



2012 Provincial Skills Canada Competition

Scope Document

Edmonton Expo Centre, Edmonton

May 10 & 11, 2012

EVENT: IT and Network Support	LEVEL: Secondary
START TIME: May 10 th : 8:00 am May 11 th : 8:00 am	LOCATION: Hall B, Edmonton Expo Centre, Edmonton
DURATION: Two Days	
WORLDSKILLS TRADE #: 39	

GENERAL DESCRIPTION

Purpose of the Challenge:

Give participants the opportunity to demonstrate their knowledge and challenge their skills in computer and network support functions.

Skills and Knowledge to be Tested:

Secondary competitors will be setting up their work areas, installing, cabling and interconnecting their systems with the rest of the competitors; this will be performed as a group project. Part of this interconnection will involve crimping a cable. Once the systems have all been set up and configured, competitors will focus on setting up their own systems. The supplied computers will be used as "hosts" for virtual machines, the competitors will be expected to setup and do specific configurations of Windows and Linux machines. The scenario involves hooking their "school" into the larger supernet, and creating users, groups and securing the resources in a proper manner. All networking testing will be done virtually using Packet Tracer software. Networking at the secondary level will assume the use of a (virtual) Linksys wireless router.

Specific Skills tested include

- Find faults and troubleshoot systems with improper configuration.
- Identify PC Hardware components.
- Install and configure various operating systems (see supplied software for versions) in a virtual environment.
- Properly cable and setup a LAN.
- Setup network administration & security.
- Optimize network & system performance.
- Perform basic network administration tasks.
- Use packet tracer software to create virtual network environment.
- Understand basic routing concepts, and be able to set up and configure a (virtual) Linksys broadband router to manage a small home based network and connect it to the Internet.
- Answer general questions on various operating systems such as Linux, Windows, etc.
- Understanding of TCP/IP and ability to perform subnet calculations and assign addresses.
- Properly record system documentation.
- Time management.

SKILLS20

*A short answer and written component will be used to evaluate the competitor's ability to demonstrate user support as practical functions cannot be simulated within the project environment.

*Documentation for Cisco products is available at www.cisco.com.

Project Outline:

The competitor will be required to:

- Identify PC hardware components.
- Work in group to setup a LAN and properly interconnect systems to the network.
- Troubleshoot a PC with faults and provide customer service and support
- Install PC OS and application software in a virtual (VMWare) environment.
- Connect computers in a client/server environment.
- Conduct administrative functions in a client server environment.
- Secondary competitors will be required to configure a Linksys broadband router.
- Properly terminate (crimp) an Ethernet cable to the TIA 568 specification.
- Subnet an IPv4 network into smaller networks.
- Use Packet Tracer Software to build virtual home network.
- Install and configure Active Directory for user and group management.
- Properly setup and secure network shares.
- Setup fundamental network services including DNS and DHCP on a Windows server.
- Install and do basic configuration of a Linux system.

All competitors must exhibit workplace safety procedures and conduct themselves professionally at all times.

EQUIPMENT & MATERIALS

Equipment and Materials Competitors Must Supply:

- Work bench tools including pliers, screwdrivers, and proper anti-static accessories (including grounding straps). Competitors should also supply pens or other writing implements to do documentation

Equipment and Materials Supplied by Committee:

- Network cable crimpers (if competitor does not have any).
- All computer hardware.

Supplied Software:

- Current CentOS version
- Windows 7
- Windows 2008R2 Server
- VMWare Workstation or VMWare player
- Packet Tracer



Clothing Requirement

Appropriate work clothing must be worn to compete. All clothing must be neat and clean and free of rips and tears. Casual wear such as shorts will not be permitted.

SAFETY

The health, safety and welfare of all individuals involved with Skills Canada Alberta are of vital importance. Safety is a condition of participation with Skills Canada Alberta and shall not be sacrificed for the sake of expediency. At the discretion of the judges and technical committees, any competitor can be denied the right to participate should they not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.

JUDGING CRITERIA

- Omitting specifics, competition description will include marking of all elements.
- Competitor's ability to upgrade and properly configure PC workstation & server.
- Proper installation of operating system and application software.
- Competitor's ability to work in a group to wire and setup a Network LAN and its systems.
- Demonstration of network connectivity and administration.
- Safely utilize trade tools and display of proper methodology.
- Neatness of work area and space management.
- Neat and proper documentation of PC inventory and configuration settings.
- In the case of a tie at the end of the competition, the committee will vote based on their assessment of your performance in terms of neatness, professionalism and teamwork to differentiate between the tied competitors ranking.

RELATED CAREER AND TECHNOLOGY STUDIES COURSES

Descriptions of all related courses can be found on:
<http://education.alberta.ca/media/2205264/net.pdf>

EVALUATION BREAKDOWN:

- Windows Specific 25%
- Linux Specific 15%
- Linksys Router 10%
- Network Generic 25%
- Troubleshooting and setup 25%



ADDITIONAL INFORMATION

Competitor Registration

The Provincial Skills Canada Competition (PSCC) registration will open online www.skillsalberta.com on February 27th, 2012 at 8:00 am.

Lunch

Lunch for accredited competitors only will be provided by Skills Canada Alberta. Teacher accreditation can be purchased online at www.skillsalberta.com. Registration opens on February 27, 2012 at 8:00 am.

Parking & Venue Maps

<http://www.edmontonexpocentre.com/attend/parking/>

Awards Ceremony

The awards ceremony will take place on Friday May 11, 2012 at 5:30pm in Hall D of the Edmonton Expo Center. Admission is free and everyone is welcome to attend. The awards ceremony will be shown live at www.skillsalberta.com.

Team Alberta Information

Team Alberta will be selected at the Provincial Skills Canada Competition (PSCC) on May 10-11, 2012. Then two days later the gold medalists from PSCC will compete at the Skills Canada National Competition (SCNC) in Edmonton, Alberta. It is recommended that competitors review the SCNC scope documents to be familiar with the national scope and project.

http://www.skillscanada.com/index.php?option=com_content&task=view&id=226&Itemid=242

During the PSCC Awards Ceremony on May 11 all students who earn a medal will be escorted backstage after we photograph their onstage moments of success. Gold medalists will be given their Team Alberta information package and will confirm their participation in the SCNC.

Students must be present at the Awards Ceremony to claim their position on Team Alberta. If the Gold medalist is not able to attend SCNC, the next top ranking individuals will be asked to participate.

Please prepare your students in advance to accept a position on Team Alberta and how your school will support their participation.

If a student is not able to attend the Awards Ceremony a letter confirming the student's interest in Team Alberta participation can be emailed to kariz@skillscanada.com, otherwise the Team Alberta position will be offered to the silver medalist.

COMMITTEE MEMBERS:

Doug Warden (Chair)	SAIT
Dave Sloat	Pembina Hills Regional School Division No.7
Michelle Finch	Office Solutions
Matthew Chadder	Telus