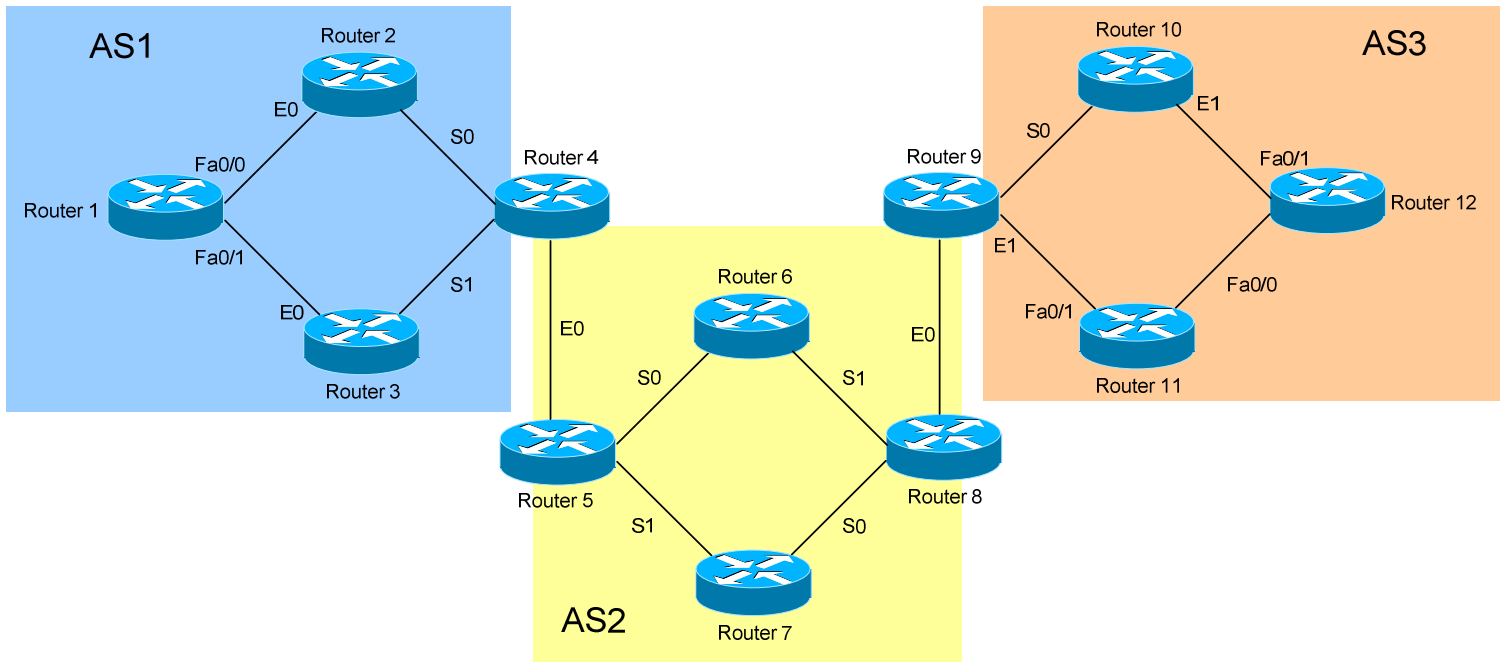


## - Advanced EIGRP Lab -

### Configuring Advanced EIGRP Routing - Lab



### Basic Objectives:

1. Configure and cable the Serial/Ethernet interfaces as indicated in the above diagram.
2. Configure the IP addresses on the routers using the following 192.168.YY.x/24 scheme:

Router 1 – 2 = 192.168.12.x	Router 6 – 8 = 192.168.68.x
Router 1 – 3 = 192.168.13.x	Router 7 – 8 = 192.168.78.x
Router 2 – 4 = 192.168.24.x	Router 8 – 9 = 192.168.89.x
Router 3 – 4 = 192.168.34.x	Router 9 – 10 = 192.168.109.x
Router 4 – 5 = 192.168.45.x	Router 9 – 11 = 192.168.119.x
Router 5 – 6 = 192.168.56.x	Router 10 – 12 = 192.168.120.x
Router 5 – 7 = 192.168.57.x	Router 11 – 12 = 192.168.121.x

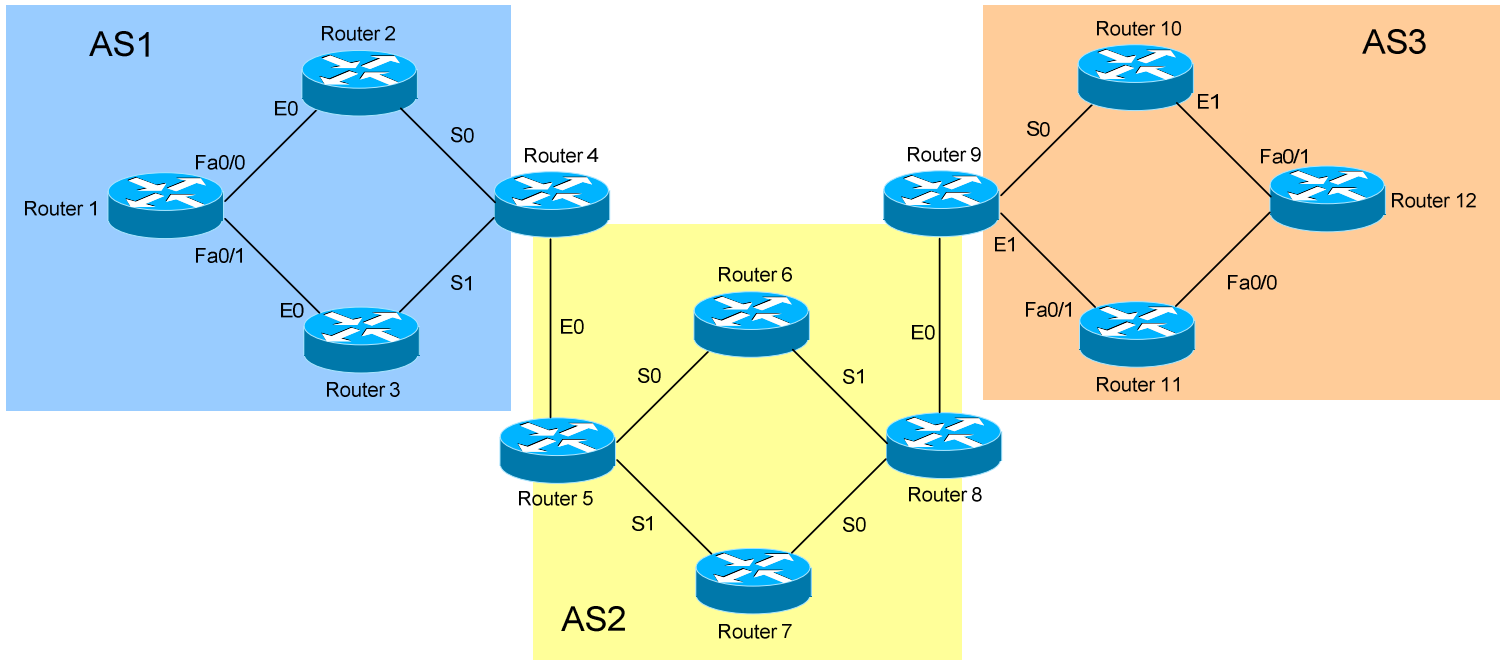
3. Configure a loopback interface on each router. The interface should have an address using the following scheme: Y.Y.Y.Y/24. For example, Router 4's loopback should be 4.4.4.4/24.

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**Configuring Advanced EIGRP Routing – Lab (continued)**



**EIGRP Objectives:**

4. Configure EIGRP on all routers using the Autonomous System numbers as diagrammed. Advertise *all* networks into EIGRP, including your loopback interfaces. Ensure that any interface not participating in the EIGRP domain will not accept or send EIGRP updates.

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5. Perform route redistribution on the Router 4 and Router 9, to connect all Autonomous Systems. Ensure that all networks are reachable.

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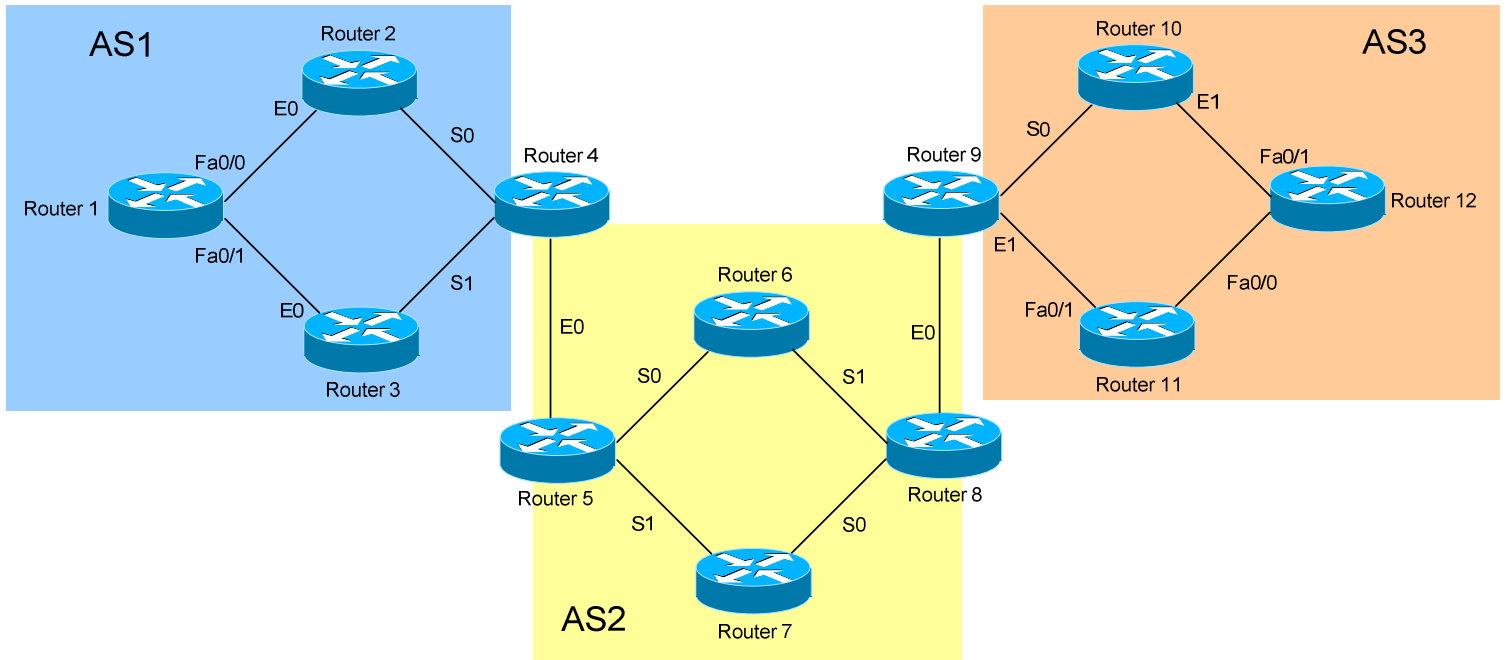
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**Configuring Advanced EIGRP Routing – Lab (continued)**



**EIGRP Objectives:**

- View your routing table. Note the difference between Internal and External EIGRP routes.

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- Authenticate updates between neighbors with a key-string of CISCO.

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- On each router, create a loopback interface with the following address 66.XX.1.1/16, where XX is your router number.

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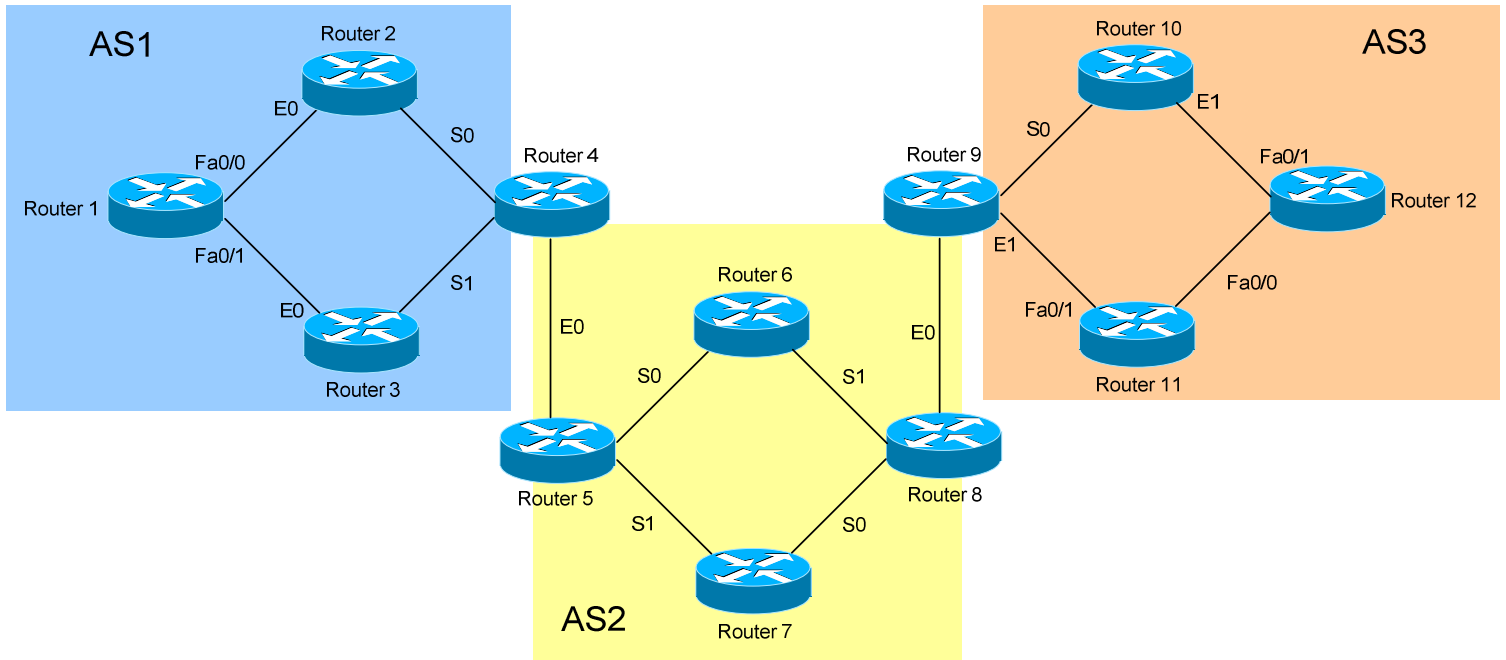
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**Configuring Advanced EIGRP Routing – Lab (continued)**



**EIGRP Objectives:**

9. Create static routes on each router to the following networks, with a next hop of 66.XX.1.2:

77.XX.0.0/24, 77.XX.1.0/24, 77.XX.2.0/24, 77.XX.3.0/24

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10. Redistribute these static routes into EIGRP. Check your routing tables to ensure these routes have propagated. Ensure that the networks are not auto-summarized.

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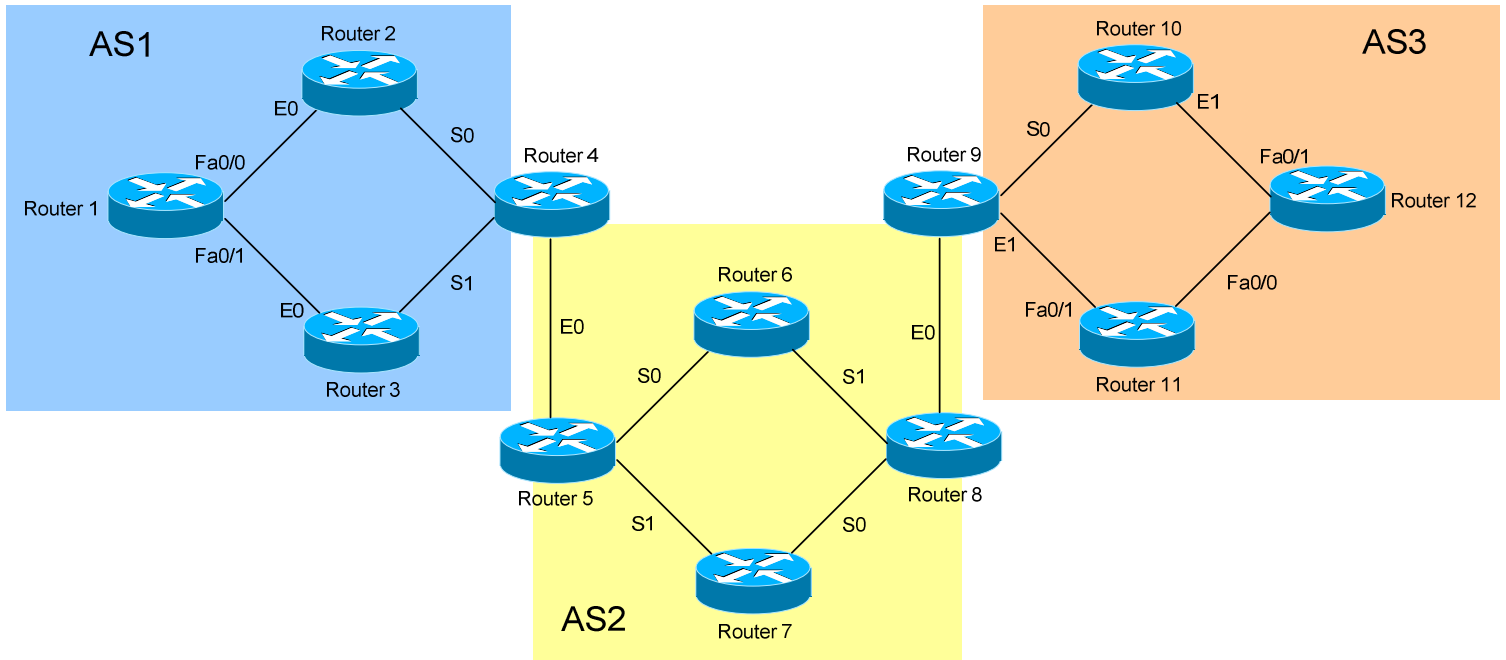
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**Configuring Advanced EIGRP Routing – Lab (continued)**



**EIGRP Objectives:**

11. Force EIGRP to send a summary address for the first two of those networks (77.XX.0.0/24, 77.XX.1.0/24).

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12. Force EIGRP to use Bandwidth, Delay, Load, and Reliability to calculate its metric. Ensure that EIGRP will only use 20% of the bandwidth of an interface for its traffic.

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