



## Contest Description

Edmonton Expo Centre, Edmonton

May 3 & May 4, 2023

<b>EVENT:</b> IT Network Systems Administration	<b>LEVEL:</b> Secondary
<b>START TIME:</b> May 3: 9:00 AM MAY 4: 9:00 AM	<b>LOCATION:</b> Hall B, Edmonton Expo Centre
<b>DURATION:</b> One Day	<b>WORLDSKILLS TRADE #:</b> 39

### CONTEST INTRODUCTION

Give competitors 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 identifying components of a computer and making recommendations for upgrading parts.
- Competitors will be expected to setup and do specific configurations of Windows 10 machines in a home or small business scenario.
- Competitors will complete help tickets on Windows 10 computers on a home network and build a network in a virtual environment using Packet Tracer software. Networking tasks at the secondary level will assume the use of a (virtual) Linksys wireless router.
- Cybersecurity activities will involve a written component and a practical component done within a Linux shell environment.

### PROJECT DESCRIPTION

- Computer hardware identification and recommendations.
- Troubleshoot and document configuration and networking issues
- Configure and troubleshoot Windows 10
- Configure Linux in a command line environment
- Perform basic network administration tasks.
- Use packet tracer software to troubleshoot and configure a virtual network environment.
- Understand basic switch configurations using Cisco IOS.
- Understand basic routing 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.
- Properly setup and secure network shares.
- Understanding of TCP/IP and ability to perform basic IPv4 subnet calculations and assign addresses.
- Understand IPv6 configuration
- Properly record system documentation.



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- Time management.
- Understanding of general cybersecurity topics including common cybersecurity threats (i.e. phishing, malware, etc.), and common security practices (i.e. encryption, firewalls, etc.) to perform in a simulated incident and written component.

All competitors must always exhibit workplace safety procedures and conduct themselves professionally.

## EQUIPMENT & MATERIALS

### Equipment and Materials Competitors Must Supply:

Clothing: Appropriate business attire.	Computer Toolkit
Writing and documentation utilities.	RJ45 Crimpers

### Supplied Software:

Windows 10	Windows 2016R2 Server
VMWare Workstation or VMWare player	Putty
Packet Tracer – available for download from the Cisco website	Linux

## JUDGING CRITERIA

- Omitting specifics, competition description will include marking of all elements.
- Competitor’s ability to upgrade and properly configure PC workstation.
- Proper installation of operating system and application software.
- 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 winner will be determined by the highest score on the troubleshooting section will be the winner, if still tied, the highest score on the Windows Networking section will determine the winner, if still tied, the highest score on the Packet Tracer section will determine the winner, committee, if still tied, the highest score on the Hardware section will determine the winner.

## EVALUATION BREAKDOWN:

- Computer Hardware and Troubleshooting 25%
- Server Challenges (Linux) 25%
- Network (Packet Tracer) 25%
- Cybersecurity 25%

## 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



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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.

## RELATED CAREER AND TECHNOLOGY STUDIES COURSES

Descriptions of all related courses can be found on:

[Alberta Education](#)

NET2020: Workstation Technology & Operations	NET2060: Network Protocols	NET3070: Routing Fundamentals
NET2030: Network Structures	NET2070: Local Area Networks	NET3090: Network Management
NET2040: Network Media & Devices	NET3050: Network Operating Systems	NET3100: Network Media & Devices, Security

## ADDITIONAL INFORMATION

### Skills Canada Alberta Regional and Provincial Rules and Regulations

[Regional and Provincial Rules and Regulations](#)

### Competitor Registration

Registration for Provincial Skills Canada Competition (PSCC) will open online on January 18, 2023 @ 8:30 AM. Please refer to this competitions event page for additional registration and competition information:

<https://skillsalberta.com/competition/>

### Lunch

Lunch for accredited competitors will be provided by Skills Canada Alberta.

**Parking & Venue Maps:** <http://edmontonexpocentre.com/attend/parking/>

### Opening Ceremonies / Competitor Registration

Opening Ceremonies for the PSCC will take place on Tuesday May 2, 2023 at 6:00 pm in Hall D of the Edmonton EXPO Centre. Admission is free, and everyone is welcome to attend. It is important to note that competitor registration will open immediately following the Opening Ceremony.

### Awards Ceremony

The Awards Ceremony will take place on Thursday May 4, 2023 at 6:30 pm in Hall D of the Edmonton EXPO Centre. Admission is free and everyone is welcome to attend. The Awards Ceremony will be shown live at

<http://skillsalberta.com/>

### Team Alberta Information





Team Alberta will be selected at the PSCC Awards Ceremony. Gold medalists will then be eligible to participate at the Skills Canada National Competition (SCNC) on May 24- 27, 2023 in Winnipeg MB. It is recommended that competitors review the SCNC contest description to be familiar with the national contest description and project at <http://www.skillscanada.com/>.

During the PSCC Awards Ceremony on Thursday May 4, 2023 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. If a student is not able to attend the Awards Ceremony a letter confirming the student’s interest in Team Alberta participation must be emailed to [javierad@skillsalberta.com](mailto:javierad@skillsalberta.com) prior to the start of competition on May 3, 2023.

**Please prepare your students in advance to accept a position on Team Alberta and outline how your school will support their participation. Furthermore, it is very important that all fieldtrip/travel information for potential Team AB members is organized and completed prior to the selection of Team AB.**

**Questions?**

Please contact Kennedy Mayer at [kennedym@skillsalberta.com](mailto:kennedym@skillsalberta.com) if you have any questions regarding the Contest Description.

**COMMITTEE MEMBERS:**

Gerald Chung (chair)	Shan Kampen
Peter Estephan	Mershad Sahebsara
Anjesh Sherestha	



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