

# CTF 2023

香港網絡保安新生代  
Hong Kong Cyber Security New Generation  
奪旗挑戰賽  
Capture the Flag Challenge

# 10 - 12 November 2023

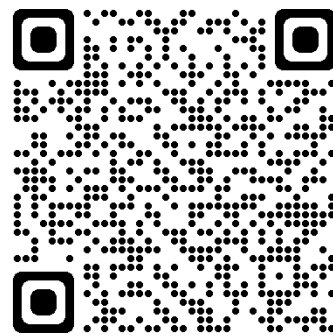
## Organisers



## Co-organisers



## Gold Sponsors



Website : <http://ctf.hkcert.org>





# CAPTURE THE FLAG CHALLENGE 2023

Continuous innovation in Internet technology development and applications has enhanced the quality of life and work efficiency, but at the same time it has created various new cyber security challenges. It only serves to fuel the demand for cyber security professionals. To cope with the challenges, the training of local cyber security practitioners and the nurturing of new generations are indispensable.

For the younger generation, **TechEd** could foster and enhance their knowledge and interest in cyber security, train up their creative thinking, and teach skills such as cryptography, programming concept, and network forensics, and other techniques to effectively address emerging cybersecurity challenges.

For existing cyber security practitioners, regular update of latest trends and enhancement of cyber security skills can help organisations to reduce the risk and improve incident response capability.

In light of this, the Hong Kong Computer Emergency Response Team Coordination Centre (HKCERT) and the Hong Kong Productivity Council (HKPC) jointly organise the “**Hong Kong Cyber Security New Generation Capture the Flag (CTF) Challenge 2023**” (the Contest) to strengthen the cyber security skills and awareness of the industry and students and encourage problem solving through teamwork, creative thinking, and cyber security skills.

Workshops by cyber security experts will be organised to help the participants understand the Contest format and type of challenges they will encounter during the Contest, aiming to ensure that all participants are well-prepared before the Contest.

**Sign up now, and get ready for the challenge!**

## Date and Time

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**10 November 2023, 6:00PM (HK time) to 12 November 2023, 6:00PM (HK time)**

*The system will operate for 48 hours continuously, and participants can access it anytime during the Contest.*

## Contest Format

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This is a **Jeopardy-style** online CTF Contest. Participants will get a score after solving the challenges during the Contest.

## What can be learnt from the Contest

Please refer to website <http://ctf.hkcert.org/ctf-challenge-info/index.html>



## Type of Challenges and Samples

- Binary Exploitation
- Cryptography
- Forensics
- Reverse Engineering
- Web Exploitation
- Miscellaneous



\* All the challenges in this contest are bilingual (i.e. Trad. Chinese and English)

\* Samples: [https://ctf.hkcert.org/ctf-challenge-info/index.html#challenge\\_type](https://ctf.hkcert.org/ctf-challenge-info/index.html#challenge_type)

\* References of previous challenges: <https://github.com/hkcert-ctf/CTF-Challenge>



## Eligibility

The Contest is divided into 3 categories:

1. **Secondary School;**
2. **Tertiary Institution;** and
3. **Open Category**

The Contest is conducted in a team format, with each team consisting of **one to four members**. Each participant can only enrol to **one team** and submit one application.

Participants shall **agree and comply** with all the terms and conditions, and rules of the Contest.

### Categories and Prizes (*\*Number of prizes will depend on the number of team members*)

1. **Secondary School** – Secondary students in Hong Kong
  - Gold: Samsung Galaxy Tab S6 Lite 10.4" (2022 Edition) Tablet (LTE + WiFi)
  - Silver: Apple Watch SE GPS + Cellular Aluminium Case (2022) – 40mm
  - Bronze: Nothing ear (2) Headphone

\* All members of the team must be from the same school

\* Schools which sent **more than 50 students** (Only count for students from participated team<sup>(Note 1)</sup>) will receive the **“Supportive School Award”** (The School can send an unlimited number of teams to join)

\* The school which achieved the **most outstanding result** will receive the “**Best School Award**” (Note 2)

\* **Each winning school** will receive a trophy (i.e. the school of Gold, Silver and Bronze winners, and the winning school of the “Supportive School Award” and “Best School Award”)

\* The challenges in the Secondary School category are different from those in the Tertiary Institution and Open categories. Therefore, if teams from secondary schools want to compete with teams in Open category, they can choose to opt-in in the registration form. Please note that in this case, **their score will be counted in Open category**. For instructions on how to opt-in the registration form, please refer to the guidelines provided in the registration form.

2. **Tertiary Institution** – Full-time students studying **Diploma, Higher Diploma, Associate Degree or Bachelor’s Degree** in Hong Kong universities or colleges

- Gold: Bowers & Wilkins PI7 S2 Headphone
- Silver: Microsoft Xbox Series S Game Console (1TB)
- Bronze: Sony REON POCKET 4 Wearable Thermal Device (Main Unit with neckband)

\* Students who are studying other degrees not specified above (e.g. master’s degree, doctoral degree, etc.) are not eligible to join this category. **They can consider joining the Open category.**

3. **Open Category** – **At least one** Hong Kong resident or holder of a valid Hong Kong working or study visa is on the team

- Gold: Sony PlayStation® 5 PS5 Digital Edition CFI-1218B01 Game Console
- Silver: Insta360 Go 3 Action camera (32GB)
- Bronze: Philips PPX325/INT PicoPix Micro+ Mobile Projector

Examples	
Scenario	Eligible to join
Members are studying in the <u>same</u> secondary school of Hong Kong	<ul style="list-style-type: none"> <li>● Secondary school, or</li> <li>● Open Category (opt-in)</li> </ul>
One of the members is studying at <u>different</u> secondary schools in Hong Kong	<ul style="list-style-type: none"> <li>● Open Category</li> </ul>
Members are studying Diploma, Higher Diploma, Associate Degree or Bachelor’s Degree in Hong Kong universities or colleges	<ul style="list-style-type: none"> <li>● Tertiary institution, or</li> <li>● Open Category</li> </ul>
One of the members is studying for a master’s or doctoral degree at Hong Kong universities or colleges	<ul style="list-style-type: none"> <li>● Open Category</li> </ul>
One of the members is a Hong Kong resident, the other three members are not	<ul style="list-style-type: none"> <li>● Open Category</li> </ul>



In addition to the above prizes, all the winners will receive an **award certificate**. Other participants from the participating team <sup>(note 1)</sup> will receive an **electronic certificate**.

**In addition, the team with the highest score among the Tertiary Institution and Open Category will have the opportunity to qualify for the SECCON CTF 2023 International Final, the flagship annual cybersecurity competition held in Japan on December 23-24, 2023.** For more information about SECCON CTF 2023, please visit <https://www.secon.jp/2023/>.

*(Note 1) Participated Team means Teams with score **greater than or equal to 20**.*

*(Note 2) The Organisers will sum the score of the **top 30 teams** on the scoreboard by schools. The school which achieved the highest score will receive the **“Best School Award”**.*

## Team Name

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Each team names will consist of two parts (1) Team code; and (2) Team name, which can be the name of school/institution or any custom name. The naming convention for each team category is as follows:

1. Secondary School
  - Assigned by the Organiser
  - Naming convention is {Team Code} – {School name of the members}
  - E.g. S0001 – Tsuen Wan East Secondary School
2. Tertiary Institution
  - Custom name in English with a maximum of 50 characters, or assigned by the Organiser
  - Naming convention
    - {Team Code} – {self-defined name}, or
    - {Team Code} – {Institution name of each member}
3. Open Category
  - Custom name in English with a maximum of 50 characters
  - Naming convention is {Team Code} – {self-defined name}
  - E.g. O0001 – HK CTFMan

The Organisers reserve the right to change any team names without prior notice.

## Proof of Answer (Write-up)

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The top five teams in each category are required to submit a proof of answer (write-up) for three of the solved challenges selected by the Organisers. The Organisers will verify the accuracy to confirm the final ranking.

## Registration Link

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<https://alt.iotfor.ms/hkcert/ctf2023>



## Deadline of Registration

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31 October 2023 (*Registration after the deadline will not be accepted*)

## Workshop (Hybrid mode)

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Two workshops will be arranged to brief on the Contest arrangement, target audience, learning outcome and demonstration of solving challenges.

Workshop 1: Web Exploitation, Cryptography and Miscellaneous

Date: 7 October 2023

Time: 2:30 pm – 5:00 pm

Venue: InnoSpace, 1/F, HKPC Building, 78 Tat Chee Avenue, Kowloon, Hong Kong

Onsite Quota: 40\*

Online Quota: NA

Workshop 2: Binary Exploitation and Reverse Engineering

Date: 14 October 2023

Time: 2:30 pm – 5:00 pm

Venue: Theatre 2, 1/F, HKPC Building, 78 Tat Chee Avenue, Kowloon, Hong Kong

Onsite Quota: 40\*

Online Quota: NA

Registration link:

<https://alt.iotfor.ms/hkcert/ctf2023-workshops-registration>



\* *Previous workshop:*

<https://youtube.com/playlist?list=PLi4stWN75PY54iDwb3JIHi3nz3ZRvB07b>



## Seminar and Award Presentation Ceremony

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19 December 2023, 9:30 am – 5:00 pm at HKPC Building, 78 Tat Chee Avenue, Kowloon



## Terms and Conditions

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- The participating teams should abide to these Terms and Conditions and the Rules of the Contest. The Organisers reserve the right to penalise team members for noncompliance with suspension of access or disqualification. The related teams and their members shall not raise objection.
- Each participating team will be named as per the rule specified under the “Team Name” section. The Organisers reserve the right to change the team’s name at any time without prior notice. The participants shall not raise objection.
- The whole team is disqualified if any member of the team is not eligible.
- All works of the team must be contributed by eligible members of the team.
- The team should notify the Organisers of any change in team members immediately. The Organisers will verify the identity of the winning team members when confirming their award.
- The Organisers may allow teams from other countries / regions to compete in the platform. The invited teams would compete in another category. Their score and ranking would not affect the other groups. The participants shall not raise objection.
- The decisions of the Organisers on the Contest results will be final and the results of the Contest will be published on <https://ctftime.org>. The participants shall not raise objection to the Contest results or rankings.
- The Organisers reserve the right to change the prize at any time without prior notice.
- The Organisers reserve the right to amend the Rules from time to time and inform the participants.

## Rules

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- Each team should include maximum of 4 team members (i.e. 1 – 4 members). All team members must fulfil the entry requirements stated in the Eligibility.
- Representatives of the Contest Organising Committee, members of the project team and supplier(s) of the Contest are not eligible for joining the Contest.
- The top five teams of each category are required to submit the write-up as specified under the “Write-up” section within the set time by the Organisers.
- After completing the 48 hours’ Contest, the top three teams of each category with the highest scores and their write-ups confirmed by the Organisers will be declared the gold, silver and bronze winners respectively. In case of a tie in score, the final placing will be decided by time.
- If any issues occur during the Contest, participants shall report them to the Organisers immediately.
- Don't attack the CTF platform, such as:
  - Modify the scoreboard;
  - Generate excessive load;
  - Launch denial of service attack;
  - Don't attack any machine or service other than the designated ones.
- No social engineering attack.
- Don't cheat or interrupt the Contest, such as:



- Share flags;
- Ask for flags;
- Delete flags;
- Intentionally prevent other teams from submitting flags.
- In the chat room:
  - Don't send any message which contains violent, obscene or indecent content.
  - Don't upload any file which infringes any copyrights and intellectual property rights.
- Do not share any content or details of the CTF challenges with anyone before the end of the contest.
- Any abuse or violation of the Rules will result in penalty as stated in the Terms and Conditions.

## Enquiry

Please contact our Ms Tracy Choy at +852 2788 5884 or [tracyc@hkpc.org](mailto:tracyc@hkpc.org).

## Supporting Organisations (In arbitrary Order)



## Fully Supported By

