The National Centers of Academic Excellence in Cybersecurity (NCAE-C) are sponsoring a Cyber Competition through the Virtual Internship and Varied Innovative Demonstrations (VIVID) consortium of University of Alabama in Huntsville, Augusta University, University of Arizona, and Florida International University.

This competition is open to all CAE designated schools. All 5 team members must be students from the same CAE school. Multiple teams are allowed from each school. The virtual competition can support over 100 teams. If more teams register than can be handled by the platform, school CAE POCs will be contacted to prioritize which team(s) compete from their school. Selected teams will be notified by 31 January.

The first phase of the competition is a virtual event taking place from 11-14 March 2024. The top 15 teams based on results from the virtual event will compete in the live event to continue the competition at the CAE Annual Colloquium in October/November 2024. Teams do not require a faculty sponsor/coach for the virtual event (phase 1), but if selected for the live competition (phase 2) a faculty sponsor/coach must accompany the team. Travel stipends will be provided to offset travel costs for those teams competing in the live event.

A virtual bootcamp/preparation will be available in February to assist teams preparing for the competition. A list of tasks will be provided at that time, but the general tasks the competition will target are penetration testing (Red Team) and incident response (Blue Team).

A virtual platform will be used for both the virtual and live competitions. All machines used by the teams will be part of the virtual platform environment.

Phase 1 is completely online and will follow this schedule:

11 March: (Day 0) Introduction to the competition environment
12 March: (Day 1) Jeopardy-style CTF (preview of Red/Blue Team tasks seen on Days 2 and 3)
13 March: (Day 2) Red Team Tasks
14 March: (Day 3) Blue Team Tasks

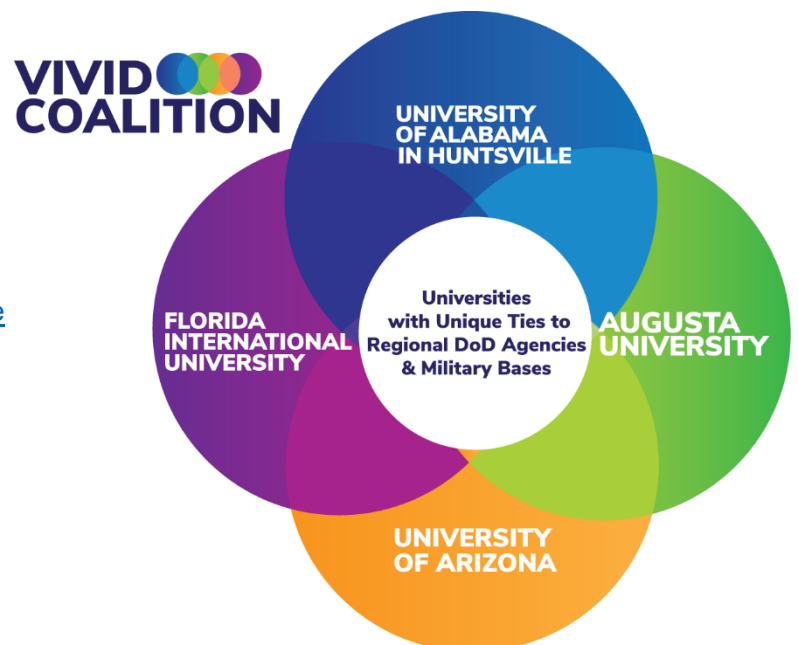Phase 2 is a live event at the CAE Annual Colloquium (date TBD) and will follow this schedule:

(Day 0) Introduction to the competition environment
(Day 1) Jeopardy-style CTF (preview of Red/Blue Team tasks seen on Days 2 and 3)
(Day 2) Red Team Tasks
(Day 3) Blue Team Tasks
(Day 4) King of the Hill

Top prize for the winning team at the live event is a gaming system for each team member!

**How to get involved:**

Register your 5-person team at this link: [register here](register here)

The scenario for the 2024 event is below.



VIVID COALITION

UNIVERSITY OF ALABAMA IN HUNTSVILLE

AUGUSTA UNIVERSITY

FLORIDA INTERNATIONAL UNIVERSITY

Universities with Unique Ties to Regional DoD Agencies & Military Bases

UNIVERSITY OF ARIZONA

# News flash!

**Apex University**

Apex University (AU) announces their new artificial intelligence (AI) research system, ***Overlord***! Professor Rosie Meebs, head of the project, declares "this is a new generation of AI that will reach heights never reached before. Our new code is faster and learns better than anything in existence. We project that in less than 8 months, ***Overlord*** will reach singularity and be a true intelligence. We expect once that happens, our AI will be able to solve any number of problems from creating fusion to solving the climate change crisis. Any negative comments are just jealousy, and we know there will be no problems once ***Overlord*** comes online. We will turn on ***Overlord*** on 1 March 2024 and change the world!"

## Red Team

The hubris of mankind knows no end. How a group of academics think creating machine intelligence is a good thing is beyond belief. The danger of artificial intelligence is well known. Just look at the Forbes article[1] that tells us the risks or even Scientific American[2] which describes the menace of our digital overlords. They even had the audacity to call it "***Overlord***"; we must stop them!

Fortunately for us, a member of the AU research team that created this monstrosity sees the danger and has told us there is a hidden backdoor to their system that allows remote access. It's great having an insider that shares our beliefs! Additionally, the creators were at least smart enough to build in an "off switch" but it is protected by an authentication system that needs a digital key. With this knowledge, we can enter the ***Overlord*** system and steal the key. Once we have it, we can shut down this monstrosity. Unfortunately, our inside person does not have the credentials to get to the key, so we must break into their system.

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[1] forbes.com/sites/bernardmarr/2023/06/02/the-15-biggest-risks-of-artificial-intelligence/
[2] https://www.scientificamerican.com/article/heres-why-ai-may-be-extremely-dangerous-whether-its-conscious-or-not/

Our tasks:

- Recon the Apex University network
- Identify the systems that hosts **Overlord**
- Distract the security operations center analysts to cover your attack
- Infiltrate the system
- Gain access to the command & control computer
- Find the digital key
- Exfiltrate the key

# Blue Team



You and your team are lucky enough to gain experience at Apex University's (AU) Security Operations Center (SOC). For the last semester you've been working three days a week learning the job roles in SOC and expanding your cybersecurity knowledge. While today is usually not a workday, the SOC director called all of you to work and explained the university network was under attack and all the full-time analysts were swamped. The director needs you to work within the network and identify any artifacts in the system indicating threat activity and indicators of compromise.

Our incident response tasks:

- Find artifacts in the system indicating threat activity and indicators of compromise
- Detect the threat actors
- Respond to any malicious activity
- Mitigate threats
- Report what you find

How to get involved:

Register your 5-person team at this link: register here

All 5 team members must be students from the same CAE school.  Selected teams will be notified by 31 January.

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