CyberPatriot: How it Works

Air Force Association

CyberPatriot is the premier national youth cyber education program created to inspire high school and middle school students toward careers in cybersecurity or other science, technology, engineering and mathematics (STEM) disciplines critical to our nation's future. The program was created by the Air Force Association. The Northrop Grumman Foundation is the presenting sponsor.

THE NATIONAL YOUTH CYBER DEFENSE COMPETITION

What makes up a team?

Each CyberPatriot team requires a coach, usually a teacher or adult leader of a team-sponsoring organization. Coaches need no special technical background, and coaching a CyberPatriot team is not restricted to instructors of technical subjects like math or science. Any teacher with the desire to help students learn something new, exciting and relevant can be a great CyberPatriot coach!

In addition to the coach, a team is made up of two to six students (5 competitors, 1 alternate). Students must be registered with the CyberPatriot Program office and must be enrolled with the school or organization they are competing with. All cyber teaching materials are provided, and there is no course or skill prerequisite for the program. Any student with the interest can join a team and be successful.

In cases where a team needs help with computer basics, the team Coach can request help from qualified Technical Mentors. Technical Mentors are local volunteers who possess appropriate IT knowledge and skills. Background checks are required of all Technical mentors in our mentor network.

What does a school need to participate?

One or two computers and an Internet connection are required for occasional weekend use during the on-line portions of the competition. Computer hardware requirements are modest, and most schools already have computers that meet the technical specifications of the competition. The computer technical requirements are available on www.uscyberpatriot.org. In the event that a school cannot provide the needed equipment or Internet connection, CyberPatriot will assist in attempting to provide possible leads in locating equipment or providing alternate Internet access (e.g. AT&T Air Cards). CyberPatriot's goal is to make sure that every team that wants to participate can participate.

There is a modest $395 registration fee for each team registered ($195 for Middle School teams). In return, the team receives access to the Microsoft Developers Network Academic Alliance software. This allows the team to download a number of operating systems and productivity tools that can be used to prepare for the competition, a benefit that alone is worth several thousand dollars. Each registered team member also receives a CyberPatriot participant kit. Past kits have included a CyberPatriot bag, t-shirt, commemorative coin, and official competitor's pin.

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What training materials do we need?

Although coaches are welcome to supplement the provided teaching materials as they wish, all materials necessary for a successful competition are providedon the CyberPatriot website. Teachers (and other coaches) are encouraged to use the provided materials not solely for use in preparing their team for competition, but also to educate all students in their school or organization about good cyber security practices and safe computer and Internet use.

How does competition work?

Teams compete in three divisions:

Open High School Division: Open to all high schools, scouting units, Boys and Girls Clubs, and approved high school home school programs across the country

All Service Division: High school JROTC Programs / Civil Air Patrol squadrons / Naval Sea Cadet Corps units

Middle School Division: Open to teams of middle school students

The early rounds of the competition are done online during weekends from the teams' home locations (schools, homes, libraries, etc.).

Prior to the round, teams download "virtual image" representations of operating systems with known flaws, or cybersecurity "vulnerabilities." The team's assignment is to find the flaws while keeping specified computer functions ("services," such as email) working. Team progress is recorded by a central CyberPatriot scoring system.

At the end of the third round, a combination of approximately 30 teams from the Open, All Service, and Middle School Divisions (each consisting of 5 primary competitors, 1 alternate, and 2 Chaperone members) will be invited to attend an in-person CyberPatriot National Finals Competition in the Washington, DC area for which all team travel expenses are paid by CyberPatriot. There, teams will compete face to face to defend virtual networks from a professional aggressor team. The teams are given a business scenario; they will be newly hired IT professionals who will be managing the network of a small company. There will be 8 to 12 virtual machines on this network that need to be managed. Teams get their score by reducing the known vulnerabilities of the network, maintaining critical services (email, web server, etc.) and by defending the network from attack. Winning teams at the National Finals Competition receive education grants. Internship opportunities are available to all registered CyberPatriot competitors.

For more information, please visit www.uscyberpatriot.org or call 877-885-5716.

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