CISA

CYBERSECURITY & INFRASTRUCTURE SECURITY AGENCY

Office of the Chief People Officer (OCLO)

Office of the Chief People Officer (OCPO)

Academic Programs and Outreach

Associate Chief: Mike Howell

This presentation was given at the 2023 National Cybersecurity Education Colloquium

CyberCorps®: Scholarship for Service

This presentation was given at the 2023 National Cybersecurity Education Colloquium

- CISA supports a federal partnership with the National Science Foundation (NSF) and the Office of Personnel Management (OPM) to provide scholarship funding to cybersecurity-related degree programs.
  - Scholarship recipients serve in a cybersecurity role within a U.S. government entity for a period of time equal to the length of their scholarship.
  - CISA provides $400K to OPM via Interagency Agreement (IAA) support the in-person fair (JAN) and virtual job fair (FALL) each year. IAA has a base year with base year and 4 option years.
  - CISA provides program management oversight with NSF/OPM

National Centers of Academic Excellence

This presentation was given at the 2023 National Cybersecurity Education Colloquium

- CISA partners with the National Security Agency (NSA) and Federal Bureau of Investigation (FBI) on the National Centers of Academic Excellence in Cybersecurity (NCAE-C) program.
  - The program designates two- and four-year institutions that meet rigorous program requirements as Centers of Academic Excellence (CAE).
  - CISA is a federal sponsor for the NCAE Cyber Defense and Research designations
  - There are over 420 CAE designated institutions.

NICE Challenge Project

This presentation was given at the 2023 National Cybersecurity Education Colloquium

- CISA contracted with California State University San Bernardino (CSUSB) to develop NICE Cyber Challenges for Industrial Control Systems (ICS) and Micro-Challenges for the public.
  - FY21 Funding- $1M
    - CISA contracted with CSUSB to develop 6 Industrial Control System NICE Challenges. Available to CAE institutions to use in cybersecurity curriculum and hands on learning experiences
  - FY22 Funding- $1M
    - CISA contracted with CSUSB to develop 14 NICE Micro-Challenges focused on the CISA Cybersecurity Career Pathway Tool based on the NIST NICE Cybersecurity Workforce Framework

Future Projects

This presentation was given at the 2023 National Cybersecurity Education Colloquium

- FY23 Funding-
  - $1.27M
    - CISA is contracting with a CAE designated school to develop 12 Threat Sandbox Challenges based on the CISA Known Exploited Vulnerabilities (KEVs) Catalog
  - $1.5M
    - CISA is contracting with a CAE designated university to continue to support a National Cybersecurity Workforce Development program.

- FY24 Funding-
  - More planned cybersecurity workforce development initiatives

US Cyber Team Sponsorship

This presentation was given at the 2023 National Cybersecurity Education Colloquium

- CISA is a founding sponsor of the first US Cyber Team
  - The first US Cyber Team competed at the International Cybersecurity Challenge (ICC) in Athens, Greece from June 13-17, 2022.
  - The second US Cyber Team will compete at the International Cybersecurity Championship & Conference (IC3) in San Diego, CA from August 1-4, 2023.
  - Sponsorship is for $50K/year. We have just renewed for season III from July 23-June 24
  - Get your cyber students involved!
    - Great opportunity to compete and gain cyber experience.

Other Sponsorships (cont'd)

This presentation was given at the 2023 National Cybersecurity Education Colloquium

- Hack the Building 2.0, Hospital Edition($55,000)
  - Hosted by the Maryland Innovation and Security Institute (MISI) as part of the NCAE-C program, this competition stresses the importance of building cybersecurity and medical cyber. Event occurs September 18-22.

- National Collegiate Cyber Defense Competition ($30,000)
  - Hosted by the University of Texas at San Antonio, the competition enables college students to demonstrate competency in attack and defense of live systems. Event is currently being built and will take place in the spring of 2024.

Other Sponsorships

This presentation was given at the 2023 National Cybersecurity Education Colloquium

- Cyber Force Competition ($15,000)
  - Hosted by the Department of Energy, the competition is critical infrastructure focused on the energy sector. Year round sponsorship of the Cyber Force program, including the upcoming competition on November 3-4.

- Social Engineering Competition ($10,000)
  - Hosted by Temple University, the competition teaches students the tools, techniques, and procedures used by social engineers as well as ways to prevent victimization. The theme for the 2024 event is Tax Scams. The competition is currently being build from August 2023-December 2023 to accommodate the Internal Revenue Agency's participation in the event. (Spring 2024, dates to be announced).

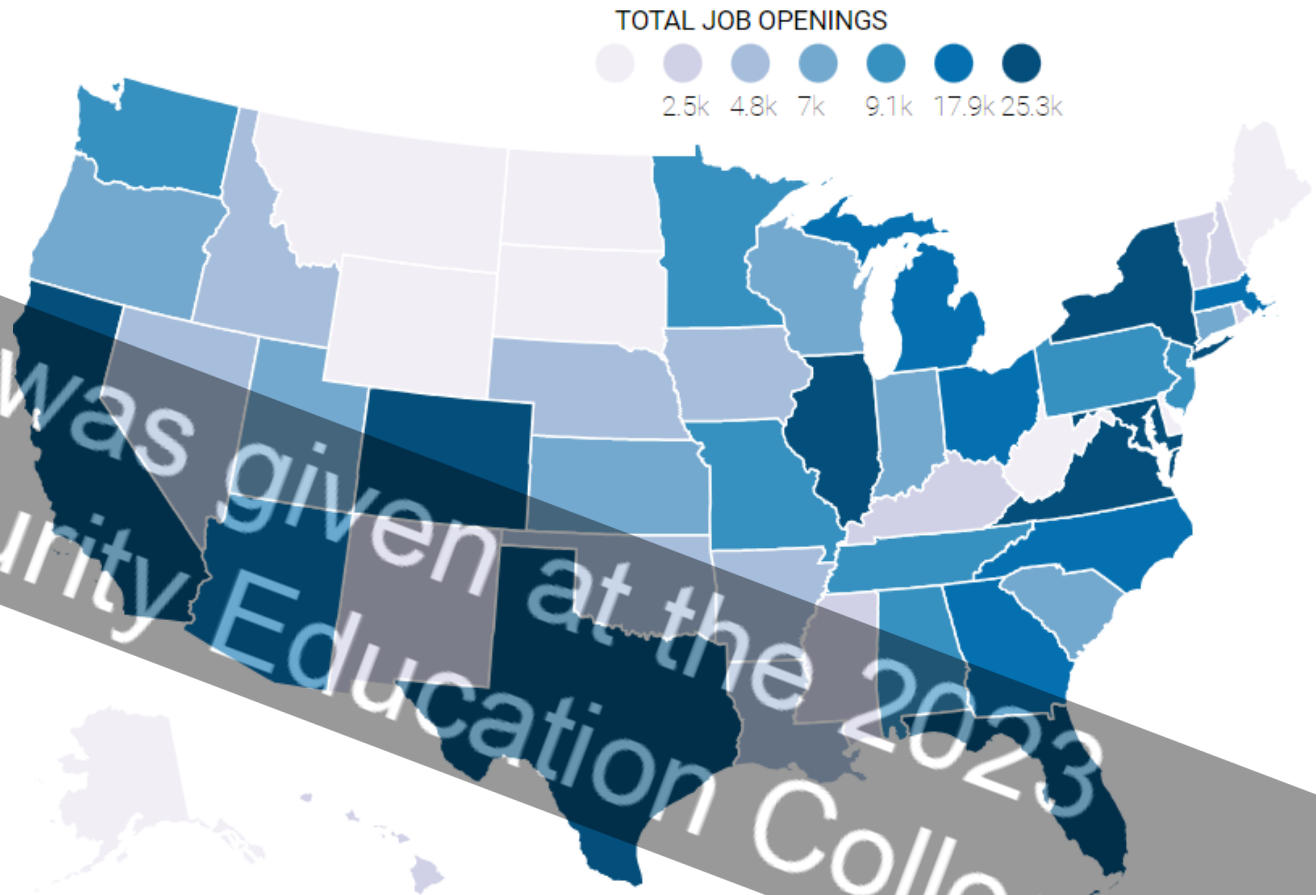
EXPLORING CYBER CAREERS WITH CYBER CAREER PATHWAY MICRO-CHALLENGES

This presentation was given at the 2023 National Cybersecurity Education Colloquium

Cybersecurity Careers

- CyberSeek Heat Map
- **660K** unfilled cybersecurity jobs nationwide
- **3.4** million unfilled cybersecurity jobs globally
- Job openings have increased **77%** from 2010 to 2023

www.cyberseek.org



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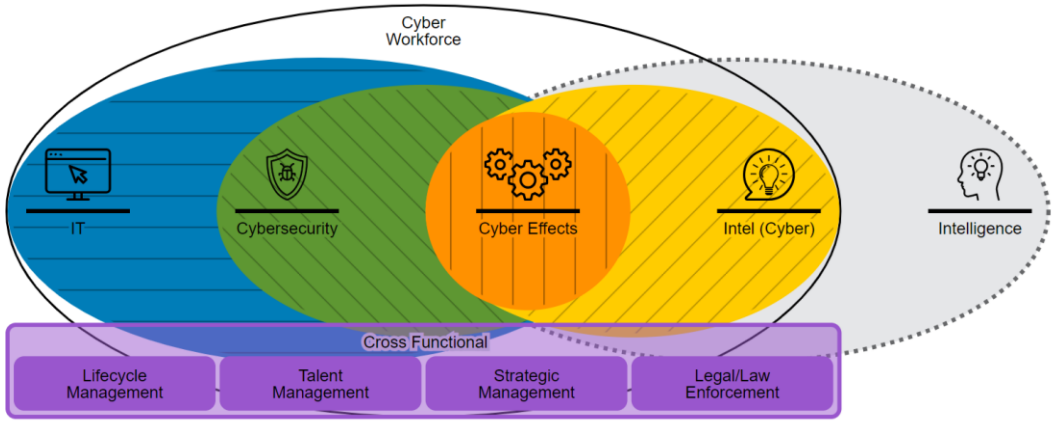
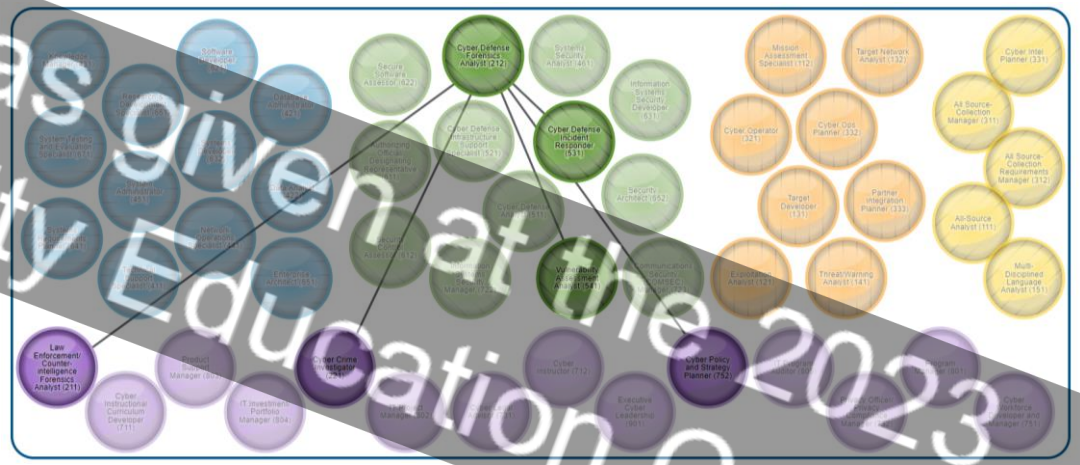
Cyber Career Pathway Tool

- NICE Cybersecurity Workforce Framework
- De-mystifying cyber careers
- Explore **52 work roles**
- Knowledge/Skills/Abilities
- Related Work Roles
- On Ramps/Off Ramps

www.niccs.cisa.gov





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Cyber Career Pathway Tool

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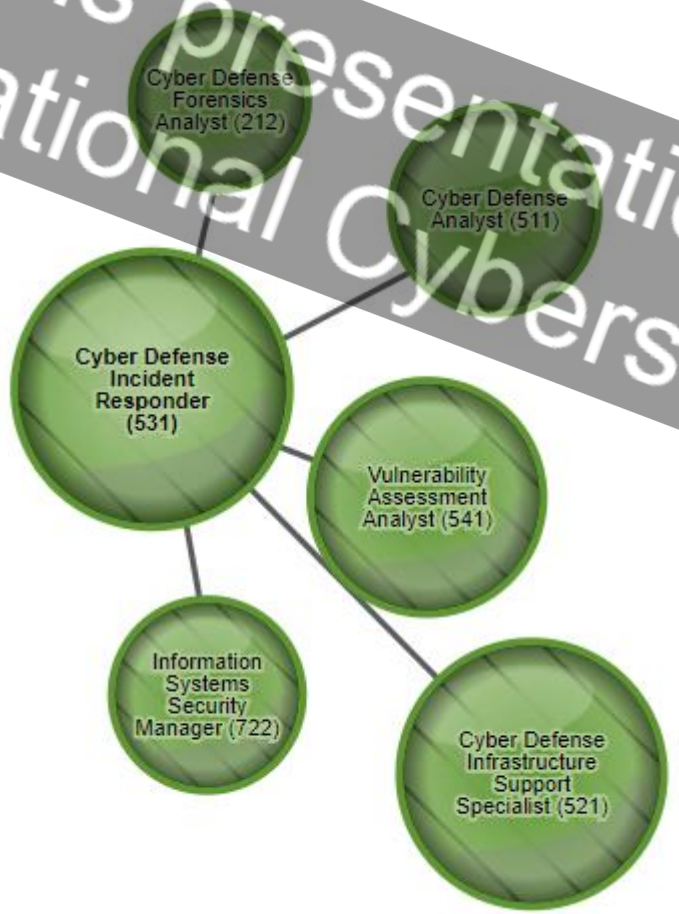

Cyber Defense Incident Responder

Investigates, analyzes, and responds to cyber incidents within the network environment or enclave.

Community: Cybersecurity

Category: Protect and Defend

Specialty Area: Incident Response

OPM ID: 531

See USAJOBS listings coded for Cyber Defense Incident Responder

Related Functional Titles

The following job titles have been identified by subject matter experts as either alternative titles for this work role or including the functions of this work role as part of their job duties.

- Computer Network Defense Incident Responder
- Computer Security Incident Response Team Engineer
- Disaster Recovery Specialist
- Incident Handler
- Incident Responder
- Incident Response Analyst
- Incident Response Coordinator
- Incident Response Engineer

View Cyber Career Pathway Documents

Cyber Career Pathway Tool

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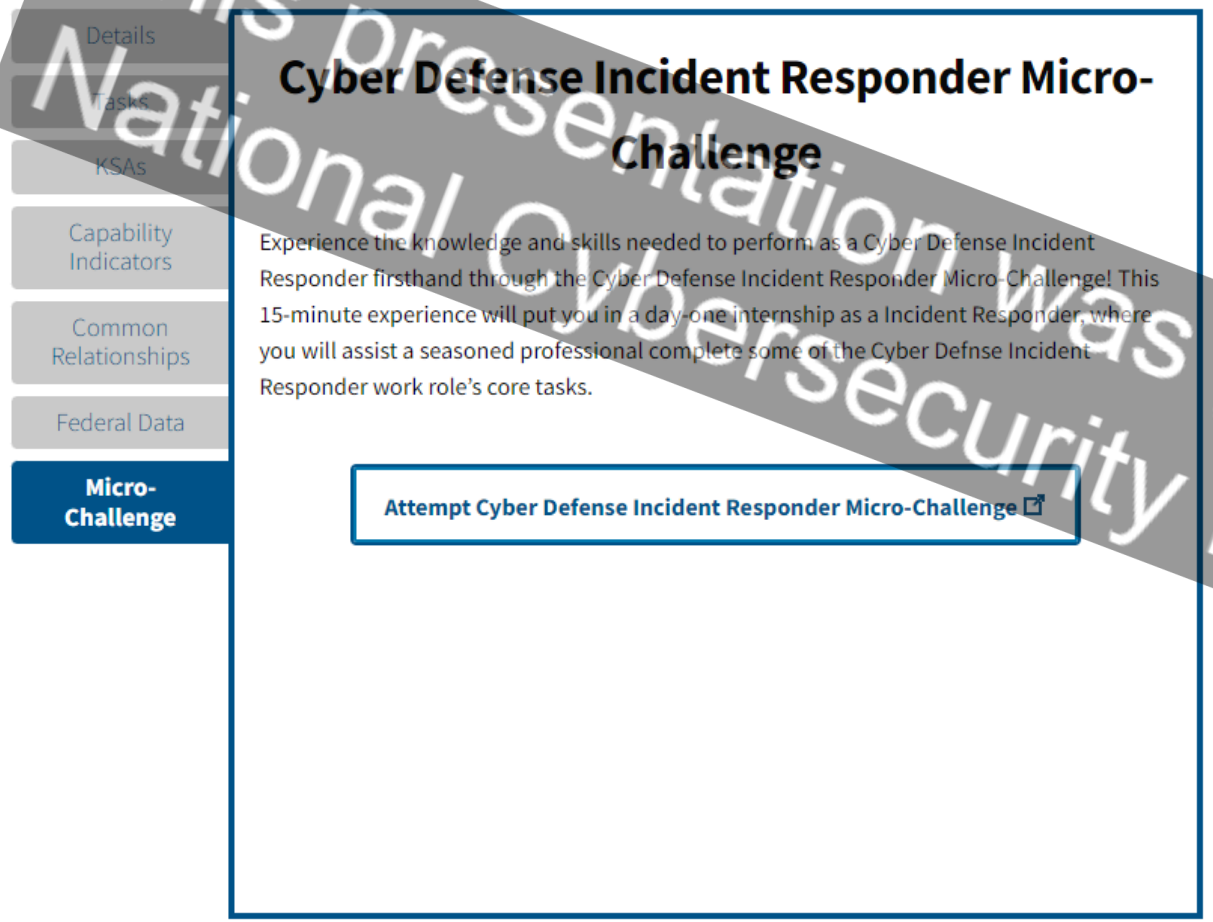
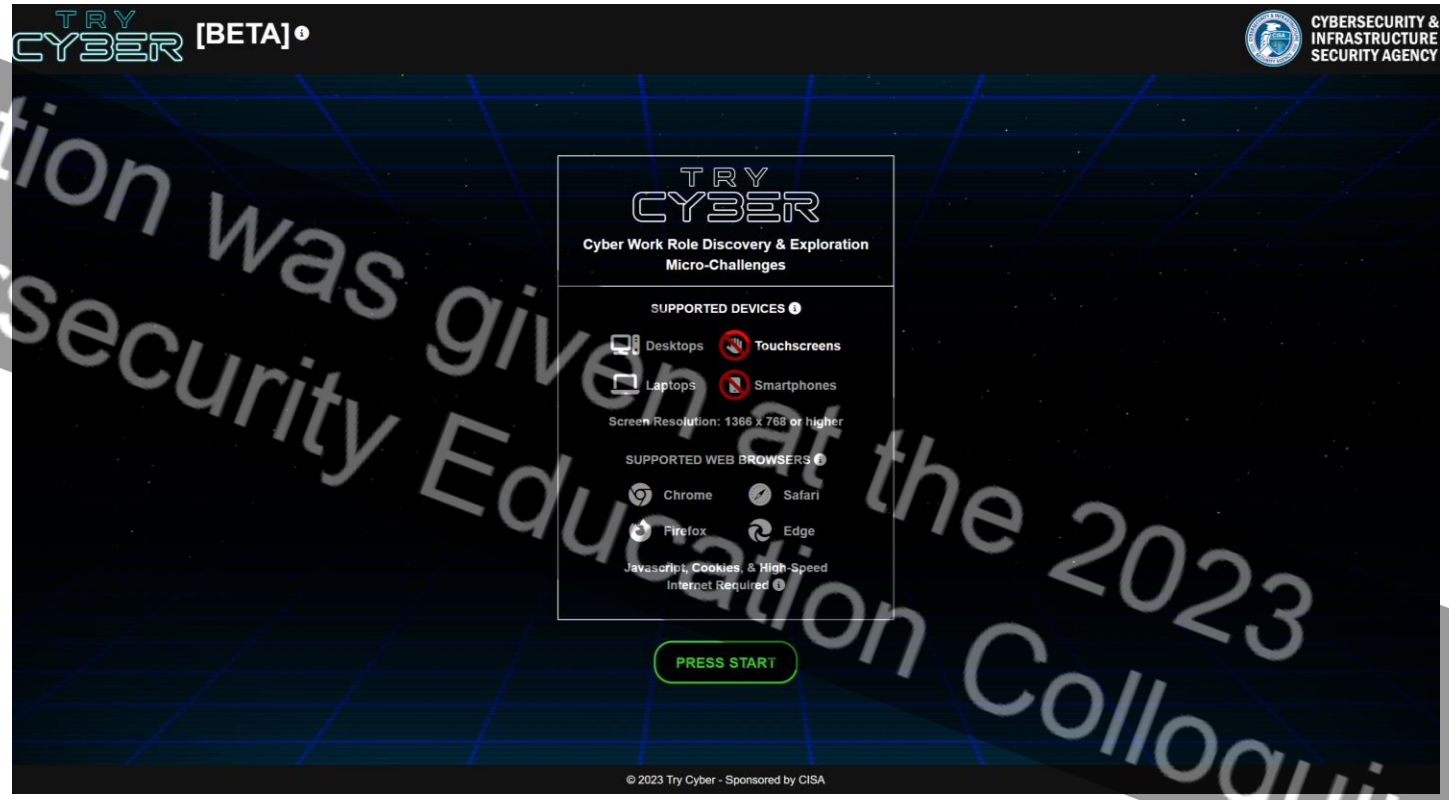


Hear from cybersecurity professionals on select workforce roles.

What does the work really look like?

This presentation was given at the 2023 National Cybersecurity Education Colloquium

Challenge yourself on select cybersecurity workforce role tasks.



www.niccs.cisa.gov/workforce-development/cyber-career-pathways-tool

About the Micro-Challenges

This presentation was given at the 2023 National Cybersecurity Education Colloquium

- Cybersecurity **career exploration and discovery**
- **Demystify** cybersecurity careers
- Users will **see themselves** in a cybersecurity workforce role
- Provide first-hand experience of the tasks, knowledge, and skills performed in the top cybersecurity workforce roles
- Environment guides users through the challenge while providing more information about the workforce role
- Based on NICE Cybersecurity Workforce Framework Core Tasks
- **15-minute** challenges geared towards beginners

10 Cyber Work Roles

Open jobs according to CyberSeek Heat Map

- Cyber Defense Analyst (42,409)
- Cyber Defense Incident Responder (56,288)
- Data Analyst (192,743)
- **Database Administrator (44,672)**
- Law Enforcement/Counterintelligence Forensics Analyst (11,198)
- **Network Operations Specialist (120,428)**
- **System Administrator (119,594)**
- Systems Security Analyst (139,074)
- **Technical Support Specialist (78,332)**
- Vulnerability Assessment Analyst (103,896)

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Micro-Challenge Overview

This presentation was given at the 2023 National Cybersecurity Education Colloquium

What to Expect

- User is placed into work enviornment as a day-one intern
- A mentor guides the user through the challenge, sharing knowledge and skills about the work role along the way
- Users may progress through challenges even if they are unable to successfully complete a challenge

Micro-Challenge Tasks

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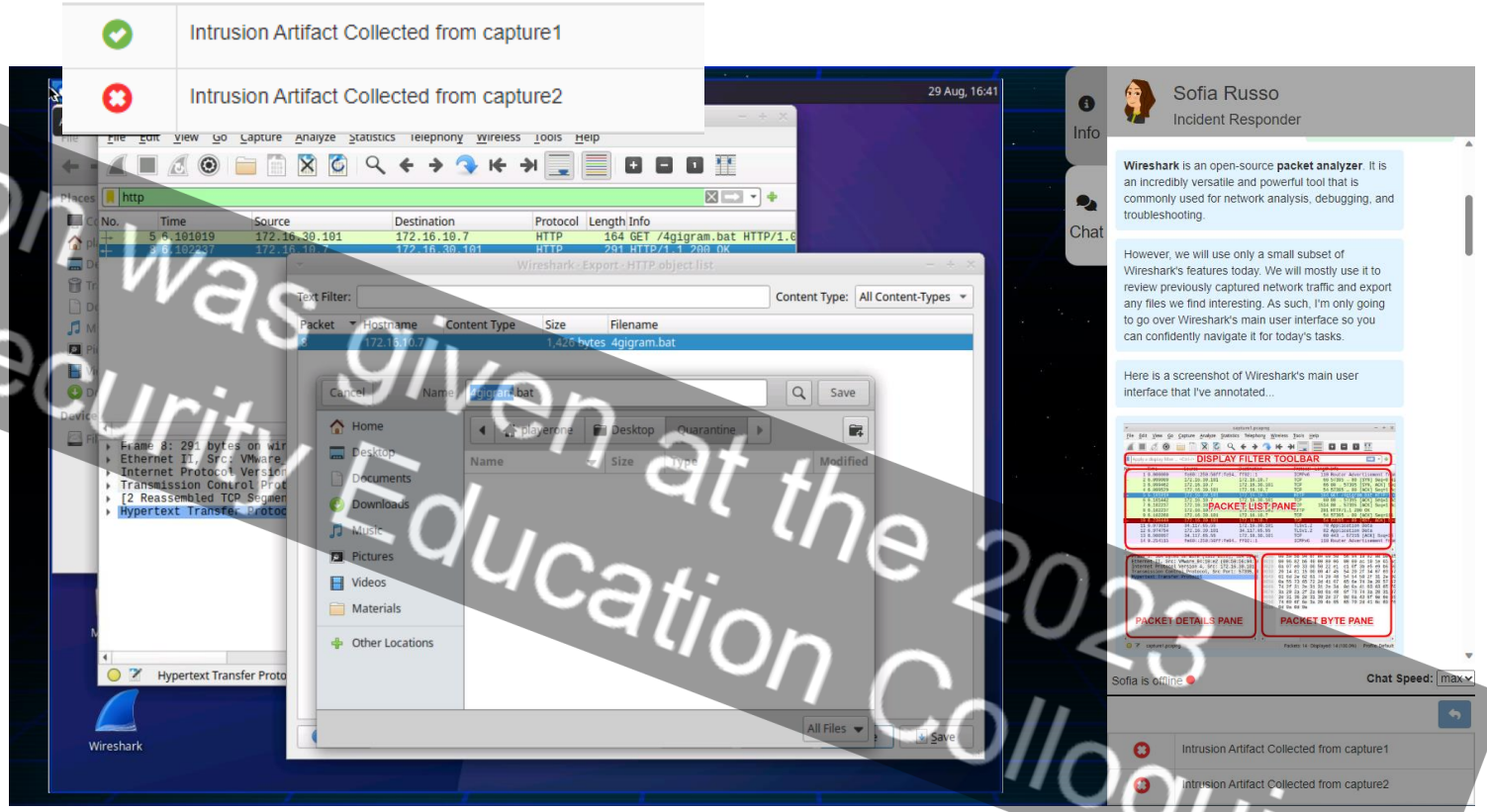
Cyber Defense Incident Responder

Collect intrusion artifacts (e.g., source code, malware, Trojans) and use discovered data to enable mitigation of potential cyber defense incidents within the enterprise. (NICE Framework T0278)



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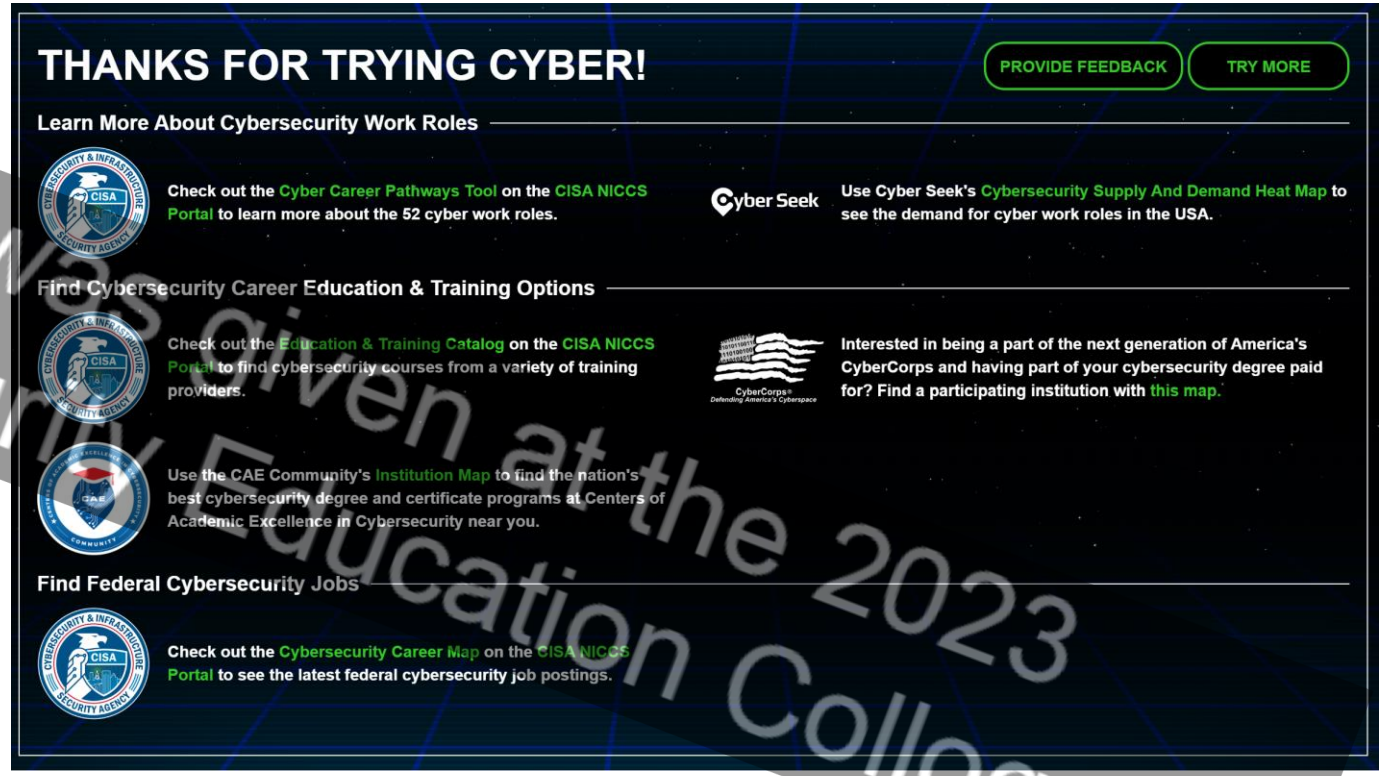
Post Challenge Resources

- ✓ Relevant cybersecurity education and training resources
- ✓ Scholarship opportunities
- ✓ Interactive Cybersecurity Career Map
- ✓ Job search resources



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TRY CYBER

This presentation was given at the 2023 National Cybersecurity Education Colloquium

DEMO

This presentation was given at the 2023 National Cybersecurity Education Colloquium

For more information:
www.cisa.gov
www.niccs.cisa.gov

Questions?
Email:niccs@hq.dhs.gov

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