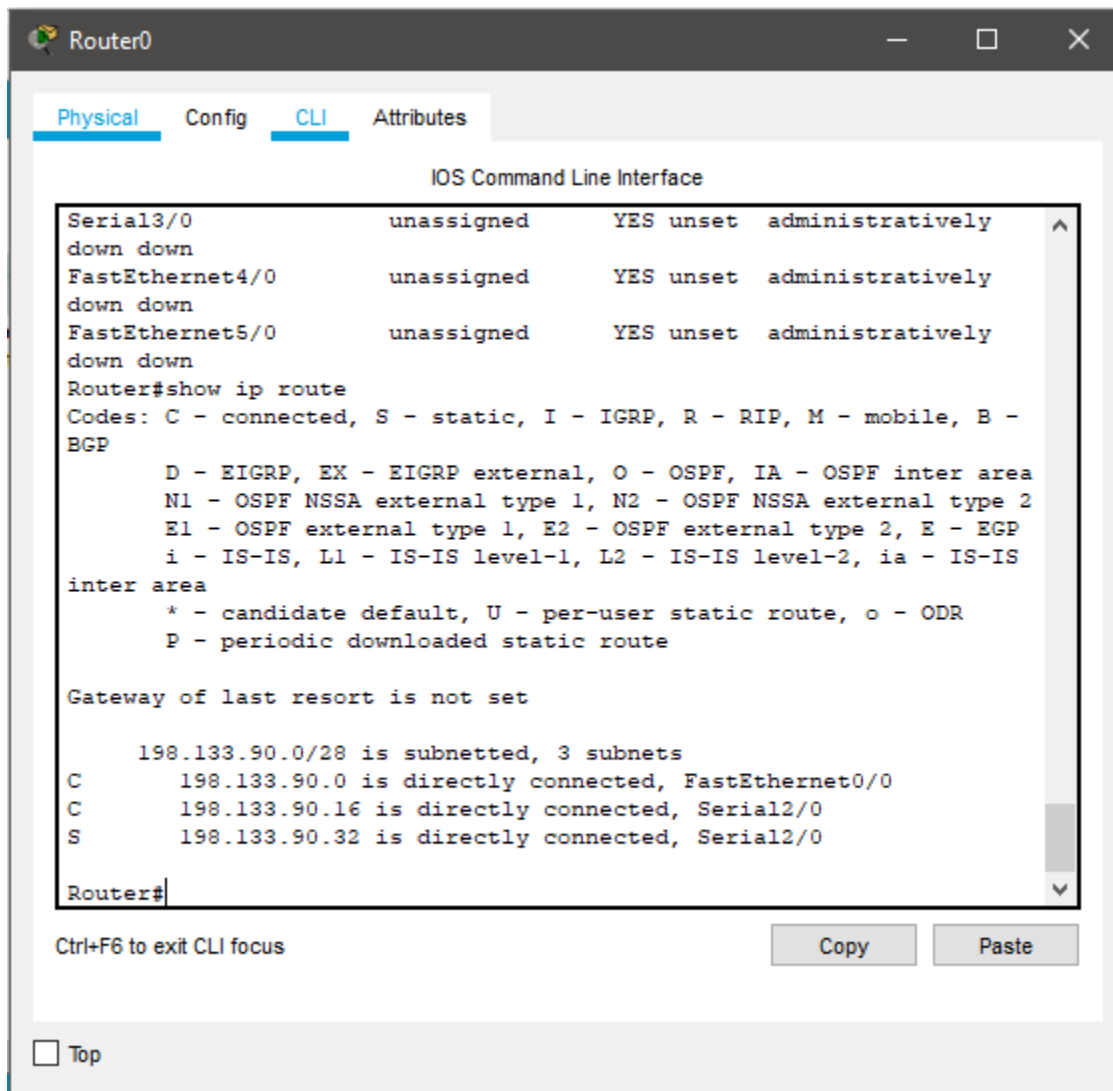
Router(config)#ip route 198.133.90.32 255.255.255.240 se2/0
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
s
% Ambiguous command: "s"
Router#show ip interface brief
Interface                IP-Address      OK? Method Status
Protocol
FastEthernet0/0          198.133.90.2    YES manual up
up
FastEthernet1/0          unassigned      YES unset  administratively
down down
Serial2/0                 198.133.90.17   YES manual up
up
Serial3/0                 unassigned      YES unset  administratively
down down
FastEthernet4/0          unassigned      YES unset  administratively
down down
FastEthernet5/0          unassigned      YES unset  administratively
down down
Router#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

Show ip route:



Show running config:

Router#show running-config
Building configuration...

Current configuration : 800 bytes

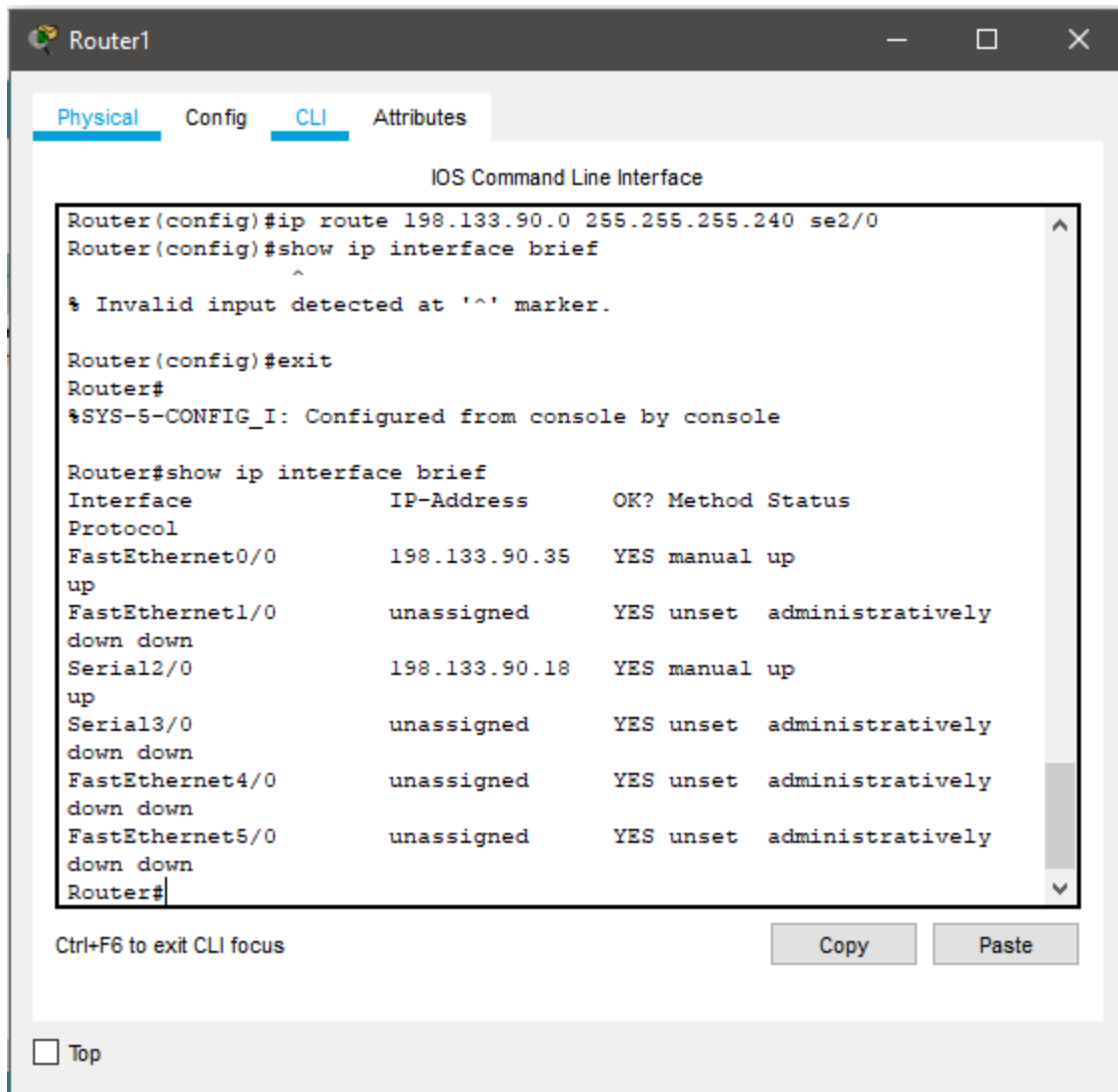
!

```
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
interface FastEthernet0/0
ip address 198.133.90.2 255.255.255.240
duplex auto
speed auto
!
interface FastEthernet1/0
no ip address
duplex auto
speed auto
shutdown
!
interface Serial2/0
```

```
ip address 198.133.90.17 255.255.255.240
clock rate 64000
!
interface Serial3/0
no ip address
shutdown
!
interface FastEthernet4/0
no ip address
shutdown
!
interface FastEthernet5/0
no ip address
shutdown
!
router rip
!
ip classless
ip route 198.133.90.32 255.255.255.240 Serial2/0
!
ip flow-export version 9
!
!
!
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
login
!
!
!
end
```

Router 2:

Show ip interface brief:



The screenshot shows a Cisco Router CLI window titled "Router1". The window has tabs for "Physical", "Config", "CLI", and "Attributes". The "CLI" tab is active, displaying the "IOS Command Line Interface".

```
Router(config)#ip route 198.133.90.0 255.255.255.240 se2/0
Router(config)#show ip interface brief
^
% Invalid input detected at '^' marker.

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

Router#show ip interface brief
```

Interface	IP-Address	OK?	Method	Status
FastEthernet0/0	198.133.90.35	YES	manual	up
FastEthernet1/0	unassigned	YES	unset	administratively down
Serial2/0	198.133.90.18	YES	manual	up
Serial3/0	unassigned	YES	unset	administratively down
FastEthernet4/0	unassigned	YES	unset	administratively down
FastEthernet5/0	unassigned	YES	unset	administratively down

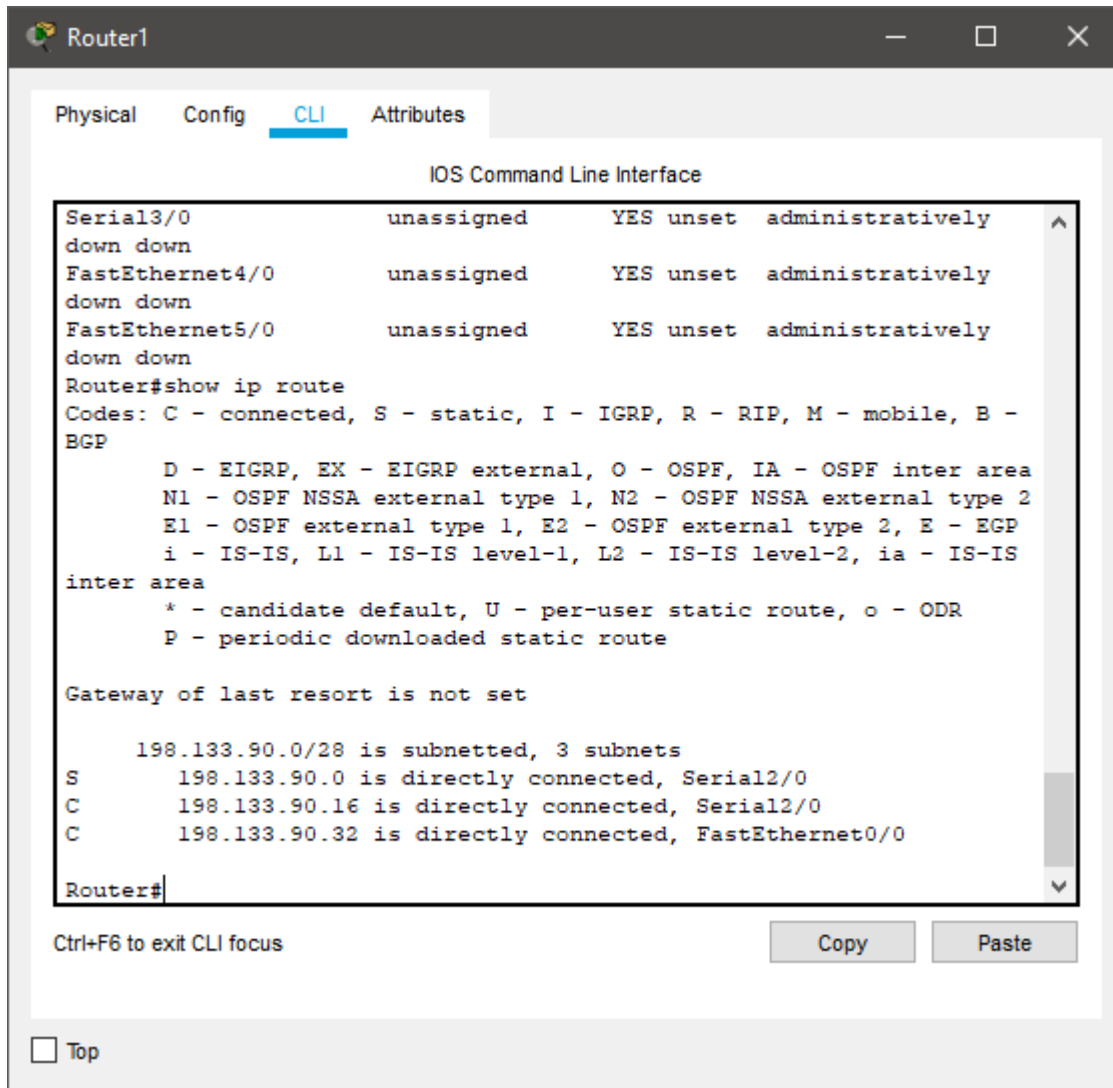
Router#

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

Show ip route:



Show running config:

Router#show running config

^

% Invalid input detected at '^' marker.

```
Router#show running-config
Building configuration...
```

Current configuration : 769 bytes

```
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
```

```
!
hostname Router
```

! ! ! ! ! ! !

```
ip cef
no ipv6 cef
```

[illegible]

```
interface FastEthernet0/0
ip address 198.133.90.35 255.255.255.240
duplex auto
speed auto
!
interface FastEthernet1/0
no ip address
```

```
duplex auto
speed auto
shutdown
!
interface Serial2/0
ip address 198.133.90.18 255.255.255.240
!
interface Serial3/0
no ip address
shutdown
!
interface FastEthernet4/0
no ip address
shutdown
!
interface FastEthernet5/0
no ip address
shutdown
!
ip classless
ip route 198.133.90.0 255.255.255.240 Serial2/0
!
ip flow-export version 9
!
!
!
!
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
login
!
!
!
End
```