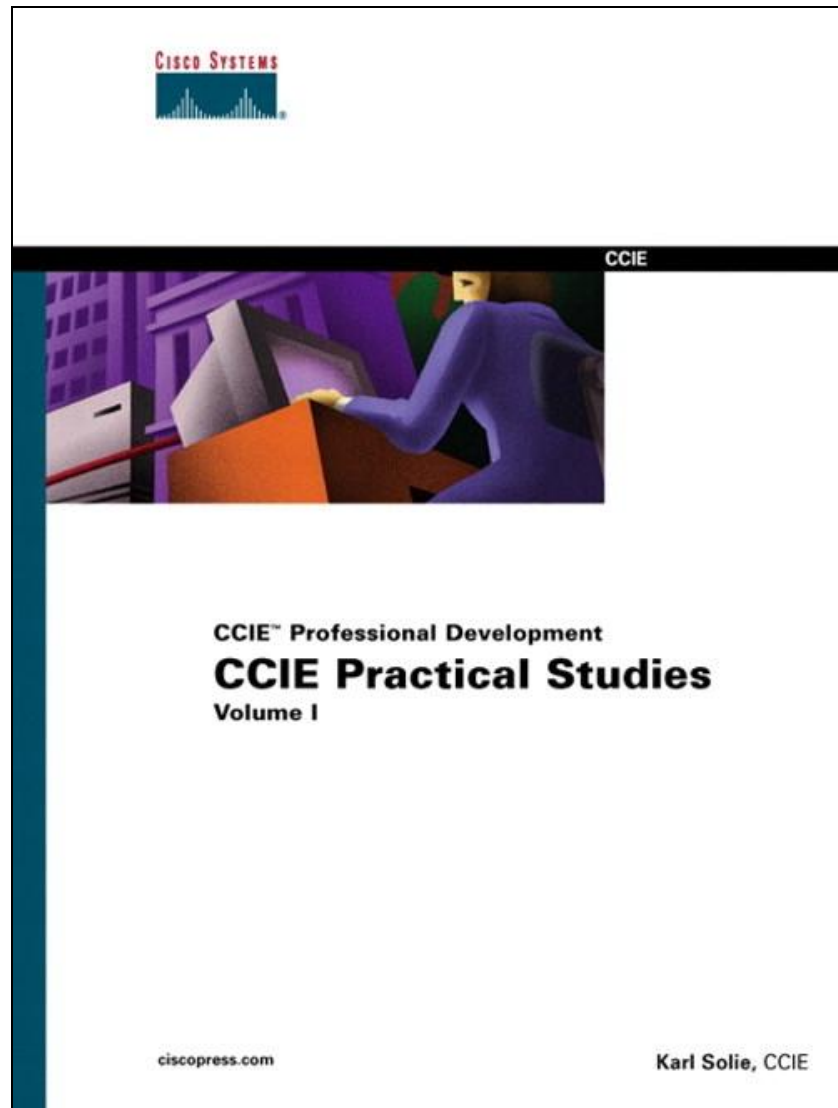


Cisco Press CCIE Practical Studies

CCIE Practice Lab:

“Darth Reid Solutions”



Cisco Press CCIE Practical Studies
CCIE Practice Lab:
“Darth Reid”

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Overview

The Cisco Press CCIE Practical Studies Volume 1 book contains 5 simulated CCIE lab exams in chapter 18, and the solutions are not in the book. As promised in the book, the solutions are posted are www.ciscopress.com. This file contains the solutions to one of those labs.

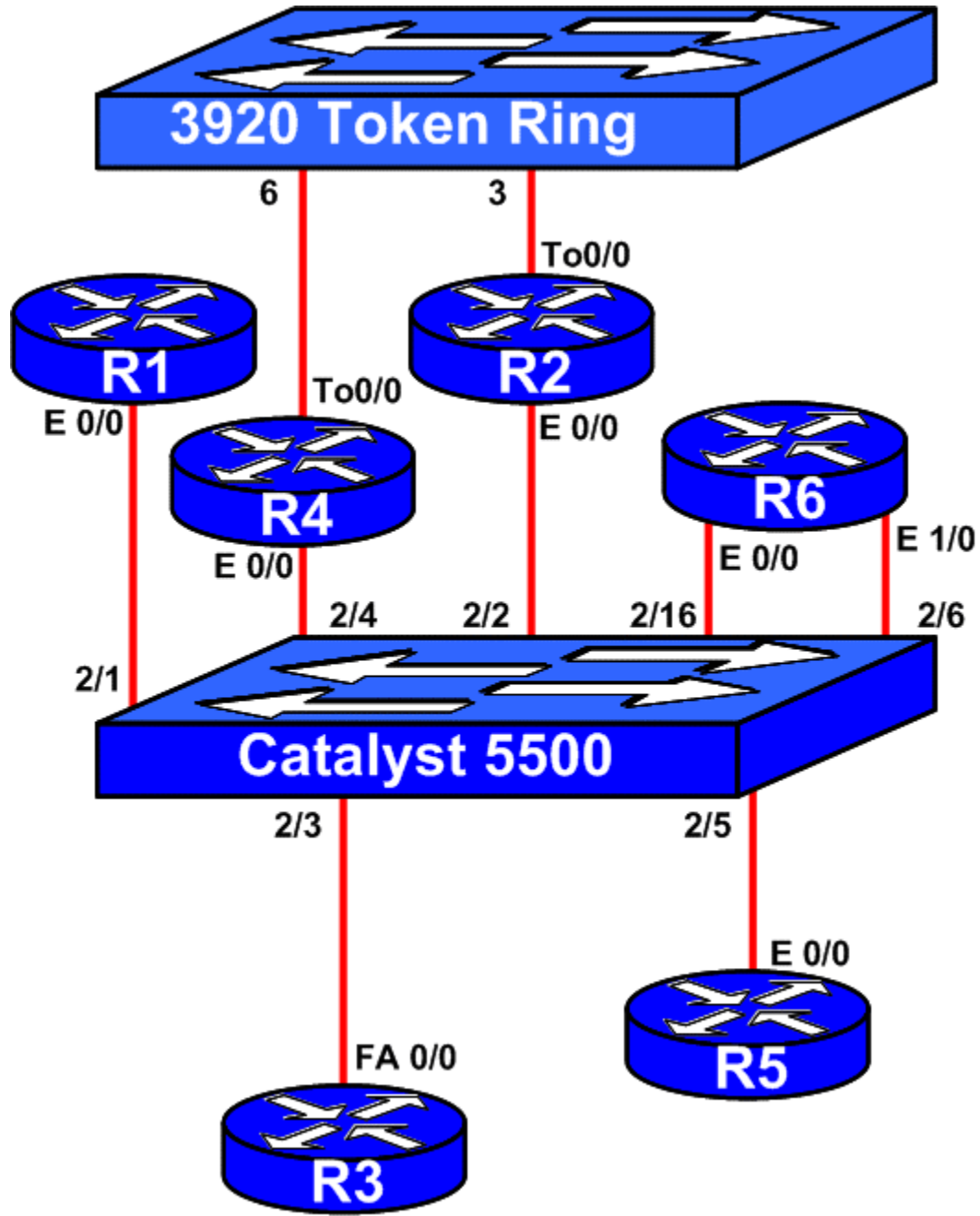
Technical Details

The following table lists the interfaces on the routers used for the solution.

Table 52-1: Names and Interfaces used

CCIE PS Device Name	Interfaces Used	Frame-Relay Port	LAN Switch Port	VLAN or Ring Number
R1	Serial 0/0 Ethernet 0/0 Bri 0/0	Serial 1/0	FA 2/1	VLAN 2
R2	Serial 0/0 Ethernet 0/0 TokenRing 0/0	Serial 0/1	FA 2/10 Port 3 (T/R)	VLAN 20 Ring 2
R3	Serial 0/0 FastEthernet 0/0	Serial 0/0	FA 2/5	VLAN 10
R4	Serial 0/0 Ethernet 0/0 TokenRing 0/0	Serial 0/2	FA 2/15	VLAN 1
R5	Ethernet 0/0 Bri 0/0		FA 2/20	VLAN 1
R6	Ethernet 0/0 Ethernet 1/0		2/30 2/25	VLAN 10 VLAN 20

In the following figure, the LAN cabling is detailed, with port numbers shown as well.



Lab Instruction Changes and Interpretations

With any complex lab, there might be various interpretations of the meaning of the requirement. Interpreting the problem statement is part of the difficulty of the lab. However, with the solution, it is sometimes helpful to more directly state how a requirement was interpreted. Also, there may be items in the lab exercises that may be changed at the next printing in order to correct typographic errors, unintended ambiguities, and the like. For this lab, the following lists the interpretations used when compiling these answers:

Section VII, Number 1: “FTF” should instead be “FTP”.

Section VII, Number 1: Delete line with IP address 227.24.194.x.

Section VII, Number 1: Change line with IP address 131.24.196.x to be 131.24.193.x.

Section X, number 1: “Happing” should instead be “Happening”.

Initial Configurations

The following configurations are for the Frame Relay Switch and Access Server.

Initial Configuration: FR Switch

```
! Cisco Press CCIE Practical Studies Volume I
!
! Initial Configuration
!
! Lab52 - Frame-Relay Switch
!
!
!
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname frame_switch
!
logging rate-limit console 10 except errors
enable password cisco
!
ip subnet-zero
!
!
no ip finger
!
no ip dhcp-client network-discovery
frame-relay switching
call rsvp-sync
!
!
!
!
!
!
!
interface FastEthernet0/0
description Interface not used
no ip address
shutdown
duplex auto
speed auto
!
interface Serial0/0
no ip address
encapsulation frame-relay
```

```
clockrate 148000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 121 interface Serial1/0 120
!
interface Serial0/1
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 111 interface Serial1/0 110
!
interface Serial0/2
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 131 interface Serial1/0 130
!
interface Serial0/3
no ip address
encapsulation frame-relay
shutdown
no fair-queue
clockrate 148000
frame-relay lmi-type ansi
frame-relay intf-type dce
!
interface Serial1/0
no ip address
encapsulation frame-relay
clockrate 148000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 110 interface Serial0/1 111
frame-relay route 120 interface Serial0/0 121
frame-relay route 130 interface Serial0/2 131
!
interface Serial1/1
no ip address
shutdown
clockrate 2000000
!
ip kerberos source-interface any
ip classless
ip http server
!
!
```

```
tftp-server flash:c2600-js-mz.121-10.bin
tftp-server flash:c2600-js-mz.122-1.bin
!
dial-peer cor custom
!
!
!
!
line con 0
exec-timeout 0 0
password cisco
logging synchronous
login
transport input none
line aux 0
exec-timeout 0 0
password cisco
logging synchronous
login
line vty 0 4
exec-timeout 0 0
password cisco
login
line vty 5 15
login
!
end
```


Initial Configuration: Access Server

```
! Cisco Press CCIE Practical Studies Volume I
!
! Initial Configuration
!
! Lab52 - Terminal Server
!
!
!version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname terminal_server
!
logging rate-limit console 10 except errors
enable password cisco
!
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
ip host R1 2033 172.16.0.1
ip host TKN 2042 172.16.0.1
ip host ETH 2043 172.16.0.1
ip host FRS 2041 172.16.0.1
ip host R8 2040 172.16.0.1
ip host R7 2039 172.16.0.1
ip host R6 2038 172.16.0.1
ip host R5 2037 172.16.0.1
ip host R4 2036 172.16.0.1
ip host R3 2035 172.16.0.1
ip host R2 2034 172.16.0.1
!
no ip dhcp-client network-discovery
call rsvp-sync
!
!
!
!
!
!
!
!
interface Loopback0
ip address 172.16.0.1 255.255.255.0
!
```

```
interface FastEthernet0/0
no ip address
shutdown
duplex auto
speed auto
!
ip kerberos source-interface any
ip classless
ip http server
!
!
!
dial-peer cor custom
!
!
!
!
line con 0
exec-timeout 0 0
password cisco
logging synchronous
login
transport input none
line 33 48
no exec
transport input all
line aux 0
line vty 0 4
exec-timeout 0 0
password cisco
logging synchronous
login
line vty 5 15
login
!
no scheduler allocate
end
```

Solutions

The following configurations are the complete part 1 and part 2 solutions for this lab.

Solution: Router1

```
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Lab52 - Router 1 - R1
!
!
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname r1
!
logging buffered 8192 debugging
logging rate-limit console 10 except errors
enable password cisco
!
username r1 password 0 cisco
username r5 password 0 cisco
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
!
ip multicast-routing
no ip dhcp-client network-discovery
ipx routing 0007.eb7f.0340
isdn switch-type basic-ni
call rsvp-sync
!
!
!
!
!
!
dlsw local-peer peer-id 133.10.5.1
dlsw remote-peer 0 tcp 133.10.10.1 lf 1500 lsap-output-list 201
dlsw bridge-group 1
!
!
interface Loopback0
ip address 133.10.5.1 255.255.255.224
```

```
!  
interface Loopback1  
ip address 128.200.1.1 255.255.255.0  
!  
interface Ethernet0/0  
ip address 133.10.4.1 255.255.255.0  
ip access-group 102 in  
no shutdown  
ip pim dense-mode  
ip igmp join-group 224.10.10.1  
half-duplex  
ipx network 14  
bridge-group 1  
!  
interface Serial0/0  
no ip address  
encapsulation frame-relay  
frame-relay lmi-type ansi  
no shutdown  
!  
interface Serial0/0.1 multipoint  
description frame link to r2  
ip address 133.10.6.1 255.255.255.0  
no ip split-horizon  
ip ospf hello-interval 60  
ip ospf dead-interval 180  
ip ospf priority 255  
ipx network 11  
frame-relay class mymap  
frame-relay map ipx 11.0007.eb7e.f8a0 110 broadcast  
frame-relay interface-dlci 110  
!  
interface Serial0/0.23 multipoint  
ip address 133.10.1.3 255.255.255.224  
ip pim dense-mode  
no ip split-horizon  
ip ospf priority 255  
ipx network 12  
no ipx split-horizon eigrp 1  
frame-relay map llc2 130 broadcast  
frame-relay map ipx 12.0007.eb7e.ff80 130 broadcast  
frame-relay map ip 133.10.1.4 120 broadcast  
frame-relay map ip 133.10.1.6 130 broadcast  
frame-relay map ipx 12.0007.eba3.b540 120 broadcast  
!  
interface TokenRing0/0  
no ip address  
shutdown  
ring-speed 16  
!
```

```
interface BRI0/0
ip address 133.10.2.1 255.255.255.0
encapsulation ppp
dialer map ipx 10.0007.eb7e.0340 name r5 broadcast
dialer map ip 133.10.2.2 name r5 broadcast
dialer-group 1
ipx network 10
isdn switch-type basic-ni
isdn spid1 40855520100101
isdn spid2 40855520110101
cdapi buffers regular 0
cdapi buffers raw 0
cdapi buffers large 0
ppp authentication chap
ppp multilink
no shutdown
!
interface Serial0/1
no ip address
shutdown
!
interface Serial1/0
no ip address
shutdown
!
interface Serial1/1
no ip address
shutdown
!
interface Serial1/2
no ip address
shutdown
!
interface Serial1/3
no ip address
shutdown
!
router eigrp 1
redistribute ospf 1
network 133.10.0.0
default-metric 64 1 255 1 1500
no auto-summary
no eigrp log-neighbor-changes
!
router ospf 1
log-adjacency-changes
area 0 range 128.200.1.0 255.255.255.0
area 0 range 133.10.1.0 255.255.255.224
area 0 range 133.10.2.0 255.255.255.0
area 0 range 133.10.3.0 255.255.255.0
```

```
area 0 range 133.10.5.0 255.255.255.224
redistribute igrp 1 metric 10 subnets
redistribute bgp 2010 subnets
network 128.200.1.0 0.0.0.255 area 0
network 133.10.1.0 0.0.0.31 area 0
network 133.10.2.0 0.0.0.255 area 0
network 133.10.3.0 0.0.0.255 area 0
network 133.10.5.0 0.0.0.31 area 0
network 133.10.6.0 0.0.0.255 area 0
neighbor 133.10.1.6
neighbor 133.10.1.4
default-information originate
!
router igrp 1
redistribute ospf 1
network 133.10.0.0
default-metric 64 1 255 1 1500
!
router bgp 2010
no synchronization
bgp log-neighbor-changes
network 128.200.1.0 mask 255.255.255.0
neighbor 133.10.10.1 remote-as 2010
neighbor 133.10.10.1 update-source Loopback0
neighbor 133.10.10.1 send-community
neighbor 133.10.10.1 route-map no_send out
neighbor 133.10.20.1 remote-as 2010
neighbor 133.10.20.1 update-source Loopback0
neighbor 133.10.20.1 send-community
neighbor 133.10.20.1 route-map no_send out
default-metric 10
!
ip kerberos source-interface any
ip classless
ip http server
!
!
map-class frame-relay mymap
frame-relay cir 32000
frame-relay bc 155400
frame-relay be 0
frame-relay adaptive-shaping becn
access-list 7 permit 128.200.1.0
access-list 101 deny eigrp any any
access-list 101 deny ospf any any
access-list 101 permit ip any any

access-list 102 deny tcp 131.24.194.0 0.0.1.255 any eq www
access-list 102 deny tcp 131.24.194.0 0.0.1.255 any eq ftp
access-list 102 deny tcp 131.24.194.0 0.0.1.255 any eq ftp-data
```

```
access-list 102 deny tcp 131.24.193.0 0.0.0.255 any eq www
access-list 102 deny tcp 131.24.193.0 0.0.0.255 any eq ftp
access-list 102 deny tcp 131.24.193.0 0.0.0.255 any eq ftp-data
access-list 102 deny tcp 131.25.195.0 0.0.0.255 any eq www
access-list 102 deny tcp 131.25.195.0 0.0.0.255 any eq ftp
access-list 102 deny tcp 131.25.195.0 0.0.0.255 any eq ftp-data
access-list 102 deny tcp host 135.152.1.1 any eq www
access-list 102 deny tcp host 135.152.1.1 any eq ftp
access-list 102 deny tcp host 135.152.1.1 any eq ftp-data
access-list 102 permit ip any any

access-list 201 permit 0x0000 0x0D0D
dialer-list 1 protocol ip list 101
route-map no_send permit 10
match ip address 7
set community no-export
!
!
!
!
ipx router eigrp 1
network 12
network 10
network 11
!
!
ipx router rip
no network 12
!
!
!
bridge 1 protocol ieee
!
dial-peer cor custom
!
!
!
!
line con 0
transport input none
line aux 0
line vty 0 4
password cisco
login
line vty 5 15
login
!
end
```

Solution: Router2

```
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Lab52 - Router 2 - R2
!
!
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname r2
!
logging rate-limit console 10 except errors
enable password cisco
!
ip subnet-zero
!
!
no ip finger
!
no ip dhcp-client network-discovery
ipx routing 0007.eb7e.f8a0
call rsvp-sync
!
!
!
!
!
!
source-bridge ring-group 10
source-bridge remote-peer 10 tcp 133.10.11.1
source-bridge remote-peer 10 tcp 133.10.32.1 local-ack
dlsw local-peer peer-id 133.10.10.1 promiscuous
!
!
interface Loopback0
ip address 133.10.10.1 255.255.255.0
!
interface Ethernet0/0
ip address 160.100.2.1 255.255.255.0
half-duplex
ipx network 20
no shutdown
!
interface Serial0/0
```



```
description fram link to r1
bandwidth 64
ip address 133.10.6.2 255.255.255.0
encapsulation frame-relay
ip ospf hello-interval 60
ip ospf dead-interval 180
ip ospf priority 0
ipx network 11
no fair-queue
frame-relay class mymap
frame-relay map llc2 111 broadcast
frame-relay map ipx 11.0007.eb7f.0340 111 broadcast
frame-relay map ip 133.10.6.1 111
frame-relay lmi-type ansi
no shutdown
!
interface TokenRing0/0
ip address 133.10.11.1 255.255.255.0
ipx network 21
ring-speed 16
multiring all
source-bridge 1 1 10
source-bridge spanning
no shutdown
!
interface Serial0/1
no ip address
shutdown
!
router ospf 1
log-adjacency-changes
redistribute igmp 1 subnets
network 133.10.6.0 0.0.0.255 area 0
network 133.10.10.0 0.0.0.255 area 0
network 133.10.11.0 0.0.0.255 area 0
network 133.10.12.0 0.0.0.255 area 0
network 160.100.2.0 0.0.0.255 area 0
default-metric 1
!
router igmp 1
redistribute ospf 1
network 133.10.0.0
default-metric 64 1 255 1 1500
!
router bgp 2010
bgp log-neighbor-changes
redistribute ospf 1
neighbor 133.10.5.1 remote-as 2010
neighbor 133.10.5.1 update-source Loopback0
neighbor 133.10.5.1 next-hop-self
```

```
neighbor 133.10.20.1 remote-as 2010
neighbor 133.10.20.1 update-source Loopback0
neighbor 160.100.1.254 remote-as 2001
neighbor 160.100.1.254 route-map weight_700 in
neighbor 160.100.2.254 remote-as 2001
neighbor 160.100.2.254 route-map weight_700 in
!
ip kerberos source-interface any
ip classless
ip http server
!
!
map-class frame-relay mymap
frame-relay cir 32000
frame-relay bc 64000
frame-relay be 0
frame-relay adaptive-shaping becn
route-map weight_700 permit 10
set weight 700
!
!
!
!
ipx router eigrp 1
network 11
!
!
ipx router rip
no network 11
!
!
!
bridge 1 protocol ibm
!
dial-peer cor custom
!
!
!
!
line con 0
transport input none
line aux 0
line vty 0 4
password cisco
login
line vty 5 15
login
!
no scheduler allocate
end
```

Solution: Router3

```
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Lab52 - Router 3 - R3
!
!
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname r3
!
logging rate-limit console 10 except errors
enable password cisco
!
ip subnet-zero
!
!
no ip finger
!
no ip dhcp-client network-discovery
ipx routing 0007.eba3.b540
call rsvp-sync
!
!
!
!
!
!
!
!
interface Loopback0
ip address 133.10.20.1 255.255.255.128
!
interface FastEthernet0/0
ip address 160.100.1.1 255.255.255.0
duplex auto
speed auto
ipx network 30
no shutdown
!
interface Serial0/0
description fram link to r1
ip address 133.10.1.4 255.255.255.224
encapsulation frame-relay
```

```
ip ospf priority 0
ipx input-sap-filter 1000
ipx network 12
no fair-queue
frame-relay map ipx 12.0007.eb7e.ff80 121 broadcast
frame-relay map ipx 12.0007.eb7f.0340 121 broadcast
frame-relay map ip 133.10.1.3 121 broadcast
frame-relay map ip 133.10.1.6 121
frame-relay map ip 133.10.6.2 121
frame-relay lmi-type ansi
no shutdown
!
interface Serial0/1
no ip address
shutdown
!
router ospf 1
log-adjacency-changes
redistribute rip subnets route-map only_192
network 133.10.1.0 0.0.0.31 area 0
network 133.10.20.0 0.0.0.127 area 0
distribute-list 1 in
!
router rip
redistribute ospf 1
network 160.100.0.0
default-metric 4
distribute-list 2 out
!
router bgp 2010
bgp log-neighbor-changes
neighbor 133.10.5.1 remote-as 2010
neighbor 133.10.5.1 update-source Loopback0
neighbor 133.10.5.1 next-hop-self
neighbor 133.10.10.1 remote-as 2010
neighbor 133.10.10.1 update-source Loopback0
neighbor 160.100.1.254 remote-as 2001
neighbor 160.100.1.254 route-map weight_700 in
neighbor 160.100.2.254 remote-as 2001
neighbor 160.100.2.254 route-map weight_700 in
!
ip kerberos source-interface any
ip classless
ip http server
!
access-list 1 deny 192.168.1.0 0.0.0.255
access-list 1 permit any
access-list 2 permit 192.168.1.0 0.0.0.255
access-list 2 permit 192.190.102.0 0.0.0.255
access-list 2 deny any
```

```
access-list 1000 deny BB00.0000.0000.0000 4 FILESRV
access-list 1000 permit FFFFFFFF
route-map weight_700 permit 10
set weight 700
!
route-map only_192 permit 10
match ip address 2
!
route-map only_192 deny 20
!
!
!
!
ipx router eigrp 1
distribute-sap-list 1000 in
network 12
!
!
ipx router rip
no network 12
!
!
!
!
dial-peer cor custom
!
!
!
!
line con 0
transport input none
line aux 0
line vty 0 4
password cisco
login
line vty 5 15
login
!
no scheduler allocate
end
```

Solution: Router4

```
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Lab52 - Router 4 - R4
!
!
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname r4
!
logging buffered 4096 debugging
logging rate-limit console 10 except errors
enable password cisco
!
ip subnet-zero
!
!
no ip finger
!
ip multicast-routing
no ip dhcp-client network-discovery
ipx routing 0007.eb7e.ff80
call rsvp-sync
!
!
!
!
!
!
source-bridge ring-group 10
source-bridge remote-peer 10 tcp 133.10.32.1
source-bridge remote-peer 10 tcp 133.10.11.1 local-ack
!
!
interface Loopback0
ip address 133.10.30.1 255.255.255.240
!
interface Loopback1
ip address 161.100.1.1 255.255.255.0
!
interface Ethernet0/0
ip address 133.10.33.3 255.255.255.192
ip pim dense-mode
```

```
ip igmp join-group 224.10.10.1
half-duplex
ipx network 41
standby track Se0/0
standby 1 priority 110 preempt
standby 1 ip 133.10.33.1
no shutdown
!
interface Serial0/0
ip address 133.10.1.6 255.255.255.224
ip pim dense-mode
encapsulation frame-relay
ip summary-address eigrp 1 161.100.1.0 255.255.255.0 5
ip summary-address eigrp 1 160.100.1.0 255.255.255.0 5
ip ospf priority 0
ipx network 12
no fair-queue
frame-relay map llc2 131 broadcast
frame-relay map ipx 12.0007.eb7f.0340 131 broadcast
frame-relay map ip 133.10.1.3 131 broadcast
frame-relay map ip 133.10.1.4 131 broadcast
frame-relay map ipx 12.0007.eba3.b540 131 broadcast
frame-relay interface-dlci 131
frame-relay lmi-type ansi
no shutdown
!
interface TokenRing0/0
ip address 133.10.32.1 255.255.255.0
ipx network 40
ring-speed 16
multiring all
source-bridge 2 1 10
source-bridge spanning
no shutdown
!
interface BRI0/0
no ip address
cdapi buffers regular 0
cdapi buffers raw 0
cdapi buffers large 0
!
interface Serial0/1
no ip address
shutdown
!
interface Serial1/0
no ip address
shutdown
!
interface Serial1/1
```

```
no ip address
shutdown
!
interface Serial1/2
no ip address
shutdown
!
interface Serial1/3
no ip address
shutdown
!
router eigrp 1
network 133.10.0.0
network 161.100.0.0
no auto-summary
no eigrp log-neighbor-changes
!
router ospf 1
router-id 133.10.30.1
log-adjacency-changes
area 30 range 133.10.32.0 255.255.255.0
area 30 range 133.10.33.0 255.255.255.192
area 30 virtual-link 192.168.1.1
network 133.10.1.0 0.0.0.31 area 0
network 133.10.30.0 0.0.0.15 area 0
network 133.10.32.0 0.0.0.255 area 30
network 133.10.33.0 0.0.0.63 area 30
!
ip kerberos source-interface any
ip classless
ip http server
!
!
!
!
ipx router eigrp 1
network 12
!
!
ipx router rip
no network 12
!
!
!
bridge 1 protocol ibm
!
dial-peer cor custom
!
!
!
```



```
!  
line con 0  
transport input none  
line aux 0  
line vty 0 4  
password cisco  
login  
line vty 5 15  
login  
!  
end
```

Solution: Router5

```
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Lab52 - Router 5 - R5
!
!
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname r5
!
logging buffered 4096 debugging
logging rate-limit console 10 except errors
enable password cisco
!
username r1 password 0 cisco
username r5 password 0 cisco
ip subnet-zero
!
!
no ip finger
!
ip multicast-routing
no ip dhcp-client network-discovery
ipx routing 0007.eb7e.f800
isdn switch-type basic-ni
call rsvp-sync
!
!
!
!
!
!
!
!
interface Loopback0
ip address 133.10.41.1 255.255.255.0
ipx network BB00
!
interface Loopback1
ip address 192.168.1.1 255.255.255.0
!
interface Ethernet0/0
ip address 133.10.33.2 255.255.255.192
```

```
ip pim dense-mode
ip ospf priority 0
ip igmp join-group 224.10.10.1
half-duplex
ipx network 41
standby 1 priority 100 preempt
standby 1 ip 133.10.33.1
no shutdown
!
interface Serial0/0
no ip address
shutdown
no fair-queue
!
interface TokenRing0/0
no ip address
shutdown
ring-speed 16
!
interface BRI0/0
ip address 133.10.2.2 255.255.255.0
encapsulation ppp
ip ospf demand-circuit
dialer idle-timeout 30
dialer map ipx 10.0007.eb7f.0340 broadcast 4085552010
dialer map ipx 10.0007.eb7f.0340 broadcast 4085552011
dialer map ip 133.10.2.1 broadcast 4085552010
dialer map ip 133.10.2.1 broadcast 4085552011
dialer-group 1
ipx network 10
isdn switch-type basic-ni
isdn spid1 40855520500101
isdn spid2 40855520510101
cdapi buffers regular 0
cdapi buffers raw 0
cdapi buffers large 0
ppp authentication chap
ppp multilink
no shutdown
!
interface Serial0/1
no ip address
shutdown
!
router ospf 1
log-adjacency-changes
area 30 range 133.10.33.0 255.255.255.192
area 30 range 133.10.41.0 255.255.255.0
area 30 virtual-link 133.10.30.1
area 50 range 192.168.1.0 255.255.255.0
```

```
network 133.10.2.0 0.0.0.255 area 0
network 133.10.33.0 0.0.0.63 area 30
network 133.10.41.0 0.0.0.255 area 30
network 192.168.1.0 0.0.0.255 area 50
!
ip kerberos source-interface any
ip classless
ip http server
!
access-list 101 deny eigrp any any
access-list 101 permit ip any any
dialer-list 1 protocol ip list 101
!
!
!
ipx router eigrp 1
network 10
!
!
ipx sap 4 FILESRV BB00.0000.0000.0000 4 2
!
!
dial-peer cor custom
!
!
!
!
line con 0
transport input none
line aux 0
line vty 0 4
password cisco
login
line vty 5 15
login
!
no scheduler allocate
end
```

Solution: Router6

```
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Lab52 - Router 6 - R6
!
!
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname r6_backbone_router
!
logging rate-limit console 10 except errors
enable password cisco
!
ip subnet-zero
!
!
no ip finger
!
no ip dhcp-client network-discovery
call rsvp-sync
!
!
!
!
!
!
!
!
!
!
interface Loopback20
ip address 192.190.100.1 255.255.255.0
!
interface Loopback21
ip address 192.190.101.1 255.255.255.0
!
interface Loopback22
ip address 192.190.102.1 255.255.255.0
!
interface Loopback23
ip address 160.100.100.1 255.255.255.0
!
interface Loopback24
ip address 160.100.128.1 255.255.255.0
!
```

```
interface Loopback25
ip address 160.100.129.1 255.255.255.0
!
interface Loopback26
ip address 160.100.130.1 255.255.255.0
!
interface Ethernet0/0
description place in vlan 20 - backbone 1
ip address 160.100.2.254 255.255.255.0
half-duplex
no shutdown
!
interface TokenRing0/0
no ip address
shutdown
ring-speed 16
!
interface BRI0/0
no ip address
shutdown
cdapi buffers regular 0
cdapi buffers raw 0
cdapi buffers large 0
!
interface Ethernet1/0
description place on vlan 10 - Backbone 2
ip address 160.100.1.254 255.255.255.0
half-duplex
no shutdown
!
router rip
passive-interface Ethernet0/0
network 160.100.0.0
network 192.190.100.0
network 192.190.101.0
network 192.190.102.0
!
router bgp 2001
no synchronization
bgp log-neighbor-changes
network 160.100.100.0 mask 255.255.255.0
network 160.100.128.0 mask 255.255.255.0
network 160.100.129.0 mask 255.255.255.0
network 160.100.130.0 mask 255.255.255.0
neighbor 160.100.1.1 remote-as 2010
neighbor 160.100.1.1 ebgp-multihop 10
neighbor 160.100.2.1 remote-as 2010
neighbor 160.100.2.1 ebgp-multihop 10
!
ip kerberos source-interface any
```

```
ip classless
ip route 133.10.0.0 255.255.0.0 160.100.2.1
ip http server
!
!
!
dial-peer cor custom
!
!
!
!
line con 0
exec-timeout 0 0
password cisco
logging synchronous
login
transport input none
line aux 0
exec-timeout 0 0
password cisco
logging synchronous
login
line vty 0 4
exec-timeout 0 0
password cisco
login
line vty 5 15
login
!
no scheduler allocate
end
```

Solution: Cat 5500

```
begin
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Lab52 - Ethernet Switch
!
!
!
!
!
# ***** NON-DEFAULT CONFIGURATION *****
!
!
#time: Thu Jan 17 2002, 18:41:52
!
#version 5.5(8)
!
set password $2$yY7p$wx5s6VU6iWIEPnwtR/FkS/
set enablepass $2$icAt$kB5bvNXItLlIgEyYdW/uC/
!
#system
set system name  Cat5K
!
#frame distribution method
set port channel all distribution mac both
!
#vtp
set vtp mode transparent
set vlan 1 name default type ethernet mtu 1500 said 100001 state
active
set vlan 2 name VLAN0002 type ethernet mtu 1500 said 100002
state active
set vlan 10 name VLAN0010 type ethernet mtu 1500 said 100010
state active
set vlan 20 name VLAN0020 type ethernet mtu 1500 said 100020
state active
set vlan 1002 name fddi-default type fddi mtu 1500 said 101002
state active
set vlan 1004 name fddinet-default type fddinet mtu 1500 said
101004 state activ
e stp ieee
set vlan 1005 name trnet-default type trbrf mtu 1500 said 101005
state active st
p ibm
set vlan 1003 name token-ring-default type trcrf mtu 1500 said
101003 state acti
ve mode srb aremaxhop 7 stemaxhop 7 backupcrf off
!
```



```
#ip
set interface sc0 2 133.10.4.5/255.255.255.0 133.10.4.255
set ip route 0.0.0.0/0.0.0.0          133.10.4.1
!
#spantree
#vlan 1
set spantree priority 1      1
#vlan 2
set spantree maxage      25    2
!
#set boot command
set boot auto-config non-recurring
!
#permit list
set ip permit enable telnet
set ip permit enable snmp
set ip permit 133.10.33.0 255.255.255.0 telnet
!
#mls
set mls nde disable
!
# default port status is enable
!
!
#module 1 : 0-port Supervisor IIG
!
#module 2 : 24-port 10/100BaseTX Ethernet
set vlan 2      2/1
set vlan 10     2/3,2/6-7
set vlan 20     2/2,2/16
set vlan 1      2/10
set port name   2/1  R1_UPLINK
set port name   2/2  R2_UPLINK
set port name   2/3  R3_UPLINK
set port name   2/4  R4_UPLINK
set port name   2/5  R5_UPLINK
set port name   2/6  R6_UPLINK_E1/0
set port name   2/7  R7_UPLINK
set port name   2/10 Sniffer
set port name   2/15 r4 uplink
set port name   2/16 R6_UPLINK_E0/0
set port name   2/20 r5 uplink
set port name   2/24 R8_UPLINK
set port security 2/1 enable age 0 maximum 1 shutdown 0
violation shutdown
set port security 2/1 00-07-eb-7e-ff-a0
set trunk 2/1 off negotiate 1-1005
!
#module 3 empty
!
```

```
#module 4 empty
!  
#module 5 empty
!  
#module 15 empty
!  
#module 16 empty
!  
#switch port analyzer  
set span 2 2/10 both inpkts disable learning enable multicast  
enable create  
end
```