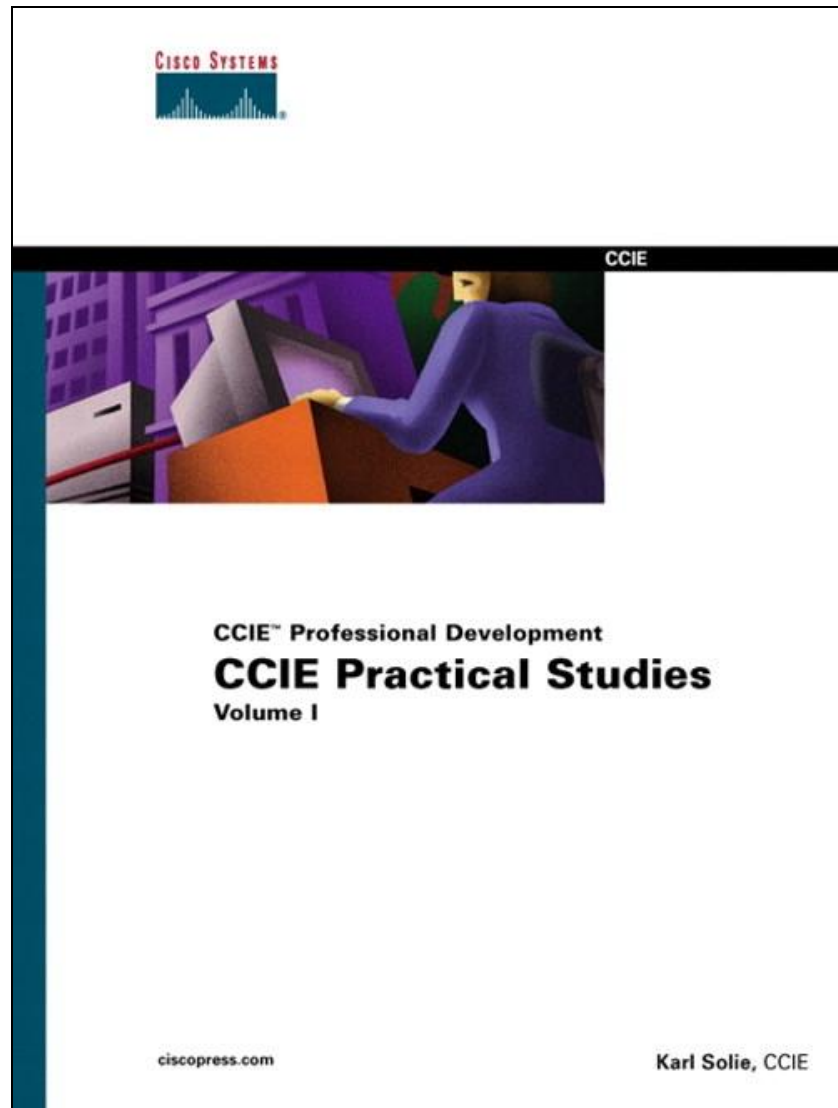


Cisco Press CCIE Practical Studies

CCIE Practice Lab: “Unnamed Solutions”



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

LAB	Book Chapter	Book Page
The Unnamed Lab	18	1169

Overview	3
Technical Details	3
Table 55-1: Names and Interfaces used	3
Lab Instruction Changes and Interpretations	5
Initial Configurations	6
Initial Configuration: FR Switch	6
Initial Configuration: Access Server	9
Initial Configuration: Backbone Router	11
Solutions:	14
Solution: Router1	14
Solution: Router2	18
Solution: Router3	22
Solution: Router4	25
Solution: Router5	28
Solution: Router6	31
Solution: ATM Router	33
Solution: Cat 5500	36

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.

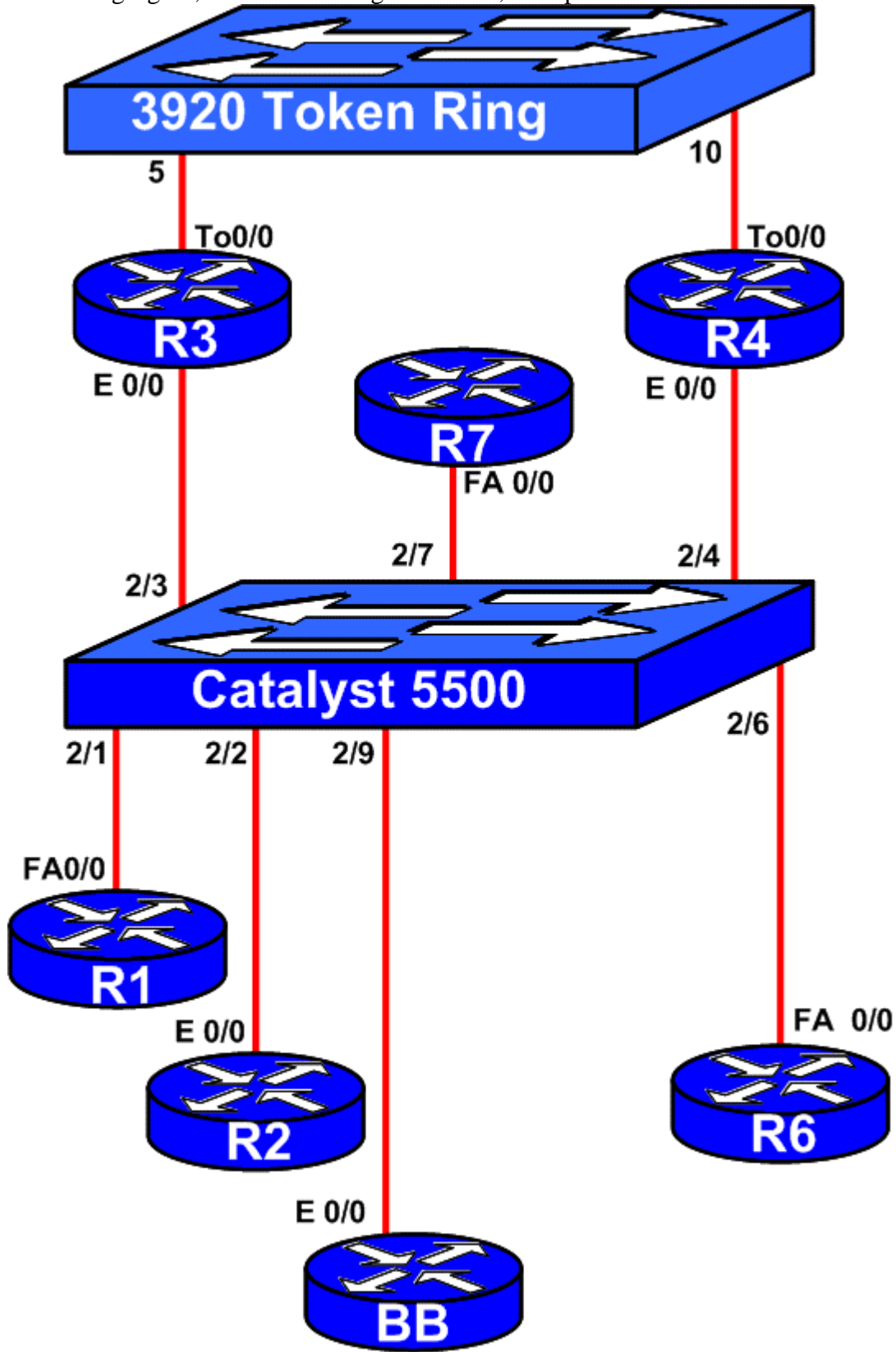
Technical Details

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

Table 55-1: Names and Interfaces used

CCIE PS Device Name	Device Name in Pod where Solution was Developed	Interfaces Used	Frame-Relay Port	LAN Switch Port	VLAN or Ring Number
R1	R7	Serial 0/0 FastEthernet 0/0	Serial 1/0	FA 2/7	VLAN 10
R2	R2	Serial 0/1 Ethernet 0/0 Bri 0/0		FA 2/2	VLAN 30
R3	R4	Serial 0/0 Ethernet 0/0 TokenRing 0/0	Serial 0/2	FA 2/4 Port 10 (T/R)	VLAN 30 Ring 1
R4	R3	Serial 0/1 Ethernet 0/0 TokenRing 0/0		FA 2/3 Port 5 (T/R)	Backbone 2 Ring 2
R5	R1	Serial 0/0 FastEthernet 0/0 BRI 0/0	Serial 0/3	FA 2/1	VLAN 55
ATM Router	R5	ATM 1/0			
R6	R6	FastEthernet 0/0 ATM 1/0		FA 2/6	VLAN 30
Backbone Router	BB	Ethernet 0/0		FA 2/9	VLAN 10

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:

No changes.

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
!
! Lab55 - 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
!
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
!
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
```

```
no fair-queue
frame-relay lmi-type ansi
frame-relay intf-type dce
!
interface Serial0/1
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
!
interface Serial0/2
no ip address
encapsulation frame-relay
clockrate 148000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 121 interface Serial0/3 120
frame-relay route 141 interface Serial1/0 140
!
interface Serial0/3
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 120 interface Serial0/2 121
frame-relay route 130 interface Serial1/0 131
!
interface Serial1/0
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 131 interface Serial0/3 130
frame-relay route 140 interface Serial0/2 141
!
interface Serial1/1
no ip address
!
interface Serial1/2
no ip address
!
interface Serial1/3
no ip address
shutdown
!
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 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
```


Initial Configuration: Access Server

```
! Cisco Press CCIE Practical Studies Volume I
!
! Initial Configuration
!
! Lab55 - Terminal_Server
!
!
!
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname AS
!
logging rate-limit console 10 except errors
!
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
ip host R1 2033 10.1.1.1
ip host FRS 2041 10.1.1.1
ip host R7 2039 10.1.1.1
ip host BB 2040 10.1.1.1
ip host R6 2038 10.1.1.1
ip host R5 2037 10.1.1.1
ip host R4 2036 10.1.1.1
ip host R3 2035 10.1.1.1
ip host R2 2034 10.1.1.1
ip host ETHSW 2043 10.1.1.1
ip host adtran1 2044 10.1.1.1
!
no ip dhcp-client network-discovery
call rsvp-sync
!
!
!
!
!
!
!
!
interface Loopback0
ip address 10.1.1.1 255.255.255.0
!
```

```
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
transport input none
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
```



```
!  
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 2 - backbone 2  
ip address 133.7.77.254 255.255.255.0  
half-duplex  
!  
interface Ethernet0/1  
description place on vlan 10 - backbone 1  
ip address 160.100.2.254 255.255.255.0  
half-duplex  
!  
router rip  
network 160.100.0.0  
network 192.190.100.0  
network 192.190.101.0  
network 192.190.102.0  
no auto-summary  
!  
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 160.100.2.1 remote-as 2010  
neighbor 160.100.2.1 ebgp-multihop 10  
!  
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 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
```

Solutions:

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

Solution: Router1

```
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname r1
!
logging rate-limit console 10 except errors
enable secret 5 $1$90sI$eAKdAuSJ8B75Zj7uU9jac/
!
username unnamed privilege 15
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
!
no ip dhcp-client network-discovery
ipx routing 0001.0001.0001
call rsvp-sync
!
!
dlsw local-peer peer-id 133.7.1.1
dlsw remote-peer 0 tcp 133.7.3.3
dlsw bridge-group 1
!
!
interface Loopback0
ip address 133.7.1.1 255.255.255.0
ip ospf network point-to-point
!
interface FastEthernet0/0
ip address 160.100.2.1 255.255.255.0
duplex auto
speed auto
ipx network 70
bridge-group 1
!
interface Serial0/0
ip address 133.7.147.7 255.255.255.0
encapsulation frame-relay
ip ospf network point-to-multipoint
ipx network 147
```

```
no fair-queue
no arp frame-relay
frame-relay map ipx 147.0005.0005.0005 140 broadcast
frame-relay map ipx 147.0003.0003.0003 140 broadcast
frame-relay map ip 133.7.147.1 140 broadcast
frame-relay map ip 133.7.147.4 140 broadcast
no frame-relay inverse-arp
!
interface Serial0/1
no ip address
shutdown
!
interface Serial0/2
no ip address
shutdown
!
interface Serial0/3
no ip address
shutdown
!
router ospf 1
log-adjacency-changes
summary-address 133.7.20.0 255.255.255.0
summary-address 133.7.55.0 255.255.255.0
summary-address 192.190.100.0 255.255.252.0
redistribute rip metric 20 subnets route-map 160192_only
redistribute bgp 2010 subnets
network 133.7.1.0 0.0.0.255 area 10
network 133.7.147.0 0.0.0.255 area 10
!
router rip
redistribute ospf 1 metric 3 route-map no_160192
passive-interface FastEthernet0/0
network 160.100.0.0
!
router bgp 2010
bgp log-neighbor-changes
network 192.0.0.0 mask 255.0.0.0
aggregate-address 192.0.0.0 255.0.0.0 summary-only suppress-map
only_192
redistribute ospf 1 route-map ospf_bgp
neighbor 133.7.2.2 remote-as 2010
neighbor 133.7.2.2 update-source Loopback0
neighbor 133.7.2.2 next-hop-self
neighbor 160.100.2.254 remote-as 2001
!
ip kerberos source-interface any
ip classless
ip route 192.0.0.0 255.0.0.0 Null0
ip http server
```

```
!  
access-list 7 deny 192.0.0.0 0.0.0.255  
access-list 11 permit 192.0.0.0 0.255.255.255  
access-list 11 permit 160.100.0.0 0.0.255.255  
access-list 13 deny 160.100.0.0 0.0.255.255  
access-list 13 deny 192.0.0.0 0.255.255.255  
access-list 13 permit any  
access-list 72 deny 192.0.0.0 0.0.0.255  
access-list 72 deny 160.100.100.0 0.0.0.255  
access-list 72 deny 160.100.128.0 0.0.3.255  
access-list 72 deny 10.10.10.0 0.0.0.15  
route-map ospf_bgp permit 10  
match ip address 72  
!  
route-map 160192_only permit 10  
match ip address 11  
!  
route-map no_160192 permit 10  
match ip address 13  
!  
route-map only_192 permit 10  
match ip address 7  
!  
route-map only_192 permit 20  
!  
!  
!  
!  
!  
ipx router eigrp 1  
network 147  
!  
!  
ipx router rip  
no network 147  
!  
!  
!  
bridge 1 protocol ieee  
dial-peer cor custom  
!  
!  
!  
!  
line con 0  
login local  
transport input none  
line aux 0  
line vty 0 4  
password cisco  
login
```



```
line vty 5 15
login
!
no scheduler allocate
end
```

Solution: Router2

```
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
!
username r1 password 0 ciscoll
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
!
no ip dhcp-client network-discovery
ipx routing 0002.0002.0002
ipx internal-network 2222
isdn switch-type basic-ni
call rsvp-sync
!
!
!
!
!
!
!
!
!
!
interface Loopback0
ip address 133.7.2.2 255.255.255.0
ip ospf network point-to-point
!
interface Loopback10
ip address 192.168.23.23 255.255.255.0
!
interface Ethernet0/0
ip address 133.7.28.2 255.255.252.0
ip access-group 121 in
half-duplex
ipx network 28
!
interface Serial0/0
no ip address
shutdown
no fair-queue
!
```

```
interface BRI0/0
ip address 133.7.21.2 255.255.255.0
encapsulation ppp
dialer map ip 133.7.21.1 name r1 broadcast
dialer-group 1
isdn switch-type basic-ni
isdn spid1 40855530200101
isdn spid2 40855530210101
cdapi buffers regular 0
cdapi buffers raw 0
cdapi buffers large 0
ppp authentication chap
!
interface Serial0/1
bandwidth 64
ip address 133.7.23.2 255.255.255.0
ipx ipxwan 0 unnumbered r2
ipx nlsr enable
ipx nlsr rip on
!
interface Async65
no ip address
!
router ospf 1
log-adjacency-changes
area 100 stub
summary-address 192.190.100.0 255.255.255.0
redistribute igrp 100 subnets route-map 2rts_only
network 133.7.2.0 0.0.0.255 area 10
network 133.7.21.0 0.0.0.255 area 100
network 133.7.28.0 0.0.3.255 area 0
!
router igrp 100
redistribute ospf 1 metric 64000 10 255 1 1500 route-map no_133
passive-interface Ethernet0/0
network 133.7.0.0
network 192.168.23.0
!
router bgp 2010
bgp log-neighbor-changes
neighbor 133.7.1.1 remote-as 2010
neighbor 133.7.1.1 update-source Loopback0
neighbor 133.7.1.1 route-reflector-client
neighbor 133.7.23.3 remote-as 2020
neighbor 133.7.28.6 remote-as 2010
neighbor 133.7.28.6 route-reflector-client
neighbor 133.7.28.6 next-hop-self
!
ip kerberos source-interface any
ip classless
```

```
ip default-network 192.168.23.0
ip http server
!
access-list 13 permit 133.7.77.0 0.0.0.255
access-list 13 permit 133.7.23.0 0.0.0.255
access-list 17 deny 133.7.77.0 0.0.0.255
access-list 17 deny 133.7.23.0 0.0.0.255
access-list 17 permit any
access-list 102 permit tcp any any
access-list 121 deny icmp host 133.7.147.7 host 133.7.147.2
echo
access-list 121 deny icmp host 133.7.147.7 host 133.7.23.2
echo
access-list 121 deny icmp host 133.7.147.7 host 133.7.28.2
echo
access-list 121 deny icmp host 133.7.147.7 host 133.7.21.2
echo
access-list 121 deny icmp host 133.7.147.7 host 133.7.2.2 echo
access-list 121 deny icmp host 160.100.2.1 host 133.7.147.2
echo
access-list 121 deny icmp host 160.100.2.1 host 133.7.23.2
echo
access-list 121 deny icmp host 160.100.2.1 host 133.7.28.2
echo
access-list 121 deny icmp host 160.100.2.1 host 133.7.21.2
echo
access-list 121 deny icmp host 160.100.2.1 host 133.7.2.2 echo
access-list 121 permit ip any any
access-list 1201 deny 55 FFFFFFFF
access-list 1201 permit -1
dialer-list 1 protocol ip permit
route-map 2rts_only permit 10
match ip address 13
!
route-map no_133 permit 10
match ip address 17
!
!
!
!
ipx router nlsr
area-address 0 0
distribute-list 1201 in
!
!
!
!
voice-port 1/0/0
!
voice-port 1/0/1
```

```
!  
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

```
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
!
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
!
no ip dhcp-client network-discovery
ipx routing 0003.0003.0003
call rsvp-sync
!
!
!
!
!
!
source-bridge ring-group 2048
dlsw local-peer peer-id 133.7.3.3 group 4 border
dlsw ring-list 1 rings 1
dlsw remote-peer 1 tcp 133.7.1.1 lsap-output-list 201
dlsw remote-peer 0 tcp 133.7.5.5
!
!
interface Loopback0
ip address 133.7.3.3 255.255.255.0
ip ospf network point-to-point
!
interface Ethernet0/0
ip address 133.7.28.4 255.255.252.0
half-duplex
ipx network 28
!
interface Serial0/0
no ip address
encapsulation frame-relay
no fair-queue
frame-relay lmi-type ansi
!
interface Serial0/0.1 multipoint
```

```
ip address 133.7.147.4 255.255.255.0
ip ospf network point-to-multipoint
ipx network 147
no ipx split-horizon eigrp 1
no arp frame-relay
frame-relay map ipx 147.0005.0005.0005 121 broadcast
frame-relay map ipx 147.0001.0001.0001 141 broadcast
frame-relay map ip 133.7.147.1 121 broadcast
frame-relay map ip 133.7.147.7 141 broadcast
no frame-relay inverse-arp
!
interface TokenRing0/0
ip address 133.7.20.4 255.255.255.192
ipx network 1
ring-speed 16
source-bridge 1 1 2048
source-bridge spanning
!
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
!
router ospf 1
log-adjacency-changes
area 10 range 133.7.147.0 255.255.255.0
area 10 virtual-link 133.7.5.5
area 20 range 133.7.20.0 255.255.255.0
network 133.7.3.0 0.0.0.255 area 10
network 133.7.20.0 0.0.0.63 area 20
network 133.7.28.0 0.0.3.255 area 0
network 133.7.147.0 0.0.0.255 area 10
!
ip kerberos source-interface any
ip classless
ip http server
!
access-list 201 permit 0xF0F0 0x0101
!
!
!
ipx router eigrp 1
network 147
!
```

```
!  
ipx router rip  
no network 147  
!  
!  
!  
!  
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

```
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname r4
!
logging rate-limit console 10 except errors
!
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
!
no ip dhcp-client network-discovery
ipx routing 0004.0004.0004
ipx internal-network 3333
call rsvp-sync
!
!
!
!
!
!
!
!
!
interface Loopback0
ip address 133.7.4.4 255.255.255.0
!
interface Ethernet0/0
ip address 133.7.77.1 255.255.255.0
half-duplex
!
interface Serial0/0
no ip address
shutdown
no fair-queue
!
interface TokenRing0/0
ip address 10.10.10.1 255.255.255.240
ip nat inside
ipx network 2
ipx nlsp enable
ring-speed 16
access-expression input (lsap(201) & dmac(701))
!
```

```
interface Serial0/1
ip address 133.7.23.3 255.255.255.0
ip nat outside
ipx ipxwan 0 unnumbered r3
ipx nlsp enable
ipx nlsp rip on
clockrate 64000
!
router igrp 100
network 133.7.0.0
!
router bgp 2020
bgp log-neighbor-changes
network 10.10.10.0 mask 255.255.255.240 backdoor
neighbor 133.7.23.2 remote-as 2010
!
ip kerberos source-interface any
ip nat pool ring_2 133.7.23.254 133.7.23.254 prefix-length 24
ip nat inside source list 5 pool ring_2 overload
ip classless
ip http server
!
access-list 5 permit 10.10.10.0 0.0.0.15
access-list 201 permit 0x0000 0x0D0D
access-list 701 permit 3745.0001.0001 0000.0000.0000
!
!
!
ipx router nlsp
area-address 0 0
!
!
ipx router rip
no network 2
!
!
!
!
voice-port 1/0/0
!
voice-port 1/0/1
!
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

```
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname r5
!
logging rate-limit console 10 except errors
!
username r2 password 0 ciscoll
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
!
no ip dhcp-client network-discovery
ipx routing 0005.0005.0005
isdn switch-type basic-ni
call rsvp-sync
!
!
!
!
!
!
dlsw local-peer peer-id 133.7.5.5 group 4 promiscuous
dlsw remote-peer 0 tcp 133.7.3.3
dlsw icanreach netbios-name unnamed
dlsw bridge-group 1
!
!
interface Loopback0
ip address 133.7.5.5 255.255.255.0
!
interface FastEthernet0/0
ip address 133.7.10.250 255.255.255.192
ip policy route-map vlan_30_map
duplex auto
speed auto
ipx network 55
bridge-group 1
!
interface Serial0/0
ip address 133.7.147.1 255.255.255.0
encapsulation frame-relay
ip ospf network point-to-multipoint
```

```
ipx network 147
no fair-queue
no arp frame-relay
frame-relay map ipx 147.0003.0003.0003 120 broadcast
frame-relay map ipx 147.0001.0001.0001 120 broadcast
frame-relay map ip 133.7.147.4 120 broadcast
frame-relay map ip 133.7.147.7 120 broadcast
no frame-relay inverse-arp
!
interface BRI0/0
ip address 133.7.21.1 255.255.255.0
encapsulation ppp
dialer map ip 133.7.21.2 name r2 broadcast 4085553020
dialer map ip 133.7.28.0 name r2 broadcast 4085553020
dialer watch-group 1
dialer-group 1
isdn switch-type basic-ni
isdn spid1 40855530100101
isdn spid2 40855530110101
cdapi buffers regular 0
cdapi buffers raw 0
cdapi buffers large 0
ppp authentication chap
!
interface Serial0/1
no ip address
shutdown
!
router ospf 1
log-adjacency-changes
area 10 virtual-link 133.7.3.3
area 55 range 133.7.10.0 255.255.255.0
area 100 stub
network 133.7.5.0 0.0.0.255 area 10
network 133.7.10.192 0.0.0.63 area 55
network 133.7.21.0 0.0.0.255 area 100
network 133.7.147.0 0.0.0.255 area 10
!
ip kerberos source-interface any
ip classless
ip http server
!
access-list 131 permit icmp 133.7.10.0 0.0.0.255 133.7.28.0
0.0.0.255 echo
access-list 131 permit icmp 133.7.10.0 0.0.0.255 133.7.28.0
0.0.0.255 echo-reply
dialer watch-list 1 ip 133.7.28.0 255.255.252.0
dialer-list 1 protocol ip list 131
route-map vlan_30_map permit 10
match ip address 131
```

```
set ip next-hop 133.7.21.2
!
!
!
!
ipx router eigrp 1
network 147
network 55
!
!
ipx router rip
no network 55
no network 147
!
!
ipx sap 7 fakepsrver 55.aaaa.aaaa.aaaa 451 1
!
bridge 1 protocol ieee
!
dial-peer cor custom
!
!
!
!
line con 0
logging synchronous
transport input none
line aux 0
line vty 0 4
password cisco
login
line vty 5 15
login
!
end
```

Solution: Router6

```
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname r6
!
logging rate-limit console 10 except errors
!
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
!
no ip dhcp-client network-discovery
ipx routing 0006.0006.0006
call rsvp-sync
!
!
!
!
!
!
!
!
!
interface Loopback0
ip address 133.7.6.6 255.255.255.0
ip ospf network point-to-point
!
interface FastEthernet0/0
ip address 133.7.28.6 255.255.252.0
duplex auto
speed auto
ipx network 28
!
interface ATM1/0
no ip address
ip authentication mode eigrp 100 md5
ip authentication key-chain eigrp 100 david
no atm ilmi-keepalive
pvc 0/5 qsaal
!
pvc 0/16 ilmi
!
!
interface ATM1/0.1 multipoint
```

```
ip address 133.7.56.6 255.255.255.0
atm esi-address 666666111111.66
!
svc SVC1 nsap 47.00918100000000070D82B201.555555111111.55
protocol ip 133.7.56.5
broadcast
encapsulation aal5mux ip
!
!
router eigrp 100
network 133.7.0.0
auto-summary
no eigrp log-neighbor-changes
!
router ospf 1
log-adjacency-changes
network 133.7.6.0 0.0.0.255 area 0
network 133.7.28.0 0.0.3.255 area 0
!
router bgp 2010
bgp log-neighbor-changes
neighbor 133.7.28.2 remote-as 2010
!
ip kerberos source-interface any
ip classless
ip http server
!
!
!
!
!
!
dial-peer cor custom
!
!
!
!
line con 0
transport input none
line aux 0
line vty 0 4
password cisco
login
!
end
```


Solution: ATM Router

```
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname ATM
!
logging rate-limit console 10 except errors
!
ip subnet-zero
!
!
no ip finger
no ip domain-lookup
!
no ip dhcp-client network-discovery
call rsvp-sync
!
!
!
!
!
!
!
!
!
!
!
interface Loopback0
ip address 133.7.7.7 255.255.255.0
!
interface FastEthernet0/0
no ip address
shutdown
duplex auto
speed auto
!
interface Serial0/0
no ip address
encapsulation frame-relay
shutdown
no fair-queue
clockrate 2000000
frame-relay lmi-type ansi
!
interface Serial0/1
no ip address
shutdown
clockrate 2000000
!
```

```
interface Serial0/2
no ip address
shutdown
clockrate 2000000
!
interface Serial0/3
no ip address
shutdown
clockrate 2000000
!
interface ATM1/0
no ip address
ip authentication mode eigrp 100 md5
ip authentication key-chain eigrp 100 david
no atm ilmi-keepalive
pvc 0/5 qsaal
!
pvc 0/16 ilmi
!
!
interface ATM1/0.1 multipoint
ip address 133.7.56.5 255.255.255.0
atm esi-address 555555111111.55
!
svc SVC1 nsap 47.00918100000000070D82B201.666666111111.66
protocol ip 133.7.56.6
broadcast
encapsulation aal5mux ip
!
!
router eigrp 100
network 133.7.0.0
auto-summary
no eigrp log-neighbor-changes
!
ip kerberos source-interface any
ip classless
ip http server
!
!
!
dial-peer cor custom
!
!
!
!
line con 0
transport input none
line aux 0
line vty 0 4
```

```
password cisco  
login  
!  
end
```

Solution: Cat 5500

```
! Cisco Press CCIE Practical Studies Volume I
!
! Initial Configuration
!
! Lab55 - Ethernet Switch
!
!
!
begin
!
# ***** NON-DEFAULT CONFIGURATION *****
!
!
#time: Fri Jan 25 2002, 23:39:49
!
#version 5.5(8)
!
set prompt cat5k
!
#frame distribution method
set port channel all distribution mac both
!
#vtp
set vtp domain ccie
set vtp passwd Cisco_CCIE
set vlan 1 name default type ethernet mtu 1500 said 100001 state
active
set vlan 2 name vlan_2 type ethernet mtu 1500 said 100002 state
active
set vlan 10 name vlan_10 type ethernet mtu 1500 said 100010
state active
set vlan 30 name vlan_30 type ethernet mtu 1500 said 100030
state active
set vlan 55 name vlan_55 type ethernet mtu 1500 said 100055
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 55 133.7.10.254/255.255.255.192 133.7.10.255
set ip route 0.0.0.0/0.0.0.0 133.7.10.250
!
#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 2/3,2/9
set vlan 10 2/7-8
set vlan 30 2/2,2/4,2/6,2/23
set vlan 55 2/1,2/22
set port level 2/2,2/4,2/6 high
set port security 2/2 enable age 0 maximum 1 shutdown 0
violation shutdown
set port security 2/4 enable age 0 maximum 1 shutdown 0
violation shutdown
set port security 2/6 enable age 0 maximum 1 shutdown 0
violation shutdown
set port security 2/2 00-07-eb-93-5c-80
set port security 2/4 00-07-eb-7e-fb-c0
set port security 2/6 00-07-85-c2-c0-21
set trunk 2/2 off negotiate 1-1005
set trunk 2/4 off negotiate 1-1005
set trunk 2/6 off negotiate 1-1005
set spantree portcost 2/1,2/6-7 100
set spantree portvlancost 2/1 cost 99
set spantree portvlancost 2/6 cost 99
set spantree portvlancost 2/7 cost 99
!
#module 3 empty
!
#module 4 empty
!
#module 5 empty
!
#module 15 empty
!
#module 16 empty
end
```