PURPOSE
To evaluate each contestant’s preparation for employment and to recognize outstanding students for excellence and professionalism in the field of technical computer applications.

ELIGIBILITY
Open to active SkillsUSA members enrolled in programs with computer literacy as part or all of the occupational objective.

CLOTHING REQUIREMENTS
NYS Business Casual - which consists of:
- Button-up collared, white dress shirt, white blouse (collarless or small-collared) or white turtleneck, with any collar.
- Black dress slacks (accompanied by black dress socks or black or skin-tone seamless hose) or black dress skirt (knee-length, accompanied by black or skin-tone seamless hose)
- Black dress shoes - no open back or open toed shoes

Note: Contestants must wear their official contest clothing to the contest orientation meeting. Also #2 pencil, resume, and safety assurance form.

EQUIPMENT AND MATERIALS
1. Supplied by technical committee:
   a. Power strip
   b. Network storage and networking equipment to connect to an Ethernet network
2. Supplied by the contestant:
   a. Computer with the following minimum specifications
      1. Computer/laptop manufactured within last 24 months
   2. NIC card for a wired Ethernet connection
   3. Full administrative rights with all user passwords disabled or uninstalled
   4. Virtualization software such as VMware Player or VirtualBox
   5. The latest releases of VMware Horizon and AWS Workspace Software from http://tcanationals.com/software

b. All competitors must create a one-page résumé and submit a hard copy to the technical committee chair at orientation. Failure to do so will result in a 10-point penalty.

3. Any changes to the hardware or software requirements will be announced on website of SkillsUSA NYS: http://www.nysskillsusa.org

4. No phones or tablets will be allowed during the contest.

Note: Your resume may be judged as part of your contest” Check the Contest Guidelines and/or the updates page on the NYS SkillsUSA Website: http://www.nysskillsusa.org

SCOPE OF THE CONTEST
This contest is defined by industry standards as set by the current industry technical standards. The contest assesses the ability of a candidate to perform jobs and skills selected from the list of competencies as determined by the NYS technical committee.

Knowledge Performance
A written exam will be given that covers the installation and operation of the software, hardware and cabling plus general computer support knowledge. Topics also include information as related to the Internet, networking and data sharing. There will be additional questions related to professional development.

Skill Performance
A series of demonstrations will be performed during the skill performance portion of this contest. The competencies outlined by the contest technical committee will be used as the
foundation for this assessment. Contestants should be familiar with using a Windows, Linux and/or macOS-based operating system. All work must be done independently.

Standards and Competencies

TECH 1.0 — Administer topics relating to the Internet standards and guidelines as set forth by the technical committee
1.1 Describe email functions
1.2 Demonstrate knowledge of cloud computing
1.3 Explain networking processes
1.4 Display knowledge of server installation
1.5 Describe wireless and Bluetooth technology

TECH 2.0 — Install and configure an operating system per standards and guidelines as set forth by the technical committee
2.1 Modify the configuration setting for an operating system
2.2 Create users and policies for users
2.3 Manipulate application software as needed
2.4 Demonstrate technical troubleshooting Abilities
2.5 Display an ability to work in a team environment to develop solutions to common business problems

TECH 3.0 — Demonstrate the use of application software per standards and guidelines as set forth by the technical committee
3.1 Use features in data management
  3.1.1 Importing and exporting data
  3.1.2 Knowledge of SQL and DML (Data Manipulation Language)
  3.1.3 Web & data source scraping, including data from APIs
  3.1.4 Creating and editing reports
  3.1.5 Normalizing and de-normalizing
  3.1.6 Developing and maintaining data schemas
  3.1.7 Data security best practices
  3.1.8 Analyzing data for common business purposes
3.2 Use features in word processing
  3.2.1 Format text and paragraphs
  3.2.2 Apply and format columns
  3.2.3 Insert and modify content in headers and footers
  3.2.4 Modify document layout and page setup
  3.2.5 Create new documents using a template
  3.2.6 Review and modify document properties
  3.2.7 Organize documents using file folders
  3.2.8 Save documents in appropriate formats for different users
  3.2.9 Print documents, envelopes and labels
  3.2.10 Preview documents and Web pages
  3.2.11 Insert and edit text, symbols and special characters
  3.2.12 Insert frequently used and pre-defined text
  3.2.13 Navigate to specific content
  3.2.14 Insert, position and size graphics
  3.2.15 Create and modify diagrams and charts
  3.2.16 Locate, select and insert supporting information
  3.2.17 Change and organize document views and windows
  3.2.18 Insert and modify tables
  3.2.19 Create bulleted lists, numbered lists and outlines
  3.2.20 Insert and modify hyperlinks
  3.2.21 Circulate documents for review
  3.2.22 Compare and merge documents
  3.2.23 Insert, view and edit comments
  3.2.24 Track, accept and reject proposed changes

3.3 Use features of spreadsheets
  3.3.1 Enter and edit cell content
  3.3.2 Locate specific cell content
  3.3.3 Locate, select and insert supporting information
  3.3.4 Insert, position and size graphics
  3.3.5 Filter lists using the AutoFilter feature
  3.3.6 Sort lists
  3.3.7 Insert and modify formulas
  3.3.8 Use statistical, date and time, financial and logical functions
  3.3.9 Create, modify and position diagrams and charts based on worksheet data
  3.3.10 Apply and modify cell formats
  3.3.11 Apply and modify cell styles
  3.3.12 Modify row and column formats
  3.3.13 Format worksheets
  3.3.14 Insert, view and edit comments
3.3.15 Create new workbooks from templates
3.3.16 Insert, delete and move cells
3.3.17 Create and modify hyperlinks
3.3.18 Organize worksheets
3.3.19 Preview data in other views
3.3.20 Customize window layout
3.3.21 Build & develop complex formulas involving multiple sheets and/or logic statements
3.3.22 Organize workbooks using file folders
3.3.23 Save data in appropriate formats for different uses
3.4 Use features in presentation software
3.4.1 Create new presentations from templates
3.4.2 Insert and edit text-based content
3.4.3 Insert tables, charts and diagrams
3.4.4 Insert pictures, shapes and graphics
3.4.5 Insert objects
3.4.6 Format text-based content
3.4.7 Format pictures, shapes and graphics
3.4.8 Format slides
3.4.9 Apply animation schemes
3.4.10 Apply slide transitions
3.4.11 Customize slide templates
3.4.12 Work with masters
3.4.13 Track, accept and reject changes in a presentation
3.4.14 Add, edit and delete comments in a presentation
3.4.15 Compare and merge presentations
3.4.16 Organize a presentation
3.4.17 Set up slide shows for delivery
3.4.18 Rehearse timing
3.4.19 Deliver presentations
3.4.20 Prepare presentations for remote delivery
3.4.21 Save and publish presentations
3.4.22 Print slides, outlines, handouts and speaker notes
3.4.23 Export a presentation to another Microsoft Office program
3.5 Web page development tools
3.6 Web browser

TECH 4.0 — Complete a hands-on demonstration of basic programming & scripting per standards and guidelines as set forth by the technical committee

4.1 Exhibit knowledge of one or more scripting languages (JavaScript, Python, Ruby, PowerShell, etc.)
4.2 Demonstrate ability to outline logic flow of common business scenarios
4.3 Employ knowledge of networking and data flow
Championships for 2020

**Special Instructions to Contestants**

**Due by Feb 28, 2020**

Contest Name **Technical Computer Applications**

Chairperson: Pat Cronn

*Only Special Instructions received by Feb. 28, 2020 will be posted on the website!!!*

**Deleted Materials & Supplies:**

1a: remove power strip

1b: remove “network storage and networking equipment to connect to an Ethernet network”

**Additional Materials & Supplies:**

1: add “table and chairs”

2a1: add “Computer/Laptop; 10’ extension cord”

2: add “Software suite accessibility, including a minimum of work processing, spreadsheet, database and presentation software.”

2: add “pen/pencil”

**Other:**