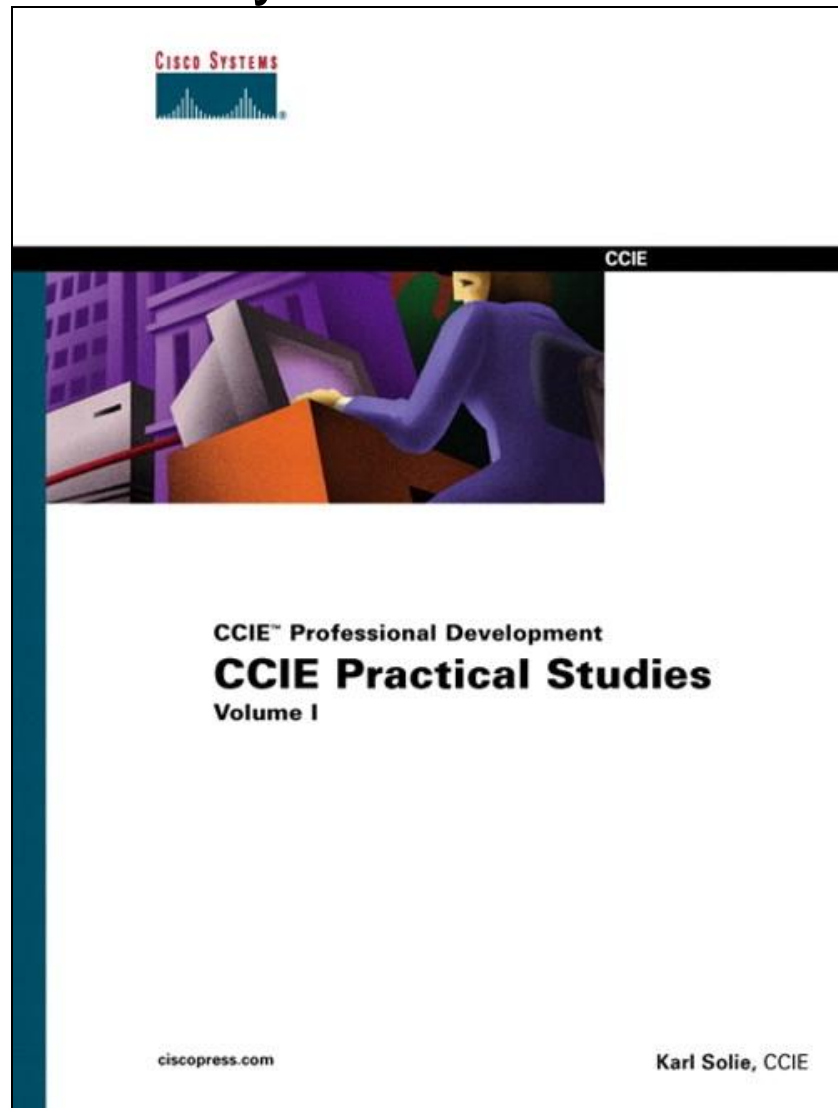


Cisco Press CCIE Practical Studies

CCIE Practice Lab: “Skynet Solutions”



Cisco Press CCIE Practical Studies
CCIE Practice Lab:
“Skynet”

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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.

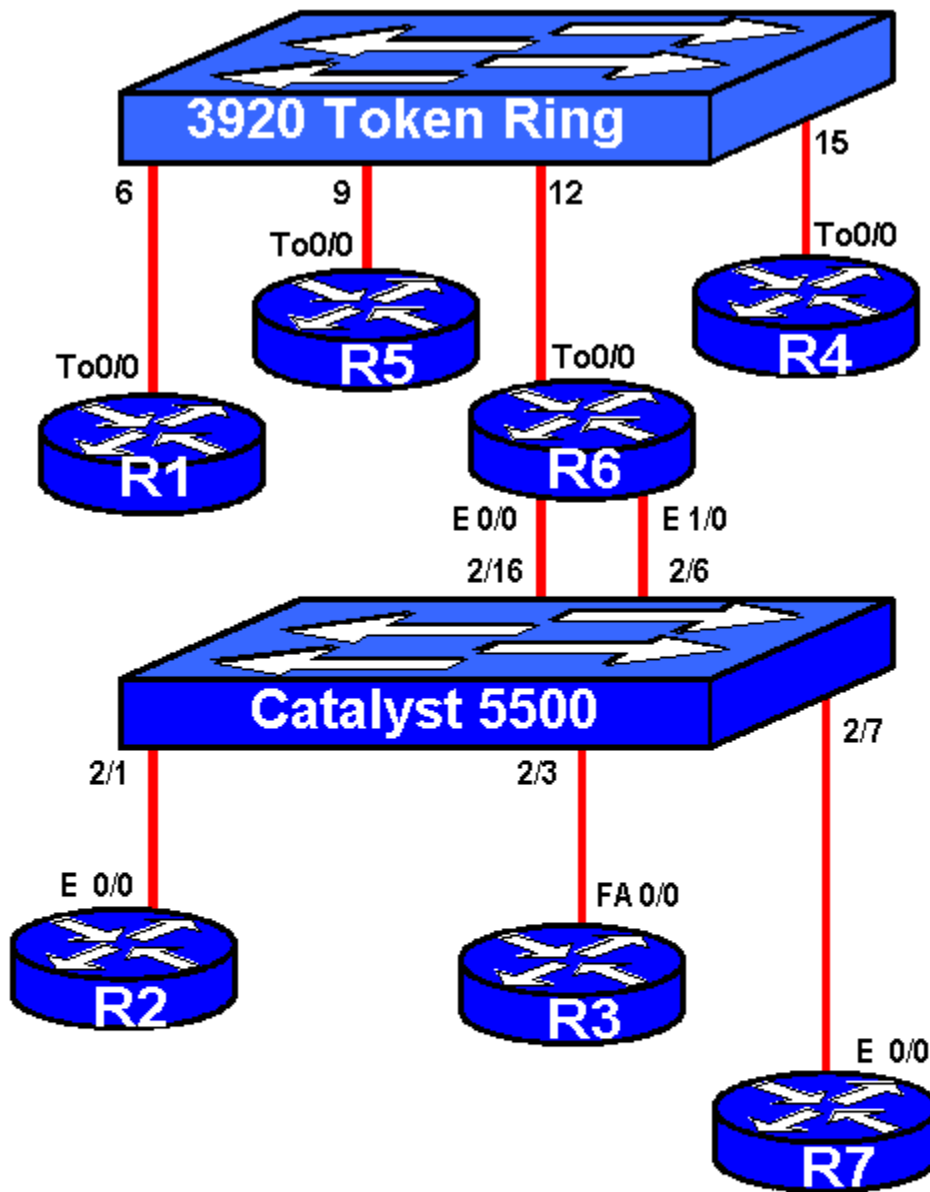
Technical Details

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

Table 51-1: Names and Interfaces used

CCIE PS Device Name	Interfaces Used	Frame-Relay Port	LAN Switch Port	VLAN or Ring Number
R1	Serial 0/0 Serial 0/1 TokenRing 0/0	Serial 1/0	Port 6 (T/R)	Ring 1
R2	Serial 0/0 Serial 0/1 Ethernet 0/0	Serial 0/1	2/1	VLAN 3
R3	Serial 0/0 FastEthernet 0/0	Serial 0/0	2/3	VLAN 1
R4	Serial 0/0 Serial 0/1 TokenRing 0/0	Serial 0/2	Port 15 (T/R)	Ring 2
R5	Serial 0/1 TokenRing 0/0		Port 9 (T/R)	Ring 4
R6	Ethernet 0/0 Ethernet 1/0 TokenRing 0/0		2/6 2/16 Port 12 (T/R)	VLAN 1 VLAN 2 Ring 3
R7-Backbone	Ethernet 0/0		2/7	VLAN 3

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 VIII Number 3: Sentence should begin “Have R2...” instead of “Have R5...”.

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
!  
! Frame-Relay Switch
!  
!  
!
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!  
hostname frame_switch
!  
logging buffered 4096 debugging
enable password cisco
!  
ip subnet-zero
!  
!  
no ip domain-lookup
!  
frame-relay switching
call rsvp-sync
!  
!  
!  
!  
!  
!  
!  
!  
interface FastEthernet0/0
no ip address
shutdown
duplex auto
speed auto
!  
interface Serial0/0
description to R3
no ip address
encapsulation frame-relay
no fair-queue
clockrate 148000
frame-relay lmi-type ansi
```

```
frame-relay intf-type dce
frame-relay route 121 interface Serial0/2 120
frame-relay route 152 interface Serial1/0 151
no shut
!
interface Serial0/1
no ip address
shutdown
!
interface Serial0/2
description to R1
no ip address
encapsulation frame-relay
fair-queue
clockrate 148000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 110 interface Serial1/0 111
frame-relay route 120 interface Serial0/0 121
frame-relay route 130 interface Serial0/3 131
no shut
!
interface Serial0/3
description to R4
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 131 interface Serial0/2 130
no shut
!
interface Serial1/0
description to R2
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 111 interface Serial0/2 110
frame-relay route 151 interface Serial0/0 152
no shut
!
interface Serial1/1
no ip address
shutdown
clockrate 2000000
!
ip classless
ip http server
```

```
!  
!  
!  
dial-peer cor custom  
!  
!  
!  
!  
line con 0  
exec-timeout 0 0  
password cisco  
logging synchronous  
login  
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
```


Initial Configuration: Access Server

```
! Cisco Press CCIE Practical Studies Volume I
!
! Initial Configuration
!
! Terminal Server
!
!
!
version 12.2
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname access_server
!
!
ip subnet-zero
!
!
no ip domain-lookup
ip host eth 2043 172.16.0.1
ip host FRS 2041 172.16.0.1
ip host R4 2040 172.16.0.1
ip host R7 2039 172.16.0.1
ip host R5 2037 172.16.0.1
ip host R6 2038 172.16.0.1
ip host R1 2036 172.16.0.1
ip host R2 2034 172.16.0.1
ip host R2 2033 172.16.0.1
ip host r3 2035 172.16.0.1
ip host tkn 2042 172.16.0.1
!
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 classless
ip http server
!
!
!
dial-peer cor custom
!
!
!
!
line con 0
line 33 48
no exec
transport input all
line aux 0
line vty 0 4
login
line vty 5 15
login
!
no scheduler allocate
end
```

Solutions:

The following configurations list a suggested solution to all parts of this lab.

Solution: Router1

```
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Router 1 - R1
!
!
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname R1
!
logging buffered 4096 debugging
logging rate-limit console 10 except errors
enable password cisco
!
username r4 password 0 ccie
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
ip host br1-sr4 140.100.50.33
ip host br5-sr5 140.100.4.33
ip host br4-sr8 199.199.2.1
ip host br6-sr6 140.100.6.6
ip host dlsw_BR5_SR5 1.1.1.1
!
ip multicast-routing
no ip dhcp-client network-discovery
ipx routing 0004.0004.0004
call rsvp-sync
!
!
!
!
!
!
source-bridge ring-group 20
source-bridge ring-group 100
dlsw local-peer peer-id 140.100.4.33 group 1 border promiscuous
dlsw remote-peer 0 fst 140.100.50.33
```

```
dlsw remote-peer 0 tcp 199.199.2.1 keepalive 0 timeout 90
!
!
dspu vdlc 100 4000.1111.1111
dspu vdlc enable-pu lsap 4
!
dspu pu TESTPU rmac 4000.6666.6666 rsap 20 lsap 4
!
!
interface Ethernet0/0
no ip address
shutdown
half-duplex
!
interface Serial0/0
description To FRS s0/2
no ip address
encapsulation frame-relay
no fair-queue
frame-relay lmi-type ansi
no shut
!
interface Serial0/0.84 multipoint
description PVC to R4
backup interface Serial0/1
ip address 140.100.84.4 255.255.255.0
ipx network 84
frame-relay interface-dlci 130
!
interface Serial0/0.134 multipoint
description PVCs to R2 & R3
ip address 140.100.134.4 255.255.255.0
ip pim sparse-mode
ip ospf hello-interval 60
ip igmp join-group 224.10.10.10
ipx network 134
no ipx split-horizon eigrp 2002
frame-relay map bridge 120 broadcast
frame-relay map bridge 110 broadcast
frame-relay map ip 140.100.134.1 110 broadcast
frame-relay map ip 140.100.134.3 120 broadcast
bridge-group 10
bridge-group 10 output-lsap-list 200
!
interface TokenRing0/0
ip address 140.100.4.33 255.255.255.224
ipx network 4
ring-speed 16
source-bridge 1 1 100
source-bridge spanning
```

```
no shut
!
interface BRI0/0
no ip address
shutdown
cdapi buffers regular 0
cdapi buffers raw 0
cdapi buffers large 0
!
interface Serial0/1
description PPP To R4
ip address 140.100.48.49 255.255.255.252
encapsulation ppp
ipx network 48
ipx output-network-filter 800
clockrate 148000
ppp authentication chap
no shut
!
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 ospf 100
log-adjacency-changes
area 10 virtual-link 199.199.10.1
redistribute connected subnets
network 140.100.48.0 0.0.0.255 area 10
network 140.100.84.0 0.0.0.255 area 0
network 140.100.134.0 0.0.0.255 area 0
neighbor 140.100.134.1
neighbor 140.100.134.3
neighbor 140.100.84.8
!
router bgp 2001
no synchronization
bgp log-neighbor-changes
neighbor 140.100.134.1 remote-as 2001
```

```
neighbor 140.100.134.1 route-reflector-client
neighbor 140.100.134.3 remote-as 2001
neighbor 140.100.134.3 route-reflector-client
no auto-summary
!
ip kerberos source-interface any
ip classless
ip http server
ip pim rp-address 192.168.1.1 50
!
access-list 50 permit 224.10.10.10
access-list 200 permit 0x0404 0x0101
!
!
!
ipx router eigrp 2002
network 134
network 84
!
!
ipx router rip
no network 84
no network 134
!
!
!
bridge 10 protocol ieee
bridge 10 priority 100
!
dial-peer cor custom
!
!
!
!
line con 0
exec-timeout 0 0
password cisco
logging synchronous
login
transport input none
line aux 0
line vty 0 4
exec-timeout 0 0
password cisco
logging synchronous
login
line vty 5 15
login
!
end
```


Solution: Router2

```
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Router 2 - R2
!
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname R2
!
logging buffered 4096 debugging
logging rate-limit console 10 except errors
enable password cisco
!
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
!
no ip dhcp-client network-discovery
ipx routing 0001.0001.0001
ipx internal-network 1
call rsvp-sync
!
!
!
!
!
!
!
!
interface Ethernet0/0
description Place in VLAN3 to R7
ip address 192.128.128.2 255.255.255.0
half-duplex
ipx network 128
bridge-group 10
no shut
!
interface Serial0/0
description to FRS s1/0 - PVCs to R1 & R3
ip address 140.100.134.1 255.255.255.0
encapsulation frame-relay
ip ospf hello-interval 60
```



```
ip ospf priority 0
ipx network 134
frame-relay map bridge 111 broadcast
frame-relay map ipx 134.0004.0004.0004 111 broadcast
frame-relay map ip 140.100.134.3 111 broadcast
frame-relay map ip 140.100.134.4 111 broadcast
frame-relay map ipx 134.0003.0003.0003 111 broadcast
frame-relay lmi-type ansi
bridge-group 10
bridge-group 10 output-lsap-list 200
no shut
!
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 Serial0/1
no ip address
shutdown
!
interface Serial1/0
description HDLC Link to R5
ip address 140.100.51.53 255.255.255.252
ipx ipxwan 0 unnumbered R1
ipx nlsr enable
clockrate 128000
no shut
!
interface Serial1/1
no ip address
shutdown
!
interface Serial1/2
no ip address
shutdown
!
interface Serial1/3
no ip address
shutdown
!
router eigrp 2020
redistribute rip metric 10000 100 255 1 1500
```

```
redistribute ospf 100 metric 10000 100 255 1 1500
network 140.100.51.52 0.0.0.3
no auto-summary
no eigrp log-neighbor-changes
!
router ospf 100
log-adjacency-changes
redistribute eigrp 2020 metric 100 subnets
redistribute rip metric 200 subnets
network 140.100.134.0 0.0.0.255 area 0
!
router rip
version 2
redistribute eigrp 2020 metric 1
redistribute ospf 100 metric 1
network 192.128.128.0
distribute-list 10 out Ethernet0/0
no auto-summary
!
router bgp 2001
no synchronization
bgp log-neighbor-changes
aggregate-address 128.200.0.0 255.252.0.0 summary-only
neighbor 140.100.51.54 remote-as 2011
neighbor 140.100.51.54 timers 300 900
neighbor 140.100.134.4 remote-as 2001
neighbor 192.128.128.1 remote-as 2010
no auto-summary
!
ip kerberos source-interface any
ip classless
ip http server
ip ospf name-lookup
!
access-list 10 deny 140.100.8.32
access-list 10 permit any
access-list 200 permit 0x0404 0x0101
!
!
!
ipx router eigrp 2002
redistribute nlsp
network 134
!
!
ipx router nlsp
area-address 0 0
redistribute eigrp 2002
!
!
```

```
ipx router rip
no network 134
!
!
!
bridge 10 protocol ieee
!
dial-peer cor custom
!
!
!
line con 0
exec-timeout 0 0
password cisco
logging synchronous
login
transport input none
line aux 0
line vty 0 4
exec-timeout 0 0
password cisco
logging synchronous
login
line vty 5 15
login
!
end
```

Solution: Router3

```
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Router 3 - r3
!
!
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname R3
!
logging buffered 4096 debugging
logging rate-limit console 10 except errors
enable password cisco
!
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
!
ip multicast-routing
no ip dhcp-client network-discovery
ipx routing 0003.0003.0003
call rsvp-sync
!
!
!
!
!
!
!
!
!
interface Loopback1
ip address 192.168.1.1 255.255.255.0
ipx network DEAD
!
interface FastEthernet0/0
description VLAN 1 to R6
ip address 140.100.36.3 255.255.255.0
ip pim sparse-mode
ip igmp join-group 224.10.10.10
duplex auto
speed auto
ipx network 36
```

```
bridge-group 10
no shut
!
interface Serial0/0
description To FRS s0/0 - PVCs to R1 and R2
ip address 140.100.134.3 255.255.255.0
ip pim sparse-mode
encapsulation frame-relay
ip ospf hello-interval 60
ip ospf priority 0
ip igmp join-group 224.10.10.10
ipx network 134
ipx output-sap-filter 1000
no fair-queue
frame-relay map bridge 121 broadcast
frame-relay map ip 140.100.134.1 121 broadcast
frame-relay map ip 140.100.134.4 121 broadcast
frame-relay lmi-type ansi
bridge-group 10
bridge-group 10 output-lsap-list 200
no shut
!
interface Serial0/1
no ip address
shutdown
!
router ospf 100
log-adjacency-changes
no auto-cost
redistribute igrp 100 metric 200 subnets
network 140.100.134.0 0.0.0.255 area 0
!
router igrp 100
redistribute connected metric 10000 100 255 1 1500
redistribute ospf 100 metric 10000 100 255 1 1500
passive-interface Serial0/0
network 140.100.0.0
!
router bgp 2001
no synchronization
bgp log-neighbor-changes
neighbor 140.100.134.4 remote-as 2001
no auto-summary
!
ip kerberos source-interface any
ip classless
ip http server
ip pim rp-address 192.168.1.1 50
!
access-list 50 permit 224.10.10.10
```

```
access-list 1000 deny ADD 0 PRINTER
access-list 200 permit 0x0404 0x0101
!
!
!
ipx router eigrp 2002
network 134
!
!
ipx router rip
no network 134
!
!
!
bridge 10 protocol ieee
!
dial-peer cor custom
!
!
!
!
line con 0
exec-timeout 0 0
password cisco
logging synchronous
login
transport input none
line aux 0
line vty 0 4
exec-timeout 0 0
password cisco
logging synchronous
login
line vty 5 15
login
!
end
```

Solution: Router4

```
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Router 4 - R4
!
!
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
!
username R1 password 0 ccie
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
ip host br1-sr4 140.100.50.33
ip host br5-sr5 140.100.4.33
ip host br4-sr8 199.199.2.1
ip host br6-sr6 140.100.6.6
!
no ip dhcp-client network-discovery
ipx routing 0008.0008.0008
call rsvp-sync
!
!
!
!
!
!
source-bridge ring-group 20
source-bridge ring-group 100
dlsw local-peer peer-id 199.199.2.1 group 2 border promiscuous
dlsw remote-peer 0 tcp 140.100.4.33 keepalive 0 timeout 90
dlsw remote-peer 0 tcp 140.100.6.6
!
!
interface Loopback1
ip address 199.199.1.1 255.255.255.0
ipx network 19901
```

```
!  
interface Loopback2  
ip address 199.199.2.1 255.255.255.0  
ipx network 19902  
!  
interface Loopback3  
ip address 199.199.3.1 255.255.255.0  
ipx network 19903  
!  
interface Loopback4  
ip address 199.199.4.1 255.255.255.0  
ipx network 19904  
!  
interface Loopback5  
ip address 199.199.5.1 255.255.255.0  
ipx network 19905  
!  
interface Loopback6  
ip address 199.199.6.1 255.255.255.0  
ipx network 19906  
!  
interface Loopback7  
ip address 199.199.7.1 255.255.255.0  
ipx network 19907  
!  
interface Loopback8  
ip address 199.199.8.1 255.255.255.0  
ipx network 19908  
!  
interface Loopback9  
ip address 199.199.9.1 255.255.255.0  
ipx network 19909  
!  
interface Loopback10  
ip address 199.199.10.1 255.255.255.0  
ipx network 19910  
!  
interface Serial0/0  
description To FRS s0/3 - PVC to R1  
backup interface Serial0/1  
ip address 140.100.84.8 255.255.255.0  
encapsulation frame-relay  
ip ospf priority 0  
ipx network 84  
no fair-queue  
frame-relay interface-dlci 131  
frame-relay lmi-type ansi  
no shut  
!  
interface TokenRing0/0
```



```
ip address 140.100.8.33 255.255.255.224
ipx network 8
ring-speed 16
source-bridge 2 1 100
source-bridge spanning
no shut
!
interface Serial0/1
description PPP to R1
ip address 140.100.48.50 255.255.255.252
encapsulation ppp
ipx network 48
ipx output-network-filter 800
ppp authentication chap
no shut
!
router ospf 100
log-adjacency-changes
area 10 virtual-link 140.100.134.4
redistribute connected route-map DistributeLoops
network 140.100.8.32 0.0.0.31 area 20
network 140.100.48.0 0.0.0.255 area 10
network 140.100.84.0 0.0.0.255 area 0
!
ip kerberos source-interface any
ip classless
ip http server
!
access-list 10 permit 199.199.0.0 0.0.255.255
access-list 801 deny DEAD
access-list 801 permit FFFFFFFF
route-map DistributeLoops permit 10
match ip address 10
!
!
!
!
ipx router eigrp 2002
distribute-list 801 in
network 84
!
!
ipx router rip
no network 84
!
!
!
!
dial-peer cor custom
!
```

```
!  
!  
!  
line con 0  
exec-timeout 0 0  
password cisco  
logging synchronous  
login  
transport input none  
line aux 0  
line vty 0 4  
exec-timeout 0 0  
password cisco  
logging synchronous  
login  
line vty 5 15  
login  
!  
end
```

Solution: Router5

```
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Router 5 - R5
!
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
!
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
ip host br1-sr4 140.100.50.33
ip host br5-sr5 140.100.4.33
ip host br4-sr8 199.199.2.1
ip host br6-sr6 140.100.6.6
!
no ip dhcp-client network-discovery
ipx routing 0005.0005.0005
ipx internal-network 5
call rsvp-sync
!
!
!
!
!
!
source-bridge ring-group 20
source-bridge ring-group 100
dlsw local-peer peer-id 140.100.50.33 group 1 promiscuous
dlsw remote-peer 0 fst 140.100.4.33
dlsw icanreach mac-exclusive
dlsw icanreach mac-address 3745.0001.0101 mask ffff.ffff.ffff
!
!
dspu vdlc 100 3745.0001.0101
dspu vdlc enable-pu lsap 4
!
```

```
dspu pu TESTPU rmac 4000.6666.6666 rsap 12 lsap 4
!
!
interface Loopback0
ip address 151.100.1.1 255.255.255.0
ipx network 100
!
interface Loopback1
ip address 151.101.1.1 255.255.255.0
ipx network 101
!
interface Loopback2
ip address 172.16.1.1 255.255.255.0
ipx network 16
!
interface Ethernet0/0
no ip address
shutdown
half-duplex
!
interface Serial0/0
description To R2
ip address 140.100.51.54 255.255.255.252
ip summary-address eigrp 2020 151.100.0.0 255.254.0.0 5
ipx ipxwan 0 unnumbered R5
ipx nlsdp enable
no fair-queue
no shut
!
interface TokenRing0/0
ip address 140.100.50.33 255.255.255.240
ipx network 50
ipx nlsdp enable
ring-speed 16
source-bridge 4 1 100
source-bridge spanning
no shut
!
interface Serial0/1
no ip address
shutdown
!
router eigrp 2020
redistribute connected
network 140.100.0.0
distribute-list 10 in Serial0/0
no auto-summary
no eigrp log-neighbor-changes
!
router bgp 65001
```

```
no synchronization
bgp log-neighbor-changes
bgp confederation identifier 2011
network 172.16.1.0 mask 255.255.255.0 route-map metric
neighbor 140.100.51.53 remote-as 2001
neighbor 140.100.51.53 timers 300 900
no auto-summary
!
ip kerberos source-interface any
ip classless
ip http server
!
access-list 10 deny 199.199.1.0 0.0.254.255
access-list 10 permit any
route-map metric permit 10
set metric 75
!
!
!
!
ipx router nlsp
area-address 0 0
!
!
!
!
dial-peer cor custom
!
!
!
!
line con 0
exec-timeout 0 0
password cisco
logging synchronous
login
transport input none
line aux 0
line vty 0 4
exec-timeout 0 0
password cisco
logging synchronous
login
line vty 5 15
login
!
end
```

Solution: Router6

```
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Router 6 - R6
!
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname R6
!
logging buffered 4096 debugging
logging rate-limit console 10 except errors
enable password cisco
!
username skynet password 0 cisco
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
ip host br1-sr4 140.100.50.33
ip host br5-sr5 140.100.4.33
ip host br4-sr8 199.199.2.1
ip host br6-sr6 140.100.6.6
!
ip multicast-routing
no ip dhcp-client network-discovery
ipx routing 0006.0006.0006
call rsvp-sync
!
!
!
!
!
!
source-bridge ring-group 20
source-bridge ring-group 100
dlsw local-peer peer-id 140.100.6.6 group 2 promiscuous
dlsw remote-peer 0 tcp 199.199.2.1
!
!
dspu vdlc 100 4000.6666.6666
dspu vdlc enable-host lsap 4
dspu vdlc enable-host lsap 12
dspu vdlc enable-host lsap 20
```

```
!  
dspu host BR1SR4 xid-snd 05d11111 rmac 4000.1111.1111 rsap 4  
lsap 20  
!  
dspu host TESTHOST xid-snd 05d11111 rmac 3745.0001.0101 rsap 4  
lsap 4  
!  
dspu vdlc start BR1SR4  
dspu vdlc start TESTHOST  
!  
interface Ethernet0/0  
description VLAN 1 to R3  
ip address 140.100.36.6 255.255.255.0  
ip access-group Inboundfilter in  
ip nat outside  
ip pim sparse-mode  
ip igmp join-group 224.10.10.10  
half-duplex  
ipx network 36  
no shut  
!  
interface TokenRing0/0  
ip address 140.100.6.6 255.255.255.0  
ipx network 6  
ring-speed 16  
source-bridge 3 1 100  
source-bridge spanning  
no shut  
!  
interface BRI0/0  
no ip address  
shutdown  
cdapi buffers regular 0  
cdapi buffers raw 0  
cdapi buffers large 0  
!  
interface Ethernet1/0  
description VLAN 2  
ip address 10.10.10.1 255.255.255.0  
ip nat inside  
half-duplex  
ipx network 10  
no shut  
!  
router igrp 100  
redistribute connected  
network 140.100.0.0  
!  
ip kerberos source-interface any
```

```
ip nat pool overload 140.100.36.254 140.100.36.254 prefix-length
24
ip nat inside source list 20 pool overload overload
ip classless
ip default-network 192.168.1.0
ip http server
ip pim rp-address 192.168.1.1 50
!
!
ip access-list extended Inboundfilter
permit igrp any any
permit tcp any any eq www
permit icmp any any echo-reply
permit icmp any any echo
permit tcp any any eq telnet
dynamic usrskynet timeout 600 permit ip any any
access-list 10 deny 10.0.0.0 0.255.255.255
access-list 10 permit any
access-list 20 permit 10.10.10.0 0.0.0.255
access-list 50 permit 224.10.10.10
route-map routefilter permit 10
match ip address 10
!
!
!
ipx route ADD 6.0006.0006.0006
!
ipx sap 7 PRINTER ADD.0333.0333.0333 100 3
!
!
dial-peer cor custom
!
!
!
!
line con 0
exec-timeout 0 0
password cisco
logging synchronous
login
transport input none
line aux 0
line vty 0 4
exec-timeout 0 0
password cisco
logging synchronous
login local
autocommand access-enable timeout 600
line vty 5 15
login
```



```
!  
end
```

Solution: Router7

```
! Cisco Press CCIE Practical Studies Volume I
!
! Initial Configuration
!
! Router 7 - Backbone
!
!
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname R7_Backbone
!
logging buffered 4096 debugging
enable password cisco
!
ip subnet-zero
!
!
no ip domain-lookup
!
call rsvp-sync
!
!
!
!
!
!
!
!
interface Loopback20
ip address 128.200.1.1 255.255.255.0
!
interface Loopback21
ip address 128.201.1.1 255.255.255.0
!
interface Loopback22
ip address 128.202.1.1 255.255.255.0
!
interface FastEthernet0/0
description Place in VLAN 3 to R1
ip address 192.128.128.1 255.255.255.0
ip rip send version 2
ip rip receive version 2
duplex auto
speed auto
no shutdown
!
```

```
router rip
version 2
network 128.200.0.0
network 128.201.0.0
network 128.202.0.0
network 192.128.128.0
no auto-summary
!
router bgp 2010
no synchronization
bgp log-neighbor-changes
network 128.200.0.0
network 128.201.0.0
network 128.202.0.0
network 192.128.128.0
neighbor 192.128.128.2 remote-as 2001
neighbor 192.128.128.2 ebgp-multihop 10
!
ip classless
ip http server
!
!
!
dial-peer cor custom
!
!
!
!
line con 0
exec-timeout 0 0
password cisco
logging synchronous
login
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
```

Solution: Cat 5500

```
!begin
! Cisco Press CCIE Practical Studies Volume I
!
! Solved Configuration
!
! Ethernet Switch
!
!
!
!
# ***** NON-DEFAULT CONFIGURATION *****
!
!
#time: Wed Dec 19 2001, 14:32:18
!
#version 5.5(8)
!
set password $2$ECz0$rJ5VdCWH29L9UW5VG3zRF0
set enablepass $2$v.7o$qXsCjQl5IbxOhw2o.eBWB1
!
#system
set system name Larry_2924
!
#frame distribution method
set port channel all distribution mac both
!
#vtp
set vtp domain Skyline
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 3 name VLAN0003 type ethernet mtu 1500 said 100003
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 active stp ieee
set vlan 1005 name trnet-default type trbrf mtu 1500 said 101005
state active stp ibm
set vlan 1003 name token-ring-default type trcrf mtu 1500 said
101003 state active mode srb aremaxhop 7 stemaxhop 7 backupcrf
off
!
#set boot command
set boot auto-config non-recurring
!
#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    2/6  
set vlan 3    2/1,2/7  
!  
#module 3 empty  
!  
#module 4 empty  
!  
#module 5 empty  
!  
#module 15 empty  
!  
#module 16 empty  
end
```