

MITRE Engenuity Embedded Capture the Flag™

ANNOUNCING THE NINTH ANNUAL EMBEDDED CAPTURE THE FLAG (eCTF) COMPETITION



JOIN YOUR SCHOOL'S TEAM FOR THE 2024 eCTF

The 2024 competition will run from January 18th through April 17th with an award ceremony on April 26th.

How is this different from other Capture the Flag (CTF) competitions?

The eCTF is unique in two major ways. First, the focus is on securing embedded systems, which present an entirely new set of challenges and security issues that are not currently covered by traditional CTFs. Second, this event balances offense and defense by including a significant secure-design phase in addition to an attack phase. This competition will help you develop practical skills that can be applied to securing critical systems such as medical devices, smart grids, IoT devices, and mobile devices.

What is this year's challenge?

Teams will design and implement a supply chain security solution for microcontrollers on a medical device. The system must securely verify the device integrity while keeping sensitive data confidential.

Design Phase

Teams design and implement systems that meets security and functionality requirements



Handoff

Organizers test each design for functionality



Attack Phase

Teams analyze and attack each other's designs for points



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Embedded systems skills help build your knowledge, career, and reputation



Who can participate?

Anyone! Students at all academic levels are welcome to participate. Team sizes are unlimited (although a minimum of 3 students is recommended). Sponsorship of a faculty member is required.

Can I earn course credits?

Most students can earn credits. Work with your professor(s)/team advisor to determine if/how you can earn credit at your institution. Remember that this is a significant time commitment, typically commensurate with the course credit you may receive. An example syllabus is available from the eCTF organizers upon request.

What is provided by MITRE to help?

MITRE provides teams with documentation, a reference implementation, embedded hardware, and technical guidance throughout the competition.

Are there awards?

Winning teams receive a cash prize, publicity from MITRE, and typically earn accolades from their university as well. Students have used their participation in eCTF to build resumes, present at conferences, and open the door to valuable internship and career opportunities, including engineering positions at MITRE and competition sponsors.

Up for a challenge?

For more information, visit ectf.mitre.org, where your team advisor can register your team.

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