Air Force Association's
CYBERPATRIOT
National Youth Cyber Education Program
presented by NORTHROP GRUMMAN Foundation

Issue 30
September 2014

BACK TO SCHOOL!

The CyberSentinel
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Commissioner's Cache

Welcome back to school! I hope you had a wonderful summer. While many of you were busy with training, work, and even with Northrop Grumman internships (thank you, Northrop Grumman!), your CyberPatriot Program Office has been busy, too, adding to and improving your program.

In August we completed the last of three AFA CyberCamp pilots, and all were met with great reviews. We published a new training video and an introductory image with which your team can practice for the entire month of September… it even has answers to the vulnerabilities, something Coaches and Mentors requested. And more is coming! AT&T has generously renewed its commitment to provide air cards for teams that need them. Thank you AT&T!

This month we will have our annual "Sneak Preview" of the new competition software, and our training materials are getting a major update. But here's the BEST news: CyberPatriot teams will now be part of the Cisco Networking Academy and have access to its products. Thank you, Cisco!

This season promises to be our biggest and best ever. Oh, don't forget that registration closes Oct. 10, so get registered and get ready for another exciting CyberPatriot season!

Bernard K. Skoch
National Commissioner
CyberPatriot
Air Force Association

Program Office Bits

REGISTRATION DEADLINE:
OCT. 10, 2014

52 DAYS until Round 1

Features

CyberPatriot VII is right around the corner. Are you ready?

Introductory Images
This September, the CyberPatriot Program Office will release Windows 7 and Ubuntu images containing basic vulnerabilities. For the first time ever, these images will include an answer key on the desktop so that new and inexperienced teams can learn how to address simple security vulnerabilities and prepare for the first round of competition. The Introductory Images will be available for the full month of September. More information to come.

Sneak Preview
From 12:00 noon - 4:00 p.m. Eastern on Saturday, Sept. 20, 2014, teams registered for CyberPatriot VII are invited to try out the newest version of the CyberPatriot Competition System (CCS).

The Sneak Preview is designed to help the CyberPatriot Program Office test the new version of CCS and is not a scored round of competition. Image difficulty will be similar to that of the Exhibition Round images that were used throughout the summer, but there will be different vulnerabilities.

An Image Download and Instructions email will be sent to registered Coaches and Mentors on or before Thursday, Sept. 18. Coaches may forward this email to their Competitors so that they may participate individually. Competitors do not need to be registered to participate in the round. Images should be downloaded before the start of the Sneak Preview.

At 11:30 a.m., a virtual chatroom will open to answer any questions about the preview and the competition in general. This chatroom will stay open for the duration of the Sneak Preview. The Image Download and Instructions Email sent to Coaches and Mentors will contain login information for the virtual meeting that will take place before and during the round.

(In scored rounds of competition, only Coaches will receive competition-related emails. Mentors will not receive competition emails outside of the Sneak Preview.)

Decryption passwords and Team IDs will be sent in a Competition Start (StartEx) Email at noon, officially starting the Sneak Preview. Coaches will receive five Team IDs for each of their teams and one for themselves. Every individual should use a different hash during the Sneak Preview. Mentors will receive one Team ID for their own use.

(In scored rounds of competition, each team will receive only Team ID to use on all their images.)

Finally, the StartEx Email will also contain a link to a survey with questions to keep in mind during the Sneak Preview. Participants should fill out this survey while on the images and submit it immediately following the end of the event.

Cisco Networking Academy Coming to CyberPatriot

Beginning this month, CyberPatriot Diamond sponsor Cisco will offer their Networking Academy to all CyberPatriot VII teams.

Stay tuned for more details!

CISCO

⚠️ Important Rules Book Amendments

There have been many important changes implemented for the CyberPatriot VII competition season. Please take time to review the following Rules Book amendments, and remember to review the Rules Book before first round competition begins.

1. Team rosters are now limited to two to six Competitors rather than two to 10 Competitors.
2. Coaches may now lead up to five, rather than three, teams.
3. Coaches may use one email address to register all five of their teams rather than a unique email address for each team.
4. The CyberPatriot Competition design has been updated to reflect middle school participation and competition tiers based on team performance. Please refer to the June 2014 edition of the CyberSentinel for a detailed explanation.

For the full version, see pages 103-106 of the current Rules Book.

More AFA CyberCamp Successes

The remaining two pilot AFA Cyber-Camps were held during the first two weeks of August, wrapping up the pilot program for the summer.

The City of San Antonio, a CyberPatriot Center of Excellence, hosted a camp at Texas A&M University. There, a group of young women completed a series of cybersecurity lessons.

CyberPatriot's newest Center of Excellence, Fairfax County Public Schools, in Virginia, also held a camp in August. Overall, the feedback was positive and the students are ready to go for the upcoming competition season.

On further review of the pilot program, the CyberPatriot Program plans to launch AFA CyberCamps nationally, so stay tuned for more information!

Top: Nearly 60 students kicking off the first day of camp at Chantilly Academy (Fairfax County). Middle: A CyberPatriot alumnus turned CyberCamp instructor, passes out hard- earned certificates to participants. Bottom: The students in San Antonio get a group picture during the last day of camp.

Coaches' Corner

- **Online Coaches' and Mentors' Meetings.** This month's Coaches' Meetings are a great time to ask any questions about the competition before the Semifinals. The first two meetings will provide round details in a slideshow with a questions afterward. The third meeting will have a shorter slide presentation and focus on questions from participants of all experience levels. Information on joining these meetings will be emailed to all registered Coaches and Mentors in the coming week. Below is the September meeting schedule.

  - Sept. 9 — 4:30 pm ET/3:30 pm CT/1:30 pm PT
  - Sept. 11 — 9:00 pm ET/8:00 pm CT/6:00 pm PT

- **Requests for AT&T Air Card.** A survey regarding air card requests will be sent to registered Coaches during the first week of September. Air cards are issued based on level of need and date of survey submission. Coaches who have not returned their air cards from previous seasons will be ineligible to receive air cards this season.

- **CyberPatriot VII Registration.** The deadline to register as a Coach for CP-VII is Oct. 10, 2014. Registration can be completed online at www.uscyberpatriot.org. Please note that individuals must complete the volunteer registration before beginning the Coach registration process. Click here for detailed instructions on how to complete the process.

Meet the CP-VI Coach and Mentor of the Year Winners!

Coach of the Year: Ken Steffey

Earlier this year, INST Ken Steffey of the Naval Sea Cadet Corps received the Centurion Battalion Unit Citation Award for his commitment to CyberPatriot. Now, Steffey has one more award to add to the list: CyberPatriot VI Coach of the Year.

Under Steffey's direction, the Centurion Battalion out of Winter Park, Fla., went from a regular team to the Top Sea Cadet team in the state and in the country, a success that has set the standard for all other Sea Cadet teams nationwide. But the success of his team is not what earned Steffey this award — It is his dedication and commitment to the program.

Being a product manager for FARO Technologies has certainly helped Steffey develop dynamic instructional skills that he applies when teaching his team. Each product and each customer is different, much like team members. Talking to each member individually to glean their situation and preferences and using this knowledge to schedule and plan practices and activities has proved effective for Steffey.

On top of his particular teaching plan, Steffey does an outstanding job ensuring that practices engage the cadets and stay interesting. Throughout the season he brings in industry engineers to talk and interact with the cadets for various aspects of the competition, mixes in mock competitions with researching specific security techniques, encourages lots of hands-on practice and gives each cadet the chance at every task, tells stories of real-life examples to reinforce relevance, and finds hundreds of resources to keep everyone active.

Planning all of these activities takes sincere dedication. Steffey has spent hundreds of hours in and out of practices researching security practices, operating system specific procedures, software, and many other resources to ensure that his team spends practices doing only relevant work and work that will increase their effectiveness in the competition. He goes above and beyond the expectations of a coach to source equipment, mentors, tools, knowledge, finances, and many other assets that were critical to Centurion Battalion's success.

"What an amazing year!" said Steffey. "I am honored to be selected as Coach of the Year from among all the excellent coaches that support this program. It is an incredible privilege to participate in such a well organized and effectively run youth competition. CyberPatriot is changing kids lives and futures, providing opportunities to learn and excel in an area that is so critical to our national security and personal freedoms. Thank you to AFA, the CyberPatriot Program Office Team, and Northrop Grumman for such a great year."

Steffey (back left) and team members enjoy a lunch break at the CP-VI National Finals Competition.

Mentor of the Year: Ron Woerner

Ron Woerner
CP-VI Mentor of the Year

Ron Woerner is a noted speaker and writer in the security industry and the director of the cybersecurity program at Bellevue University in Bellevue, Neb. He is also the CyberPatriot VI Mentor of the Year.
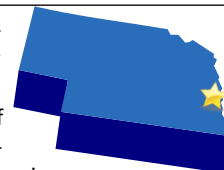
Woerner has over 20 years of corporate experience in information technology and security, working for numerous organizations. He also served as an intelligence officer in the US Air Force in the 1990s.

Woerner's easy-going teaching style is one that his team has readily responded to for the past three years. While his team may not have advanced to the National Finals, their skill level has grown by leaps and bounds, both in technical ability and in real-life application. His students are frequently amazed at his depth of knowledge about computers, have seen him answer questions about all operating systems, commercial software, anti-virus programs, networking infrastructure, hardware, and even hacking tools that he warns the kids not to try at home. But he not only teaches the do's and don'ts of cybersecurity, he also stresses how computers affect current events and how at risk companies and governments really are.

Woerner's lessons are not just in the classroom. In fact, his professional network has allowed his team to visit the AIM Youth @ INFOTEC, the Air Force Weather Agency, an Offutt Air Force Base communications squadron, and Omaha's FBI Cyber Crimes laboratory.

"I get as much from the student competitors as they get from me. It's such a pleasure to watch these kids learn and grow throughout the year." said Woerner. "They move from being newbies to blooming cybersecurity professionals."

As for next season, Woerner will be working once again with Bellevue East High School. He said, "CyberPatriot provides so many real-world learning opportunities for the students. They become skilled on the very tools and technologies used throughout the industry. We need more cyber warriors and CyberPatriot helps to fill that void.

"Ron's personal mission is to develop the computer professionals who are needed in this country." said CyberPatriot competitor William Ickes. "I am glad that he has chosen my CyberPatriot team as one of his ways to a make difference for the future."

Several of Woerner's students at Bellevue East High School work through a practice image.

Northrop Grumman Expands CyberPatriot Through Partnership with Cybersecurity Challenge UK

As part of the company's commitment to cybersecurity and STEM education, Northrop Grumman announced last month that it has entered into a partnership with Cyber Security Challenge UK under which it will bring the CyberPatriot program to the United Kingdom (UK). The competition will be known in the UK as CyberCenturion and will serve as a new way to inspire and nurture cyber talent to build a pool of talented cyber professionals.

"CyberPatriot has grown in the US at a phenomenal rate as young people are inspired by the opportunity to learn technical cyber defense skills while developing their leadership, teamwork, and communication skills," said Diane Miller, Northrop Grumman program director for CyberPatriot. "This past year has been marked by great expansion for the program, with the middle school launch, the camp pilot and now with international participation. I'm thrilled that students across the UK will have this wonderful opportunity, thanks to the vision of Cyber Security Challenge UK and the support of our outstanding association partner, AFA."

CyberCenturion will enable young people interested in the world of cybersecurity to get their first real experience with the scenarios and challenges that today's professionals have to grapple with on a daily basis. It will sit between the existing Cyber Security Challenge UK schools program for secondary schools (roughly equivalent to US middle school-level) and the main competition program (equivalent to US college-level students and beyond), and will be designed specifically for young people, under the age of 18, who have an interest in cyber, but have yet to find a way to apply their knowledge to the real challenges that professionals face.

Like CyberPatriot, CyberCenturion starts in October with a two-week practice round, followed by qualification rounds in November and January, and the final competition in April. Team size and the actual competition mirror the CyberPatriot program; however, only the top six teams advance to a face-to-face final competition. No word yet on a UK/US face-off!

Cyber Security Challenge UK is a nationwide program aimed at bringing more talented people into the cybersecurity profession and to build a bigger UK cyber talent pool to help address the skills shortage that affects government bodies, businesses, and citizens alike. For more on CyberCenturion, visit http://cybersecuritychallenge.org.uk/.

Three members of the Spokane Public Schools CyberPatriot Center of Excellence continued their training with the National Science Foundation and the National Security Agency. Subjects covered were Security Fundamentals, Cryptography, Linux and Chrome Operating Systems, Social Engineering, Networking/Networking Defense, Malware, and Digital Forensics. Each instructor was provided with a Chrome OS Notebook to use for training their CyberPatriot competitors.

Pictured left to right are Retired MSgt Loyd Patton, John R. Rogers AFJROTC Coach; Terry Yeigh, John R. Rogers Open Division Coach; Dr. Golden Richard III; and Tony "Skip" Crater, Ferris Open Division Coach.

This Month in Cyber History

Sept.25, 1987 — IBM announces plans to develop a new design for transmitting information within a computer, called Micro Channel Architecture, which it said could transfer data at 160 million bytes per second or eight times faster than the fastest speed at the time. The basic data rate of the Micro Channel was increased from ISA's 8 MHz to 10 MHz. Although IBM was hoping to make its system the industry standard, manufacturers of IBM-compatible computers largely chose other methods.

For more information, visit:
www.computerhistory.org/tdih/September/25/

NCWIT Award for Aspirations in Computing

The National Center for Women & Information Technology (NCWIT) Award for Aspirations in Computing honors young women at the high-school level for their computing-related achievements and interests. Awardees are selected for their computing and IT aptitude, leadership ability, academic history, and plans for post-secondary education.

This is a great opportunity for CyberPatriot competitors, past and present. Applications will be accepted from Sept. 15 through Nov. 2.

Apply today at http://www.aspirations.org/!

CyberPatriot Coach Chris Sutton (left) and Competitor Angela Cheng (third from left) of Grissom High School were recognized for the 2014 Alabama Aspirations in Computing Award. Photo courtesy of NCWIT.