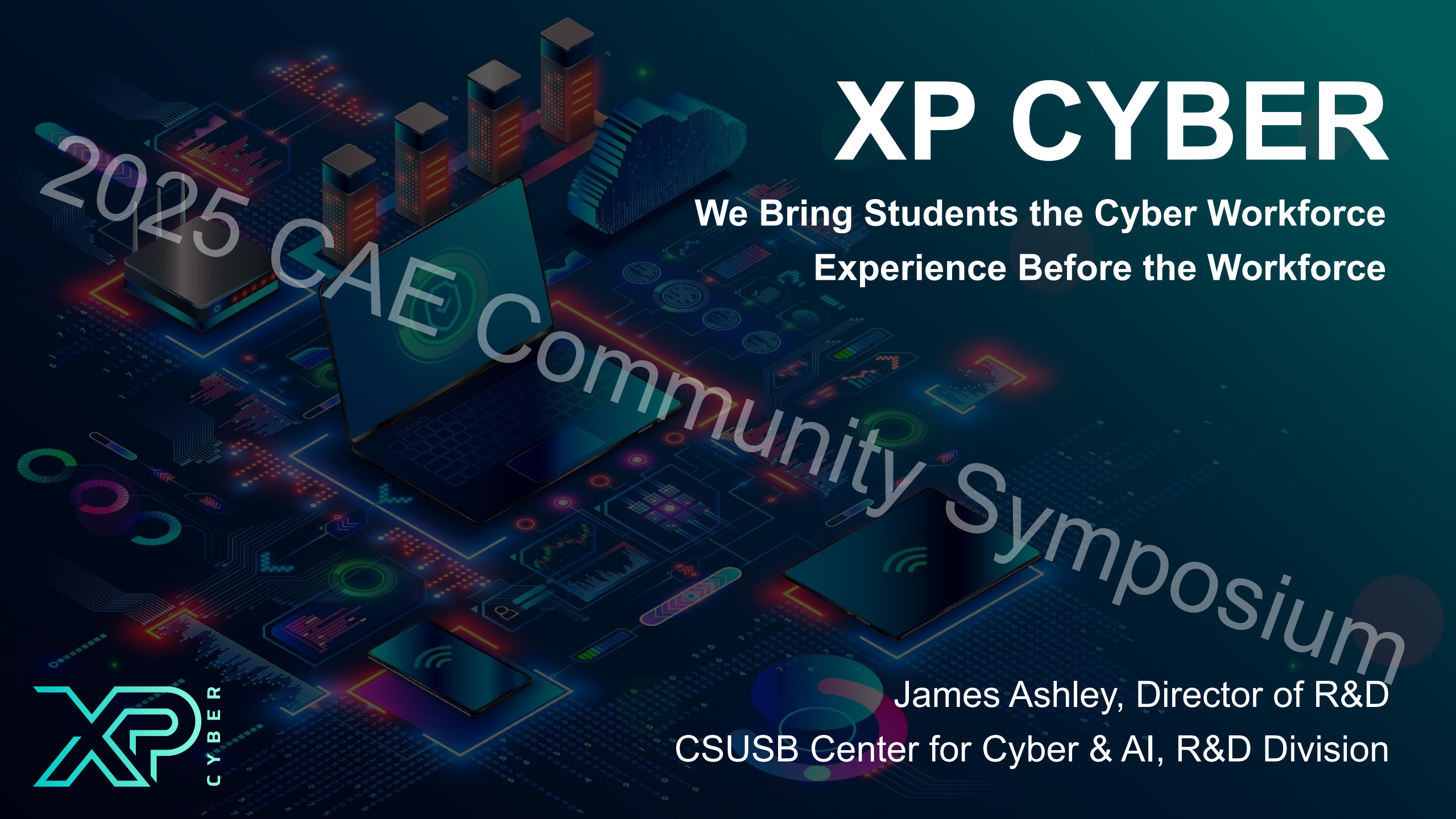

# XP CYBER

**We Bring Students the Cyber Workforce Experience Before the Workforce**

2025 CAE Community Symposium

James Ashley, Director of R&D

CSUSB Center for Cyber & AI, R&D Division

# Rebrand Complete

## The NICE Challenge Project is now XP Cyber!

As of January 2025:

- ✔ XP Cyber Range left Beta
- ✔ XP Cyber Support Portal is online
- ✔ XP Cyber Website launched

!!! NICE Challenge Webportal is deprecated

!!! NICE Challenge Helpdesk is offline

!!! NICE Challenge Project Website is deprecated

- The XP Cyber Range co-exists with the NCP Webportal and can be used interchangeably until the NCP Webportal is taken offline in Summer 2025.

- The XP Cyber Range and NCP Webportal share all content and user data. No new accounts needed; all data is preserved.

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# For more information on our rebranding, please visit...

## HTTPS://XPCYBER.COM/BLOG

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# Build & Assess Competency with Workforce-Based Challenges



## Designing with a Workforce Focus

Each challenge is designed by using a **work role** as a lens to view one or more **tasks** in which a professional in the cyber workforce must be **competent**.

## Real World Complexity & Depth

In our challenges, students must **competently** complete **tasks** actualized as **real-world scenarios** within multi-layered, **complex digital business environments**.

## Actionable Assessment Metrics

Empowered by our **cyber range platform**, our challenges include **live monitoring** of a variety of telemetry in the challenge environment to **determine and produce reporting** on the method agnostic competition of objectives, and disruptions to critical services.

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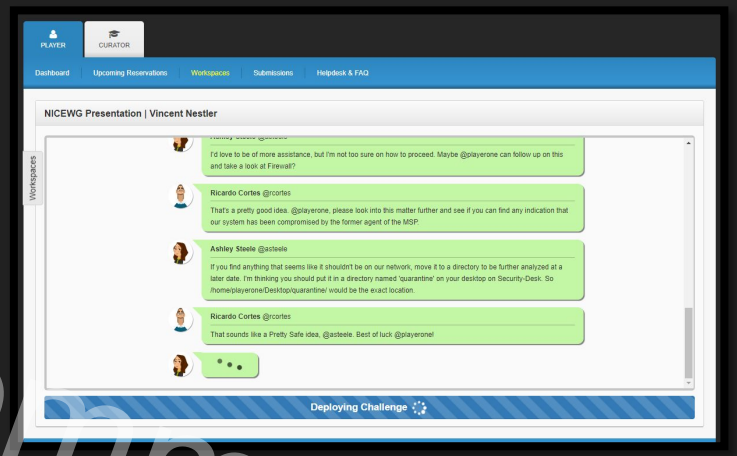
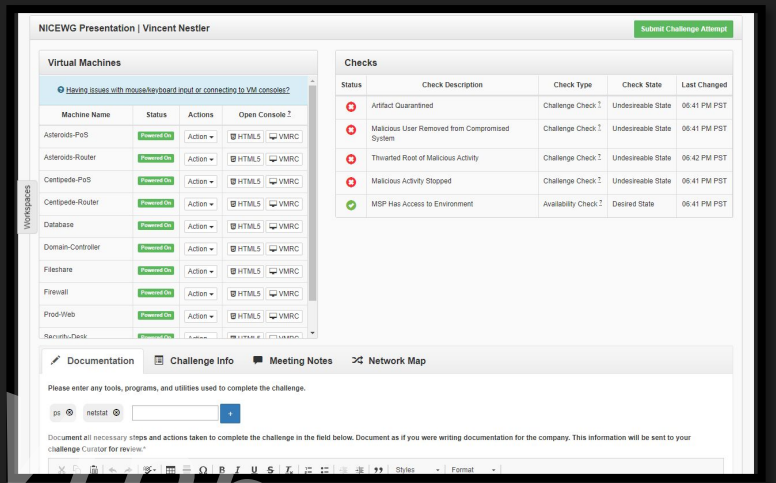
# Core Challenge Workflow

## Deploy Challenge




## Attempt Challenge




## View Results/Curator Feedback

# How Are The Challenges Used?

- **Capstone Experiences:** Cyber work role based experiences for students approaching graduation to determine if they are ready for the workforce.
- **Challenge Labs:** Next-level labs for upper-division course work, extra credit, and all-star students.
- **Competition Preparation:** Exercises for student teams and individual students preparing for cybersecurity competitions.
- **Free Play:** Our wide and varied selection of cyber work role based experiences enables students see what work roles suit them.
- **Instructional Aid:** A visual and functional aid in class for showing students real-world issues and the different ways to handle them.



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# Home Grown National EDU Cyber Range

## Locally Managed Infrastructure

- Compute, Storage, & Networking
- Hosted & Managed at CSUSB

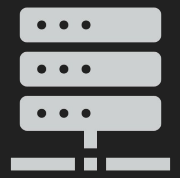
## Full-Stack Cyber Range Platform

- Content Deployment Engine
- Automated Scoring & State Monitoring
- Automated Cyber Attack Engine
- Virtualized Infra. Orchestration Suite
- Full Featured Web Application
- Purpose Built Hypervisor (IP)

## Training & Support

- 2 Monthly Webinars & Private Trainings
- Year Around Support Help Desk

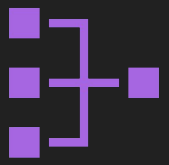
# Cyber Workforce Challenge Catalog



4 Complex Environments

148 Unique Challenges

15 DoD Cyber Workforce Framework Work Roles



14 NIST NICE Framework Work Roles

45 National Centers of Academic Excellence in Cybersecurity KUs

# Reach & Usage Stats (Since 2016)

750+ Educational Institutions

1.5K+ Educators (Curators)

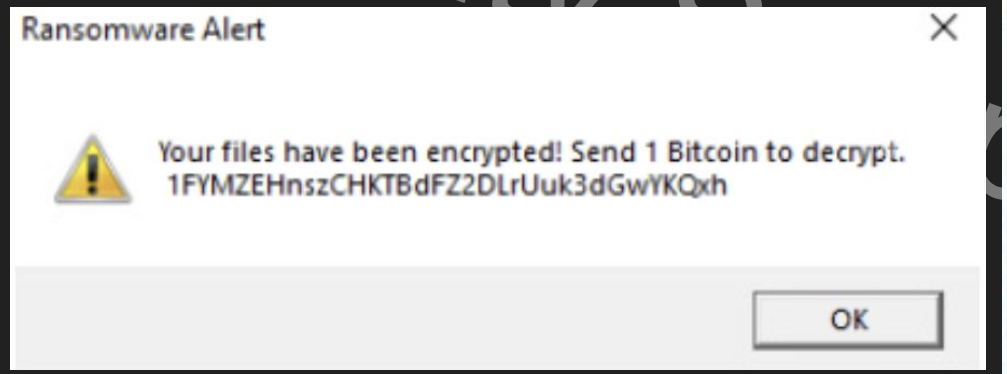
30K+ Students (Players)

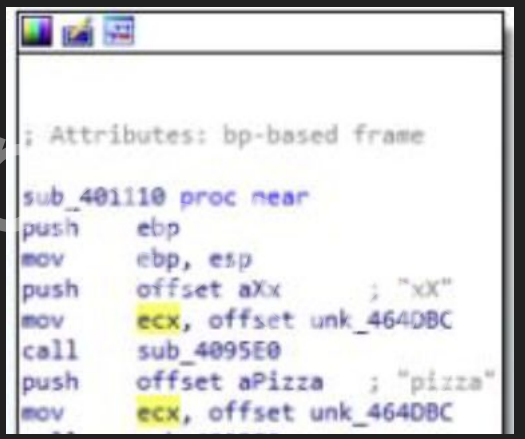
1M+ Hours Spent Solving Challenges

# New Challenge Highlight

## New Malware Analysis Challenges

- 5 New Malware Analysis Challenges within the Cyber Defense Forensics Analyst (DCWF) & Digital Forensics (NCWF) work roles and cover both static and dynamic malware analysis
- In “Malware Analysis: The Static Search”, students will be faced with their company being victim to a ransomware attack. Through malware analysis, they will need to discover a means to reconstruct the key needed to decrypt the affected files.



# New Challenge Highlight

## CISA Threat Sandbox Challenges

- 12 Purple Team Style Challenges each designed around a CVE on the CISA Known Exploited Vulnerabilities (KEV) Catalog
- Each challenge provides a background on the chosen CVE including the technical basics and the common consequences of exploitation
- Students are provided links to the real-world resources used by red & blue teams and are expected to exploit & mitigate the CVE on target systems contextualized as being within appropriate critical infrastructure (CI) sectors

# Upcoming Challenges

## “Penetration Tester” Obstacle Course

- All challenges take place within a new environment that is currently under development.
- Students will be given a Kali Linux machine placed outside of a company’s corporate network and they will be tasked with performing recon, gaining a foothold in the network, pivoting inside the network, establishing persistence, & exfiltrating valuable data.
- Challenges will provide bite sized portions of the full course and a challenge that makes the student do the whole thing in one go.
- Expect to see these in Late Summer/Early Fall 2025

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# How do you get access and get started?



**Sign-Up for an Educator (Curator) Account**

**Form is in the Middle of the Page**

**Sign-Up for an On-Boarding Webinar**

**Available 1st Friday of Every Month**

2025 CAE Community Symposium

# Thank You to Our Funders & Supporters




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