Basic Objectives:

1. Configure and cable the Ethernet interfaces as indicated in the above diagram.

2. Configure the IP addresses on the routers as follows:

   - **Router1** fa0/0 = 192.168.1.1/24  
   - **Router1** fa0/1 = 192.168.123.1/24  
   - **Router2** e0 = 192.168.123.2/24  
   - **Router2** e1 = 66.1.1.1/28  
   - **Router11** fa0/0 = 192.168.1.11/24  
   - **Router11** fa0/1 = 192.168.123.11/24  
   - **Router12** fa0/0 = 192.168.1.12/24  
   - **Router12** fa0/1 = 192.168.123.12/24  
   - **PC1** = 192.168.1.100/24  

3. Use an operating system of your choice on PC1. Ensure that it is running the TCP/IP stack.
**Hot Standby Routing Protocol (HSRP) – Lab (continued)**

**HSRP Objectives:**

4. Configure Router 1, Router 11, and Router 12 to use HSRP. Use a standby group number of “1”.

5. Use a virtual IP address of 192.168.1.5/24, and a virtual MAC address of 1111.2222.3333.

6. Ensure that Router 11 becomes the Active router, and Router 1 becomes the Standby router.

7. Ensure that hello packets are sent every 5 seconds on every router.

8. Ensure that the router with the highest priority is always the Active router.
**Hot Standby Routing Protocol (HSRP) – Lab (continued)**

HSRP Objectives:

9. Authenticate each router in the HSRP group with a password of “CISCO”.

10. Ensure that if any router is the Active router, and its fa0/1 interfaces goes down, that it will relinquish its Active status.

11. Configure routing between all four routers, ensuring connectivity to the Internet. Use a routing protocol of your choice, or static routing.

12. Ensure that Router 2 is NAT’ing traffic to the Internet.
**Hot Standby Routing Protocol (HSRP) – Lab (continued)**

**HSRP Objectives:**

13. Configure PC 1’s default gateway with the appropriate address, and ensure connectivity to the Internet.

14. Ensure that if any one (or two) HSRP router(s) is powered off, that PC 1 still has connectivity to the Internet.

15. Ensure that if the Active router’s Fa0/1 interface goes down, that PC 1 still has connectivity to the Internet.

16. View the status of the HSRP group on each router.