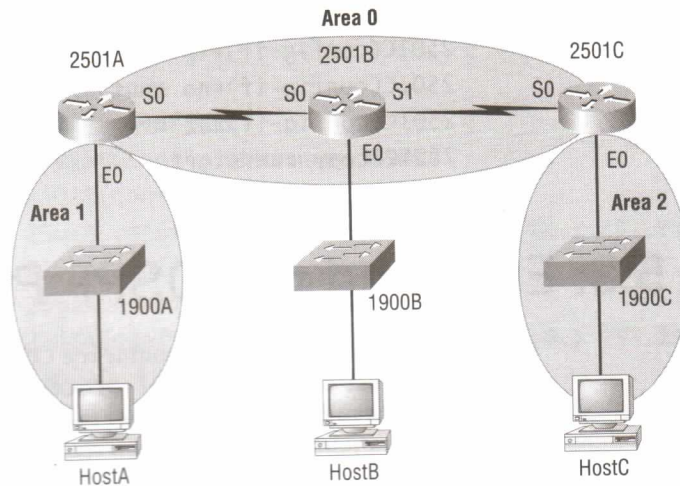**3.** Enable OSPF process 102 on 2501C.

```
2501C#config t
2501C(config)#router ospf 102
2501C(config-router)#^Z
2501C#
```

Lab 5.4: Configuring OSPF Neighbors

This lab will show you how to configure OSPF neighbors. The OSPF areas you are going to assign are as follows:

- Area 0: Serial connection between 2501A and 2501B, serial connection between 2501B and 2501C and Ethernet 0 in 2501B.
- Area 1: Ethernet interface on 2501A
- Area 2: Ethernet interface on 2501C

The configuration will look like this:

1. Configure the network between 2501A and 2501B and the Ethernet interface on 2501A. Assign serial 0 to Area 0 and Ethernet 0 to Area 1. (To understand the wildcard bits, please read Chapters 4 and 5 of the Sybex *CCNP: Routing Study Guide*.)

```
2501A#config t
2501A(config)#router ospf 100
2501A(config-router)#network 172.16.20.1 0.0.0.0 area 0
```

```
2501A(config-router)#network 172.16.10.1 0.0.0.0 area 1
2501A(config-router)#^Z
2501A#
```

2. Configure the 2501B router for OSPF. Assign all interfaces to Area 0. Since all interfaces are in the same OSPF area, there are two ways to configure OSPF for all interfaces in 2501B. Here is the first way:

```
2501B#config t
2501B(config)#router ospf 101
2501B(config-router)#network 172.16.20.2 0.0.0.0 area 0
2501B(config-router)#network 172.16.30.1 0.0.0.0 area 0
2501B(config-router)#network 172.16.40.1 0.0.0.0 area 0
2501B(config-router)#^Z
2501B#
```

Here is the second way:

```
2501B(config)#router ospf 101
2501B(config-router)#network 172.16.0.0 0.0.255.255
   area 0
```

3. Configure the 2501C router for OSPF. Assign interface s0 to Area 0 and Ethernet 0 to Area 2.

```
2501C#config t
2501C(config)#router ospf 102
2501C(config-router)#network 172.16.40.0 0.0.0.255 area 0
2501C(config-router)#network 172.16.50.1 0.0.0.0 area 2
2501C(config-router)#^Z
2501C#
```

Lab 5.5: Verifying OSPF Operation

This short lab will provide you with the commands necessary to verify the configuration on a Cisco router. To verify your configuration, take the following three steps:

1. Execute a show ip ospf neighbor command from each router. What are the results?

2. Execute a show ip route command to verify that all routes are being learned by all other routers.

3. Test the network by pinging all devices.