



# **ECSC - European Cyber Security Challenge**

**Miroslav Stampar**  
**(@stamparm)**



# Introduction

- On-site jeopardy style Capture the Flag (CTF) competition
- European Cyber Security Challenge (ECSC) is a key activity of the European Union Agency for Cyber Security (ENISA)
- Aims to support cyber security talent across Europe and harness their potential in future
- 350+ participants
- 200+ competitors
- 18+ (not only European) teams (e.g. Canada played as a Guest team)

# Brief history

- **ECSC2014** - Furstenfeld, Austria - 3 teams  
(Austria, Germany, Switzerland)
- **ECSC2015** - Lucerne, Switzerland - 6 teams
- **ECSC2016** - Dusseldorf, Germany - 10 teams
- **ECSC2017** - Malaga, Spain - 15 teams
- **ECSC2018** - London, UK - 17 teams
- **ECSC2019** - Bucharest, Romania - 20 teams
- ~~**ECSC2020** - Vienna, Austria~~ (cancelled)
- **ECSC2021** - Prague, Czech - 17 (+ 2 guest) teams

# Rules

- Maximum of 10 people per team and a minimum of 5 per team
- Each team is formed from five juniors (ages 14-20) and five seniors (ages 21-25)
- Contestants are from the nationality of the country they represent
- Coach is responsible for well-being and behavior of contestants and making sure that essential information reaches its recipients and is understood and acted upon
- Any kind of communication with people which are not part of the team is not permitted

# Challenges

- Difficulty: Easy, medium, hard
- Category: reversing, crypto, web, pwn, hardware, android, forensics, stego, misc, osint, etc.
- Time-frame: day1 and day2 (i.e. first day challenges are not available on second day)
- Dynamic scoring (i.e. more solvers, less points)
- Job board (containing contracts), contracts (containing tasks) and tasks (proof of solve by posting a flag)

# Gameboard (I)

The screenshot shows the GitHub repository page for `enisaeu/ecsc-gameboard`. The repository is public and has 4 issues, 2 pull requests, and 10 forks. The code tab is selected, showing a list of 340 commits from the `master` branch. The commits are authored by `stamparm` and include bug fixes and minor cleanup. The repository's README.md file is displayed, featuring the title "European Cyber Security Challenge Gameboard" and links to CI status, license (EUPL-1.2), and Twitter (@enisa\_eu). The repository has 29 contributors, including `stamparm`, `grazvan`, `belmontemartin`, and `icedevml`. The Languages section is also visible.

**About**  
European Cyber Security Challenge Gameboard  
[Readme](#) [View license](#)

**Releases**  
No releases published [Create a new release](#)

**Packages**  
No packages published [Publish your first package](#)

**Contributors** 4

- `stamparm` Miroslav Stampar
- `grazvan` Razvan Gavrila
- `belmontemartin` Adrián Belmonte
- `icedevml` Michał Leszczyński

**Languages**

# Gameboard (II)

## ECSC 2021 platform

Administrator  

(settings)

CTF style: Jeopardy 

Show awareness:

Cash transfers:

Dynamic scoring:

Dynamic solve threshold: 20 

Dynamic maximum decay (%): 50 

Private messages:

Support messages:

Hide team scores:

Guess attempt penalty (secs): 0 

Guess logout after attempts: 

Start time (optional):  /  :

End time (optional):  /  :

 Start  Stop

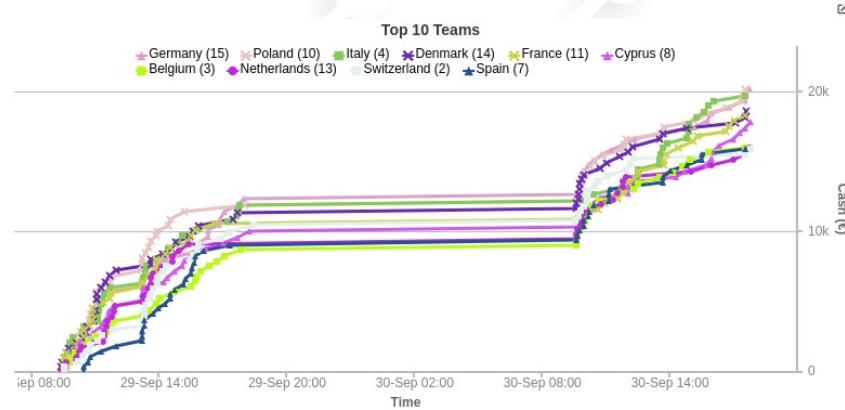
#general (chat) 

CHEETAH

cyrus : (30-Sep 17:48:51)

Teams Contracts 54 Notifications 0 Logs 7699 Stats Sign out Reset Database Report

Top 10 Teams



The chart tracks the cash accumulation of ten teams from September 29th to October 1st. The y-axis represents cash in euros (€), ranging from 0 to 20k. The x-axis shows the time in UTC, with markers at 08:00, 14:00, 20:00, 02:00, 08:00, and 14:00. Most teams show a significant increase in cash starting around 08:00 on October 1st, with Germany reaching approximately 20,280€ and Poland reaching about 20,040€.

#	Team name	Country	Cash (€)	Actions
1	Germany (15) (germany)		20,280	   
2	Poland (10) (poland)		20,040	   
3	Italy (4) (italy)		19,747	   
4	Denmark (14) (denmark)		18,675	   
5	France (11) (france)		18,345	   
6	Cyprus (8) (cyprus)		17,880	   
7	Belgium (3) (belgium)		16,049	   
8	Netherlands (13) (netherlands)		16,009	   

# Gameboard (III)

## ECSC 2021 platform



Rankings Job board 27 Contracts 2 Notifications 0 Sign out Rules

### Crack my License

€ 410

As member of a hacker group, you found on the internet several operational license keys to your favorite application. Your task is to analyse them and find out the right algorithm how to create additional keys using your own code.

Author: Adam Konopásek

medium reversing day2

Take contract

### Relax

€ 498

We needed a website to manage our Python snippets, one company sent us this demo, I like it a lot, but Dan says it has a bunch of "security issues". Dunno what he's talking about, I'm sure it's fine.

Author: Sijisu  
(@sijisu#4617)

hard web day2

Take contract

### Blinky Box

€ 498

During a routine patrol in the Ligma Galaxy, our probe discovered a new planet that must have been home to an intelligent civilisation sometime in the past and on it a strange device.

Author: Sijisu  
(@sijisu#4617)

medium hardware day2

Take contract

### Pointer Hell

€ 500

One of the computers in the planet's water purification plant has gone mad. It's transmitting strange data and we don't know what's happening to it. We need to find out what's wrong and what the computer is doing.

Author: DaveZah  
(@David#9038)

### A Small Loan

€ 460

I think you might need a small loan for this one.

Author: Sijisu  
(@sijisu#4617)

medium web day2

Take contract

### Bashing My Head

€ 378

A friend's linux computer caught a virus when downloading this program. Can you figure out how it operates?

Author: Jan Kučera  
(@flagisallus#7823)

medium misc day2

Take contract

France

	(Info)
Cash:	0 €
Last progress:	-
Active contracts:	2
Finished contracts:	0

	#general	(chat)
CHEETAH		
cyprus	(30-Sep 17:48:51)	LIIIOONNN
ireland	(30-Sep 17:48:59)	RAWR XD
cyprus	(30-Sep 17:49:04)	;
ireland	(30-Sep 17:50:58)	LMAAAOOO U MAD BRUV
foobar	says:	

# My role (?)



# Venue (I)



# Venue (II)



# Venue (III)



# Venue (IV)



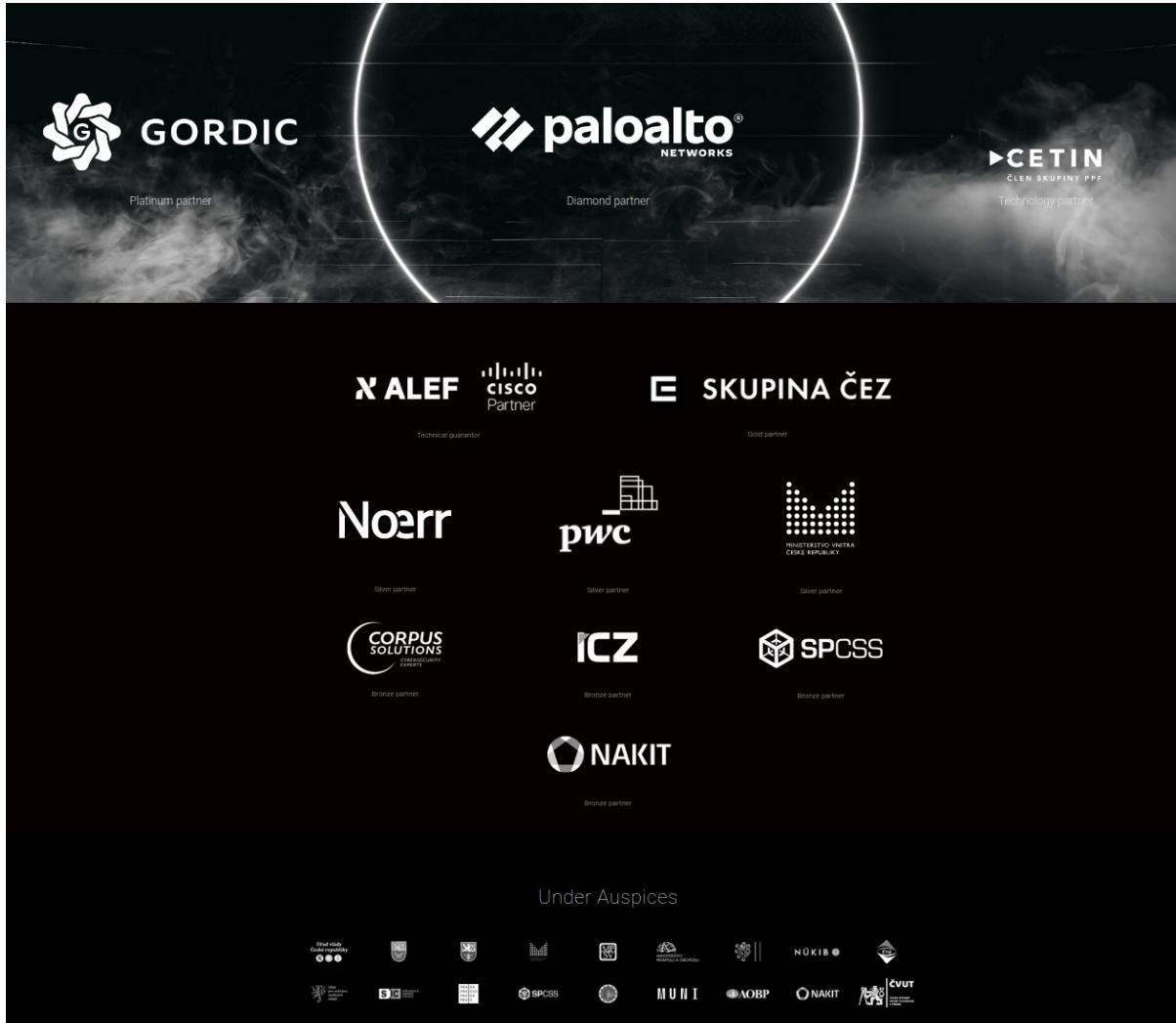
# Opening ceremony (I)



# Opening ceremony (II)



# Sponsors



# Competition (I)



# Competition (II)



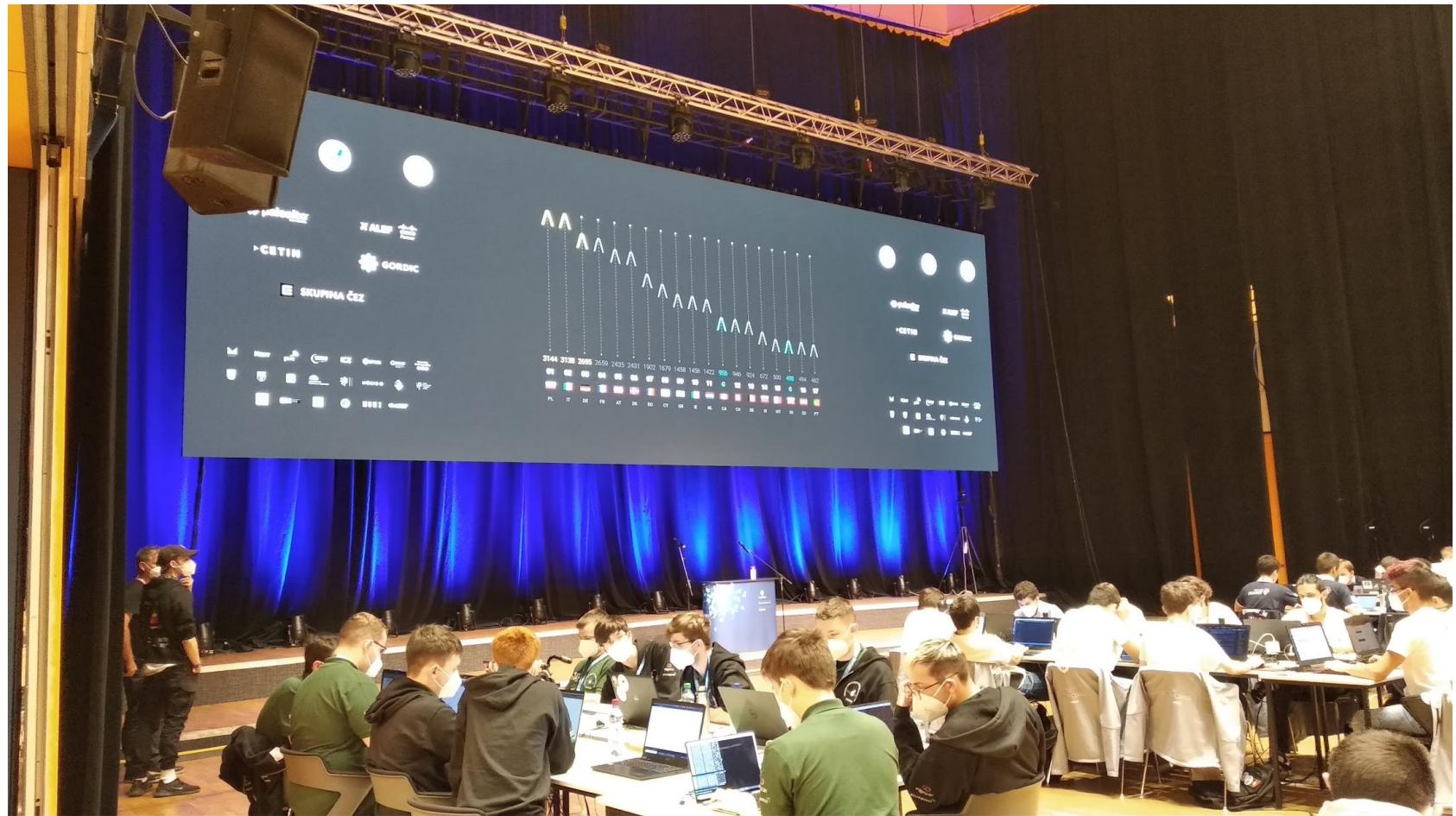
# Steering committee (I)



# Steering committee (II)



# Final results (I)



# Final results (II)



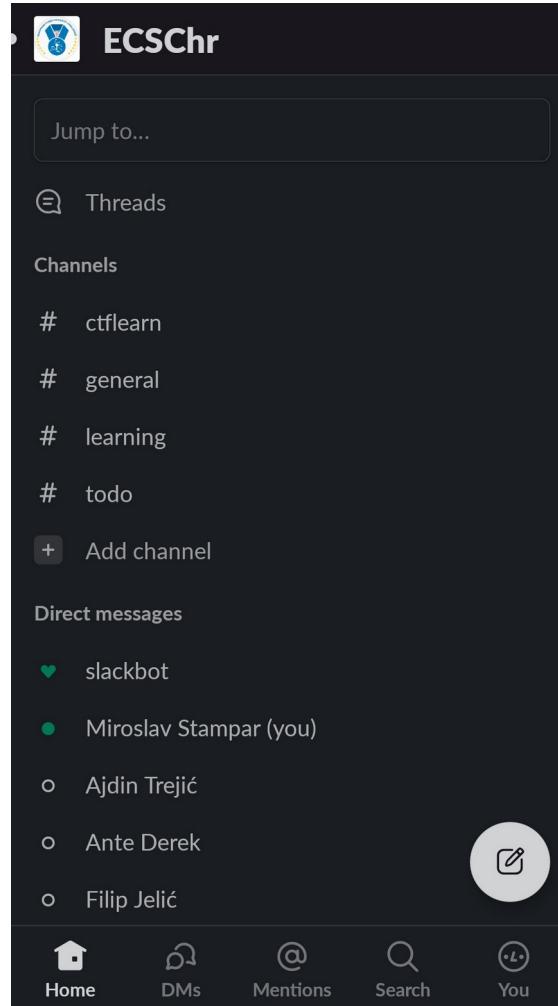
# Closing ceremony



# Croatia (I)

- Unrealized attempt to bootstrap a team in 2020
- Based on selection of students from Faculty of Electrical Engineering and Computing (FER)
- Main point of contact – Marin Vuković ([marin.vukovic@fer.hr](mailto:marin.vukovic@fer.hr))
- ECSC**2020** – cancelled due to COVID19
- ECSC**2021** – unrealized due to COVID19 uncertainties and lack of sponsors

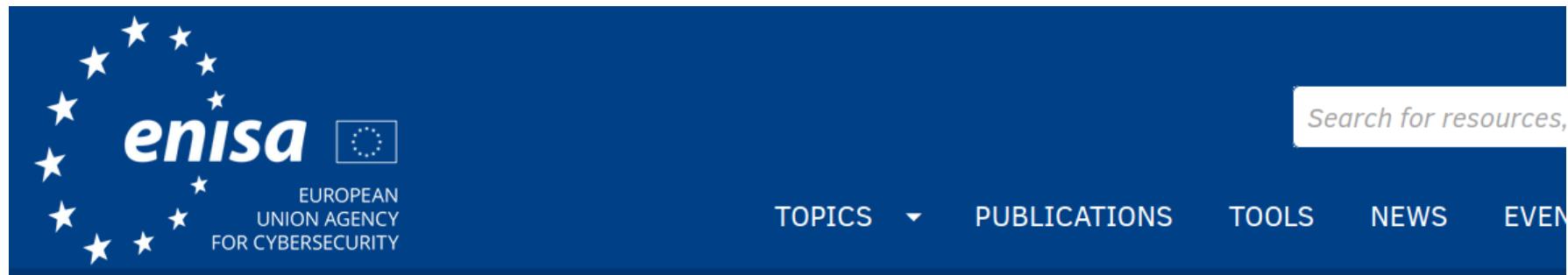
# Croatia (II)



# Croatia (III)

- Point of contact - for anything related to the future event planning (e.g. ENISA virtual meetings)
- **Sponsors** (?) - transportation, hotel, promo stuff (t-shirts, bags, etc.)
- Logistics (?) - travel arrangements
- Training (?) - CTF seniors and/or enthusiast willing to be official “coaches”
- Selection (?) - FER + ... / or to make a national qualifying competition
- p.s. Slovenia made it to the ECSC**2021**

# Future (?)



The image shows the official website header of ENISA (European Union Agency for Cybersecurity). On the left, the ENISA logo is displayed, featuring a circle of twelve yellow stars and the word "enisa" in lowercase. To the right of the logo is the text "EUROPEAN UNION AGENCY FOR CYBERSECURITY". On the far right of the header is a search bar with the placeholder text "Search for resources,".

TOPICS ▾ PUBLICATIONS TOOLS NEWS EVEN

ENISA has been at the forefront of building cybersecurity capacity in EU member states by organising various exercises and challenges for a wide variety of stakeholders. In particular, since 2015 ENISA has been coordinating the European Cyber Security Challenge (ECSC), in order to encourage young people to pursue a career in cybersecurity. Building on the success of the ECSC, ENISA, together with other regional and international organisations, decided to design and host for the first time the [International Cyber Security Challenge \(ICSC\)](#). The aim of the challenge is to attract young talent and raise awareness in the community globally on the education and skills needed in the area of cybersecurity. Teams will compete in a series of challenges in areas, such as, web application and system exploitation, cryptography, reverse engineering, hardware challenges, forensics and escape rooms. The ICSC brand is expected to be associated with the top cybersecurity talents of the world and we expect ICSC to become one of the key incubators of cybersecurity entrepreneurship and future top security experts in the world. The International competition will be held in Athens between 7th-11th December 2021.

# Future (??)



UPDATES

## Introducing the US Cyber Games

April 20, 2021

Today marks the kick off of the inaugural US Cyber Games™ led by Katzcy, in cooperation with the National Initiative for Cybersecurity Education (NICE) program at the National Institute of Standards and Technology (NIST). The program will run from April to October 2021 and consist of the US Cyber Open, the US Cyber Combine Invitational, and the selection of the first-ever US Cyber Team™ to represent the United States at the 2021 International Cyber Security Challenge (ICSC) held in Athens, Greece in December.



# Questions?

