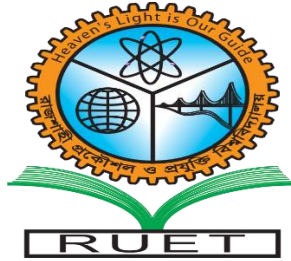


Heaven's Light is Our Guide



Computer Science And Engineering

Rajshahi University of Engineering and Technology

Course No: CSE3206

Course Title: Computer Network

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Submitted To	Submitted By
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1. last octate of the IP address of “Name PC” is the last 3 digits of my roll number (Static Host)

The screenshot shows a window titled "Name PC" with a tabbed interface. The "Desktop" tab is selected, and the "IP Configuration" section is expanded. The "Interface" dropdown is set to "FastEthernet0". Under "IP Configuration", the "Static" radio button is selected. The IPv4 Address is "192.168.3.109", Subnet Mask is "255.255.255.0", Default Gateway is "192.168.3.1", and DNS Server is "192.168.1.2". Under "IPv6 Configuration", the "Static" radio button is selected. The IPv6 Address field is empty, followed by a slash and another empty field. The Link Local Address is "FE80::201:64FF:FEA0:BB25". The Default Gateway and DNS Server fields for IPv6 are also empty. Under "802.1X", the "Use 802.1X Security" checkbox is unchecked. The Authentication dropdown is set to "MD5". The Username and Password fields are empty. A "Top" button is located at the bottom left of the window.

Name PC

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.3.109

Subnet Mask 255.255.255.0

Default Gateway 192.168.3.1

DNS Server 192.168.1.2

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::201:64FF:FEA0:BB25

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

☐ Top

2. Use Dynamic Routing for the connection:

Router0:

Router0

Physical

Config

CLI

Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

GigabitEthernet0/0

GigabitEthernet0/1

Serial0/1/0

Serial0/1/1

RIP Routing

Network

Add

Network Address
192.168.1.0
192.168.2.0
192.168.3.0
192.168.4.0
192.168.10.0
192.168.11.0
192.168.12.0


Remove

Equivalent IOS Commands

```
Router(config-if)#ip address 192.168.12.2 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 192.168.1.0
Router(config-router)#network 192.168.2.0
Router(config-router)#network 192.168.3.0
Router(config-router)#network 192.168.4.0
Router(config-router)#network 192.168.10.0
Router(config-router)#network 192.168.11.0
Router(config-router)#network 192.168.12.0
Router(config-router)#
```

Top

Router1:

 Router1 — □ ×

Physical **Config** CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/1/0

Serial0/1/1

RIP Routing

Network

Add

Network Address
192.168.1.0
192.168.2.0
192.168.3.0
192.168.4.0
192.168.10.0
192.168.11.0
192.168.12.0

Remove

Equivalent IOS Commands

```
Router(config-if)#ip address 192.168.12.1 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 192.168.1.0
Router(config-router)#network 192.168.2.0
Router(config-router)#network 192.168.3.0
Router(config-router)#network 192.168.4.0
Router(config-router)#network 192.168.10.0
Router(config-router)#network 192.168.11.0
Router(config-router)#network 192.168.12.0
Router(config-router)#
```

☐ Top

Router2:

Router2

Physical

Config

CLI

Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/1/0

Serial0/1/1

RIP Routing

Network

Add

Network Address
192.168.1.0
192.168.2.0
192.168.3.0
192.168.4.0
192.168.10.0
192.168.11.0
192.168.12.0

Remove

Equivalent IOS Commands

```
Router(config-if)#ip address 192.168.11.1 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 192.168.1.0
Router(config-router)#network 192.168.2.0
Router(config-router)#network 192.168.3.0
Router(config-router)#network 192.168.4.0
Router(config-router)#network 192.168.10.0
Router(config-router)#network 192.168.11.0
Router(config-router)#network 192.168.12.0
Router(config-router)#
```

Top

3.Assign the DNS name to “Name PC” as my Name.

Server0

Physical

Config

Services

Desktop

Programming

Attributes

SERVICES

HTTP

DHCP

DHCPv6

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

IoT

VM Management

Radius EAP

DNS

DNS Service ☒ On ☐ Off

Resource Records

Name Type

A Record

Address

Add

Save

Remove

No.	Name	Type	Detail
0	laptop0	A Record	192.168.3.2
1	nazmul	A Record	192.168.3.109
2	pc1	A Record	192.168.1.3
3	pc3	A Record	192.168.4.2
4	pc6	A Record	192.168.2.3
5	pc7	A Record	192.168.2.2

DNS Cache

☐ Top

i) Finding Nazmul pc from laptop0(DNS) :

```
C:\>ping nazmul

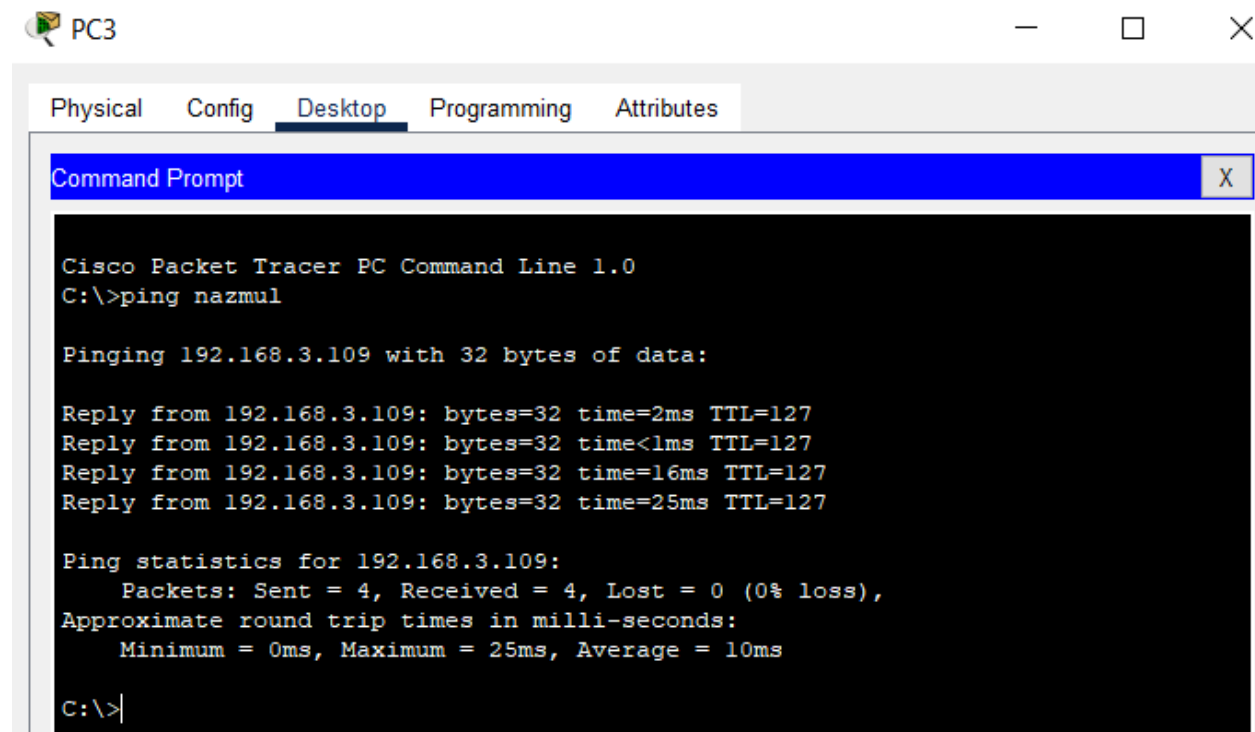
Pinging 192.168.3.109 with 32 bytes of data:

Reply from 192.168.3.109: bytes=32 time<1ms TTL=128
Reply from 192.168.3.109: bytes=32 time<1ms TTL=128
Reply from 192.168.3.109: bytes=32 time<1ms TTL=128
Reply from 192.168.3.109: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.3.109:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

ii) Finding nazmul pc from pc3(DNS) :



4. Assign IP addresses to all the host by DHCP except “Name PC”.

Router0:

```
% Ambiguous command: "en"
Router(config)#config terminal
%Invalid hex value
Router(config)#int gig0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
```

Router0(gig0/0):

```
Router(config)#int gig0/0
Router(config-if)#ip dhcp pool left
Router(dhcp-config)#default-router 192.168.1.1
Router(dhcp-config)#network 192.168.1.0 255.255.255.0
Router(dhcp-config)#no shutdown
                        ^
% Invalid input detected at '^' marker.
Router(dhcp-config)#exit
```

Router1(Fa0/0):

```
Router>en
Router#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int Fa0/0
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#
```



```

Router>en
Router#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int Fa0/0
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip dhcp pool up
Router(dhcp-config)#default-router 192.168.2.1
Router(dhcp-config)#network 192.168.2.0 255.255.255.0
Router(dhcp-config)#no shutdown
                        ^
% Invalid input detected at '^' marker.

Router(dhcp-config)#exit
Router(config)#

```

For generating ip for different network from server:

```

Router(config)#int Fa0/0
Router(config-if)#ip helper-address 192.168.1.2
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#

```

Router2(Fa0/1):

```

Router>en
Router#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int Fa0/1
Router(config-if)#ip address 192.168.3.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#
- configuration command -
Router(config)#ip dhcp pool right
Router(dhcp-config)#default-router 192.168.3.1
Router(dhcp-config)#network 192.168.3.0 255.255.255.0
Router(dhcp-config)#dns-server 192.168.1.2
Router(dhcp-config)#no shutdown
                        ^
% Invalid input detected at '^' marker.

Router(dhcp-config)#exit
Router(config)#

```

Router2(Fa0/0):

```
Router(config)#int Fa0/0
Router(config-if)#ip address 192.168.4.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
```

```
Router(config)#ip dhcp pool down
Router(dhcp-config)#default-router 192.168.4.1
Router(dhcp-config)#network 192.168.4.0 255.255.255.0
Router(dhcp-config)#dns-server 192.168.1.2
Router(dhcp-config)#no shutdown
^
% Invalid input detected at '^' marker.

Router(dhcp-config)#exit
Router(config)#
```

Discussion: All connections work successfully. I attached that screenshot below:

Realtime Simulation											
Scenario 0											
New Delete Toggle PDU List Window											
Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete	
	Successful	PC1	Name PC	ICMP		0.000	N	0	(edit)	(delete)	
	Successful	PC7	PC3	ICMP		0.000	N	1	(edit)	(delete)	
	Successful	PC6	Laptop0	ICMP		0.000	N	2	(edit)	(delete)	
	Successful	PC3	Name PC	ICMP		0.000	N	3	(edit)	(delete)	