

Skills Canada National Competition

SCOPE DOCUMENT	
Competition Year	2012
Competition location	Edmonton, AB
Trade Number	39
Trade Name	IT-Network Systems Administration
Level	Secondary

1. INTRODUCTION

1.1 Purpose of the Challenge

To evaluate each competitor's skills and to recognize excellence and professionalism in the field of IT network systems administration.

1.2 Duration of contest

14 hours

1.3 Skills and Knowledge to be tested

The competition evaluates a competitor's knowledge of computer and network hardware.

2. CONTEST DESCRIPTION

2.1 List of documents produced and timeline for when competitors have access to the documents.

DOCUMENT	DATE OF DISTRIBUTION VIA WEBSITE
No other competition document will be released prior to the competition	

2.2 Tasks that may be performed during the contest

Desktop support

- Identify, install and test hardware components
- Troubleshoot hardware failures
- Perform structured cabling tasks
- Install and configure virtual machines

- Use disk, system, and file management tools
- Produce technical and end-user documentation
- Demonstrate understanding of software licensing and its applications
- Compare products and generate recommendation based on usage criteria
- Install, setup, and configure corporate productivity software products
- Install, setup, and configure utility software fulfilling corporate computing goals
- Install and verify correct operation of peripheral devices
- Configure and troubleshoot common home office and small business software operations

Desktop software benchmarking, diagnostics, and troubleshooting

- Develop and use maintenance schedules and logs
- Use technical documentation including specifications and procedures
- Use available documentation and logs to identify and resolve problems
- Use utility software to benchmark software or hardware performance
- Use utility software to diagnose software or hardware problems
- Fix and document resolution using customer complaint descriptions
- Choose appropriate diagnostic programs to troubleshoot problems
- Troubleshoot software installation problems
- Troubleshoot common home office and small business problems

Desktop security

- Create security-related documentation
- Perform patch and update management
- Install, configure and verify basic security-related software and cryptographic processes
- Create and update security policies and procedures to ensure security and reliability of network data
- Perform security threat analysis and provide related recommendations
- Follow a provided protocol for responding to an intrusion incident

Networking

- Interpret network diagrams
- Create network documentation in written and diagrammatic forms
- Operate basic network diagnostic software
- Calculate for and apply to a network, an addressing scheme using Variable Length Subnet Mask (VLSM) Internet Protocol addressing (IP v4)

- Implement static and dynamic addressing services for hosts in a Local Area Network (LAN) environment
- Implement, verify and troubleshoot hardware and software network configuration
- Implement, verify, and troubleshoot securing of network devices
- Implement, verify, and troubleshoot network address translation
- Implement, verify, and troubleshoot Wide Area Network (WAN) links
- Implement an IP addressing scheme and IP Services to meet network requirements in a Small Office Home Office (SOHO) network
- Install wireless hardware and software on client machines
- Implement, verify, and troubleshoot wireless deployment
- Configure, verify, and troubleshoot securing of wireless communication

3. EQUIPMENT, MATERIAL, CLOTHING

3.1 Equipment provided by Skills/Compétences Canada

- Suitable computer hardware
- Linksys SOHO Integrated Router device

3.2 Material provided by Skills/Compétences Canada

- Cabling consumables
- Suitable computer hardware
- VMWare virtualization software
- Windows 7

Note: Any network services provided are for candidate use, not configuration or management.

3.3 Equipment and material provided by the competitor

- LAN cable tester
- RJ45 cable crimper
- Pliers
- Snips
- Wire strippers
- Screwdrivers

3.4 Required clothing (Provided by competitor)

- Competitors must be dressed as appropriate for an office environment.

4. SAFETY REQUIREMENTS

4.1 List of required personal protective equipment (PPE) provided by competitors

- | | | |
|---|--|---|
| <input type="checkbox"/> Safety Glasses | <input type="checkbox"/> CSA approved Safety shoes | <input type="checkbox"/> Latex gloves |
| <input type="checkbox"/> Safety Gloves | <input type="checkbox"/> Welding helmet | <input type="checkbox"/> Dust Mask |
| <input type="checkbox"/> Hard Hat | <input type="checkbox"/> Welding gloves | <input type="checkbox"/> Leather gloves |
| <input type="checkbox"/> Hearing protection | <input type="checkbox"/> Respiratory protection | <input checked="" type="checkbox"/> No PPE required |

4.2 List of required personal protective equipment (PPE) provided by Skills/Compétences Canada (SCC)

- | | | |
|---|--|---|
| <input type="checkbox"/> Safety Glasses | <input type="checkbox"/> CSA approved Safety shoes | <input type="checkbox"/> Latex gloves |
| <input type="checkbox"/> Safety Gloves | <input type="checkbox"/> Welding helmet | <input type="checkbox"/> Dust Mask |
| <input type="checkbox"/> Hard Hat | <input type="checkbox"/> Welding gloves | <input checked="" type="checkbox"/> No PPE required |
| <input type="checkbox"/> Hearing protection | <input type="checkbox"/> Respiratory protection | <input checked="" type="checkbox"/> No additional PPE will be supplied by SCC |

5. ASSESSMENT

5.1 Point breakdown

Point Breakdown	/1000
Desktop support	250
Desktop software benchmarking, diagnostics, and troubleshooting	250
Desktop security	250
Networking	250

6. ADDITIONAL INFORMATION

6.1 Personal translation services

If a personal translator is required on site, the Skills/Compétences Canada Provincial/Territorial offices must advise Skills/Compétences Canada National Secretariat a minimum of 1 month prior to the competition or this service might not be guaranteed.

6.2 Software requirements

If French software is required the Skills/Compétences Canada Provincial/Territorial offices must advise Skills/Compétences Canada National Secretariat a minimum of 1 month prior to the competition or this software might not be guaranteed.

6.3 Computer keyboard requirements

English Keyboards will be provided, if a French keyboard is required the Skills/Compétences Canada Provincial/Territorial offices must advise Skills/Compétences Canada National Secretariat a minimum of 1 month prior to the competition or this keyboard might not be guaranteed.

6.4 Tie (No ties are allowed)

In the event of a tie, placement will be determined based on their answer to a theory based question.

6.5 Competition rules

Please refer to the competition rules for all general SCNC information.

7. NATIONAL TECHNICAL COMMITTEE MEMBERS

Region	Name
Pacific Region	Nolan Fretz
Western Region	Randy Hirose
Ontario	Nick Gommans
Québec	Michel Leduc
Atlantic Region	Rob Blanchard
Host Member	Doug Warden