UN breakable
Romania

WHAT IS UNBREAKABLE ROMANIA?

UNbreakable Romania is the most complex education program for high school and university students in the country. Through its activities, UNbreakable provides an x-ray and visualisation of the level of cybersecurity skills nationally.

UNbreakable's mission is to provide young cybersecurity enthusiasts with the most varied resources, both theoretical and practical, so useful for developing the skills needed to become good cybersecurity specialists. In addition to an intensive learning environment, the initiative also provides a competitive, testing virtual space that encourages collaboration and knowledge sharing.

This way, UNbreakable plays an important role in bridging the cybersecurity workforce gap both locally and internationally.

HOW DOES UNBREAKABLE ROMANIA WORK?

BOOTCAMP

Participants receive access to theoretical and practical resources to get familiar with the competition format and methodology, and also with basic cybersecurity concepts. They can also get in touch with mentors (industry experts and community alumni), participate in webinars and solve challenges in their dedicated space on the CyberEDU educational platform.

INDIVIDUAL CONTEST

Participants will compete for 48 hours.
The main objective is to solve as many cybersecurity challenges as possible and send the maximum number of "flags" to reach the top of the leaderboard. At this stage, participants evaluate their technical skills and performance on an individual level to see what areas in their knowledge need improvement.

TEAM COMPETITION

In cybersecurity, soft skills - such as communication and teamwork - are just as important as technical skills.
This phase gives participants the chance to form teams of up to 3 members with complementary knowledge and later solve as many challenges as possible from different areas of cyber security for 48 hours.

WHY UNBREAKABLE ROMANIA?

> *A competition like UNbreakable Romania is a fantastic platform offering you the visibility you need.*

DAN CÎMPEAN
Director DNSC-National Directorate for Cybersecurity

> *UNbreakable Romania is an initiative that brings together the community of young people who have a common passion in the cyber security area.*

ANTONG ROG
Director for the Cyberint National Centre

> *UNbreakable Romania is the ideal environment that provides young people with the necessary resources to analyze and understand the efforts of the Romanian Police in preventing and fighting cybercrime.*

SORIN STĂNICĂ
Chief Police Commissioner - Institute for Research and Crime Prevention, Romanian Police

> *By taking part in this exercise, you have the opportunity to develop the necessary technical skills that will help you in a future career in cyber security.*

Lt. Col. Ing. SORIN MANOLE
Head of the Cyber Defence Agency in the Cyber Command

> *Every participant in UNbreakable is a future employee in the cyber security field in Romania or abroad.*

CRISTIAN PAȚACHIA-SULTĂNOIU
Development & Innovation Manager Orange România

> *UNbreakable is an important step in your future career in cybersecurity, but equally valuable is the networking part.*

ALEXANDRU ANDONE
Director European Delivery Center Infrastructure Cegeka România

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2022 BOOTCAMP

789 participants

116 practical labs

28 mentors

21 webinars

26 presentation hours

WEBINARS' TOPICS

- ☑ Kick-Off Bootcamp Webinar
- ☑ 5G Network Security
- ☑ Smart Contract Security Basics
- ☑ Information warfare and the importance of cybersecurity for the global stability
- ☑ Information obtained through OSINT techniques and tools
- ☑ How to kick-start your career
- ☑ Some cybercrime chain intersections
- ☑ Fundamental concepts about governance, risk management and compliance
- ☑ Data Mining in Cybersecurity: An Overview of Pattern-Matching Techniques for Intrusion Detection and Digital Forensics
- ☑ How SOC organizes in a changing world
- ☑ Password management and password cracking techniques
- ☑ BadUSB
- ☑ Cyber attacks: ensuring resilience and awareness in the public sector
- ☑ Technologies for identifying vulnerabilities
- ☑ Following UNbreakable Romania, what are your security career alternatives: from startups to corporations?
- ☑ End-to-end data privacy using homomorphic encryption models
- ☑ Technologies for ensuring cyber security
- ☑ IPv4 and IPv6 addresses
- ☑ Network pivoting and redirectors. Port knocking
- ☑ Social engineering attacks and techniques: Investigating a Business Email Compromise case
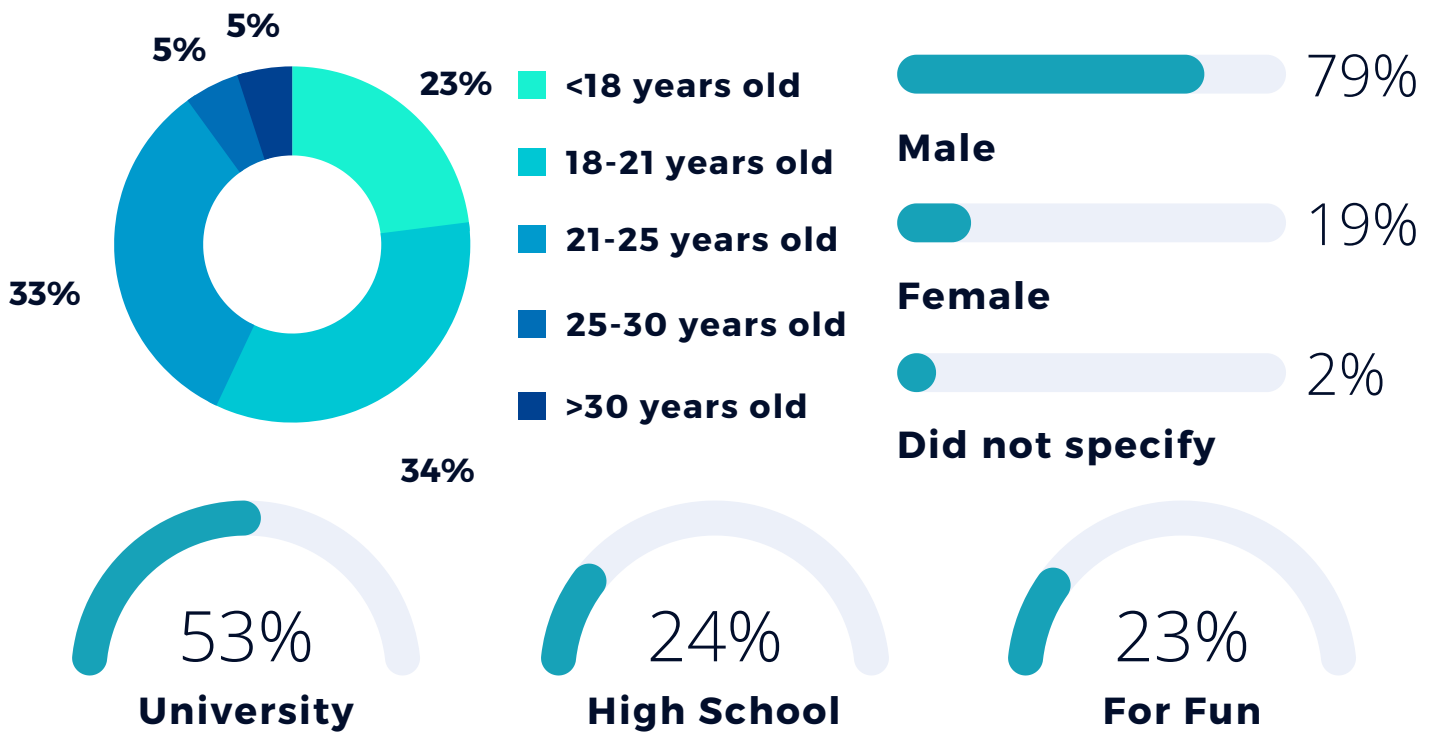- ☑ Intro to data encryption with the RSA algorithm

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2022
INDIVIDUAL CONTEST

74 high schools
35 universities
40 counties
21 challenges

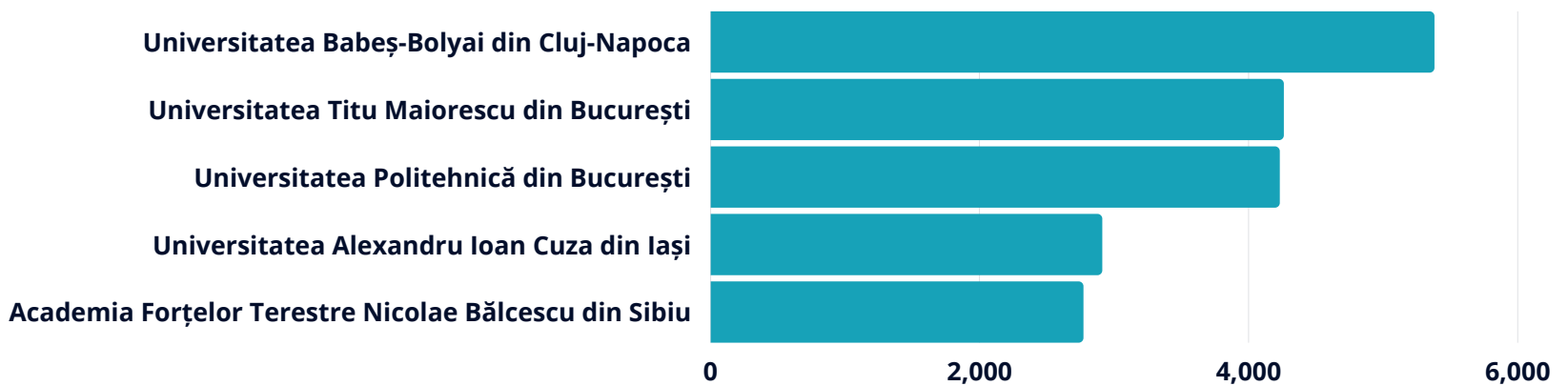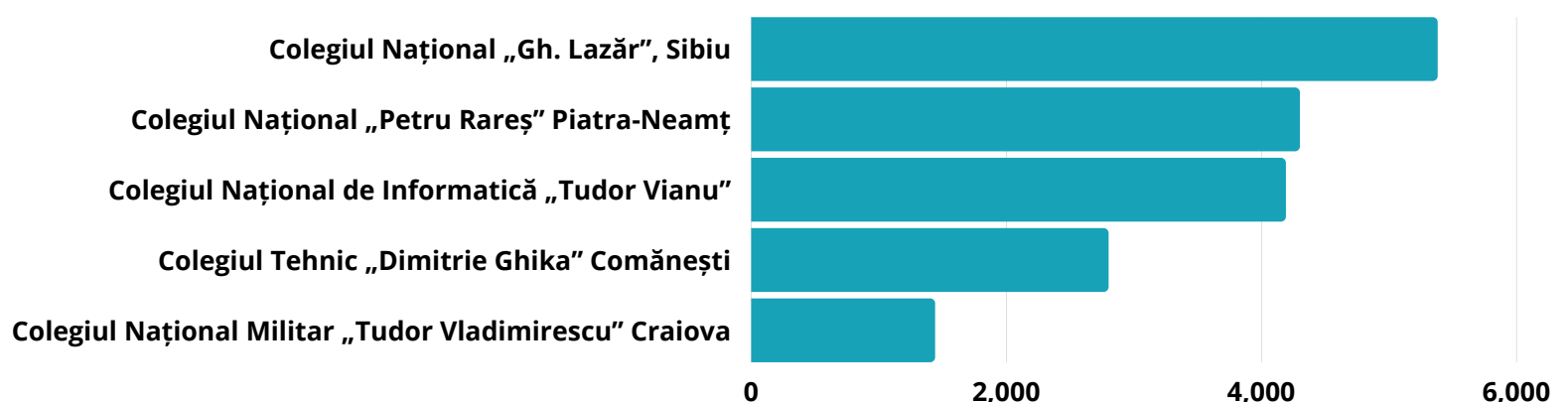## PARTICIPANTS'S DISTRIBUTION

793 PARTICIPANTS

- 23% <18 years old
- 18-21 years old
- 21-25 years old
- 25-30 years old
- >30 years old

5%
5%
33%
34%

79% Male
19% Female
2% Did not specify

53% University
24% High School
23% For Fun

RESULTS

TOP 10 COUNTIES WITH THE HIGHEST SCORE

- Cluj
- Constanța
- Sibiu
- Neamț
- Ilfov
- București
- Brașov
- Vaslui
- Bacău
- Prahova

0   2,000   4,000   6,000
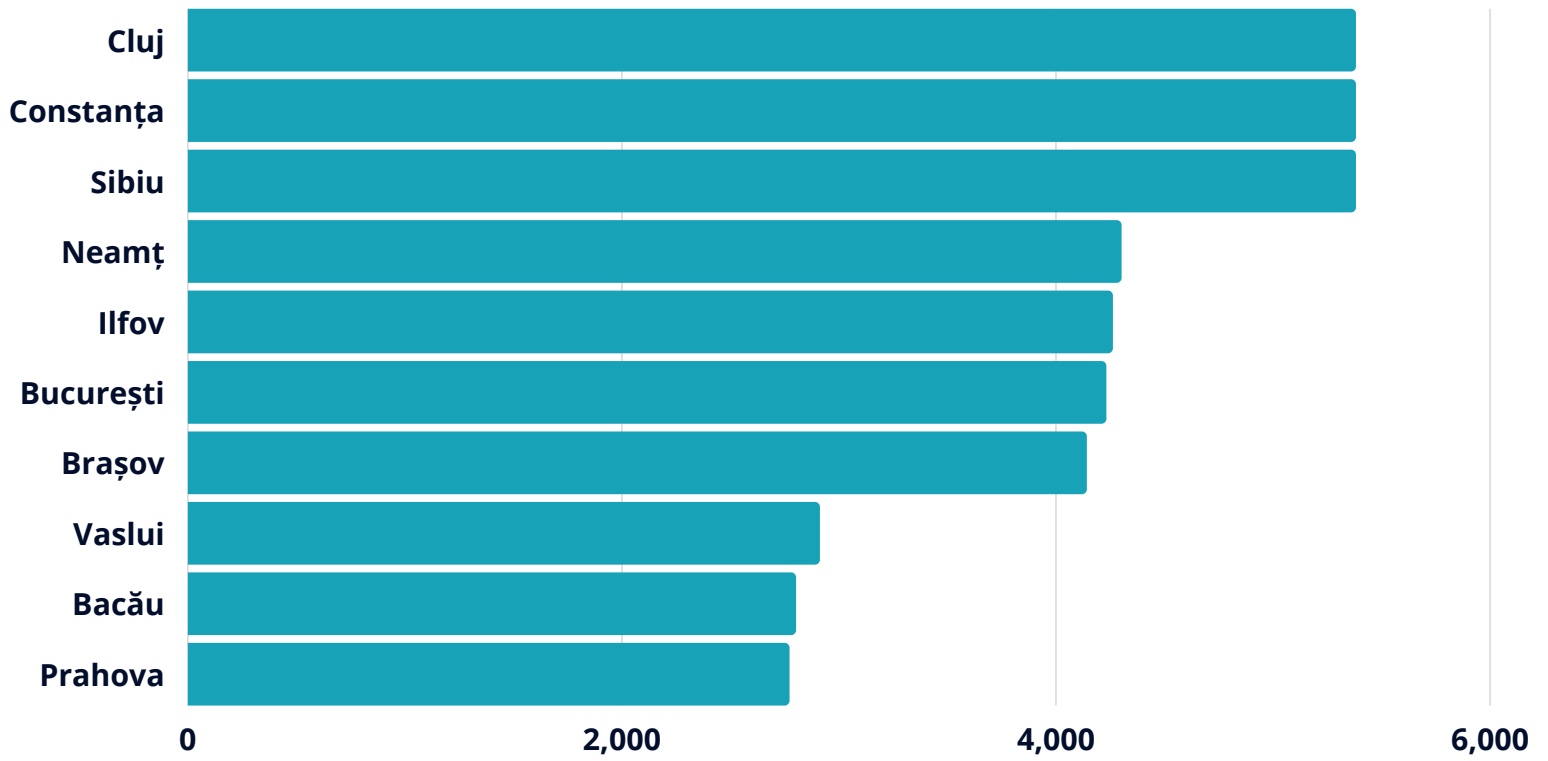
TOP 5 UNIVERSITIES WITH THE HIGHEST SCORE

- Universitatea Babeș-Bolyai din Cluj-Napoca
- Universitatea Titu Maiorescu din București
- Universitatea Politehnică din București
- Universitatea Alexandru Ioan Cuza din Iași
- Academia Forțelor Terestre Nicolae Bălcescu din Sibiu

0   2,000   4,000   6,000

TOP 5 HIGH SCHOOLS WITH THE HIGHEST SCORE

- Colegiul Național „Gh. Lazăr", Sibiu
- Colegiul Național „Petru Rareș" Piatra-Neamț
- Colegiul Național de Informatică „Tudor Vianu"
- Colegiul Tehnic „Dimitrie Ghika" Comănești
- Colegiul Național Militar „Tudor Vladimirescu" Craiova

0   2,000   4,000   6,000

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2022
INDIVIDUAL CONTEST
- FUN FACTS -

01

FIRST TENTATIVE

The first answer tentative was sent 1 minute and 41 seconds after the start of the competition by a participant from Hunedoara.

FIRST BLOOD

02

The first correct answer was sent 3 minutes and 12 seconds from the start, by a player from Bucharest.

03

AFTER 1 HOUR

In the first hour of the competition, 67 unique players submitted 716 attempts, 151 correct answers and 565 wrong ones.

AFTER 12 HOURS

04

Within 12 hours, 144 unique players submitted 6134 attempts, 1173 correct answers and 4960 wrong ones.

05

1 HOUR REMAINING

In the last hour of the competition, 37 unique players submitted 1046 attempts, 61 correct answers and 985 wrong ones.

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2022
INDIVIDUAL CONTEST
- FUN FACTS -

06

THE HIGHEST NUMBER OF SUBMITTED FLAGS

The „**encoding-party2**" challenge registered 127 submitted flags. The contestants had to decode a hidden message with a cipher.

THE LOWEST NUMBER OF SUBMITTED FLAGS

07

The „**medical-instrument**" challenge had the lowest number of submitted solutions (8). Contestants had to investigate an image of a Linux OS and answer questions about it.

08

CONTEST FINALE: ATTEMPTS & SOLUTIONS

At the end of the competition we registered 15133 attempts, out of which 2214 were successful.

THE FASTEST PLAYER TO SOLVE ALL CHALLENGES

09

The fastest player was Niță Horia (Universitatea Babeș Boylai din Cluj-Napoca), solving all challenges 18 hours before the finale.
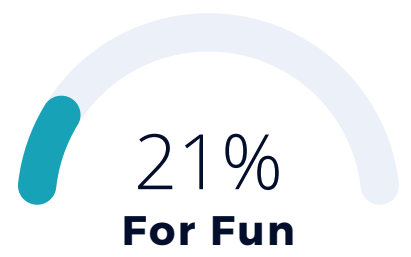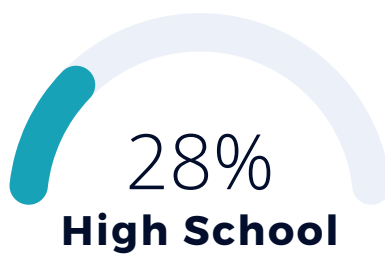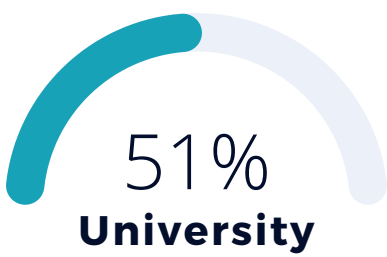
10

PARTICIPANTS 2022 VS 2021

27% of those who registered for UNbreakable 2022 were also active in the 2021 program.

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2022
TEAM COMPETITION

TEAM DISTRIBUTION

82 TEAMS

36%
34%
30%

- 1 member
- 2 members
- 3 members

51%
University

28%
High School

21%
For Fun
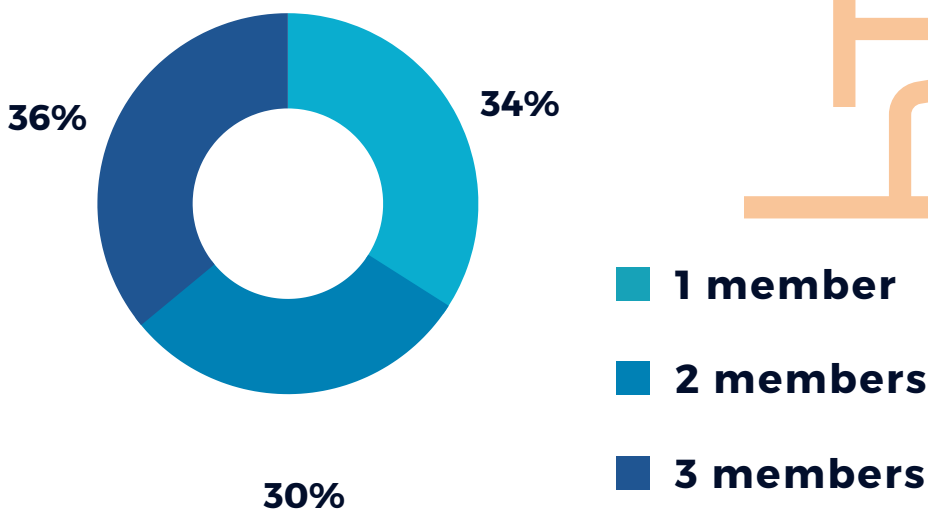
RESULTS

TOP 3 UNIVERSITY TEAMS WITH THE HIGHEST SCORE

Universitatea Babeș-Bolyai din Cluj-Napoca
Universitatea Politehnică din București
Universitatea Tehnică Gheorghe Asachi din Iași

0   2,500   5,000   7,500

TOP 3 HIGH SCHOOL TEAMS WITH THE HIGHEST SCORE

Colegiul Național de Informatică Tudor Vianu din București
Colegiul Național Nicolae Bălcescu din Brăila
Colegiul Tehnic Dimitrie Ghika din Comănești

0   2,000   4,000   6,000
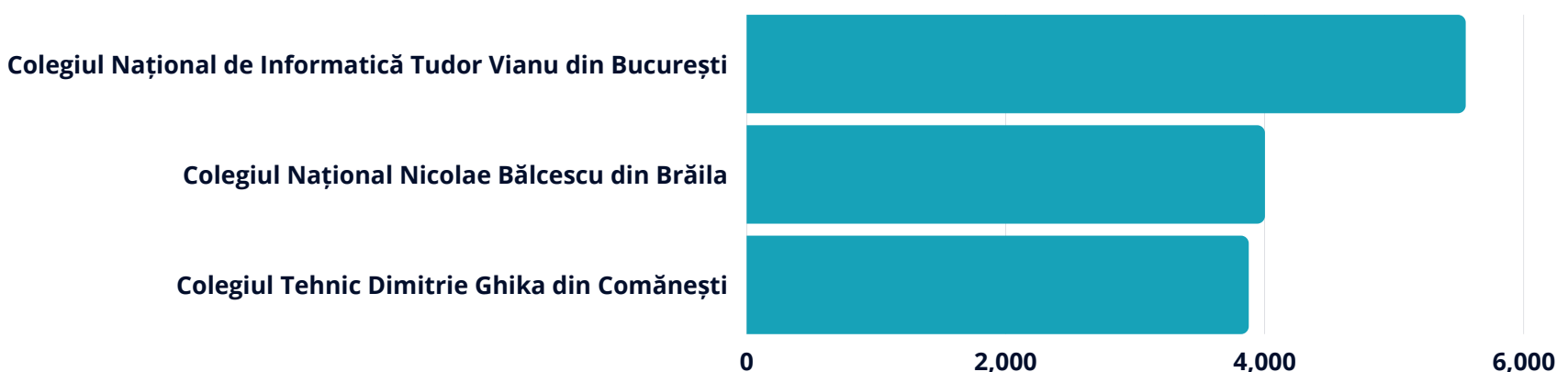
71 teams solved at least 1 challenge out of the 26 that were proposed.

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2022
TEAM COMPETITION
- FUN FACTS -

01

FIRST BLOOD

The first correct answer was submitted in 4 minutes and 9 seconds from the start, by user 0x19fec7ed, from Colegiul Național Tudor Vianu in Bucharest.

AFTER 1 HOUR

02

In the first hour of the competition, 28 teams submitted 61 correct answers, for 14 challenges, and 263 failed attempts.

03

AFTER 12 HOURS

In the first 12 hours of the competition, 64 teams submitted 544 correct answers, for 21 challenges, and 3415 failed attempts.

1 HOUR REMAINING

04

In the last hour of the competition, 14 teams submitted 16 correct answers, for 8 challenges, and 277 failed attempts.

05

COMPETITION FINALE: ATTEMPTS & SOLUTIONS

At the end of the competition we registered 6836 failed attempts. The challenges were solved 452 times, and participants sent 1013 correct answers.

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2022
TEAM COMPETITION
- FUN FACTS -

06

THE HIGHEST NUMBER OF SUBMITTED FLAGS

The „**Dacian**" challenge received 53 solutions. This is a challenge that involved investigating and identifying the correct hidden answer in a game.

THE LOWEST NUMBER OF SUBMITTED FLAGS

07

Three challenges tied with only 3 solutions each: „**Digital-talking**" (Crypto), „**Pro-trace**" (OSINT) and „**Camera-man**" (OSINT).

08

THE MOST POPULAR CATEGORY

The FORENSICS category registered an average of 128.8 solutions.

THE LEAST POPULAR CATEGORY

09

The OSINT category registered an average of 3 solutions.

10

THE TEAM THAT SOLVED ALL CHALLENGES

The Few Chosen, from Universitatea Babeș-Bolyai Cluj-Napoca, solved all 26 challenges in just 32 hours after the start, being the fastest team of the competition.
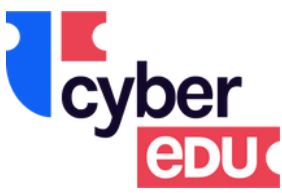
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Thank you

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Universitatea Maritimă Constanța   UNIVERSITATEA TEHNICĂ DIN CLUJ-NAPOCA   Facultatea de Matematică și Informatică Universitatea din București   Universitatea Transilvania din Brașov   UNIVERSITATEA LUCIAN BLAGA DIN SIBIU

UPIR   USU Universitatea Ștefan cel Mare Suceava   UTM UNIVERSITATEA TEHNICĂ A MOLDOVEI   UNIVERSITATEA DIN PETROȘANI

MEDIA PARTNERS

DefCamp .community   security espresso   Cadette for the love of code   BEST BUCHAREST   IQool   ISACA Romania Chapter

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