

What is UNbreakable Romania?

UNbreakable Romania is an end-to-end cybersecurity educational program for high schools and university students from Romania. Through its activities, UNbreakable provides an x-ray and visualisation of the level of cybersecurity skills nationally.

UNbreakable's mission is to bring together students who are passionate about cybersecurity, so that they have all the resources required to develop the necessary skills to become good cybersecurity specialists. It also provides a competitive environment that encourages collaboration and experience exchange.

This way, UNbreakable is actively participating in bridging the cyber security workforce gap locally and internationally.

The UNbreakable model can be replicated at different levels, depending on environment.



How does UNbreakable Romania work?

Participants have access to theoretical and practical resources to familiarize themselves with the competition format and methodology. 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.

BOOTCAMP



INDIVIDUAL COMPETITION

Participants will compete for 48 hours. The objective is to solve as many cybersecurity challenges as possible and send as many "flags" as possible to reach the top of the leaderboard. At this stage, participants evaluate their performance on an individual level and see what knowledge needs to be improved.



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 to solve exercises in different areas of cyber security for 48 hours.

TEAM COMPETITION



Why UNbreakable Romania?

This competition uncovers many paths for young people, as they can practice their individual skills, but also their cooperative skills.

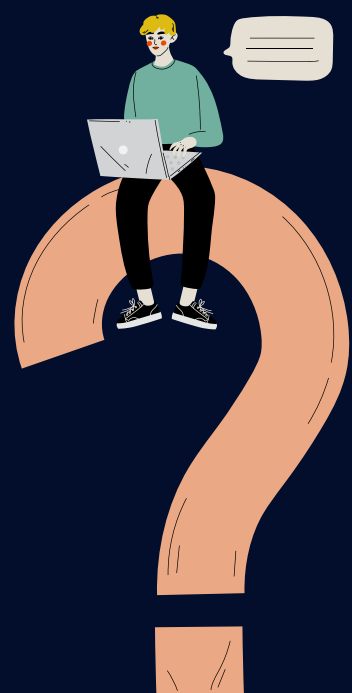
Anton Rog
Director for CyberInt National Centre

This type of competition is a fantastic foundation to extremely quickly accumulate knowledge and information that increases your professional value.

Dan Cimpean
DNSC Director (National Directorate for Cyber Security)

UNbreakable is a vehicle, getting you from point A to point B. Point B can be a career in cybersecurity.

Ioan Constantin
Cyber Security Expert Orange Romania



BOOTCAMP







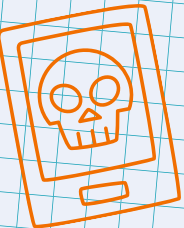
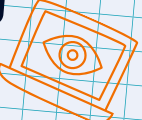
FALL-WINTER SEASON 2021

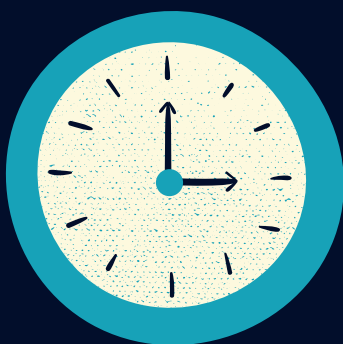
- ✓ 619 registered
- ✓ 76 challenges
- ✓ 27 mentors
- ✓ 17 webinars
- ✓ 30 hours of webinars


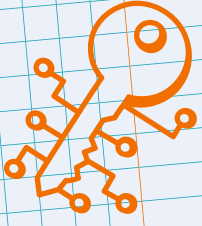
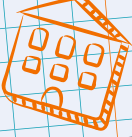


Webinars' Topics

1. Kick-off Bootcamp
2. Introduction to operational technologies 
3. Exploitation of Host Header 
4. Key cybersecurity threats
5. IPv4 and IPv6 addresses 
6. Unikernels for Fast and Secure Computing

7. The Life of a Security Researcher 
8. Intro to HackTheBox
9. Do You Feel the Heat? Meet GPU Malware 
10. Introduction to web application security
11. How to protect your data using encryption 
12. Cyber Geostrategy



13. (Cyber) Security of critical infrastructures, focusing on the Aerospace Industry 
14. Introduction to Operational Security
15. From Cyber Kill Chain to Unified Kill Chain
16. Techniques / technologies for anonymising data 
17. Intelligence, Forensics & Resilience in Public Administration Cybersecurity 

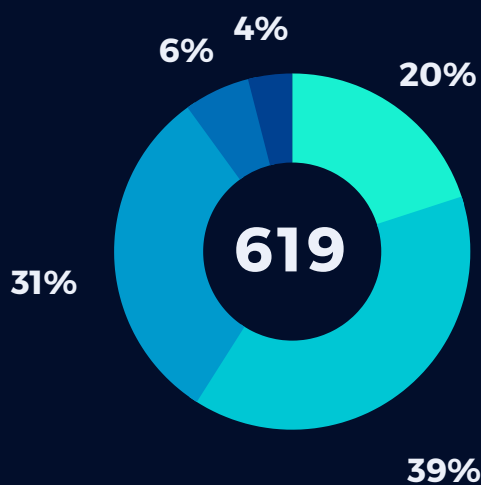
INDIVIDUAL COMPETITION



FALL-WINTER SEASON 2021

PARTICIPANTS' DISTRIBUTION

619 registered



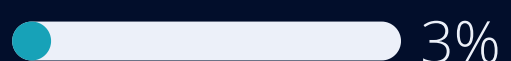
<18 years old
18-21 years old
21-25 years old
25-30 years old
>30 years old



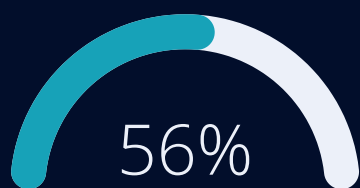
Male



Female



Did not specify



56%
University



24%
High School

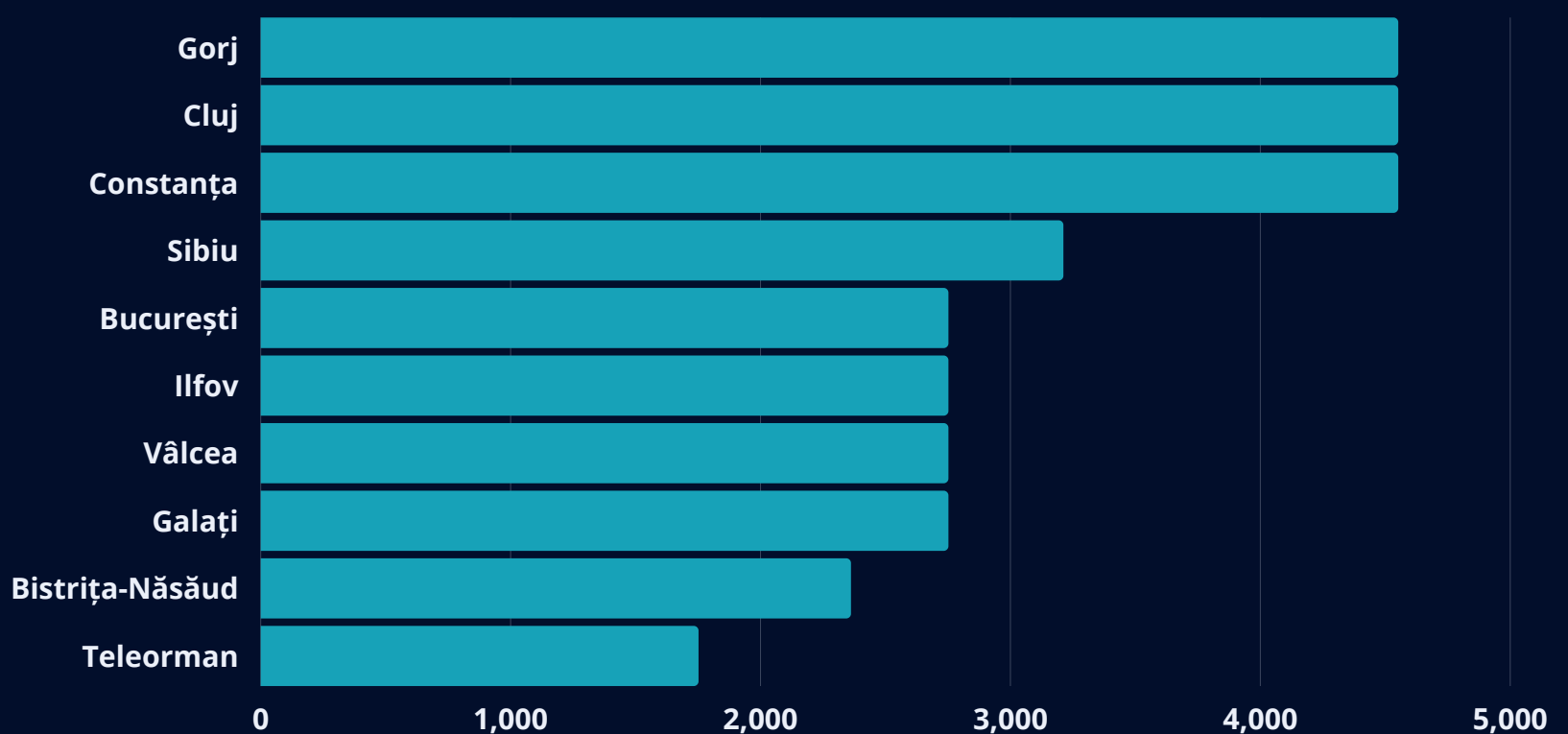


20%
For Fun

RESULTS



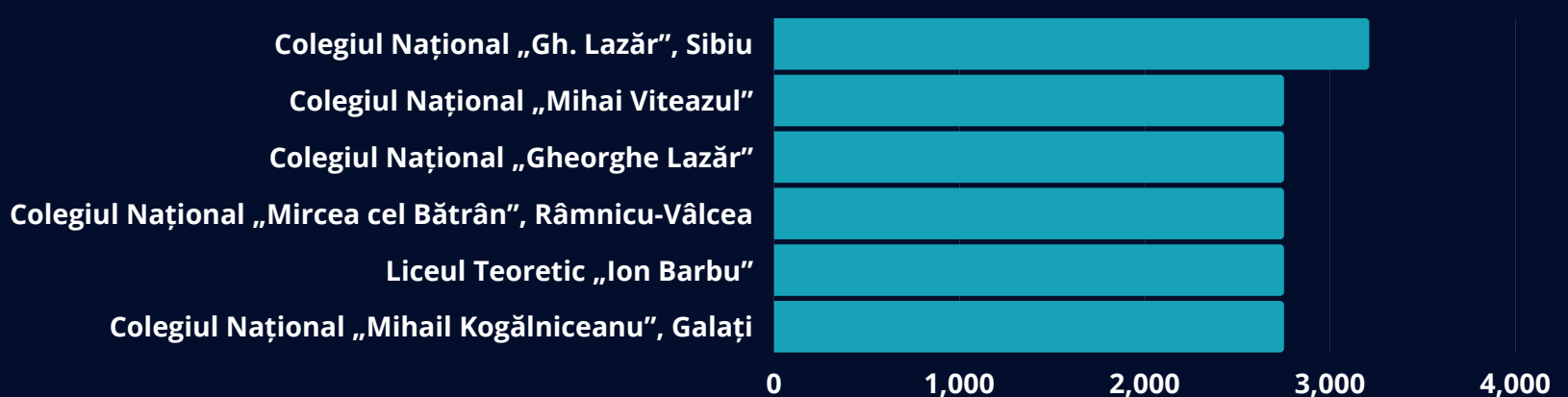
TOP 10 COUNTIES WITH THE HIGHEST SCORE



TOP 5 UNIVERSITIES WITH THE HIGHEST SCORE



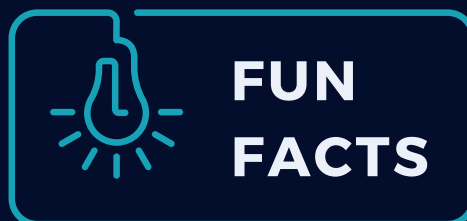
TOP 5 HIGH SCHOOLS WITH THE HIGHEST SCORE



INDIVIDUAL COMPETITION



FALL-WINTER SEASON 2021



Approximately 30% of the students who registered for UNbreakable Romania, the fall-winter season 2021, were also registered for the spring-summer edition.



FIRST BLOOD



The first correct answer was sent just **3 minutes and 41 seconds** after the start of the competition, by Ungureanu George Octavian, Colegiul Național „Ferdinand I” din Bacău.



AFTER 1 HOUR



In the first hour of the competition, participants submitted **245 attempts and 52 correct answers**. During this time, **35 players had at least one correct answer**.



AFTER 12 HOURS



Within 12 hours, participants submitted **3471 attempts and 385 correct answers**. During this time, **99 players had at least one correct answer**.



1 HOUR REMAINING



In the last hour of the competition, participants submitted **148 attempts and 16 correct answers**. Also during this time, **11 players had at least one correct answer**.



„NEIGHBORHOOD”



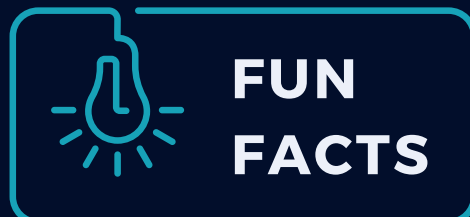
The challenge with the most solutions was **“neighborhood”**, for which 82 participants submitted solutions. The exercise involved analyzing a traffic capture to recover the wireless password of a network using specific methods.



INDIVIDUAL COMPETITION



FALL-WINTER SEASON 2021



„ENIGMA” & „BABY-YT-REPEAT”



Two exercises tied for the lowest number of solutions - only 5. One was **"enigma"**, which involved recovering an encrypted message using the Enigma algorithm, known for its use in World War II for secure communication. **The second one, called "baby-yt-repeat"**, exposed a web application vulnerable to a security problem known in the OWASP Top 10 as "Cross Site Scripting".



THE MOST SOLUTIONS



The category with the most solutions submitted was **"Reverse engineering for executable applications, scripts or documents"** with a total of **121 solutions** sent.



THE FEWEST SOLUTIONS



The category with the fewest solutions submitted was **"Cryptography and encryption, encoding or hashing algorithms"**, with a total of **11 solutions**.



TOTAL



At the end of the competition, **a total of 7959 attempts were registered, of which 786 were successful.**



THE FASTEST ONE



ADRAGOS was the fastest player. Also ADRAGOS, NIȚĂ HORIA and DIMITRIE-TOMA FURDUI, **winners of the UNIVERSITY category, solved all the exercises in the competition.**



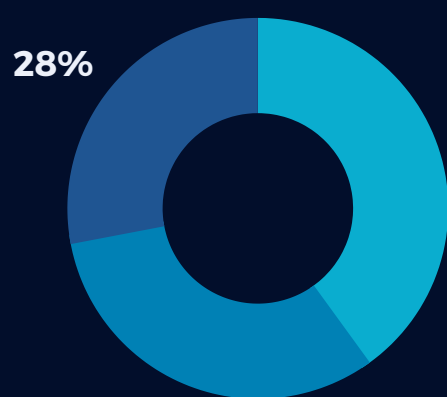
TEAM COMPETITION



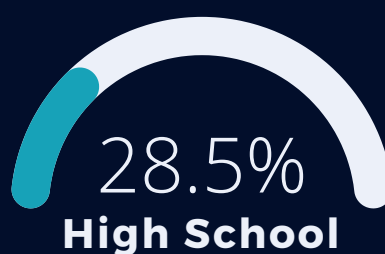
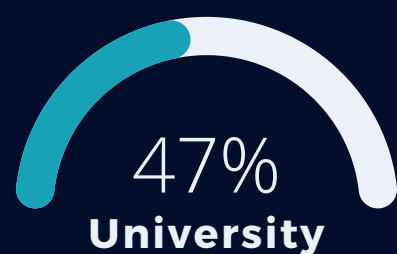
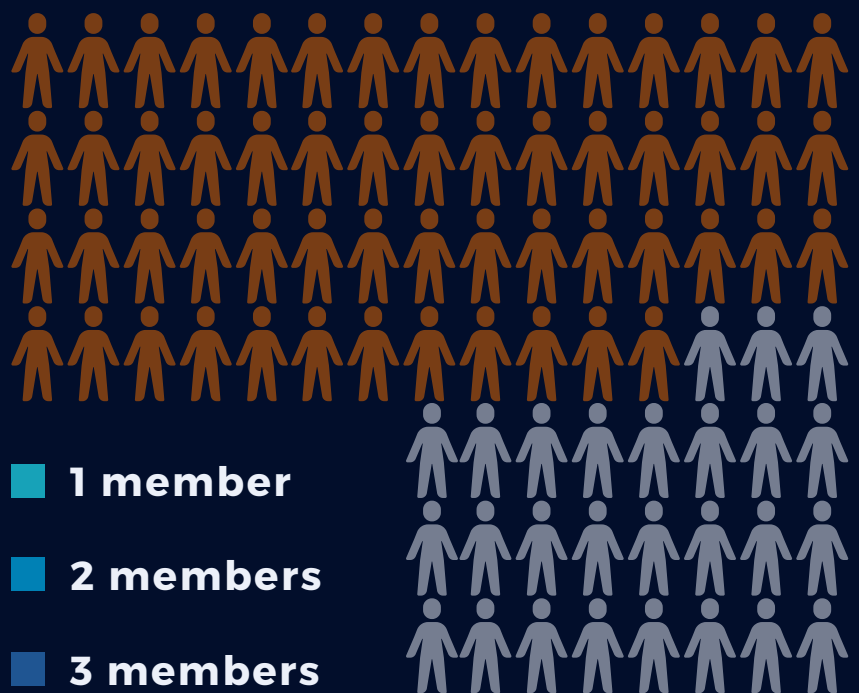
FALL-WINTER SEASON 2021

TEAMS' DISTRIBUTION

70 teams



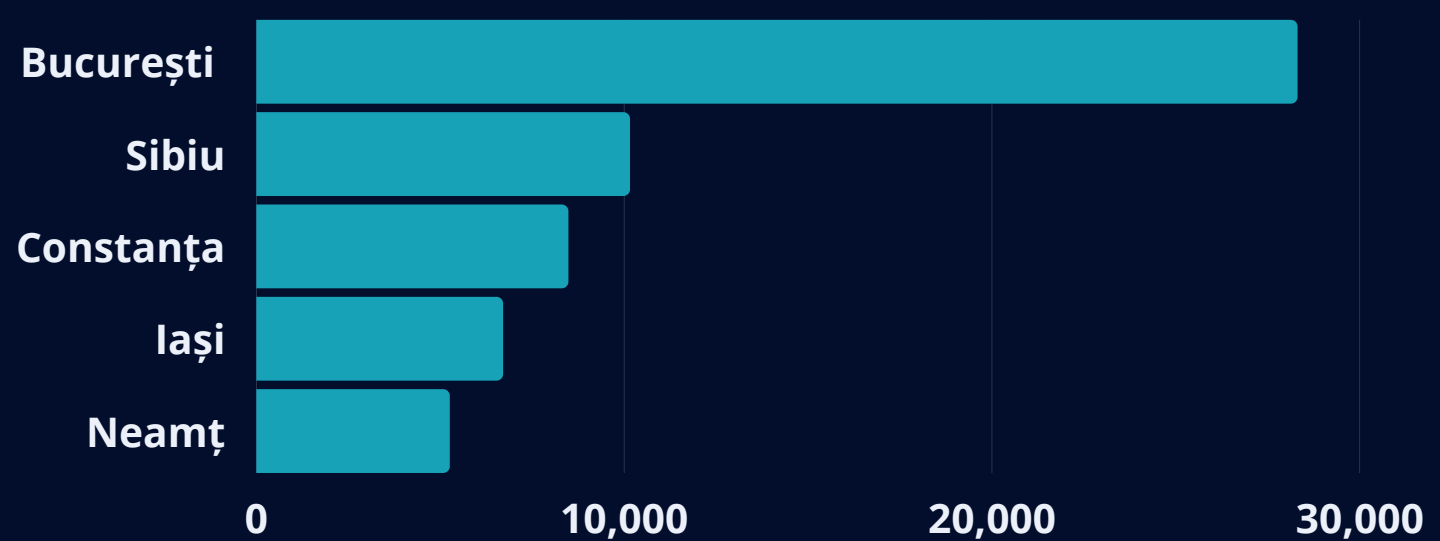
40%



RESULTS



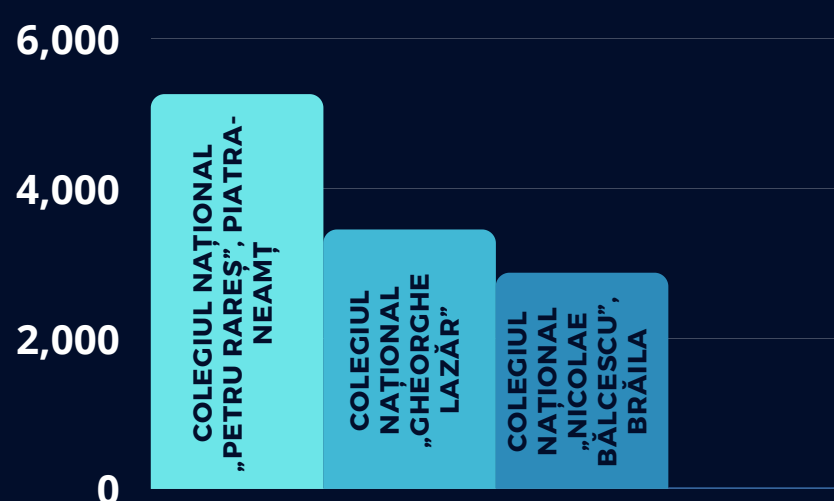
TOP 5 COUNTIES WITH THE HIGHEST SCORE



TOP 3 UNIVERSITY TEAMS WITH THE HIGHEST SCORE



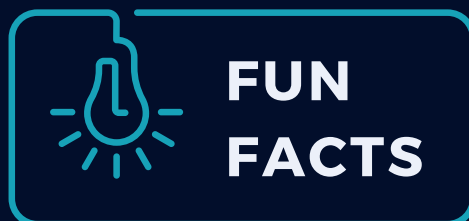
TOP 3 HIGH SCHOOL TEAMS WITH THE HIGHEST SCORE



TEAM COMPETITION



FALL-WINTER SEASON 2021



For the first time, the competition included, with the support of OMV Petrom, a bonus exercise category, entitled "Industrial Control Systems".



FIRST BLOOD



The first correct answer was sent by the HPB team from the COLEGIUL TEHNIC "DIMITRIE GHICA" COMĂNEȘTI, after **5 minutes and 45 seconds**. The exercise solved was "mexican-specialties".



AFTER 1 HOUR



In the first hour of the competition, **18 teams submitted 489 attempts and 31 correct answers**. During this time, **7 exercises received correct answers**.



AFTER 12 HOURS



In the first 12 hours of the competition, **39 teams submitted 2724 attempts and 389 correct answers**. Also during this time, **21 exercises received correct answers**.



1 HOUR REMAINING



In the last hour of the competition, **8 teams submitted 438 attempts and 16 correct answers**. During this time, **10 exercises received correct answers**.



„COMUNICATION”



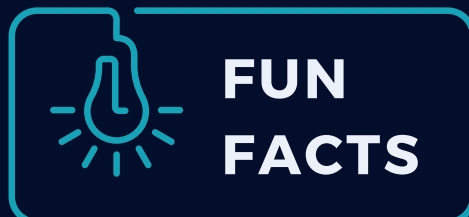
The most popular exercise was "comunication", for which **36 teams submitted solutions**. This is a standard exercise which involved analyzing a data capture and retrieving a wifi password.



TEAM COMPETITION



FALL-WINTER SEASON 2021



„WOWPWN” & „RODENT-INFESTATION”



The **"w0wpwn" problem**, which involved exploiting a binary, was not solved by any team. Another exercise that posed great difficulties was **"rodent-infestation", solved by only 3 teams**. The exercise was a traffic capture in which evidence of data exfiltration was recorded using a "time-based" technique.



THE MOST SOLUTIONS



The category with the most solutions submitted was **"Steganography", with an average of 34 solutions per exercise**.



THE FEWEST SOLUTIONS



The category with the fewest solutions submitted was **"Exploitation / pwn", with an average of 5.33 solutions per exercise**.



TOTAL



At the end of the competition **a total of 8409 attempts were recorded, of which 808 were correct**.



THE BEST TEAM



No team solved all the exercises in the competition, but **the highest ranked team was pwnibuc, with 23 out of 24 exercises solved**.





FALL-WINTER SEASON 2021

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EVENT ORGANISED BY



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