

CyberPatriot

The Air Force Association's
National Youth Cyber Education Program



CyberPatriot Coach Recruitment and Orientation Program
Registration Guide
National Youth Cyber Defense Competition

September 2019

Welcome to CyberPatriot!

CyberPatriot is the Air Force Association's National Youth Cyber Education Program, created to inspire K-12 students toward careers in cybersecurity or other science, technology, engineering, and mathematics (STEM) disciplines critical to our nation's future.

At the core of the program is the National Youth Cyber Defense Competition, the nation's largest cyber defense competition that puts high school and middle school students in charge of securing virtual networks. Other programs include AFA CyberCamps, ESCEI - an Elementary School Cyber Education Initiative, a children's cyber literature series, and CyberGenerations –a cyber safety initiative geared toward keeping senior citizens safe online.

The purpose of this guide is to walk you through the intricacies of becoming a new CyberPatriot coach for the cyber defense competition. Should you have any questions as you go through this document, please contact the CyberPatriot Program Office at:

info@uscyberpatriot.org

(877) 885 5716

Technical questions should be sent to cpoc@uscyberpatriot.org

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INTRODUCTION

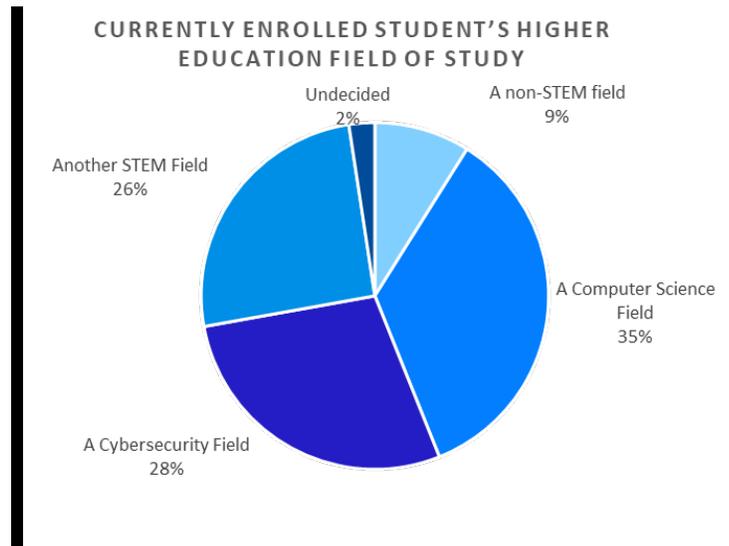
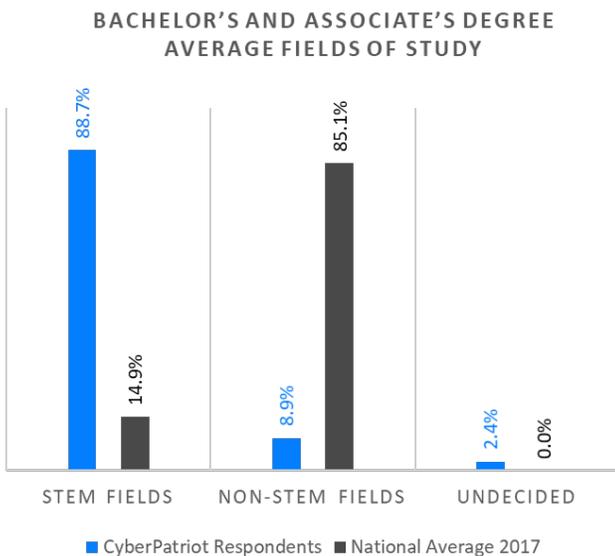


The CyberPatriot national youth cyber defense competition teaches students how to secure and defend networks and operating systems in a fun and exciting environment. It is not a hacking competition.

The benefits of participating in CyberPatriot:

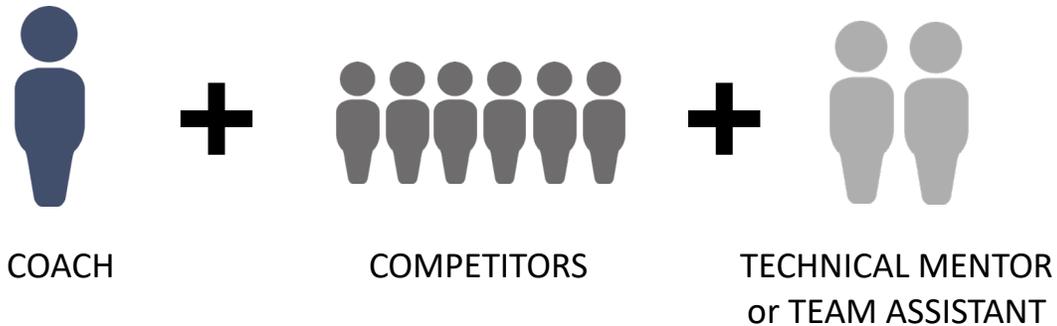
- Technical skill building
- Leadership, teamwork, creative problem solving
- Scholarship opportunities
- Internship opportunities
- Competitive advantage in job market (especially with CyberPatriot sponsor companies)

CyberPatriot was designed to attract students to cybersecurity and STEM education and careers. A bi-annual survey given to program alumni shows that nearly 89% of students who participated in CyberPatriot have gone on to study a STEM field in college.



SECTION 1: REGISTRATION

TEAM STRUCTURE & ROLE RESPONSIBILITIES



Coach: An adult (e.g. teacher, JROTC instructor, administrator, parent, etc.) approved by a participating organization to act as the administrative lead of a CyberPatriot team.

- A person is automatically designated as the coach of a team when he or she creates a team on the registration system.
- The coach is the main point of contact for competition-related correspondence.
- A team may only have one coach.
- Coaches need no cybersecurity knowledge to be successful (see technical mentor section).
- [COACH'S AGREEMENT](#)

Competitor: Youth member of the competing organization who participates in the competition rounds.

- A Team may have 2-6 registered competitors
- Must be registered to a team roster in order to be eligible for competition
- All competitors registered to a roster must be part of a common organization
- Competitors may not compete on multiple teams
- During rounds competition rounds: five (5) active competitors, one (1) substitute

Technical Mentor: Adult volunteer (18+ years old) who offers technical assistance and training to local teams.

- Cyber-knowledgeable individual who helps CyberPatriot coaches and teams prepare for the competition.
- Serves as technical advisors and role models to CyberPatriot teams
- Encouraged to work with as many teams as they choose.
- Able to work locally with teams in their area or serve as “virtual mentors” who work with teams entirely online.
- Amount of support offered may vary. The mentor-team relationship is left to mentors and coaches to determine.
- All technical mentors registered with CyberPatriot are required to complete a background check.

Team Assistant: Adult volunteer (18+ years old) who offers non-technical/administrative support to local teams

- Helps coaches and teams prepare for the competition by completing administrative tasks.
 - Scheduling practices, coordinating competition weekends, ordering food for rounds, etc.
- Encouraged to work with as many teams as they choose.
- Amount of support offered may vary. The assistant-team relationship is left to assistants and coaches to determine.
- All team assistants registered with CyberPatriot are required to complete a background check.

TEAM RULES

- A coach may register up to five (5) teams.
- Maximum of 30 students (six (6) students per team) assigned to one coach.
- There is no limit to the number of teams registered at a single organization, as long as there are enough coaches to support the number of teams.
- Multiple teams may practice together.
- Teams CANNOT compete together. If multiple teams are competing in the same room, there should be zero collaboration or communication between them.
- Any technical mentor or team assistant helping a team should be registered to that team's roster.
 - There is no limit to the number of technical mentors or team assistants helping a team.

TEAMS BY DIVISION

The competition is split into three divisions. The division competed in is determined by organization type of the registered team. There are two high school divisions and one middle school division:

Open Division: High school students from schools (public, private, charter, parochial, etc.), scouting units, Boys and Girls Clubs, home school programs, STEM programs, and other approved youth organizations.

All Service Division: High school students in JROTC programs, Civil Air Patrol squadrons, or Naval Sea Cadet Corps units.

Middle School Division: Middle school students from schools (public, private, charter, parochial, etc.), scouting units, Boys and Girls Clubs, home school programs, STEM programs, Civil Air Patrol, and other approved youth organizations.

COST PER TEAM

Open Division: \$205 per team

All Service Division: Waived

Middle School Division: \$165 per team

No BOGO discounts offered.

Fee waivers offered (upon request) to Title I schools and all-girl teams.

20% discount for early registration (teams created before July 1)

COMPETITION SCHEDULE

The competition follows the same general schedule each year:

- Registration: April – October
- Training Rounds: May – October
- Scored Competition Rounds: October – March

A detailed schedule is listed below:

DATE	EVENT	EVENT TYPE
April 1, 2019	Team registration opens	Registration
May 15 – June 14, 2019	Exhibition Round 1	Online Training Event
July 1, 2019	Early registration discount ends	Registration Deadline
July 17 – August 16, 2019	Exhibition Round 2	Online Training Event
September 5 – October 1, 2019	Training Round	Online Training Event
September 28	Sneak Preview	Online Training Event
October 2, 2019	Team registration closes	Registration Deadline
October 3-November 6, 2019	Practice Round	Online Training Event
October 25-27, 2019	Round 1	Scored Competition
November 1, 2019	Competitor registration ends	Registration deadline
November 15, 2019	Payment due	Registration deadline
November 15-17, 2019	Round 2	Scored Competition
December 6-8, 2019	State Round / Elimination Round	Scored Competition
January 24-25, 2020	Semifinals	Scored Competition
March 19-23, 2020	National Finals (Maryland)	Scored Competition (in-person)

TIME COMMITMENT

The amount of time devoted to the CyberPatriot competition varies greatly between teams. How much time you spend meeting and practicing depends on student dedication and how much they are looking to get out of the program. Some teams meet once a month, others meet several times a week.

Recommended time commitment for new teams:

- One (1) or two (2) meetings per week (1-2 hours).
- Practice tasks assigned to competitors and completed outside of meetings.
- Individual students learn one topic and teach that topic to their teammates.

Practice schedules may also vary based on the availability of a technical mentor who is assisting your team.

VOLUNTEER REGISTRATION

In order to participate in the competition, you must have a team registered. But before you can register a team, you must first create a volunteer account through the CyberPatriot website.

Volunteer Registration Steps:

1. Visit <http://www.uscyberpatriot.org>
2. Click 'Register'
3. Select 'Team or Volunteer Registration'
4. Complete all fields on registration form
5. Click 'Register' once completed



Once submitted, you will receive a confirmation email regarding your volunteer account. If you do not receive the email within a few minutes, check your spam/junk folder.

You may also bypass the email and access your account directly by navigating to the 'Competition Sign In' page from the top right corner of the homepage.



CYBERPATRIOT VOLUNTEER REGISTRATION

Fields marked with an * (asterisk) are required.

First Name: * First names may only contain letters and numbers.

Last Name: * Last names may only contain letters and numbers.

Phone Number: *

Phone Ext.:

Email Address: * Email addresses may only contain letters, numbers, and dots.

Password: * Passwords must be at least 8 characters long.

Confirm Password: *

Password Question: *

Password Answer: *

How you found out?

If other, Specify source:

T-Shirt size:

Agree to media release terms? *

Agree to competition terms? *

How much is: = ?

Refresh CAPTCHA

Register

To sign in, enter your username and password:

Username = email address used during volunteer registration

Password = password made during volunteer registration

CyberPatriot Login Page

Welcome to the CyberPatriot Volunteer site

UserName:

Password:

Sign In

[Forgot Your Password?](#)

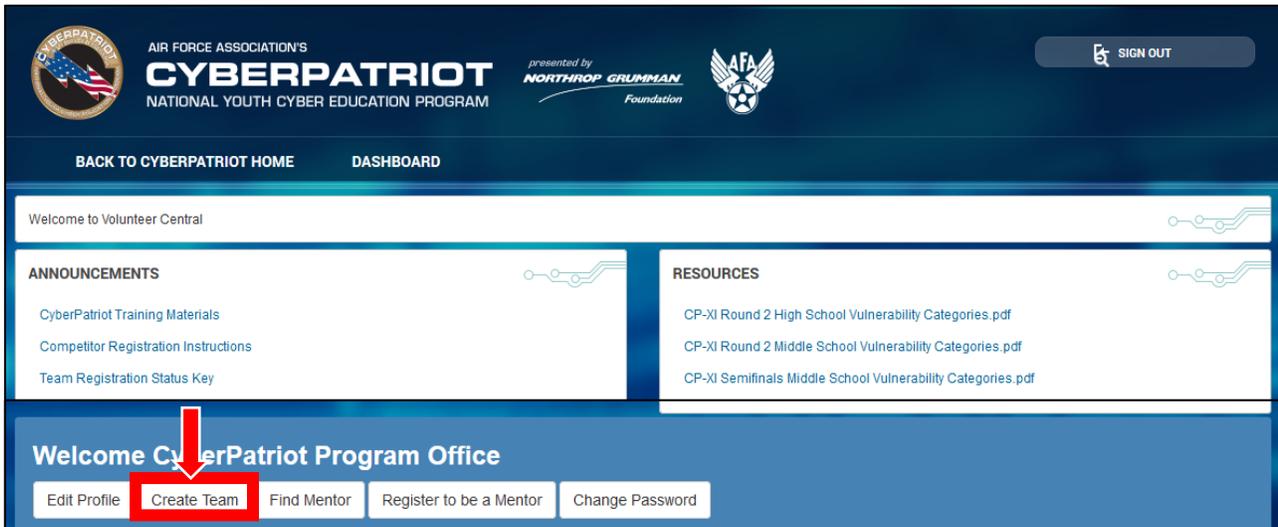
GO BACK TO SITE

COACH & TEAM REGISTRATION

Once your volunteer account is created, you have the option to register as a coach (create a team) or register as a mentor

Coach / Team Registration Steps:

1. Upon signing into the volunteer dashboard (pictured below), scroll until you see the blue box with 'Welcome [Your Name]'



2. Click 'Create Team' (Note: By creating a team under your account, you automatically become the coach of that team).
3. Complete the registration form and click 'Submit' to create team.
DO NOT click 'SUBMIT' multiple times, as this will create duplicate teams. Please click and wait until receiving confirmation the team has been registered. It may take a minute during times of high website traffic.

Organization Type	High School - Public
Official School / Organization Name (required)	<input type="text"/>
Team Nickname (optional)	<input type="text"/>
	<small>* For Coaches and organizations with multiple teams, please use the Team Nickname field to provide a unique name for this team.</small>
About Your Team	<input type="text"/>

- **Organization Type:** Determines which division you compete with.
- **Official Name:** The official name of the organization the team is competing with. Used on award certificates (if applicable).
- **Nickname:** Unofficial name of team. Can be used to differentiate between teams at same organization (e.g., Team 1, Alpha, CyberGirlz).
- **About Your Team (Optional):** Description of team that's made available to mentors/team assistants when searching for a team to help.

Physical Address

Country

Address Line1

Note: CyberPatriot cannot ship to PO Boxes. Please provide a street address.

Address Line2

City

State

Zip Code -

Center of Excellence:

Need Mentor?

Can Team have Virtual Mentor?

Shipping address is different than physical address

Verifier Information

The Verification Official should be a school administrator, organization executive or unit commander or deputy commander. Coaches CANNOT act as their own verification official.

Full Name

Title

Email Address

Confirm Email

Phone Ext

I am an employee of a CyberPatriot Sponsor.

Sponsor

I will read the current season's CyberPatriot Rules Book and agree to abide by its rules and procedures.

I understand that my team is required to have 64-bit, host computers and operating systems to participate and meet the specifications listed [here](#).

– **Physical Address:** Used to track location of participating teams. City, State, and country included on registration list and map.

– **Center of Excellence:** If not affiliated with any of the listed Centers, select 'Not Applicable'.

– **Need Mentor:** Check box if you would like mentors to be able to contact your team.

– **Virtual Mentor:** Check box if you are open to having assistance from a mentor in a remote location.

– **Shipping address:** If shipping address is different from organization's physical address, check box and provide shipping address.

– **Verifier Information:** Coaches must be verified by an organization official. The listed verification official should be a school administrator, organization executive or unit commander. Coaches CANNOT act as their own verification official.

[An automated email is sent to the verification official upon form submission.](#)

– **Sponsor Employee:** If employed by a CyberPatriot sponsor company, check box and select company. If not, leave box unchecked.

– **Other Terms/Conditions:** Check to agree to coach/competition terms.

– Click 'Submit'

Once the team is successfully created, the team's information will appear as shown below:

The screenshot shows the 'Welcome CyberPatriot Program Office' dashboard. At the top, there are buttons for 'Edit Profile', 'Create Team', 'Register to be a Mentor', and 'Change Password'. Below these are three columns of team information:

- Team Number:** 12-0002
Air Force Association
Team Nickname
High School - Charter/Magnet
- Team Status:** Awaiting Verification
Verifier Info: John Doe *verifier@uscypatriot.org*
Payment Status: Not Available
Amount: \$205.00
- Team Unique ID:** CYB3-RP4T-R10T
Cisco Login: 120002cp
Cisco Password: CYB3-RP4T-R10Tcp

On the right, there is an 'Options' dropdown menu with 'Resend verifier email' and 'Edit Team Info' options. Below the information is a table with the following data:

Role	Name	Email Address	Status	T-Shirt Size
Coach	CyberPatriot Program Office	info@uscypatriot.org		Large

Team Information

When registering a team, please always check that this information is correct. Incorrect information could lead to incorrect team fees and division placement.

This annotated screenshot highlights key fields in the team information section:

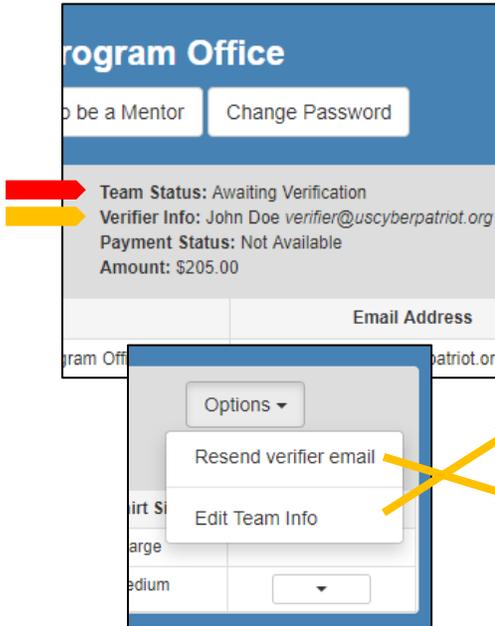
- Red arrow:** Points to 'Team Number: 12-0002'.
- Yellow arrow:** Points to 'Air Force Association'.
- Green arrow:** Points to 'Team Nickname'.
- Blue arrow:** Points to 'High School - Charter/Magnet'.

The table below the annotations shows the role 'Coach' and the organization name 'CyberPatriot Program Office'.

- **Team Number:** Used to identify teams on scoring documents. Should always be provided when contacting CyberPatriot staff.
- **Organization Name:** Official team name. Used on award certificates. Can only be changed by contacting CyberPatriot Program Office.
- **Team Nickname:** Unofficial team name. Used to distinguish between multiple teams at one organization. Used on award certificates. Can be changed using 'Edit Team Info' option in Options drop-down menu.
- **Organization Type:** Selected during registration process. Determines competition division and registration fee rate. Can only be changed by contacting CyberPatriot staff.

Team Registration Status & Verifier Information

A team is not fully registered for the competition until it has been given the 'OK' by the verification official and CyberPatriot Program Office. Team status and verifier information can be viewed on the volunteer dashboard.



Team Status:

Indicates how far along team is in approval process.

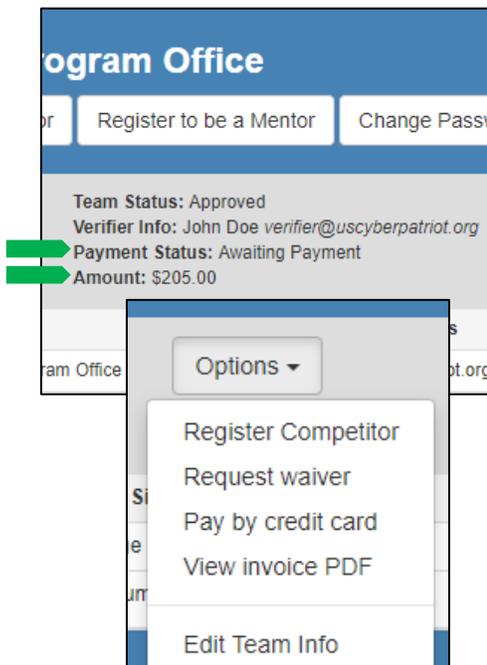
- **Awaiting Verification:** The verification official has not yet approved the team.
- **Awaiting Approval:** Team has been verified and is under final review by CyberPatriot Program Office.
- **Approved:** All steps have been completed and the team is ready for the next steps.

Verifier Info and email address:

- Use the 'Edit Team Info' option to update/change verifier's information, or change verifier entirely.
- **Resend Verifier Email:** If you update the verifier's email address or the verifier does not receive the email, use the 'Resend Verifier Email' option to regenerate the message.

Registration Fee Payment

Payment (or waiver requests) due by November 15, 2019



Payment Status:

- **Not Available:** Team is not yet approved. Cannot submit payment.
- **Awaiting Payment:** Team is approved but payment has not been received. See 'Options' dropdown menu to pay by credit card, view invoice PDF or request waiver.
- **Waiver Requested:** A waiver request has been submitted but not yet approved.
- **Waived:** A fee waiver has been granted.

2019-2020 Registration Fee Rates:

Open Division: \$205 per team*

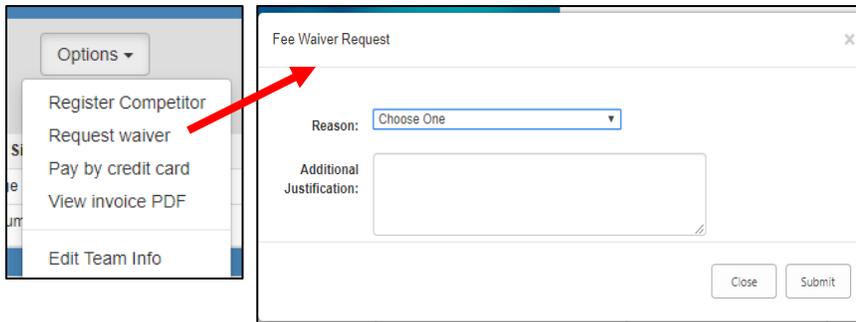
All Service Division: Waived

Middle School Division: \$165 per team*

*20% discount for teams registered before July 1

Registration Fee Payment (continued)

Fee Waivers:



The image shows two overlapping windows. On the left is the 'Options' menu with a dropdown arrow. The menu items are: Register Competitor, Request waiver, Pay by credit card, View invoice PDF, and Edit Team Info. A red arrow points from the 'Request waiver' option to the 'Fee Waiver Request' window on the right. The 'Fee Waiver Request' window has a title bar with a close button. Inside, there is a 'Reason:' dropdown menu with 'Choose One' selected. Below it is a text area for 'Additional Justification:'. At the bottom right are 'Close' and 'Submit' buttons.

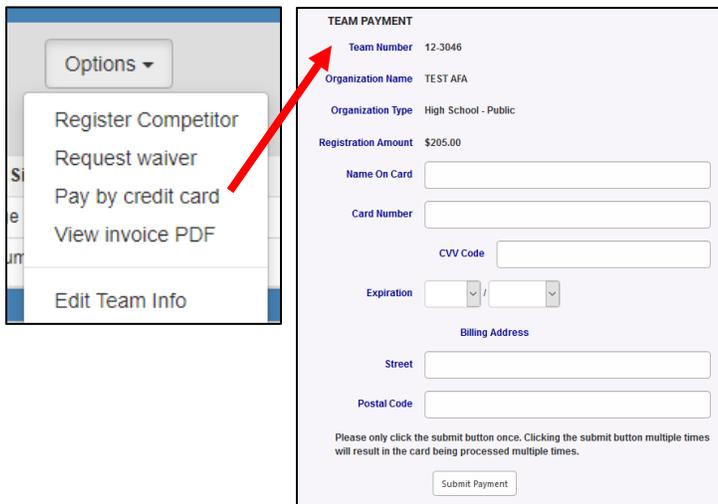
To request a fee waiver:

1. View 'Options' menu
2. Select 'Request Waiver' and complete form.
3. Click 'Submit'

Fee waiver requests are available for:

- **Organizations with Title I status** or where there is insufficient funding.
 - A letter from a school administrator stating Title I status for current school year should be emailed to info@uscyberpatriot.org after the request is submitted. A follow up email will be sent if letter is not received.
- **All-girls teams**
 - The waiver will not be approved until competitors are added to roster.

Credit Card Payments:



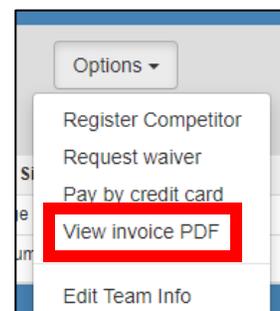
The image shows two overlapping windows. On the left is the 'Options' menu with a dropdown arrow. The menu items are: Register Competitor, Request waiver, Pay by credit card, View invoice PDF, and Edit Team Info. A red arrow points from the 'Pay by credit card' option to the 'TEAM PAYMENT' window on the right. The 'TEAM PAYMENT' window has a title bar. Inside, it displays pre-filled information: Team Number 12-3046, Organization Name TEST AFA, Organization Type High School - Public, and Registration Amount \$205.00. Below this are input fields for Name On Card, Card Number, CVV Code, and Expiration (month/year). There is also a section for Billing Address with fields for Street and Postal Code. At the bottom, there is a 'Submit Payment' button and a note: 'Please only click the submit button once. Clicking the submit button multiple times will result in the card being processed multiple times.'

To pay the team fee using a credit card

1. View 'Options' menu.
2. Select 'Pay by credit card' and complete payment form.
3. Click 'Submit Payment'.
DO NOT click submit more than once, as this will result in duplicate transactions.

Pay by purchase order or check:

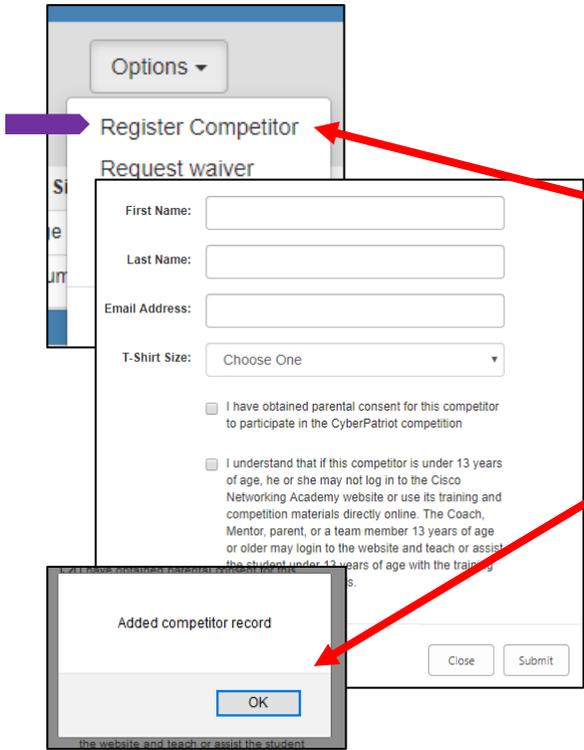
- **Purchase Order:** Email a copy of the PO to info@uscyberpatriot.org. The invoice will be updated with the PO#.
- **Check:** Mail check and copy of invoice to Air Force Association.
 - Checks should be made payable to Air Force Association.
 - Mailed to ATTN: CyberPatriot, 1501 Lee Hwy, Ste 400, Arlington, VA 22209



The image shows the 'Options' menu with a dropdown arrow. The menu items are: Register Competitor, Request waiver, Pay by credit card, View invoice PDF, and Edit Team Info. A red box highlights the 'View invoice PDF' option.

COMPETITOR REGISTRATION

Competitors must be added to rosters by November 1, 2019.



Competitors may be added to the team roster once the team has been verified and approved (team status must say 'Approved').

To register a competitor:

1. Select 'Register Competitor' from options menu
 2. Provide student's first name, last name, email address, t-shirt size.
 3. Agree to parental approval and Cisco terms
 4. Click 'Submit'
- DO NOT click submit multiple times.** Please wait for 'Added competitor record' notice.

Reminder: Teams must have between two (2) and six (6) registered competitors

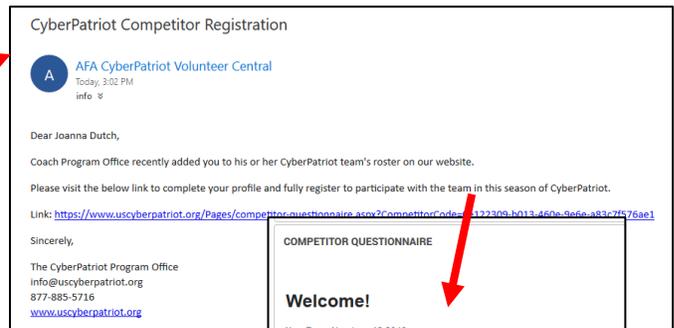
Once the competitor record is submitted, the competitor will receive an automated email with a link to a competitor questionnaire.

While not required, we strongly encourage competitors to complete the questionnaire in a timely manner*. Competitor status is dependent on completion of the form.

Competitor Status:

- **Registration Pending:** Competitor has not yet completed questionnaire
- **Registered:** Competitor has completed questionnaire

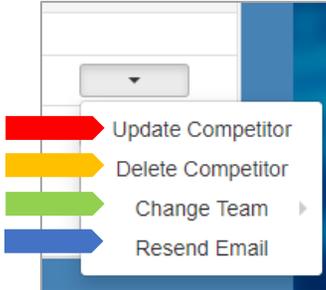
Information collected from competitors is for internal use only*



Competitor	Bernie Skoch	Bernie@uscypatriot.org	Registration Pending	Medium	
Competitor	Frank Zaborowski	Frank@uscypatriot.org	Registration Pending	Large	
Competitor	Rachel Zimmerman	Rachel@uscypatriot.org	Registration Pending	Medium	
Competitor	Rebecca Dalton	Rebecca@uscypatriot.org	Registration Pending	Medium	

Competitor Options:

Once a competitor is added to a roster, there are several changes that can be made before the November 1st deadline:



To make changes to a competitor, click the drop-down arrow next to competitor name (right side):

- **Update Competitor:** Make updates to email address or t-shirt size.
- **Delete Competitor:** Remove competitor from roster.
- **Resend Email:** Resends link to competitor questionnaire. Should be used if updates are made to a competitor’s email address.
- **Change Team:** Move competitor to another team.
 - Select new team for competitor.
 - Option to change teams will only appear if you have more than one approved team.
 - System will not allow more than six (6) competitors on a team.
 - Can only move between your own teams.

erpatriot.org	Registration Pending	Medium	▼
erpatriot.org	Registration Pending	Large	Update Competitor
cyberpatriot.org	Registered	Medium	Delete Competitor
			Change Team
			Resend Email

Team Unique ID: F4VR-RUU3-5YSL

Options ▼

12-3046

12-3116

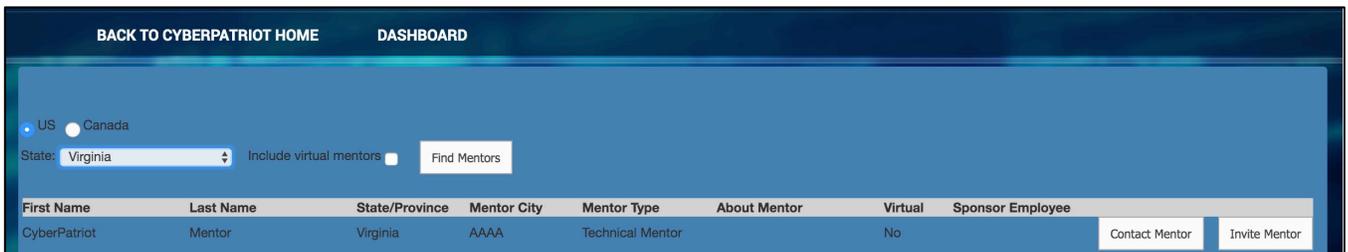
If you wish to move a competitor to a team registered to another coach, you must contact the CyberPatriot Program Office.

TECHNICAL MENTORS AND TEAM ASSISTANTS

Approved teams have the option to contact technical mentors and team assistants in their area should they need additional help with training.

To search for technical mentors and/or team assistants:

1. Click 'Find Mentor' from dashboard.
2. Filter by country and state.
3. Select check box if you wish to include virtual mentors.
4. Click 'Find Mentors'.



To send a message to a mentor/assistant:

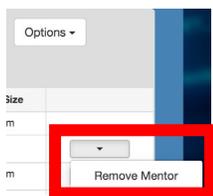
1. Click 'Contact Mentor'
2. Compose a short message to mentor. An email with your message will be sent to the volunteer (your contact information is included).



To add a mentor/assistant to your team:

1. Click 'Invite Mentor'.
2. An invitation is sent to the mentor's dashboard.
3. The mentor's name appears on your team roster.
 - *Invited* (status): Mentor has received invitation but has not yet accepted.
 - *Active* (status): Mentor has accepted invitation and is officially paired with team.

Do not invite mentors/team assistants at random. Always contact the mentor first if no previous contact has been made.



To remove a mentor:

1. Select 'Remove Mentor' from the drop-down arrow next to the mentor's name. Mentors/assistants can be removed at any point during the season.

SECTION 2: TRAINING EVENTS

Training is an important part of the CyberPatriot competition. CyberPatriot offers various methods of training, some of which can be taken advantage of year-round. Others are scheduled events that are only available for a limited time.

Online Training Modules:

Twelve (12) online training modules are available on the volunteer dashboard. These offer a foundation for what topics competitors should be familiar with.



To access these modules, click 'CyberPatriot Training Materials' under Announcement section of volunteer dashboard.

- Unit 1 - Introduction to CyberPatriot and Cybersecurity-
- Unit 2 - Introduction to Online Safety-
- Unit 3 - Cyber Ethics-
- Unit 3 - Cyber Ethics - with Instructor Notes
- Unit 4 - Principles of Cybersecurity-
- Unit 5 - Computer Basics and Virtualization-
- Unit 6 - Microsoft Windows Basics -
- Unit 7 - Microsoft Windows Security Tools-
- Unit 8 - Microsoft Windows Security Configuration
- Unit 9 - Introduction to Linux and Ubuntu-
- Unit 10 - Ubuntu Security-
- Unit 11- CyberPatriot Supplementary Training V
- Unit 12 A - Additional Training Topics
- Unit 12 B - Tips from Coaches and Mentors of the Year

Exhibition Rounds:

The sooner you register a team, the more access to training resources you will have during the summer months. Exhibition Round images are sent to any registered coach (regardless of registration status). These rounds are not meant to be challenged. They can be used as practice for returning students, an introduction to the competition for new students, or a recruitment tool for new competitors. Students do not need to be registered in order to participate in an Exhibition Round.

- Two images: Windows 10 and Ubuntu 14 (Same images/vulnerabilities in both rounds).
- Download Instructions/StartEx email is sent at 5:00 PM ET on round start date.
- Can use images unlimited number of times.

Training Round:

The training round is a month-long event that acts as an introduction to CyberPatriot. The images used in the round includes an answer key (detailed instructions on how/why to fix vulnerabilities).

- Typically includes three images.
- Download Instructions/StartEx email is sent at 5:00 PM ET on round start date.
- Can use images unlimited number of times.

Sneak Preview Event:

The purpose of the Sneak Preview event is to test any updates/changes made to the competition software. This round is typically held on a Saturday in mid-to-late September and lasts only four (4) hours. There are no alternate times or dates.

- Two (2) beginner-level images.
- Download Instructions email sent a few days in advance.
- StartEx email (contains image extraction password) sent at the start of 4-hour event time.

Practice Round:

The Practice Round is the final training event before the scored rounds of competition begin. All registered coaches will receive information regarding the round. While it is optional, it is recommended that teams participate.

- Re-release of Training Round images with new competition software.
- Introduces teams to new alarms or warnings being added for the season.
- Practice Cisco Networking Challenge Quiz and Packet Tracer provided.
- Download Instructions/StartEx email sent at 5:00 PM ET on round start date.

SECTION 3: TECHNICAL SPECIFICATIONS

Before getting into the nitty-gritty of getting technically prepared for the competition, there are a few terms you should familiarize yourself with:

Terms to Know

- **Image:** An 'image' is a virtual representation of an operating system, used for the competition. During rounds of competition, competitors are given several images of various operating systems. For example, they may receive a Windows 10 image and an Ubuntu 16 image in the first round of competition.
- **Virtual Machine (VM):** The environment in which competition images are run.
- **Host Machine:** The physical computer that the competitors are working on during the competition.
- **Unique Identifier (UID):** A twelve-character string of letters and/or numbers that uniquely identifies an individual CyberPatriot team. Teams must input their UID into competition images in order to be properly scored.
- **Checksum:** A small string of numbers and letters derived from digital data for the purpose of detecting errors that may have been incurred during the download process. Checksums that do not match indicate an error in the downloaded file.
- **Whitelist:** A list of email addresses or domain names from which an email blocking program, firewall, or intrusion detection system will allow to be received or accessed.
- **StartEx:** The email sent at the beginning of a competition round that contains the image extraction password. The StartEx email is sent only to Coaches. Start-Ex is short for "Start Exercise."

The next page and a half outline the technical specifications (hardware, software, and network requirements) for the competition. **We highly recommend sharing this information with your organization's IT department to avoid any complications in preparing for the competition.**

Hardware Requirements:

Teams are required to have 64-bit host computers and operating systems
Computers made before 2011 cannot run competition software

Processors (made in 2011 or later):

- Intel: 64-bit i3 processor of the generation "Sandy Bridge" or better.
- AMD: 64-bit processor of the generation "Bulldozer" or better.

Virtual Extensions: Virtualization technology/extensions (e.g., VT-x, Vx) must be ENABLED in BIOS.

RAM: 8 GB of RAM (using only 4 GB may cause performance issues).

Disk Space: 40 GB of free disk space.

Display: XGA (1024 x 768) or higher display. A 1280 x 1024 display is recommended.

If resources allow for it, we recommend at least three (3) computers per team.

Software Requirements:

Operating Systems

- 64-bit Windows 7 or later (OS must run VMWare Workstation Player).
- Mac (Apple) and Linux operating systems may be used at team's own risk.
- Teams with non-Windows operating systems should have at least one Windows computer that meets technical specifications for the competition.

CyberPatriot Competition System (CCS) Connection Test

- Used to check network connections to the scoring server without using a competition image.

WinMD5

- Used for verifying the checksum of the images to ensure that they have been fully downloaded without any errors.

7-Zip

- Used for unzipping the images after they have been downloaded.

VMware Workstation Player for Windows

- Used to play the images after they have been unzipped.
- The official version of VMware Workstation Player will be announced before the competition season.
- Earlier versions of VMware Player are available, but issues stemming from the use of these versions are not grounds for appeal.

Cisco Packet Tracer 7.2

- Used for the Cisco Networking Challenge.
- Free to use for registered teams.
- Downloaded from a user account at netacad.com.

Web Browsers

- Chrome, Firefox, Edge, etc. – Used for finding updates, etc.

Network Requirements:

- CyberPatriot requires a DSL or faster network connection.
- Most common issue encountered by teams during competition is network traffic blocked by a school firewall, filter, or proxy server.
- All teams will need access to HTTP on Port 80 and HTTPS on Port 443.
- Website access requirements above should be whitelisted if they cannot be accessed through school or organizational computers (see next slide).
- Connection test software available to test if a connection to the scoring engine can be established, which allows you to troubleshoot connection issues prior to a round.

Work with your organization's IT staff to ensure all hardware, software, networking, and website access requirements are met.

Website Access Requirements:

Successful participation in CyberPatriot requires access to various websites. The following websites should be whitelisted to ensure full access to all aspects of the CyberPatriot competition.

Website	Reason for Access
www.uscyberpatriot.org volunteer.uscyberpatriot.org	Coach's Dashboard, Competition Information
www.microsoft.com	Information on Windows OS and Updates
www.vmware.com	VMware software required to compete
www.7-zip.com	7-Zip compression software is required to compete
www.canonical.com	Ubuntu software updates
www.ubuntu.com	Ubuntu information
http://winmd5.com/integrity	MD5 checksum required to test competition file integrity
www.netacad.com	Cisco Networking Academy (website for Cisco challenge)
s3.amazonaws.com	Links to competition information/image downloads
Search Engines (Google, etc.)	For research and to find updates

Should you or your IT department have questions regarding the technical requirements of the competition, please contact the CyberPatriot competition staff at:

**c poc@uscyberpatriot.org
877-885-5716**

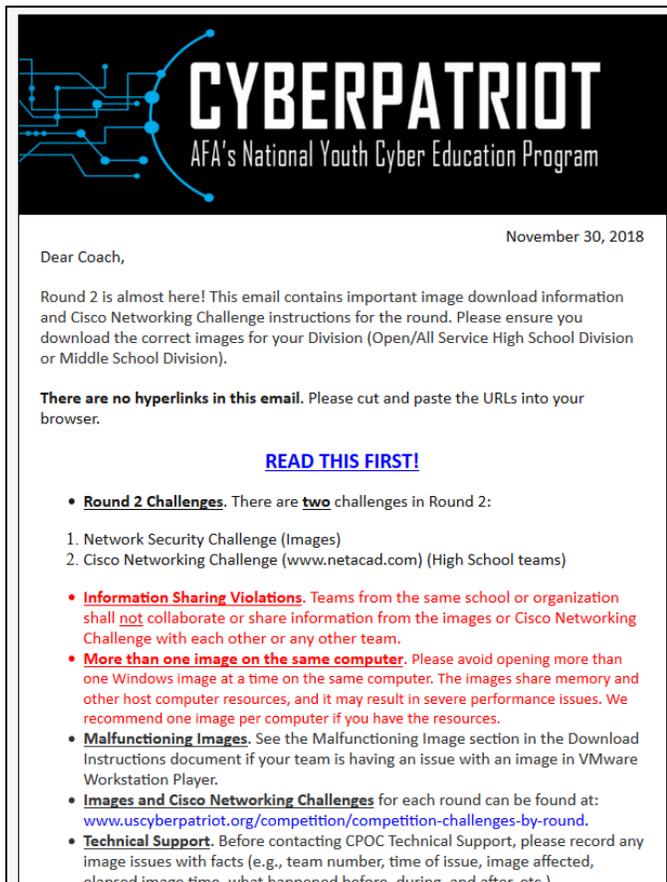
SECTION 4: DOWNLOADING A VIRTUAL IMAGE

This next section will walk you through, step-by-step, the process of how to download and extract a virtual image.

Download Instructions Email:

For any training event or competition round, coaches receive a “Download Instructions” email that contains full instructions on how to properly download and open the image files. Remember, the image files are the core of the competition.

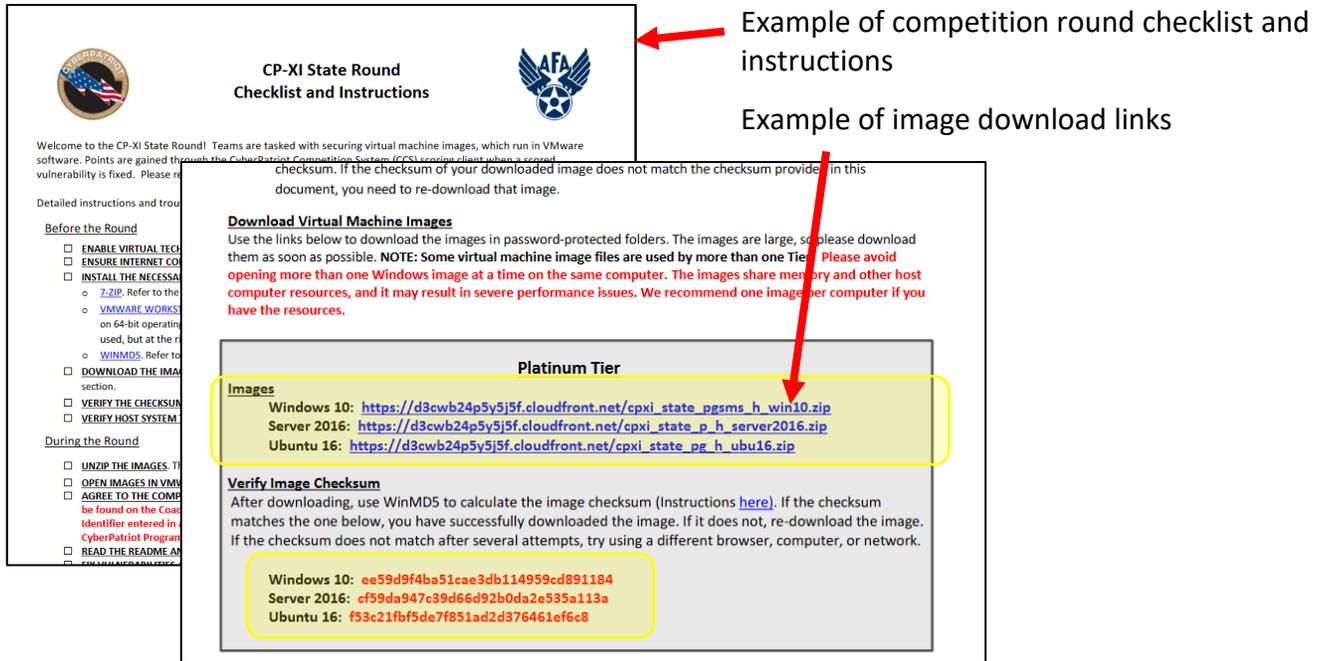
IT IS IMPORTANT THAT YOU READ THE DOWNLOAD INSTRUCTIONS EMAIL IN ITS ENTIRETY.



- Download instructions for training events are emailed to coaches at 5:00 PM ET the day the event begins.
- Download instructions for scored competition rounds are sent the Monday before the competition round begins.
- Download instructions are sent to coaches only. Mentors will not receive the email.
- If a coach is unable to attend a round of competition, a coach alternate may be designated for the round.
(Contact info@uscyberpatriot.org)



Included in the email is a link to the full checklist and download links

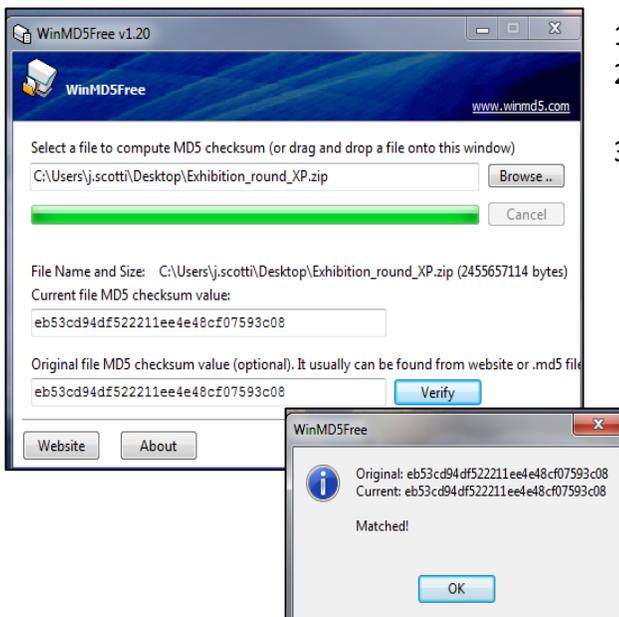


Clicking the link will initiate the download. Keep track of where the downloaded file is being saved. The file name is helpful in identifying that the proper image is being used, as it shows the round and operating system:

https://amazonaws.com/C/images/ExRd_W10.zip
 Round Operating System

Checking the Checksum:

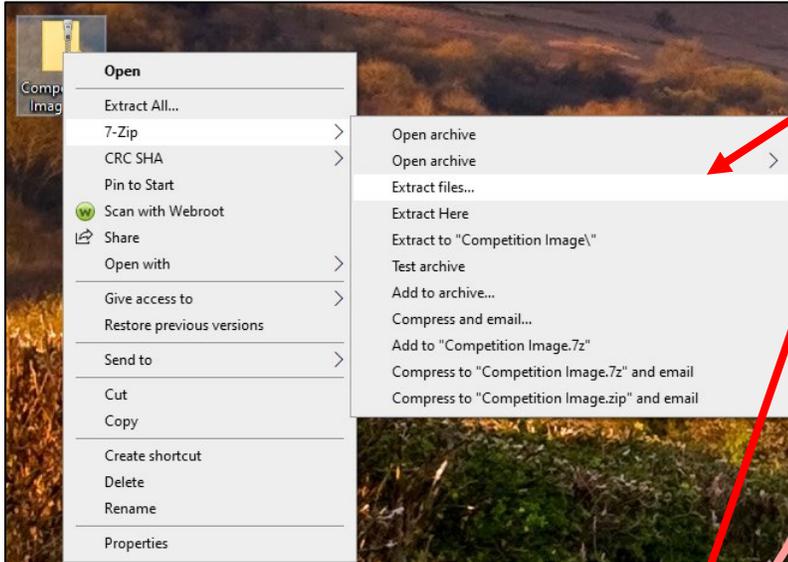
After downloading the image file, use WinMD5 to verify that the image was correctly downloaded:



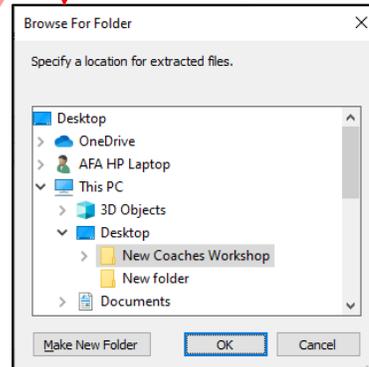
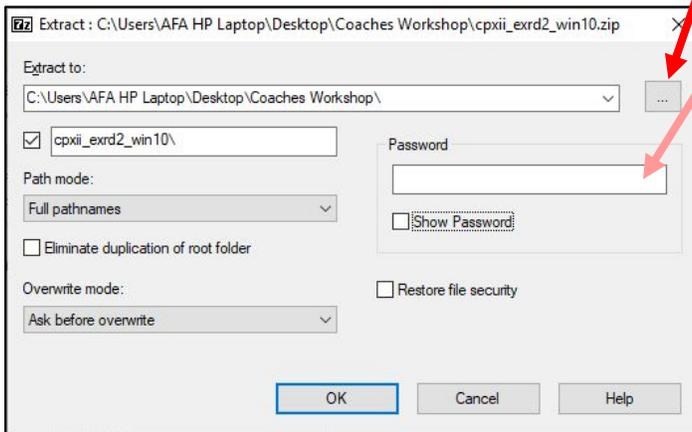
1. Open WinMD5
2. Drag and drop downloaded image zip file into WinMD5 window (or click 'Browse' to select the file)
3. Once WinMD5 has calculated checksum of downloaded file, copy and paste the checksum provided in the download instructions into the lower text field and click 'Verify'
 - **Checksums match:** You're all set! Images can be unzipped/extracted
 - **Checksums do NOT match:** Downloaded file is corrupted. Download file again.

Unzipping/Extracting the Image:

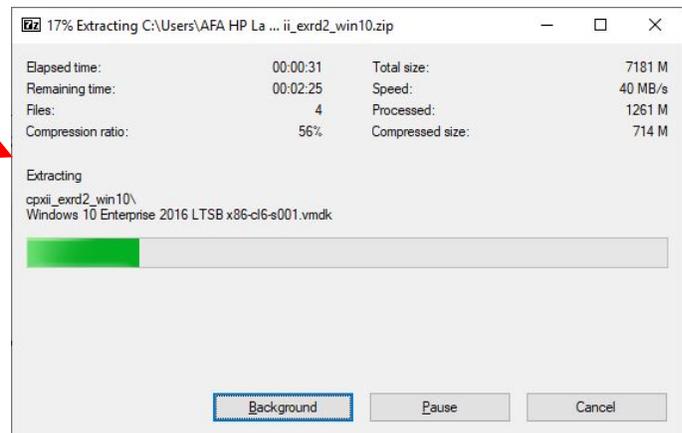
In order to open the image in VMware Workstation, the file must first be unzipped/extracted. 7-Zip is the standard extraction software used by CyberPatriot.



1. Locate the downloaded zipped file.
2. Right click downloaded zipped file.
3. Hover over 7-Zip option and select 'Extract files...'
4. Click '..' to choose folder location for unzipped/extracted file. Choose location and click 'OK'.
5. Enter image password from StartEx email and click 'OK'.

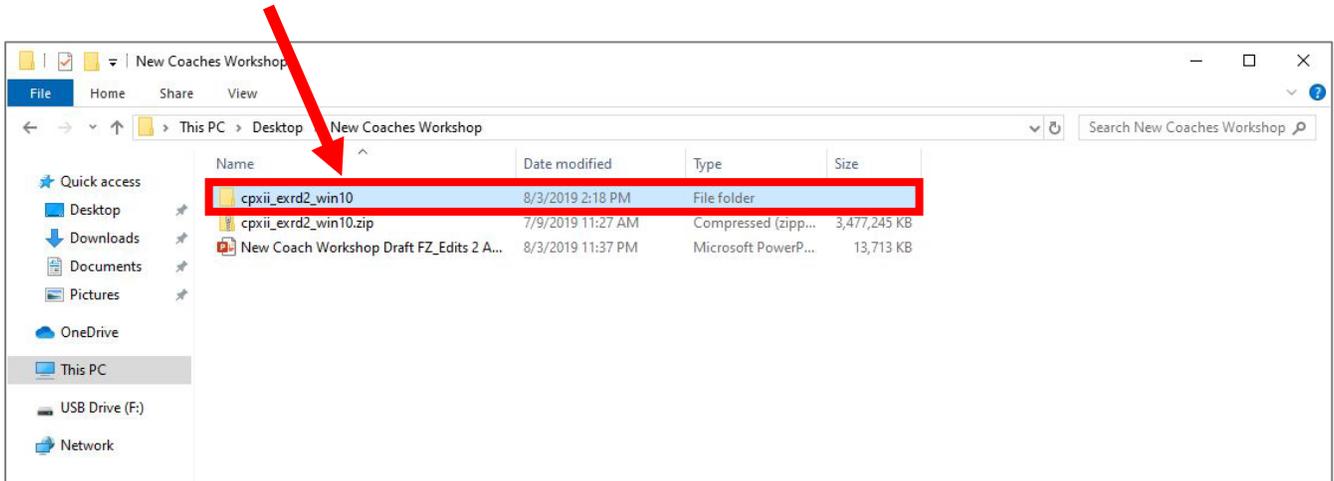


NOTE: A file that is extracting properly should take a few minutes. If the process only takes a few seconds, the password was likely input incorrectly, and the image will not properly extract.

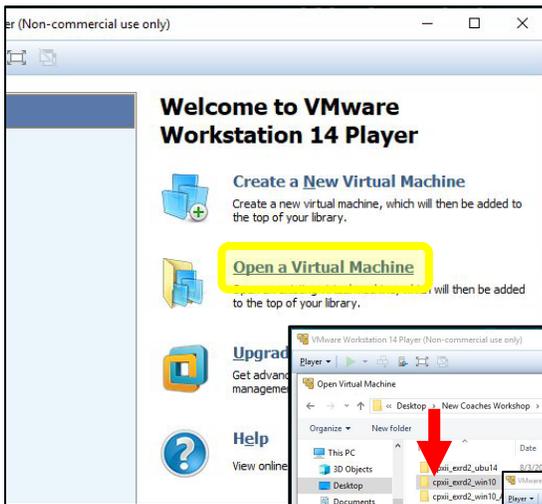


Opening an Image in VMware Workstation Player

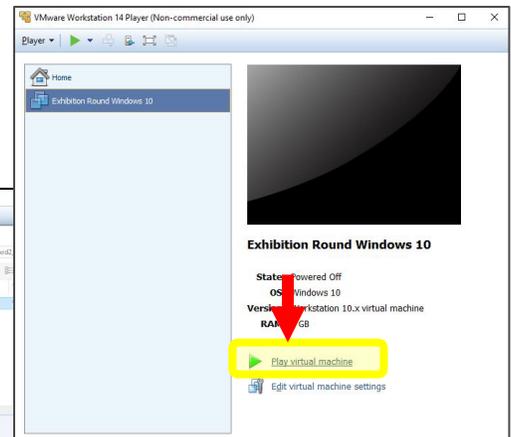
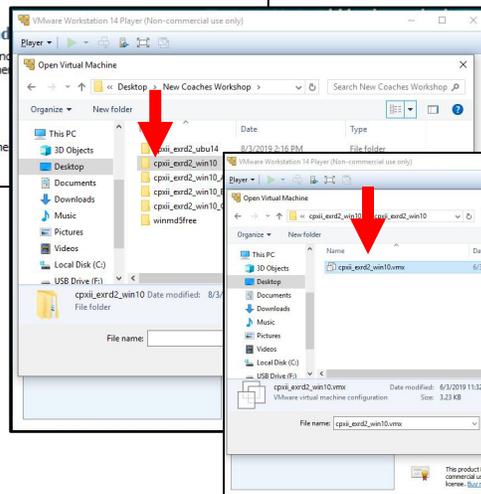
Once extracted, the file will appear in the selected file location. Note that the unzipped file does NOT have a .zip extension.

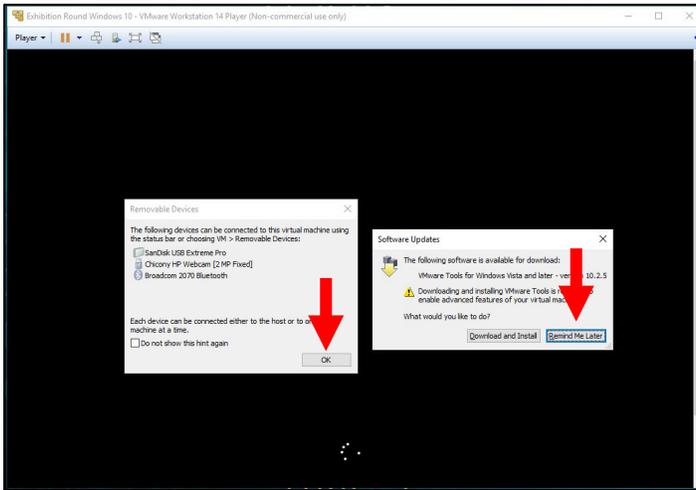


VMware Workstation Player is the standard image player for CyberPatriot. To open an image:



1. Open VMware Workstation Player.
2. Click 'Open a Virtual Machine'.
3. Open the unzipped/extracted file folder.
4. Double click the file that appears in the folder (file has .vmx extension).
5. Click 'Play Virtual Machine'.



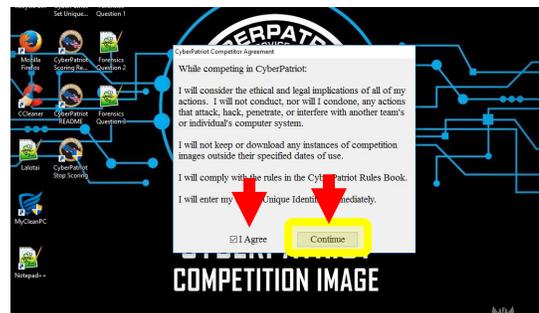


Upon clicking 'Play virtual machine,' the VM will open in a new window. It will start as a blank/black screen.

If prompted with pop-ups regarding Removeable Devices and Software Updates appear, click 'OK' and 'Remind Me Later'.

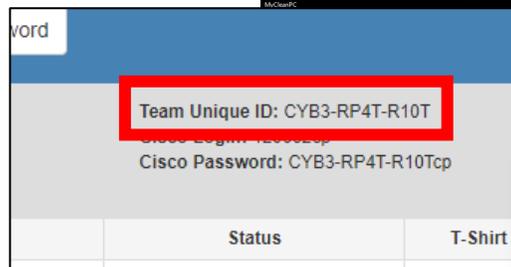
Read the CyberPatriot Competitor Agreement.

1. Check the 'I Agree' box.
2. Click 'Continue'.



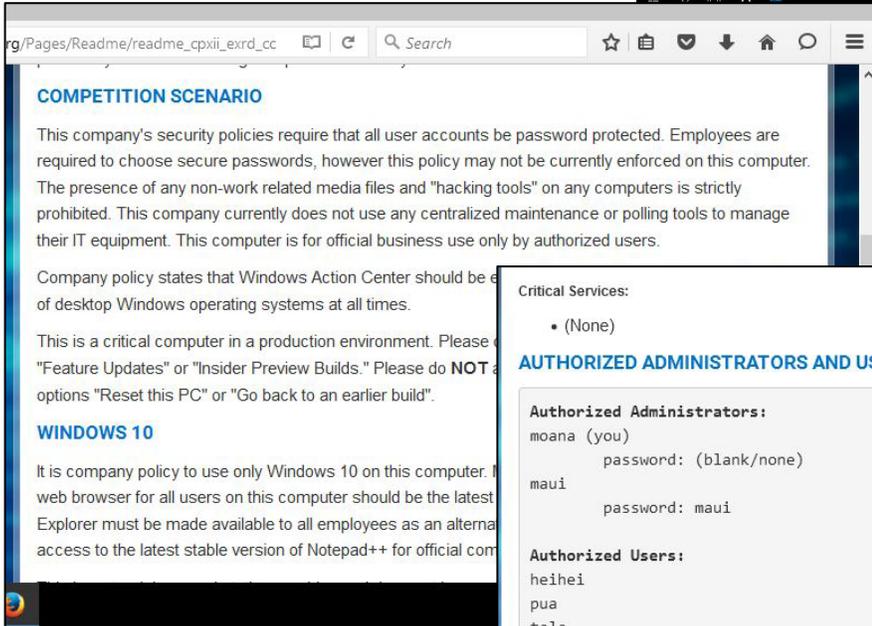
You will be prompted to enter your team's 12-character Unique Identifier (UID). The UID for your team is located on your volunteer dashboard.

Teams must input their UID into competition images in order to be properly scored. If you have more than one team registered, please ensure that the correct UID is provided to the correct team.

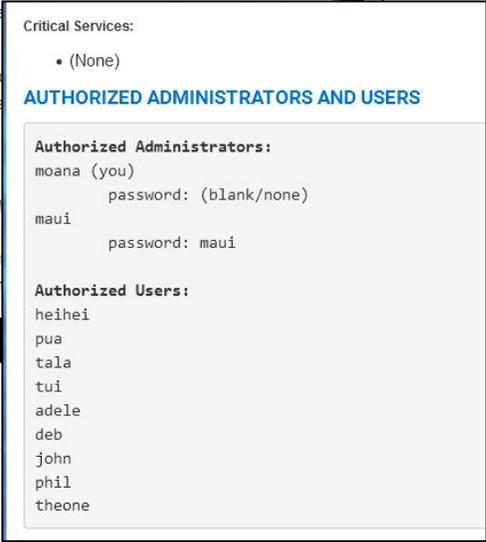


Once the image is open teams should open the README file and check their scoring report.

README File: This file, found as an icon on the image desktop, offers a scenario for the round, providing competition round hints and information.



Pictured to the left is a sample README file. It outlines a general scenario for the round and from that gives hints about certain vulnerabilities that students should find and fix.



For example, a list of authorized users offers insight to user account management tasks).

Scoring Report:

The scoring report shows a team’s performance during the round. Information on the report includes duration (time competing, score, penalties, connectivity status).



Exhibition Round Windows 10 Competition Image

Report Generated At: 2019/08/03 22:01:39 UTC

Approximate Image Running Time: 00:57:39

Approximate Team Running Time: 01:28:50

Current Team ID: **C93J-XZRR-2XB2**

0 out of 100 points received

Connection Status: Scoring Data Uploaded Successfully: No Errors Detected

Internet Connectivity Check: OK
CyberPatriot Connection Status: OK
CyberPatriot Score Upload Status: OK

0 penalties assessed, for a loss of 0 points:

0 out of 20 scored security issues fixed, for a gain of 0 points:

The CyberPatriot Competition System is the property of the Air Force Association and the University of Texas at San Antonio.

All rights reserved.

SECTION 5: COMPETITION ROUNDS & ADVANCEMENT

Scored competition rounds are at the heart of the competition. Every team is guaranteed three rounds of competition (Round 1, Round 2, and the State Round). We recommend participation in all three rounds.

For all competition rounds, the Download Instructions email is sent on the Monday before the round begins (rounds begin on Fridays). The StartEx email (the email that contains the extraction password) is sent on the round start date at 9:00 AM ET.

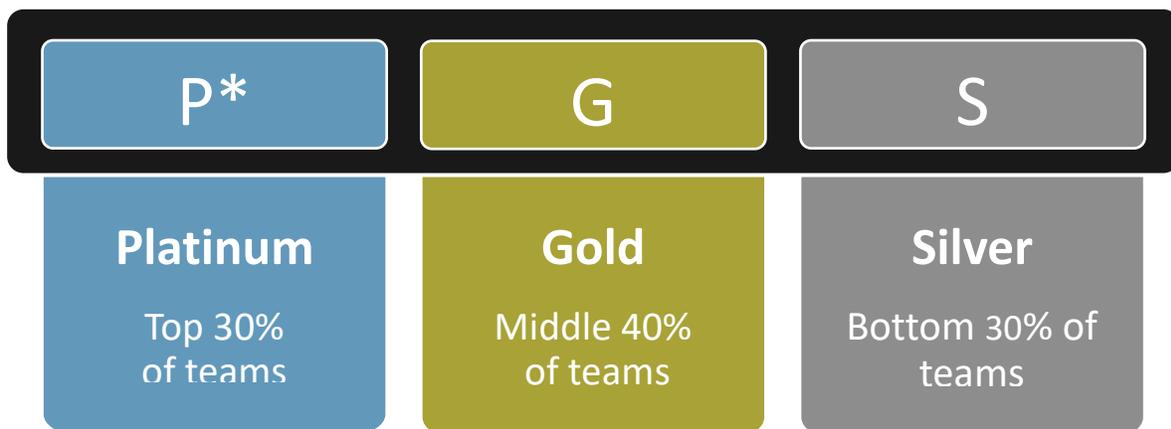
- **Round 1**

- The first official scored round of the competition.
- In terms of difficulty, it is the least difficult round.
- All verified/approved teams eligible to compete.
- Two (2) or three (3) images.
- Cisco Quiz and Packet Tracer for Open and All Service Division teams.
- Competition Windows (you choose when you compete).
 - Friday 9:00 AM – Saturday 3:00 AM ET
 - Saturday 8:00 AM – 11:59 PM ET
 - Sunday 10:00 AM – 10:00 PM ET

- **Round 2**

- Two (2) or three (3) images.
- Cisco Quiz and Packet Tracer for Open and All Service Division teams.
- Must have competitors registered.
- All verified/approved teams eligible to compete, even if teams did not compete in Round 1.
- Competition Windows (you choose when you compete).
 - Friday 9:00 AM – Saturday 3:00 AM ET
 - Saturday 8:00 AM – 11:59 PM ET
 - Sunday 10:00 AM – 10:00 PM ET

For the Open and All Service Divisions, teams are sorted into skilled tiers before competing in the State Round. A team's placement is determined by their cumulative Round 1 and Round 2 scores. See below for the tier structure. Only Platinum tier teams may qualify for the National Finals Competition



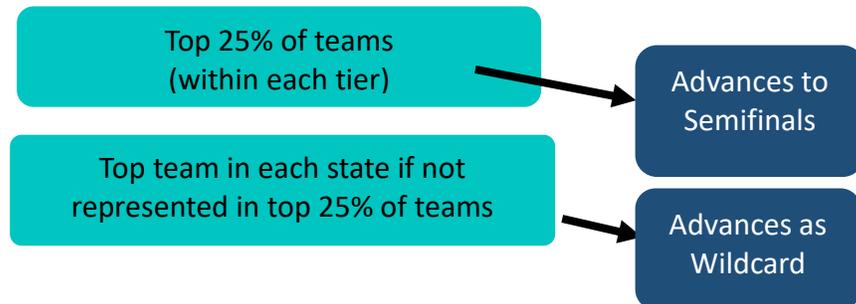
- **State Round**

- **TIER STRUCTURE for high school teams.** No tiers for middle school teams.
- **Elimination Round**
- Three (3) images
- Cisco Quiz and Packet Tracer for all divisions to include Middle School Division.
- Must have competitors registered and fees paid/waived.
- All verified/approved teams eligible to compete, even if teams did not compete in previous rounds.
- Competition Windows:
 - Friday 9:00 AM – Saturday 3:00 AM ET
 - Saturday 8:00 AM – 11:59 PM ET
 - Sunday 10:00 AM – 10:00 PM ET

For the high school divisions, State Round scores are used to determine advancement to the Semifinals. The advancement structures are below. Notice advancement differs between the various divisions.

Open Division Advancement to Semifinals:

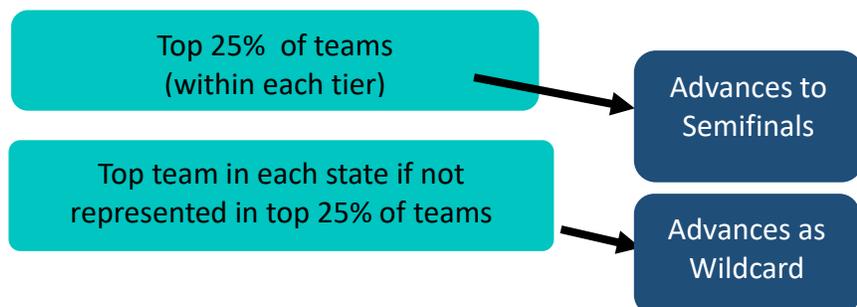
- Teams with State Round scores in the highest 25% of their tier advance to the Semifinals (Based entirely on State Round scores).
- If a represented state, Canada, or At-Large teams’ highest-scoring team does not advance as part of the highest 25% of their tier, that team advances to as a State Wildcard.



All Service Division Advancement to Semifinals:

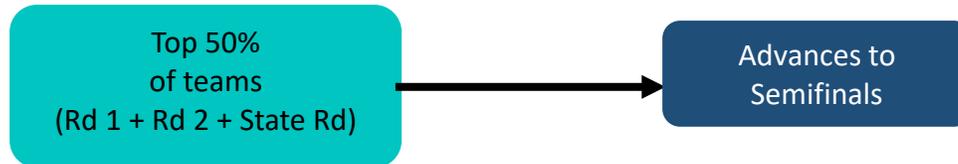
- Teams with State Round scores in the highest 25% of their tier advance to the Semifinals.
 - Based entirely on State Round scores.
- If one of a category’s six highest scoring teams does not advance as part of the highest 25% of their tier, that team advances as a Category Wild Card.

All Service Categories
Air Force JROTC
Army JROTC
Marine Corps JROTC
Navy JROTC
Civil Air Patrol
Naval Sea Cadet Corps



Middle School Division Advancement to Semifinals:

- Teams with State Round scores in the highest 25% of their tier advance to the Semifinals.
 - Based on cumulative Round 1, Round 2, and State Round scores.
- If one of a category’s six highest scoring teams does not advance as part of the highest 25% of their tier, that team advances as a Category Wild Card.



• **Semifinals**

- Last round for Gold and Silver tier high school teams.
- Three (3) or four (4) images
- Cisco Quiz and Packet Tracer for all divisions to include Middle School Division.
- National Finals Competition qualification round for Platinum tier high school teams.
- Only open to teams that advance to Semifinals.
- Competition Windows [two days only]:
 - Friday 9:00 AM – Saturday 3:00 AM ET
 - Saturday 8:00 AM – 11:59 PM ET

Advancement for National Finals Competition:

Only 28 teams qualify for the National Finals Competition.



The National Finals Competition is the only in-person event. The CyberPatriot Program office covers travel and lodging expenses. Additional information is provided to qualifying teams.

Thank you for taking time to be a CyberPatriot Coach. We understand that there is a lot of information outlined in this document and that being a first-year coach may be overwhelming. While we hope this guide was useful, we also know you may still have questions about CyberPatriot's National Youth Cyber Defense Competition.

Should you have any questions or comments regarding the guide or any of the processes outlined above, please send your questions to:

info@uscyberpatriot.org

You may also reach our staff at 877-885-5716

