
CSE421

COMPUTER NETWORKS

Lab Project

Topic 5

Shakib Al Hasan

Group 5 | Section: 01

Hamed Efaz Md. Elahi Dad	19101304
Fariha Rahman	19101038

CONFIGURATIONS

K1

Interface Configuration

K1>en

K1#conf t

Enter configuration commands, one per line. End with CNTL/Z.

K1(config)#int f0/0

K1(config-if)#ip address 10.10.8.129 255.255.255.192

K1(config-if)#ip helper-address 10.10.8.130

K1(config-if)#no shut

K1(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

K1(config-if)#exit

K1(config)#int s2/0

K1(config-if)#ip address 10.10.8.197 255.255.255.252

K1(config-if)#ip helper-address 10.10.8.130

K1(config-if)#no shut

%LINK-5-CHANGED: Interface Serial2/0, changed state to down

K1(config-if)#

K1(config-if)#exit

K1(config)#int s3/0

K1(config-if)#ip address 10.10.8.193 255.255.255.252

K1(config-if)#ip helper-address 10.10.8.130

K1(config-if)#no shut

%LINK-5-CHANGED: Interface Serial3/0, changed state to down

K1(config-if)#exit

K1(config)#exit

K1#

%SYS-5-CONFIG_I: Configured from console by console

K1#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

K1#

Routing

K1>en

K1#conf t

Enter configuration commands, one per line. End with CNTL/Z.

K1(config)#ip route 10.10.0.0 255.255.252.0 s3/0

K1(config)#ip route 10.10.0.0 255.255.252.0 s2/0 2

K1(config)#ip route 10.10.7.0 255.255.255.0 s2/0

K1(config)#ip route 10.10.7.0 255.255.255.0 s3/0 2

K1(config)#ip route 10.10.6.0 255.255.255.0 s2/0

K1(config)#ip route 10.10.6.0 255.255.255.0 s3/0 2

K1(config)#ip route 10.10.4.0 255.255.254.0 s2/0

K1(config)#ip route 10.10.4.0 255.255.254.0 s3/0 2

K1(config)#ip route 10.10.8.0 255.255.255.128 s2/0

K1(config)#ip route 10.10.8.0 255.255.255.128 s3/0 2

K1(config)#exit

K1#

%SYS-5-CONFIG_I: Configured from console by console

K1#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

K1#

Router Security

K1>en

K1#conf t

Enter configuration commands, one per line. End with CNTL/Z.

K1(config)#no ip domain-lookup

K1(config)#enable secret skb

K1(config)#banner motd & !!!ENTER PASSWORD FOR ENTERING SHAKIB'S NETWORK!!! &

K1(config)#line console 0

K1(config-line)#password skb

K1(config-line)#login

K1(config-line)#exit

K1(config)#exit

K1#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

K1#

K1#

%SYS-5-CONFIG_I: Configured from console by console

J1

Interface Configuration

J1>en

J1#conf t

Enter configuration commands, one per line. End with CNTL/Z.

J1(config)#int f0/0

J1(config-if)#ip address 10.10.0.1 255.255.252.0

J1(config-if)#ip helper-address 10.10.8.130

J1(config-if)#no shut

J1(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

J1(config-if)#exit

J1(config)#int s3/0

J1(config-if)#ip address 10.10.8.202 255.255.255.252

J1(config-if)#ip helper-address 10.10.8.130

J1(config-if)#no shut

J1(config-if)#exit

J1(config)#int s2/0

J1(config-if)#ip address 10.10.8.194 255.255.255.252

J1(config-if)#ip helper-address 10.10.8.130

J1(config-if)#no shut

J1(config-if)#

%LINK-5-CHANGED: Interface Serial2/0, changed state to up

J1(config-if)#exit

J1(config)#

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

J1(config)#exit

J1#
%SYS-5-CONFIG_I: Configured from console by console

J1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
J1#

Routing

J1>en
J1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
J1(config)#ip route 10.10.8.128 255.255.255.192 s2/0
J1(config)#ip route 10.10.8.128 255.255.255.192 s3/0 2
J1(config)#ip route 10.10.7.0 255.255.255.0 s2/0
J1(config)#ip route 10.10.7.0 255.255.255.0 s3/0 2
J1(config)#ip route 10.10.6.0 255.255.255.0 s2/0
J1(config)#ip route 10.10.6.0 255.255.255.0 s3/0 2
J1(config)#ip route 10.10.4.0 255.255.254.0 s2/0
J1(config)#ip route 10.10.4.0 255.255.254.0 s3/0 2
J1(config)#ip route 10.10.8.0 255.255.255.128 s2/0
J1(config)#ip route 10.10.8.0 255.255.255.128 s3/0 2
J1(config)#exit
J1#
%SYS-5-CONFIG_I: Configured from console by console

J1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
J1#

Router Security

J1>en
J1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
J1(config)#no ip domain-lookup
J1(config)#enable secret skb
J1(config)#banner motd & !!!ENTER PASSWORD FOR ENTERING SHAKIB'S NETWORK!!! &
J1(config)#line console 0
J1(config-line)#password skb

```
J1(config-line)#login
J1(config-line)#exit
J1(config)#exit
J1#
%SYS-5-CONFIG_I: Configured from console by console
```

```
J1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
J1#exit
```

M1

Interface Configuration

```
M1>en
M1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
M1(config)#int f0/0
M1(config-if)#ip address 10.10.7.1 255.255.255.0
M1(config-if)#ip helper-address 10.10.8.130
M1(config-if)#no shut

M1(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

M1(config-if)#exit
M1(config)#int s3/0
M1(config-if)#ip address 10.10.8.201 255.255.255.252
M1(config-if)#ip helper-address 10.10.8.130
M1(config-if)#no shut

%LINK-5-CHANGED: Interface Serial3/0, changed state to down
M1(config-if)#exit
M1(config)#int s2/0
M1(config-if)#ip address 10.10.8.198 255.255.255.252
M1(config-if)#ip helper-address 10.10.8.130
M1(config-if)#no shut
```

M1(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

M1(config-if)#exit
M1(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

M1(config)#int s6/0
M1(config-if)#ip address 10.10.8.205 255.255.255.252
M1(config-if)#ip helper-address 10.10.8.130
M1(config-if)#no shut

%LINK-5-CHANGED: Interface Serial6/0, changed state to down
M1(config-if)#exit
M1(config)#exit
M1#
%SYS-5-CONFIG_I: Configured from console by console

M1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
M1#

Routing

M1>enable
M1#
M1#configure terminal
M1(config)#ip route 10.10.0.0 255.255.252.0 s2/0
M1(config)#ip route 10.10.0.0 255.255.252.0 s3/0 2
M1(config)#ip route 10.10.8.128 255.255.255.192 s2/0
M1(config)#ip route 10.10.8.128 255.255.255.192 s3/0 2
M1(config)#exit
M1#
%SYS-5-CONFIG_I: Configured from console by console

M1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
M1#

```
M1>en
M1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
M1(config)#router rip
M1(config-router)#version 2
M1(config-router)#no auto-summary
M1(config-router)#network 10.10.7.0
M1(config-router)#network 10.10.8.204
M1(config-router)#passive-interface f0/0
M1(config-router)#redistribute static
M1(config-router)#exit
M1(config)#exit
M1#
%SYS-5-CONFIG_I: Configured from console by console
```

```
M1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
M1#
```

Router Security

```
M1>en
M1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
M1(config)#no ip domain-lookup
M1(config)#enable secret skb
M1(config)#banner motd & !!!ENTER PASSWORD FOR ENTERING SHAKIB'S NETWORK!!! &
M1(config)#line console 0
M1(config-line)#password skb
M1(config-line)#login
M1(config-line)#exit
M1(config)#exit
M1#
%SYS-5-CONFIG_I: Configured from console by console
```

```
M1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
M1#exit
```


F1

Interface Configuration

F1>en

F1#conf t

Enter configuration commands, one per line. End with CNTL/Z.

F1(config)#int f0/0

F1(config-if)#ip address 10.10.6.1 255.255.255.0

F1(config-if)#ip helper-address 10.10.8.130

F1(config-if)#no shut

F1(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

F1(config-if)#exit

F1(config)#int s2/0

F1(config-if)#ip address 10.10.8.210 255.255.255.252

F1(config-if)#ip helper-address 10.10.8.130

F1(config-if)#no shut

F1(config-if)#

%LINK-5-CHANGED: Interface Serial2/0, changed state to up

F1(config-if)#

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

F1(config-if)#exit

F1(config)#exit

F1#

%SYS-5-CONFIG_I: Configured from console by console

F1#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

F1#

Routing

```
F1>en
F1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
F1(config)#router rip
F1(config-router)#version 2
F1(config-router)#no auto-summary
F1(config-router)#network 10.10.6.0
F1(config-router)#network 10.10.8.208
F1(config-router)#passive-interface f0/0
F1(config-router)#redistribute static
F1(config-router)#exit
F1(config)#exit
F1#
%SYS-5-CONFIG_I: Configured from console by console
```

```
F1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
F1#
```

Router Security

```
F1>en
F1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
F1(config)#no ip domain-lookup
F1(config)#enable secret skb
F1(config)#banner motd & !!!ENTER PASSWORD FOR ENTERING SHAKIB'S NETWORK!!! &
F1(config)#line console 0
F1(config-line)#password skb
F1(config-line)#login
F1(config-line)#exit
F1(config)#exit
F1#
%SYS-5-CONFIG_I: Configured from console by console
```

```
F1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
```

F1#exit

S1

Interface Configuration

S1>en

S1#conf t

Enter configuration commands, one per line. End with CNTL/Z.

S1(config)#int f0/0

S1(config-if)#ip address 10.10.8.1 255.255.255.128

S1(config-if)#ip helper-address 10.10.8.130

S1(config-if)#no shut

S1(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

S1(config-if)#exit

S1(config)#int s3/0

S1(config-if)#ip address 10.10.8.209 255.255.255.252

S1(config-if)#ip helper-address 10.10.8.130

S1(config-if)#no shut

%LINK-5-CHANGED: Interface Serial3/0, changed state to down

S1(config-if)#exit

S1(config)#int s2/0

S1(config-if)#ip address 10.10.8.206 255.255.255.252

S1(config-if)#ip helper-address 10.10.8.130

S1(config-if)#no shut

S1(config-if)#

%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

S1(config-if)#exit

S1(config)#int s6/0

S1(config-if)#ip address 10.10.8.213 255.255.255.252

S1(config-if)#ip helper-address 10.10.8.130

S1(config-if)#no shut

%LINK-5-CHANGED: Interface Serial6/0, changed state to down

S1(config-if)#exit

S1(config)#exit

S1#

%SYS-5-CONFIG_I: Configured from console by console

S1#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

S1#

Routing

S1>en

S1#conf t

Enter configuration commands, one per line. End with CNTL/Z.

S1(config)#router rip

S1(config-router)#version 2

S1(config-router)#no auto-summary

S1(config-router)#network 10.10.8.0

S1(config-router)#network 10.10.8.204

S1(config-router)#network 10.10.8.208

S1(config-router)#network 10.10.8.212

S1(config-router)#passive-interface f0/0

S1(config-router)#redistribute static

S1(config-router)#exit

S1(config)#exit

S1#

%SYS-5-CONFIG_I: Configured from console by console

S1#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

S1#

Router Security

S1>en

S1#conf t

Enter configuration commands, one per line. End with CNTL/Z.

```
S1(config)#no ip domain-lookup
S1(config)#enable secret skb
S1(config)#banner motd & !!!ENTER PASSWORD FOR ENTERING SHAKIB'S NETWORK!!! &
S1(config)#line console 0
S1(config-line)#password skb
S1(config-line)#login
S1(config-line)#exit
S1(config)#exit
S1#
%SYS-5-CONFIG_I: Configured from console by console

S1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
S1#exit
```

N1

Interface Configuration

```
N1>en
N1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
N1(config)#int f0/0
N1(config-if)#ip address 10.10.4.1 255.255.254.0
N1(config-if)#ip helper-address 10.10.8.130
N1(config-if)#no shut

N1(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

N1(config-if)#exit
N1(config)#int s2/0
N1(config-if)#ip address 10.10.8.214 255.255.255.252
N1(config-if)#ip helper-address 10.10.8.130
N1(config-if)#no shut

N1(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
```

```
N1(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
```

```
N1(config-if)#exit
N1(config)#exit
N1#
%SYS-5-CONFIG_I: Configured from console by console
```

```
N1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
N1#
```

Routing

```
N1>en
N1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
N1(config)#router rip
N1(config-router)#version 2
N1(config-router)#no auto-summary
N1(config-router)#network 10.10.4.0
N1(config-router)#network 10.10.8.212
N1(config-router)#passive-interface f0/0
N1(config-router)#redistribute static
N1(config-router)#exit
N1(config)#exit
N1#
%SYS-5-CONFIG_I: Configured from console by console
```

```
N1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
N1#
```

Router Security

```
N1>en
N1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
N1(config)#no ip domain-lookup
```

```
N1(config)#enable secret skb
N1(config)#banner motd & !!!ENTER PASSWORD FOR ENTERING SHAKIB'S NETWORK!!! &
N1(config)#line console 0
N1(config-line)#password skb
N1(config-line)#login
N1(config-line)#exit
N1(config)#exit
N1#
%SYS-5-CONFIG_I: Configured from console by console

N1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
N1#exit
```

WEB SERVER

Web Server Index Page HTML

```
<html>
<center><font size='+1'
color='green'>=====</font></center>
<br>
<br>
<center><font size='+2' color='red'>!PAPON! !PAPON! !PAPON!</font></center>
<br>
<center><font size='+3' color='green'>Nazmul Hasain Papon says Hi!</font></center>
<br>
<center><font size='+2' color='red'>!PAPON! !PAPON! !PAPON!</font></center>
<br>
<br>
<center><font size='+1'
color='green'>=====</font></center>
</html>
```

ADDRESSING TABLE

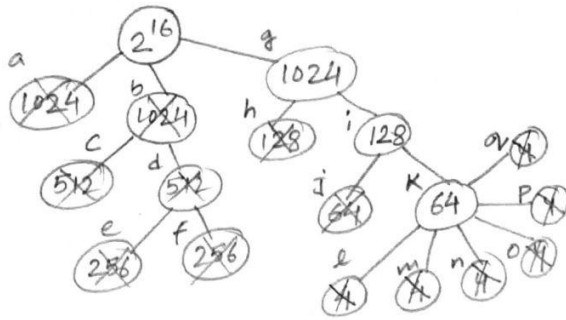
Network Address: 10.10.0.0/16

Device	Interface	IPv4 Address	Subnet Mask	Default Gateway
K1	F0/0	10.10.8.129	255.255.255.192	N/A
	S3/0	10.10.8.193	255.255.255.252	N/A
	S2/0	10.10.8.197	255.255.255.252	N/A
J1	F0/0	10.10.0.1	255.255.252.0	N/A
	S2/0	10.10.8.194	255.255.255.252	N/A
	S3/0	10.10.8.202	255.255.255.252	N/A
M1	F0/0	10.10.7.1	255.255.255.0	N/A
	S2/0	10.10.8.198	255.255.255.252	N/A
	S3/0	10.10.8.201	255.255.255.252	N/A
	S6/0	10.10.8.205	255.255.255.252	N/A
F1	F0/0	10.10.6.1	255.255.255.0	N/A
	S2/0	10.10.8.210	255.255.255.252	N/A
S1	F0/0	10.10.8.1	255.255.255.128	N/A
	S2/0	10.10.8.206	255.255.255.252	N/A
	S3/0	10.10.8.209	255.255.255.252	N/A
	S6/0	10.10.8.213	255.255.255.252	N/A
N1	F0/0	10.10.4.1	255.255.254.0	N/A
	S2/0	10.10.8.214	255.255.255.252	N/A
KPC0	NIC	10.10.8.133	255.255.255.192	10.10.8.129
KPC1	NIC	10.10.8.134	255.255.255.192	10.10.8.129
DHCP Server	NIC	10.10.8.130	255.255.255.192	10.10.8.129
Web Server	NIC	10.10.8.131	255.255.255.192	10.10.8.129
DNS Server	NIC	10.10.8.132	255.255.255.192	10.10.8.129

Device	Interface	IPv4 Address	Subnet Mask	Default Gateway
JPC0	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
JPC1	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
JP (Printer)	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
MPC0	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
MPC1	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
FPC0	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
FPC1	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
SPC0	NIC	10.10.8.3	255.255.255.128	10.10.8.1
SPC1	NIC	10.10.8.4	255.255.255.128	10.10.8.1
Email Server	NIC	10.10.8.2	255.255.255.128	10.10.8.1
NPC0	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
NPC1	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
NP (Printer)	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned

VLSM TREE

Network Address $\rightarrow 10.10.0.0/16$



- Host - IP - Give - H.B. - N.B.
1004 - 10 - 22

✓ Jashore	560	562	1024	10	22
✓ Narail	350	352	512	9	23
✓ Faridpur	210	212	256	8	24
✓ Magura	128	130	256	8	24
Satkhira	80	82	128	7	25
Kushia	40	42	64	6	26
WAN1	2	4	4	2	30
WAN2	2	4	4	2	30
WAN3	2	4	4	2	30
WAN4	2	4	4	2	30
WAN5	2	4	4	2	30
WAN6	2	4	4	2	30

10.10.0.0/16

