

# CISCO Router Configuration

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Tulare County Office of Education

**CHECK IN: 8:30 am      CONTEST BEGINS: 9:00 am      LOCATION: COS ROOM 424**

**CLASS:**

CISCO Networking Academy CCNA 2

**ELIGIBILITY:**

Participation in the competition is limited to teams of 2 individuals. Team members must be currently enrolled in, or have completed, the CISCO Academy CCNA2 course. Each academy may enter 3 teams. Additional teams may be accepted on approval of the competition chair.

**SCOPE OF COMPETITION:**

Students will cooperatively setup and configure a router network consisting of two workstations, two routers and one hub. Each workstation will communicate to its router through an Ethernet link – one directly and one through a hub. The students will make the cables for these links. The two routers will be linked together through a serial DCE-DTE cable. Each team will be given an IP address in CIDR notation that they will develop into an appropriate subnet addressing scheme. Students must make appropriate Ethernet cables, properly setup and configure the network routers, and export their configurations to a text file. They must use PING, TRACERT and TELNET to demonstrate connectivity. Connectivity will be verified by a successful:

- Ping from workstation to workstation in both directions
- Tracert from workstation to workstation in both directions
- Telnet from each workstation to the opposite router.

Five areas will be scored:

- Development of the correct subnet addressing scheme for the network
- Correct manufacture and appropriate use of Ethernet cabling
- Proper configuration of TCP/IP on the workstations
- Proper configuration of the routers
- Successful demonstration of connectivity

The competition task must be completed within the allotted time of 45 minutes.

**EQUIPMENT AND MATERIALS:**

To be supplied by the chairperson:

- An area for the competition
- 8 Windows workstations with NICs, Hyperterminal, Telnet and Tracert, serial port adaptors and rollover cables
- Power cables and plug strips as needed
- Cat5 cable, connectors and hand tools for making cables
- Floppy Disks to save router configurations
- Configuration worksheet to document configuration settings

To be supplied by contestants:

- Two routers, one hub, one DCE/DTE serial cable and two Ethernet transceivers
- Recommended: Crimpers and other hand tools for making Ethernet cables
- Recommended: RJ45 connectors for making Ethernet cables
- Recommended: 2 rollover (console) cables

# CISCO Router Configuration *(continued)*

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## **TIME:**

Teams must check in between 8:15 and 8:30 a.m. Orientation is at 8:40. All teams will be assigned to a heat and given the starting time for that heat. Contestants not in the first heat must leave the room until their start time. The first heat should begin at 9:00 a.m., the second at 10:00 a.m., and the third at 11:00 a.m.

## **SCORECARD:**

Competent and impartial networking professionals will be selected to judge the competition. Teams will be scored using a check sheet agreed on by the Academy Instructors prior to the competition.

## **TIE BREAKER:**

Ties will be broken by the elapsed time from start to completion.