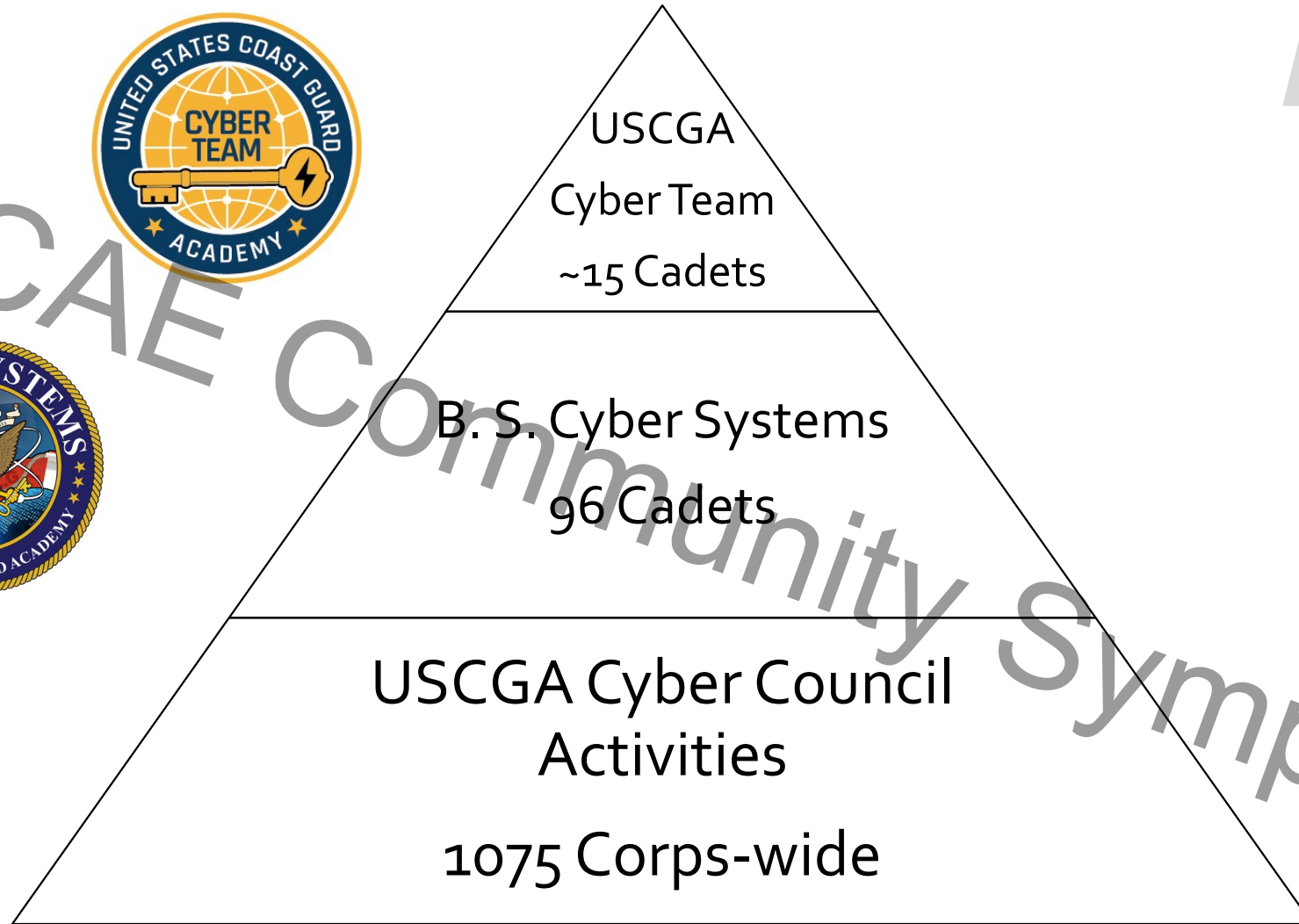




# Coast Guard Academy Cyber Defense Awareness Training

LCDR Jason Veara

US Coast Guard Academy



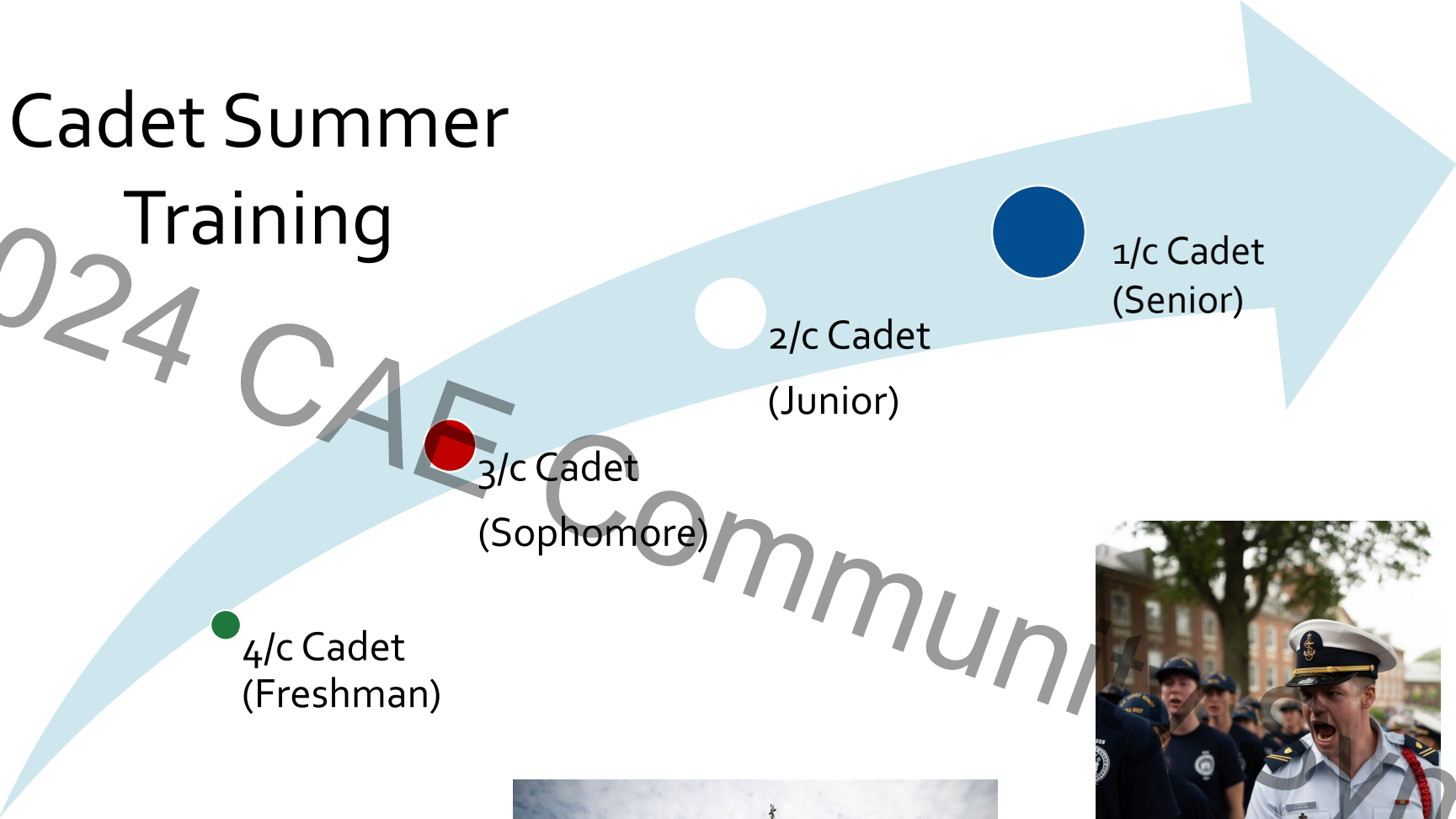
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# Cadet Summer Training

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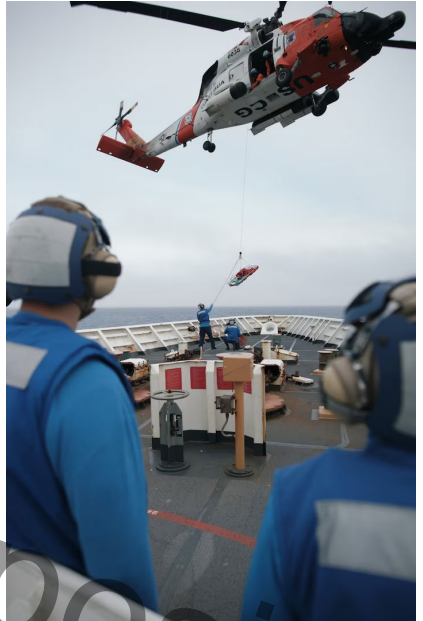
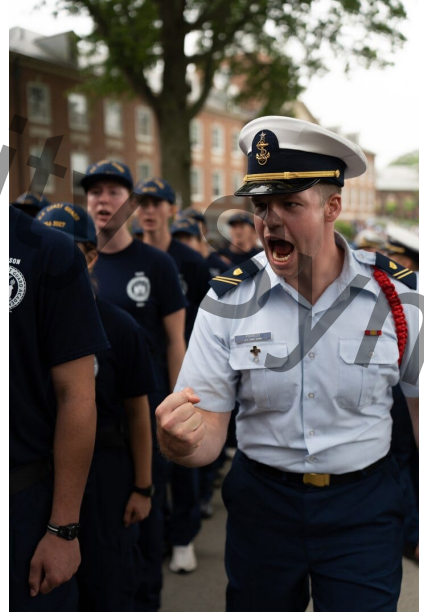


4/c Cadet  
(Freshman)

3/c Cadet  
(Sophomore)

2/c Cadet  
(Junior)

1/c Cadet  
(Senior)



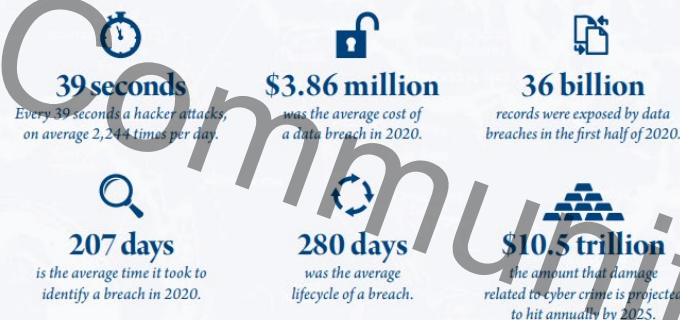
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# Why Cyber Defense Training?

## CYBER STRATEGIC OUTLOOK STATISTICS

Threats from cybersecurity continue to evolve rapidly. Since the 2015 strategy, evolving technology has empowered users with sophisticated tools to increase productivity; meanwhile, cyber attacks on the same technology have continued to evolve in tandem. As the backbone of the United States' economy, the Marine Transportation System (MTS) is a prime target for malicious cyber actors who seek to disrupt our supply chain.

### CYBER ENVIRONMENT CHANGES SINCE 2015 STRATEGY



### THE MARINE TRANSPORTATION SYSTEM

25,000 miles of coastal and inland waterways, serving 361 ports, 124 shipyards, over 3,500 maritime facilities, 20,000 bridges, 50,000 Federal aids to navigation, and 95,000 miles of shoreline that interconnect with critical highways, railways, airports, and pipelines, and undersea cables carrying 99% of U.S. communications abroad.



- Cadets will receive cyber security training and participate in hands-on exercises to reinforce material.
- Interactive Training to expose Cadets to Coast Guard Cyber Security Strategy.
- Expose Cadets to live malware and experience the effects of poor cyber hygiene in a safe a segregated network environment.

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# USB Device Security



## USB Rubber Ducky

- Acts like a keyboard when plugged into a computer

## OMG Cable

- Extremely powerful and virtually impossible to tell the difference from a real cable
- Injections happen from the USB A side of the device
- Control via Wifi, key logger functionality, store hundreds of attacks.

## Demonsed EDU

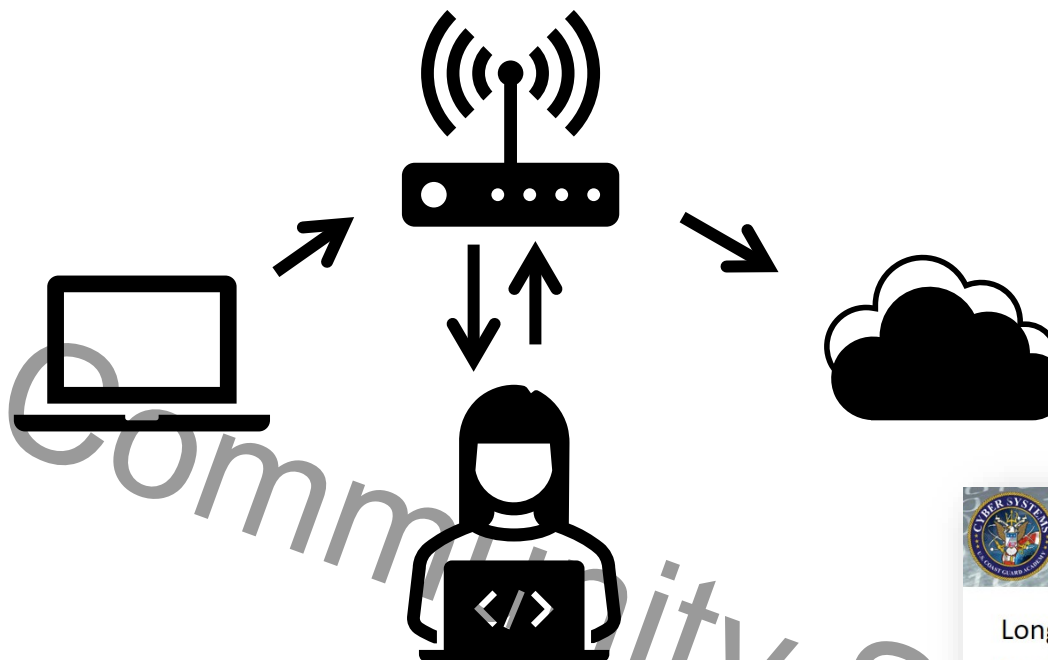
- Turn ANY USB cable into a malicious device.
- Relatively inexpensive
- Extremely small
- Has some limitations



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# Internet Security & Passwords



### How Long? How Complex?

Long?  
Complex?  
Changed Daily?

Number of Characters	Numbers Only	Lowercase Letters	Upper and Lowercase Letters	Numbers, Upper and Lowercase Letters	Numbers, Upper and Lowercase Letters, Symbols
4	Instantly	Instantly	Instantly	Instantly	Instantly
5	Instantly	Instantly	Instantly	Instantly	Instantly
6	Instantly	Instantly	Instantly	Instantly	Instantly
7	Instantly	Instantly	Instantly	Instantly	Instantly
8	Instantly	5 min	22 min	1 hour	8 hours
9	Instantly	2 min	1.9 hours	2 days	2 weeks
10	Instantly	58 min	1.2 days	2 weeks	3 years
11	2 sec	1 day	2 weeks	21 years	400 years
12	25 sec	3 weeks	100 years	100 years	100 years
13	4 min	1 year	11k years	10k years	700 years
14	41 min	11 years	100k years	100 years	2000 years
15	4 hours	8 years	43k years	400k years	13k years
16	2 days	70 years	700k years	700k years	70k years
17	4 weeks	1000 years	100k years	100k years	10k years
18	6 months	10k years	10k years	10k years	700 years

**TIME IT TAKES A HACKER TO BRUTE FORCE YOUR PASSWORD**

© 2014 HYPE SYSTEMS - Data sourced from HowSecureMyPassword.net

Home Notify me Domain search Who's been pwned Passwords API About Donate

## ';--have i been pwned?

Check if your email address is in a data breach

email address

Using Have I Been Pwned is subject to the terms of use.

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# Wireless Security



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## Phishing Campaign

Very important notice

upmc.edu <info@kratzkehl.de>  
To Williams, Richard J. LT (EDU)

Dear watsong

**Your mailbox is almost full.**

496MB 500MB

To avoid account from being shutdown kindly [Click here.](#)

Kindly upgrade mailbox storage to avoid any

Thanks,  
upmc.edu.

upmc.edu provided © 2020 All rights reserved

[EXTERNAL] Microsoft Missed Messages

Office 365 <p.stuart@fujicarbon.co.jp>  
To Williams, Richard J. LT (EDU)

Message from Trusted server.

**Office 365**

Dear user:

You have 3 quarantined messages in your quarantine portal as of Monday.

You can review these here and choose what happens to them.

Hello Williams, Richard J. LT (EDU)

Here's your email review for the past week.  
20 Incoming messages

are currently hanging on your server because your storage memory is very low.

Kindly review these messages and increase your storage memory by clicking below to deliver these messages to your inbox.

[Review My Messages](#)

Review generated for Richard.J.Williams@uscaa.edu

Fri 5/24/2019 10:35 AM

**office-365@security.onmicrosoft.com** **FAKE EMAIL ADDRESS**

Re: Your Office 365 account is about to be deleted

To: XXXX XXXXX

invoice.pdf 2 MB **CONTAINS VIRUS**

**Office 365** Microsoft

**Your Office 365 Business Essentials**

**Dear Customer** **TOO GENERIC**

Sign in to the Office 365 Admin center To Pay your **Invoice due now** **URGENCY**

View this message in the Office 365 message center

To customize **whats included** in this email, who gets it, or to unsubscribe, [set your Message center preferences.](#) **BAD LINKS**

[http://66.160.154.156/invoice](#)  
Click or tap to follow link.

**POOR GRAMMAR**

Edit release preferences

Choose the release track for your organization. Use these settings to join First Release if you haven't already.

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## Successes and Future Goals

### Successes –

- ✓ Strive for hands on as much as possible
- ✓ Move frequently
- ✓ “Magic tricks” are impactful
- ✓ End the day with a CTF

### Future Goals –

- How do we measure success?
- Export to local/CAE community
- Expand topics, maintain relevancy

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Questions?

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(860)444-8299

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