



## Internetworking

### ELIGIBILITY

Open to all active SkillsUSA members enrolled in a computer networking training program with internetworking as the occupational goal.

### CLOTHING REQUIREMENTS

Home school uniform or

**For men:** Official SkillsUSA white polo shirt with black dress slacks, black socks, and black leather shoes

**For women:** Official SkillsUSA white polo shirt with black dress slacks or knee-length skirt, black socks or black or skin tone seamless hose and black leather dress shoes

*Note: At the district level if a student is not able to wear the official SkillsUSA attire he/she may wear an outfit that would be acceptable in their specific field of study. Please keep in mind that official SkillsUSA attire will be required at the state and national level.*

### EQUIPMENT AND MATERIALS SUPPLIED BY HOST

1. Computer workstation
2. V.35 Cables
3. Cisco routers
4. Cisco switches
5. All other support or test equipment

### EQUIPMENT AND MATERIALS SUPPLIED BY CONTESTANT

1. All students must have a one-page, typewritten resume.

### SCOPE OF THE CONTEST - (DEFINED BY THE NATIONAL COMPETITION REGULATIONS)

*(District Competitions are meant to be a scaled down version of National Competition. It is important for the students to participate in a competition that will reflect a cross-section of the industry skills needed to prepare them for the state and national levels)*

The contest will be a subset of the National Competition as defined in the latest Technical Standards. The contest will consist of two parts – knowledge performance and skill performance. This includes, but not limited to: - Use network protocol models to explain the layers of communications in data network - Design, calculate and apply subnet mask and addresses, including VLSM - Build a simple Ethernet network using routers and switches - Use Cisco CLI commands to perform basic router and switch configuration and verification - Configure and verify router interfaces - Demonstrate RIP, EIGRP or OSPF configurations - Route summarization

### KNOWLEDGE PERFORMANCE

The contest will include 2 written exams assessing (1) general networking concepts as well as router specific and (2) VLSM and addressing designs. These will include the concepts from Cisco's Network Academy curriculum, CCNA Routing and Switching, Semester 1 and 2. For more information on what is contained in these semesters, please go to Cisco's website.



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### SKILL PERFORMANCE

The contest includes a troubleshooting problem and a hands-on evaluation to assess the student's skill performance which includes concepts covered in Cisco CCNA Routing and Switching Semester 1 and 2.

### Internetworking Scoring Sheet

Items Evaluated	Possible Points	Contestant Points
Written test	100	
Router Project	300	
VLSM and Address Design	100	
	Subtotal = 500	
No Resume	Deduction -10	
Clothing Penalty	Dedication -5	
	TOTAL	

*Note: No cell phones or other electronic devices may be used at any time during a competition; this includes using a calculator function on a cell phone for competitions in which calculators are permitted.*

*Note: Scorecards should only be used as guidance. Changes may occur.*