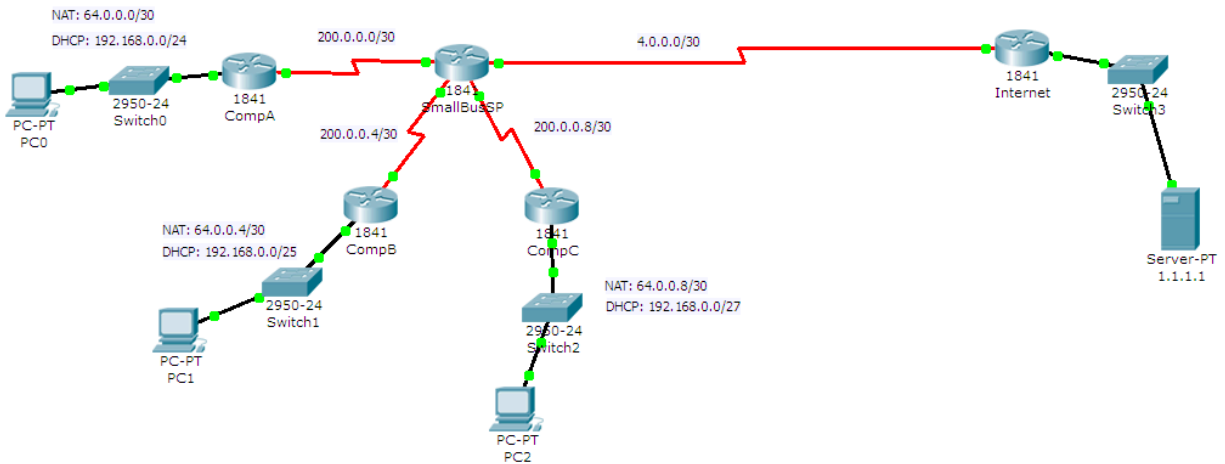


# CCNA Exploration 4

## Practice Hands-on Lab Solution

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CompA: Only allow www traffic out  
CompB: Only allow www/ftp traffic out  
CompC: Do not allow Pings from outside CompC LAN  
Use PPP and authentication on all serial connections



Background: You own a small business server provider business. You have 3 companies that you provide DHCP, NAT, and Internet access to. Choose to use either static or dynamic routing.

Static Version - Running-configurations order: SmallBusSP, CompA, CompB, CompC, Internet

```
SmallBusSP#sh run
hostname SmallBusSP
!
enable secret 5 $1$mERr$9cTjUIEqNGurQiFU.ZeCi1
!
username CompA password 0 ciscoA
username CompB password 0 ciscoB
username CompC password 0 ciscoC
username Internet password 0 cisco123
!
no ip domain-lookup
!
interface Serial0/0/0
ip address 200.0.0.1 255.255.255.252
encapsulation ppp
ppp authentication chap
clock rate 128000
!
interface Serial0/0/1
ip address 200.0.0.5 255.255.255.252
encapsulation ppp
ppp authentication chap
clock rate 128000
!
interface Serial0/1/0
ip address 200.0.0.9 255.255.255.252
encapsulation ppp
ppp authentication chap
clock rate 128000
```

```
!  
interface Serial0/1/1  
 ip address 4.0.0.2 255.255.255.252  
 encapsulation ppp  
 ppp authentication chap  
!  
ip classless  
ip route 0.0.0.0 0.0.0.0 Serial0/1/1  
ip route 64.0.0.0 255.255.255.252 Serial0/0/0  
ip route 64.0.0.4 255.255.255.252 Serial0/0/1  
ip route 64.0.0.8 255.255.255.252 Serial0/1/0  
!  
banner motd ^CGet Out^C  
line con 0  
 password cisco  
 login  
line vty 0 4  
 password cisco  
 login  
!  
end
```

### **CompA#sh run**

```
hostname CompA  
!  
enable secret 5 $1$mERr$9cTjUIEqNGurQiFU.ZeCi1  
!  
username SmallBusSP password 0 ciscoA  
!  
no ip domain-lookup  
!  
interface FastEthernet0/0  
 ip address 192.168.0.1 255.255.255.0  
 ip access-group FIREWALL-Out in  
 ip nat inside  
 duplex auto  
 speed auto  
!  
interface Serial0/0/0  
 ip address 200.0.0.2 255.255.255.252  
 encapsulation ppp  
 ppp authentication chap  
 ip nat outside  
!  
ip nat pool NAT-Pool 64.0.0.0 64.0.0.3 netmask 255.255.255.252  
ip nat inside source list NAT-ACL pool NAT-Pool overload  
ip classless  
ip route 0.0.0.0 0.0.0.0 Serial0/0/0  
!  
ip access-list standard NAT-ACL  
 permit 192.168.0.0 0.0.0.255  
ip access-list extended FIREWALL-Out  
 permit tcp any any eq www  
!  
ip dhcp excluded-address 192.168.0.1  
!  
ip dhcp pool DHCP-Pool  
 network 192.168.0.0 255.255.255.0  
 default-router 192.168.0.1  
!  
banner motd ^CGet Out^C
```

```
line con 0
password cisco
login
line vty 0 4
password cisco
login
!
end
```

#### **CompB#sh run**

```
hostname CompB
!
enable secret 5 $1$mERr$9cTjUIEqNGurQiFU.ZeCi1
!
username SmallBusSP password 0 ciscoB
!
no ip domain-lookup
!
interface FastEthernet0/0
ip address 192.168.0.1 255.255.255.128
ip access-group FIREWALL-Out in
ip nat inside
duplex auto
speed auto
!
interface Serial0/0/1
ip address 200.0.0.6 255.255.255.252
encapsulation ppp
ppp authentication chap
ip nat outside
!
ip nat pool NAT-Pool 64.0.0.4 64.0.0.7 netmask 255.255.255.252
ip nat inside source list NAT-ACL pool NAT-Pool overload
ip classless
ip route 0.0.0.0 0.0.0.0 Serial0/0/1
!
ip access-list standard NAT-ACL
permit 192.168.0.0 0.0.0.127
ip access-list extended FIREWALL-Out
permit tcp any any eq www
permit tcp any any eq ftp
!
ip dhcp excluded-address 192.168.0.1
!
ip dhcp pool DHCP-Pool
network 192.168.0.0 255.255.255.128
default-router 192.168.0.1
!
banner motd ^CGet Out^C
line con 0
password cisco
login
line vty 0 4
password cisco
login
!
end
```

#### **CompC#sh run**

```
hostname CompC
!
```

```

enable secret 5 $1$mERr$9cTjUIEqNGurQiFU.ZeCi1
!
username SmallBusSP password 0 ciscoC
!
no ip domain-lookup
!
interface FastEthernet0/0
ip address 192.168.0.1 255.255.255.224
ip nat inside
duplex auto
speed auto
!
interface Serial0/1/0
ip address 200.0.0.10 255.255.255.252
encapsulation ppp
ppp authentication chap
ip access-group FIREWALL-In in
ip nat outside
!
ip nat pool NAT-Pool 64.0.0.8 64.0.0.11 netmask 255.255.255.252
ip nat inside source list NAT-ACL pool NAT-Pool overload
ip classless
ip route 0.0.0.0 0.0.0.0 Serial0/1/0
!
ip access-list standard NAT-ACL
permit 192.168.0.0 0.0.0.31
ip access-list extended FIREWALL-In
deny icmp any any
permit ip any any
!
ip dhcp excluded-address 192.168.0.1
!
ip dhcp pool DHCP-Pool
network 192.168.0.0 255.255.255.224
default-router 192.168.0.1
!
banner motd ^CGet Out^C
line con 0
password cisco
login
line vty 0 4
password cisco
login
!
end

```

# **Internet#sh run**

```

hostname Internet
!
enable secret 5 $1$mERr$9cTjUIEqNGurQiFU.ZeCi1
!
username SmallBusSP password 0 cisco123
!
no ip domain-lookup
!
interface FastEthernet0/0
ip address 1.1.1.2 255.255.255.252
duplex auto
speed auto
!
interface Serial0/1/1

```

```
ip address 4.0.0.1 255.255.255.252
encapsulation ppp
ppp authentication chap
clock rate 1000000
!
ip classless
ip route 64.0.0.0 255.255.255.240 Serial0/1/1
!
banner motd ^CGet out of the Internet^C
line con 0
password cisco
login
line vty 0 4
password cisco
login
!
end
```