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Section: 04

Topic: 04 (Merul Badda University) **Group 401**

Router Configuration Commands

Static IP Address
Architecture Configuration
Router>enable
Router#config t
Router(config)#hostname architecture
architecture(config)#int g0/0
architecture(config-if)#ip address 10.128.6.3 255.255.255.128
architecture(config-if)#no shutdown

Law Configuration
Router>enable
Router#config t
Router(config)#hostname Law
Law(config)#int g0/0
Law(config-if)#ip address 10.128.6.131 255.255.255.192
Law(config-if)#no shutdown
Law(config)#int s0/0/1
Law(config-if)#clock rate 64000
Law(config-if)#no shutdown

Wan1:
Static IP Address
architecture(config)#int s0/0/1
architecture(config-if)#ip address 10.128.7.25 255.255.255.252
architecture(config-if)#no shutdown

Law(config)#int s0/0/1
Law(config-if)#ip address 10.128.7.26 255.255.255.252
Law(config-if)#no shutdown

Wan2:
Static IP Address
architecture(config)#int s0/1/0
architecture(config-if)#ip address 10.128.7.21 255.255.255.252
architecture(config-if)#no shutdown

Router>enable
Router#config t
economics(config)#int s0/1/0
economics(config-if)#ip address 10.128.7.22 255.255.255.252
economics(config-if)#clock rate 64000
economics(config-if)#no shutdown

Wan3:
Static IP Address
Law(config)#int s0/1/1
Law(config-if)#ip address 10.128.7.17 255.255.255.252
Law(config-if)#no shutdown

economics(config)#int s0/1/1
economics(config-if)#ip address 10.128.7.18 255.255.255.252
economics(config-if)#clock rate 64000
economics(config-if)#no shutdown

Wan4:
Static IP Address
economics>enable
economics#config t
economics(config)#int s0/0/0
economics(config-if)#ip address 10.128.7.13 255.255.255.252
economics(config-if)#no shutdown

Router>enable
Router#config t
Router(config)#hostname eng&hum
eng&hum(config)#int s0/0/0
eng&hum(config-if)#ip address 10.128.7.14 255.255.255.252
eng&hum(config-if)#clock rate 64000
eng&hum(config-if)#no shutdown

Wan5:
Law(config)#int s0/0/0
Law(config-if)#ip address 10.128.7.9 255.255.255.252
Law(config-if)#clock rate 64000

Law(config-if)#no shutdown

eng&hum(config)#int s0/0/1
eng&hum(config-if)#ip address 10.128.7.10 255.255.255.252
eng&hum(config-if)#no shutdown

Wan6:
Static IP Address
eng&hum>enable
eng&hum#config t
eng&hum(config)#int s0/1/0
eng&hum(config-if)#ip address 10.128.7.5 255.255.255.252
eng&hum(config-if)#clock rate 64000
eng&hum(config-if)#no shutdown

Router>enable
Router#config t
Router(config)#hostname bsrm
bsrm(config)#int s0/1/1
bsrm(config-if)#ip address 10.128.7.6 255.255.255.252
bsrm(config-if)#no shutdown

Wan7:
Static IP Address
bsrm(config)#int s0/0/0
bsrm(config-if)#ip address 10.128.7.1 255.255.255.252
bsrm(config-if)#clock rate 64000
bsrm(config-if)#no shutdown

Router>enable
Router#config t
Router(config)#hostname cse
cse(config)#int s0/0/0
cse(config-if)#ip address 10.128.7.2 255.255.255.252
cse(config-if)#no shutdown

Remaining default gateways:
bsrm(config)#int g0/0
bsrm(config-if)#ip address 10.128.5.2 255.255.255.0
bsrm(config-if)#no shutdown

cse(config)#int g0/0
cse(config-if)#ip address 10.128.0.1 255.255.252.0
cse(config-if)#no shutdown

eng&hum(config)#int g0/0
eng&hum(config-if)#ip address 10.128.6.195 255.255.255.192
eng&hum(config-if)#no shutdown

economics(config)#int g0/0
economics(config-if)#ip address 10.128.4.1 255.255.255.0
economics(config-if)#no shutdown

DHCP Relay:
eng&hum(config)#int g0/0
eng&hum(config-if)#ip helper-address 10.128.4.2

bsrm(config)#int g0/0
bsrm(config-if)#ip helper-address 10.128.4.2

economics(config)#int g0/0
economics(config-if)#ip helper-address 10.128.4.2

cse(config)#int g0/0
cse(config-if)#ip helper-address 10.128.4.2

Static Routing:
(Using Directly Attached)
Law(config)#ip route 10.128.6.0 255.255.255.128 Serial0/0/1
Law(config)#ip route 10.128.7.20 255.255.255.252 Serial0/0/1
Law(config)#ip route 10.128.7.12 255.255.255.252 Serial0/0/0
Law(config)#ip route 10.128.7.4 255.255.255.252 Serial0/0/0
Law(config)#ip route 10.128.7.0 255.255.255.252 Serial0/0/0
Law(config)#ip route 10.128.4.0 255.255.255.252 Serial0/1/1
Law(config)#ip route 10.128.6.192 255.255.255.192 Serial0/0/0
Law(config)#ip route 10.128.5.0 255.255.255.0 Serial0/0/0
Law(config)#ip route 10.128.0.0 255.255.252.0 Serial0/0/0
Law(config)#ip route 10.128.6.0 255.255.255.128 Serial0/0/0 5
Law(config)#ip route 10.128.4.0 255.255.255.0 Serial0/0/0

architecture(config)#ip route 10.128.7.16 255.255.255.252 Serial0/1/0
architecture(config)#ip route 10.128.7.12 255.255.255.252 Serial0/1/0
architecture(config)#ip route 10.128.7.8 255.255.255.252 Serial0/0/1
architecture(config)#ip route 10.128.7.4 255.255.255.252 Serial0/0/1
architecture(config)#ip route 10.128.7.0 255.255.255.252 Serial0/0/1
architecture(config)#ip route 10.128.4.0 255.255.255.0 Serial0/1/0
architecture(config)#ip route 10.128.6.192 255.255.255.192 Serial0/0/1

architecture(config)#ip route 10.128.5.0 255.255.255.0 Serial0/0/1
architecture(config)#ip route 10.128.0.0 255.255.252.0 Serial0/0/1
architecture(config)#ip route 10.128.6.128 255.255.255.192 Serial0/0/1
architecture(config)#ip route 10.128.6.128 255.255.255.192 Serial0/1/0 5

eng&hum(config)#ip route 10.128.7.24 255.255.255.252 Serial0/0/1
eng&hum(config)#ip route 10.128.7.16 255.255.255.252 Serial0/0/1
eng&hum(config)#ip route 10.128.7.20 255.255.255.252 Serial0/0/0
eng&hum(config)#ip route 10.128.7.0 255.255.255.252 Serial0/1/0
eng&hum(config)#ip route 10.128.4.0 255.255.255.0 Serial0/0/0
eng&hum(config)#ip route 10.128.6.128 255.255.255.192 Serial0/0/1
eng&hum(config)#ip route 10.128.0.0 255.255.252.0 Serial0/1/0
eng&hum(config)#ip route 10.128.5.0 255.255.255.0 Serial0/1/0
eng&hum(config)#ip route 10.128.6.0 255.255.255.128 Serial0/0/0

bsrm(config)#ip route 10.128.7.24 255.255.255.252 Serial0/1/1
bsrm(config)#ip route 10.128.7.20 255.255.255.252 Serial0/1/1
bsrm(config)#ip route 10.128.7.16 255.255.255.252 Serial0/1/1
bsrm(config)#ip route 10.128.7.12 255.255.255.252 Serial0/1/1
bsrm(config)#ip route 10.128.7.8 255.255.255.252 Serial0/1/1
bsrm(config)#ip route 10.128.4.0 255.255.255.0 Serial0/1/1
bsrm(config)#ip route 10.128.6.0 255.255.255.128 Serial0/1/1
bsrm(config)#ip route 10.128.6.128 255.255.255.192 Serial0/1/1
bsrm(config)#ip route 10.128.6.192 255.255.255.192 Serial0/1/1
bsrm(config)#ip route 10.128.0.0 255.255.252.0 Serial0/0/0

Dynamic Routing:
cse(config)#router rip
cse(config-router)#version 2
cse(config-router)#network 10.128.0.0
cse(config-router)#network 10.128.7.0
cse(config-router)#no auto-summary
cse(config-router)#passive-interface g0/0

economics(config)#router rip
economics(config-router)#version 2
economics(config-router)#network 10.128.4.0
economics(config-router)#network 10.128.7.20
economics(config-router)#network 10.128.7.16
economics(config-router)#network 10.128.7.12
economics(config-router)#no auto-summary
economics(config-router)#passive-interface g0/0

Redistribution

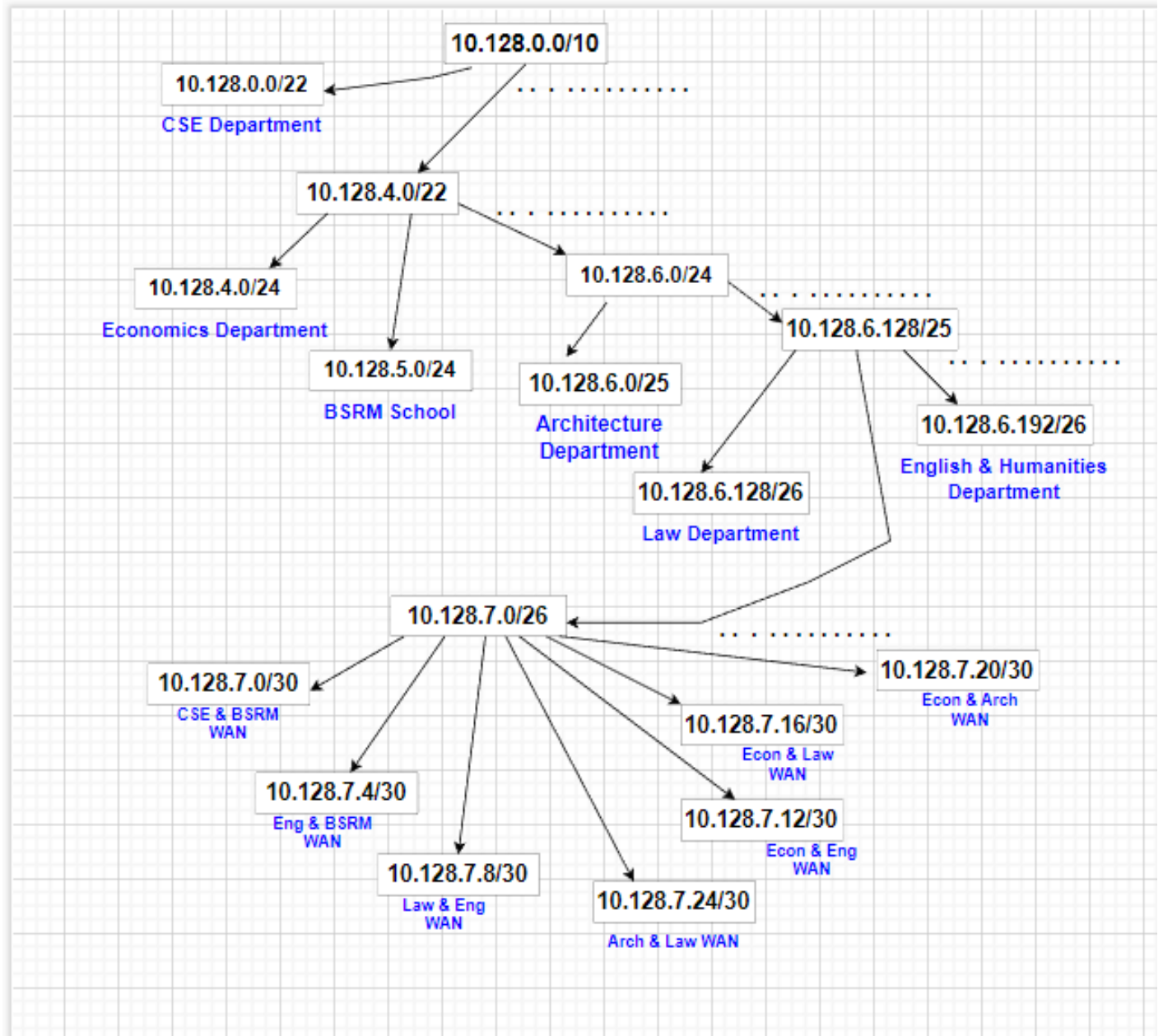eng&hum(config)#router rip
eng&hum(config-if)#version 2
eng&hum(config-if)#redistribute static
eng&hum(config-if)#network 10.128.7.12

architecture(config)#router rip
architecture(config)#version 2
architecture(config)#redistribute static
architecture(config)#network 10.128.7.20

bsrm(config)#router rip
bsrm(config-if)#version 2
bsrm(config-if)#redistribute static
bsrm(config-if)#network 10.128.7.0

VLSM Tree

10.128.0.0/10

10.128.0.0/22
CSE Department

10.128.4.0/22

10.128.4.0/24
Economics Department

10.128.5.0/24
BSRM School

10.128.6.0/24

10.128.6.0/25
Architecture Department

10.128.6.128/25

10.128.6.128/26
Law Department

10.128.6.192/26
English & Humanities Department

10.128.7.0/26

10.128.7.0/30
CSE & BSRM WAN

10.128.7.4/30
Eng & BSRM WAN

10.128.7.8/30
Law & Eng WAN

10.128.7.24/30
Arch & Law WAN

10.128.7.16/30
Econ & Law WAN

10.128.7.12/30
Econ & Eng WAN

10.128.7.20/30
Econ & Arch WAN

*I*P Address Tab*le*

Device	Interface	Ipv4 Address	Subnet Mask	Default Gateway
Law Department	G0/0	10.128.6.131	255.255.255.192	N/A
	S0/0/1	10.128.7.26	255.255.255.252	N/A
	S0/1/1	10.128.7.17	255.255.255.252	N/A
	S0/0/0	10.128.7.9	255.255.255.252	N/A
Architecture Department	G0/0	10.128.6.3	255.255.255.128	N/A
	S0/0/1	10.128.7.25	255.255.255.252	N/A
	S0/1/0	10.128.7.21	255.255.255.252	N/A
Economics Department	G0/0	10.128.4.1	255.255.255.0	N/A
	S0/0/0	10.128.7.13	255.255.255.252	N/A
	S0/1/0	10.128.7.22	255.255.255.252	N/A
	S0/1/1	10.128.7.18	255.255.255.252	N/A
English & Humanities Department	G0/0	10.128.6.195	255.255.255.192	N/A
	S0/0/0	10.128.7.14	255.255.255.252	N/A
	S0/1/0	10.128.7.5	255.255.255.252	N/A
	S0/0/1	10.128.7.10	255.255.255.252	N/A
BSRM School	G0/0	10.128.5.2	255.255.255.0	N/A
	S0/0/0	10.128.7.1	255.255.255.252	N/A
	S0/1/1	10.128.7.6	255.255.255.252	N/A
CSE Department	G0/0	10.128.0.1	255.255.252.0	N/A
	S0/0/0	10.128.7.2	255.255.255.252	N/A
PC0	NIC	10.128.6.1	255.255.255.128	10.128.6.3
PC1	NIC	10.128.6.2	255.255.255.128	10.128.6.3
PC2	NIC	10.128.6.129	255.255.255.192	10.128.6.131
PC3	NIC	10.128.6.130	255.255.255.192	10.128.6.131
PC4	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC5	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC6	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned

PC7	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC8	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC9	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC10	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC11	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
DHCP Server	NIC	10.128.4.2	255.255.255.0	10.128.4.1
DNS Server	NIC	10.128.6.193	255.255.255.192	10.128.6.195
Web Server	NIC	10.128.5.1	255.255.255.0	10.128.5.2
Gmail Server	NIC	10.128.6.132	255.255.255.192	10.128.6.131
Yahoo Server	NIC	10.128.6.194	255.255.255.192	10.128.6.195