Wi-Fighter Cyber Challenge
PA National Guard Hack-a-thon

Who: Facilitated by the PA National Guard Cyber Team and targeted to Pennsylvania High School & College STEM Students

What: Online Raspberry Pi Hack-a-thon

When: Thursday, July 23rd from 9AM to Noon ET

Where: Virtual Event via Virtual Zoom Meeting

Why: Promote cybersecurity, STEM careers, and the National Guard

How: Event preparation and registration can be found at www.pangcyber.com -- participants will have the duration of the exercise 9AM-Noon ET on Thursday 7/23 to score as many points as possible via the challenge website. At the end of the competition, attendees and scores will be recorded and attendees will be mailed a physical Raspberry Pi for participating!

Overview

Virtual Exercise via Zoom on July 23ʳᵈ from 9AM to Noon ET

This exercise is targeted towards individuals with a strong technical aptitude and a desire to learn Linux / Unix hardware and software fundamentals. The skills taught in this exercise are foundational to a career in cybersecurity and pen testing.

Experience

You will upskill with each challenge starting from square one. By the end, you will have a solid foundation to continue learning advanced skills.

- ***SBC Hardware*** – Learn about Single Board Computer hardware.
- ***SBC Setup*** – Learn how to get a SBC up and running from scratch.
- ***Linux Foundations*** – Learn the basics of the Unix/Linux OS.
- ***Command Fundamentals*** – Learn how to interact with the Linux Shell.
- ***Encoding*** – Learn how to manipulate files.
- ***Cryptography*** – Learn how to crack a password.

Technology

The tools used in this exercise are meant to expose you to Linux and cybersecurity, but there are infinite ways to solve these challenges!

- ***Raspberry Pi*** – This exercise will use the Raspberry Pi hardware platform to demonstrate and train on various cybersecurity concepts.
- ***Kali Linux*** – The Kali Linux cybersecurity Linux OS will be installed, configured and used via the Pi during this exercise.
- ***Cybersecurity Apps*** – These apps are installed in Kali Linux and will be used to teach cybersecurity concepts.
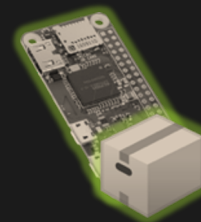
[1] Register for the Virtual Wi-Fighter

You must register for the event using the registration link on the page below:

www.pangcyber.com

An exercise facilitator will contact you to provide additional information before the event.

[2] Prepare Additional Items

You need to a few things to participate…

1) PC or Mac Computer (with admin privileges)
2) Internet connection for your computer
3) Access to Zoom via phone or computer

[3] Setup Software Wi-Fighter Kit

You will receive an email with additional instructions for logging in and for downloading exercise files to your PC/Mac before the event.

[4] Attend the Virtual Zoom Event

You will receive an email with instructions for attending the Zoom event. All registered attendees will be shipped a physical Raspberry Pi Zero W after completing the exercise!

Key Notes for the Event

Final scores will be recorded at the exercise conclusion and the winners will be announced.

- **Score points by completing challenge questions.**

  You will receive points as you answer questions. If you are a beginner, make sure you watch the YouTube videos, they will lay the foundation for the harder exercises. Hints are available with each question, but the bigger the hint, the more points you give up!

- **The National Guard facilitators will be available via Zoom for questions throughout the exercise.**

  We will check-in with the group, but feel free to ask your questions verbally or direct message us via Zoom to chat at any time.

- **The Wi-Fighter Challenge site has participant LinkedIn contact info, please connect with each other and help your buddy.**

  The cybersecurity community is small and collaborative, make sure you take the opportunity to connect with each other via LinkedIn.

- **All registered participants that attend the exercise will receive a Raspberry Pi Zero W CanaKit!**

  All registered attendees will get a physical Raspberry Pi mailed to them -- be sure to stay until the end to secure your prize!
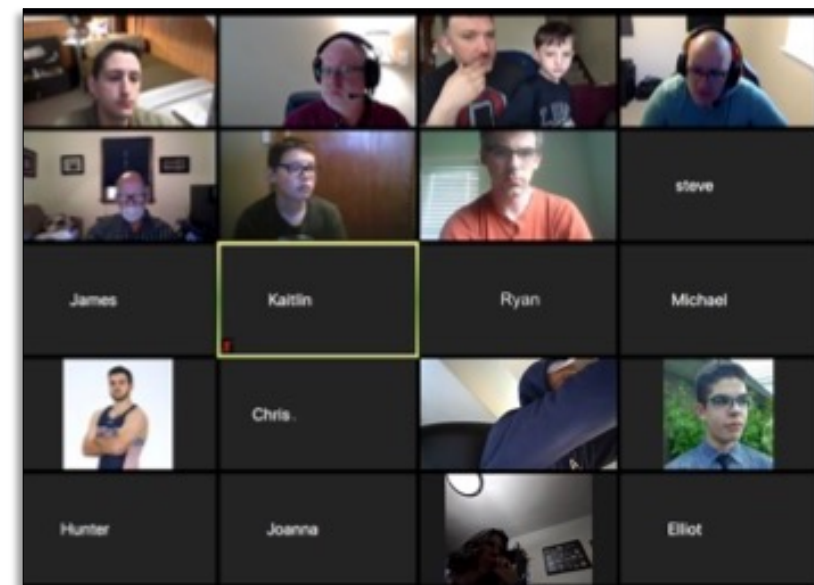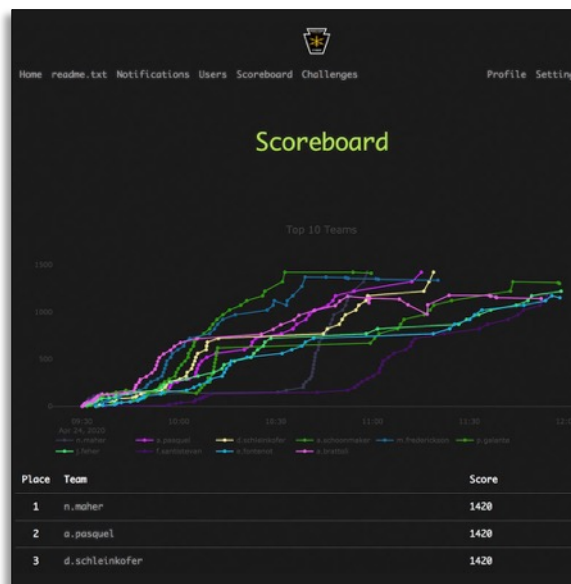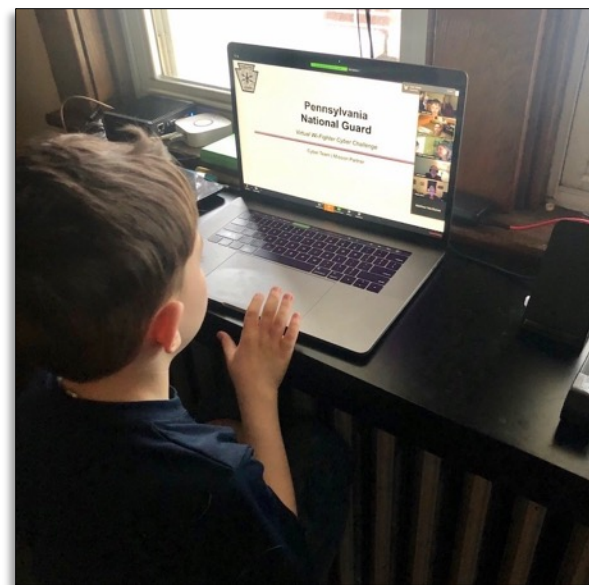
Press Releases from Past Events

The Wi-Fighter Cyber Challenge has received excellent feedback from every participating organization.

Penn State University [36 Participants]
https://news.psu.edu/story/598706/2019/11/18/academics/pa-national-guard-hosts-cyber-wi-fi-hacking-event-penn-state

Jim Thorpe Area High School | Monroe Career & Technical Institute [18 Participants]
https://www.desales.edu/news-events/news/article/2020/01/10/high-school-students-test-hacking-skills-in-wi-fighter-cyber-challenge
https://www.pa.ng.mil/Site-Management/News-Article-View/Article/2043511/pa-guard-wi-fighter-cyber-challenge-engages-students
https://www.dvidshub.net/image/5989417/pa-guard-wi-fighter-cyber-challenge-engages-students

DeSales University [71 Participants]
https://www.pa.ng.mil/Site-Management/News-Article-View/Article/2176362/pa-national-guard-holds-virtual-cyber-event
https://www.dvidshub.net/news/369167/pa-national-guard-holds-virtual-cyber-event
https://archive.bloomu.edu/news-releases/20-05-06

PA Army National Guard | Defensive Cyber Operations – Element

Protect & Defend · Detect & Analyze · Respond · Train

Who We Are

The DCO-E is a Pennsylvania State first response asset. We provide surge capacity to national capabilities and focus on domestic cyber operations.

Our Mission

To conduct Defensive Cyberspace Operations – Internal defensive measures to secure the Department of Defense Information Network in Pennsylvania. On order, DCO-E's protect critical infrastructure and respond to State cyberspace emergencies as directed by The Adjutant General or Governor.

Our Team

DCO-E members are highly trained and technically qualified, possessing the skills and knowledge required by today's defensively-oriented cyber forces.

Mission Command

Team Chief   Deputy

Information Protection Leads

Sr. Protection Lead   Protection Lead

Information Systems Specialists

Systems Lead

Sr. Specialist   Sr. Specialist   Sr. Analyst

Jr. Specialist   Jr. Analyst

Services We Provide

Vulnerability Assessments

- ☑ Network-based
- ☑ Host-based
- ☑ Wireless
- ☑ Application Scans
- ☑ Cloud & Vendor Services
- ☑ Mobile Devices & Apps

Penetration Testing

- ☑ External
- ☑ Internal
- ☑ Web Application
- ☑ Social Engineering
- ☑ Physical Security
- ☑ Mobile Devices & Apps

Vulnerability Remediation Assistance

- ☑ System STIG/SCAP Advisory
- ☑ Vulnerability Prioritization
- ☑ Key Vulnerability Patching

Cyber Incident Response

- ☑ Critical Service Restoration
- ☑ Digital Forensics
- ☑ Data Recovery
- ☑ Infrastructure Recovery
- ☑ Malware Advisory
- ☑ IDS Threat Monitoring

General Cybersecurity Support

- ☑ Election Support
- ☑ Cyber Exercise Development
- ☑ Miscellaneous SME Support

Training Opportunities

- ☑ Cybersecurity Awareness Training
- ☑ Cyber Exercise & Mission Partnerships
- ☑ Joint Cyber Training Facility at Fort Indiantown Gap
- ☑ Mobile Cyber Training Team

Contact Us

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Our Impact Since 2014

Cyber Assessments

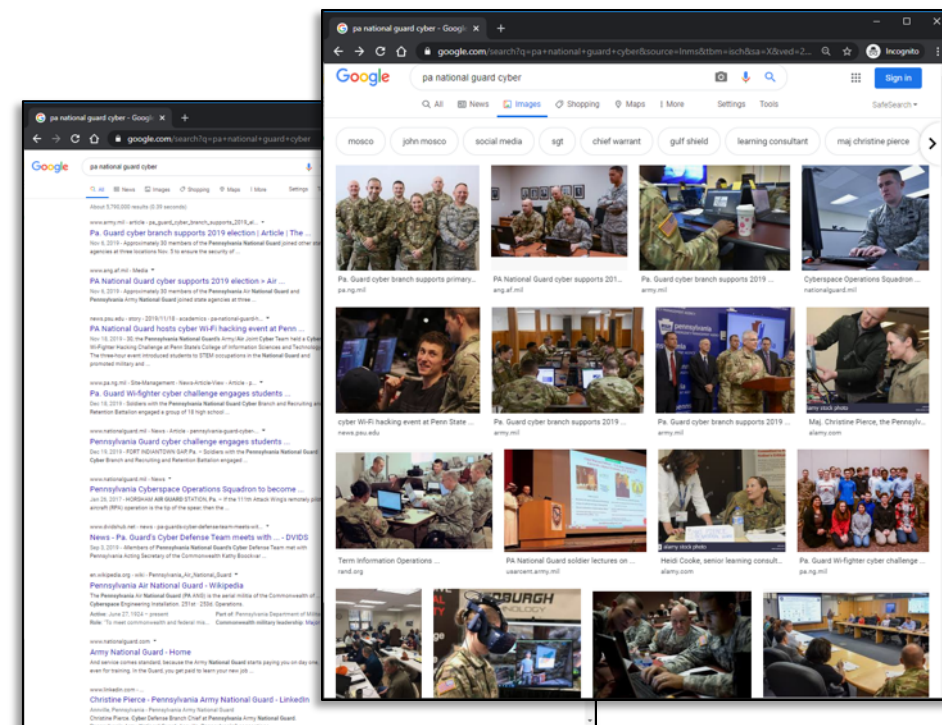**19** *County, City, State, Local Governments & Public Education Customers*

Pennsylvania Missions

3 *Papal, DNC National Convention & Presidential Inauguration Missions*

Election Support

7 *Supported Special, Primary & Presidential Elections*

Cyber Training Exercises

32 *Cyber Shield, Wi-Fighter, Warfighters, GridEx, FEMA TTX, etc.*

SPP Missions

10 *Amber Mist, Baltic Ghost, Lithuanian Elections, Vigilant Guard, etc.*

Industry Cyber Events

50+ *PA Cyber Incident Annex Development, CCAP, Public Utility Forum, etc.*

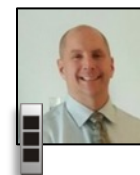### Just Google "PA National Guard Cyber"

Contact Us

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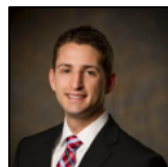C: 717-712-6474
E: jeremy.m.marroncelli.mil@mail.mil

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Thank you!
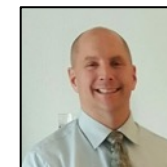
We are looking forward to hacking with you!

Christine Pierce
MAJ, SC, PAARNG
DCOE Team Chief
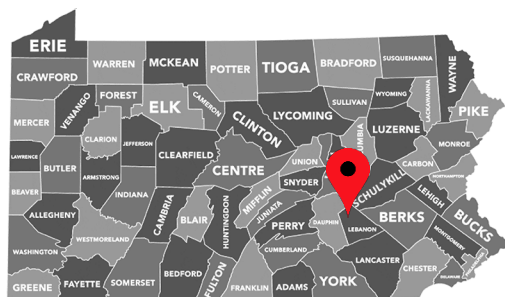
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