

ANNUAL REPORT 2022



HIGHLIGHTS OF 2022

1.1 Summary of Major Activities

Throughout the year, the Government Computer Emergency Response Team Hong Kong (GovCERT.HK) continued to strengthen the cyber security resilience, promote security awareness and raise the defensive capabilities through the collaboration with different stakeholders.

1.2 Achievements and Milestones

Strengthening Cyber Security Resilience

In 2022, the number of organisations participated in the Partnership Programme for Cyber Security Information Sharing (Cybersec Infohub) have nearly doubled. To enable more effective sharing in the collaborative platform, we implemented a new feature of information sharing between private groups and introduced new threat intelligence (TI) feeds. Furthermore, numerous member events, including meetings, workshops and webinars, were successfully organised so as to build a closer bonding among members from a wide spectrum of industries.

Awareness and Capability Building

We launched the “Build a Secure Cyberspace Promotional Campaign 2022” with the theme “Fact Check After Receiving, Think Twice Before Sharing”, held webinars and a contest with the Hong Kong Computer Emergency Response Team Coordination Centre (HKCERT) and the Hong Kong Police Force (HKPF), to raise the public awareness of false information on the Internet. We also organised a series of school visits and security talks for non-governmental organisations (NGOs) to raise their awareness on cyber security and to prevent them from falling prey to cyber pitfalls.

HIGHLIGHTS OF 2022

Collaboration with Stakeholders

We actively participated in the Asia Pacific Computer Emergency Response Team (APCERT) activities and worked closely with the Computer Emergency Response Team (CERT) community in handling threat information and coordinating incidents. We also supported our working partners for organising various events for nurturing cyber security talents, such as the Capture the Flag (CTF) Challenge 2022 and the Cyber Youth Programme 2022 organised by HKCERT and the Hong Kong Internet Registration Corporation Limited (HKIRC) respectively.

ABOUT GovCERT.HK

2.1 Introduction

GovCERT.HK is a governmental CERT responsible for coordinating incident responses for over 80 departmental Information Security Incident Response Teams (ISIRTs) of the Government of the Hong Kong Special Administrative Region of the People's Republic of China ("the Government").

GovCERT.HK works closely with HKCERT, local industries and critical Internet infrastructure stakeholders on cyber threat intelligence sharing, capability development, public education and continuous promotion on cyber security. GovCERT.HK also actively collaborates with other governmental and regional CERTs, and international organisations in sharing cyber threat intelligence and incident information; participating in training events, workshops, forums and drills; and organising activities for public awareness promotion and capability development, with a view to enhancing information and cyber security in the region.

2.2 Establishment

GovCERT.HK was established on 1 April 2015 through the consolidation of internal IT security teams within the Office of the Government Chief Information Officer (OGCIO) of the Government.

2.3 Resources

GovCERT.HK is an establishment under OGCIO and funded by the Government.

2.4 Mission and Constituency

Being the governmental CERT, GovCERT.HK centrally manages incident responses within the Government and develops CERT-related services to assist government departments in understanding the associated risks of information and cyber security, implementing appropriate security measures, monitoring potential threats and responding to security events with a view to ensuring that the government's information infrastructure is well protected.

ACTIVITIES AND OPERATIONS

3.1 Security News Bulletins

GovCERT.HK published the following security bulletins to raise the awareness among government users and the general public:

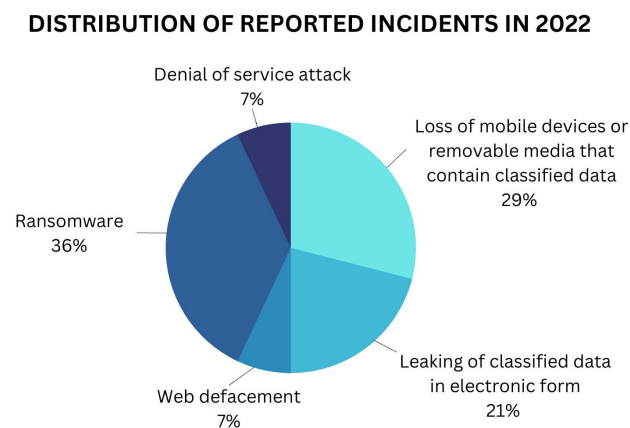
- “Security Vulnerabilities and Patches” to registered subscribers through emails on every working day;
- “Security Industry News” to registered subscribers through emails on every working day; and
- “Weekly IT Security News Bulletins” with summary of security news and product vulnerabilities to registered government subscribers through emails and posted to the GovCERT.HK website as public information.

3.2 Alerts and Advisories

In 2022, GovCERT.HK issued over 220 security alerts about known security vulnerabilities reported in common products. For those vulnerabilities with higher severity level, we proactively requested government departments to take prompt and appropriate preventive measures against potential information security risks.

3.3 Incident Handling Reports

GovCERT.HK handled 14 reported incidents related to government installations, with the incident types shown below:

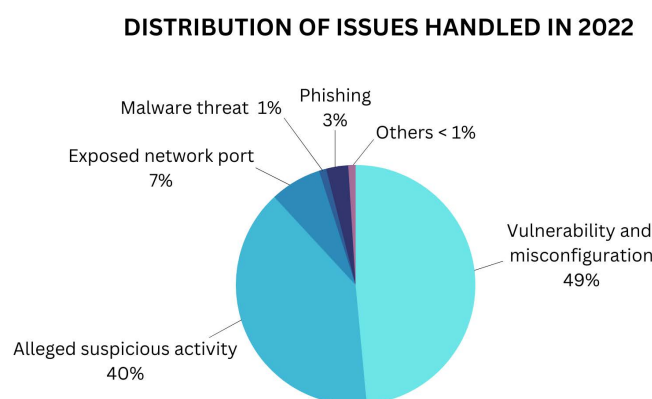


Relevant statistics on information security incidents in the Government are available on the Government's Public Sector Information Portal for public access.

(www.data.gov.hk/en-data/dataset/hk-ogcio-sec_div_01-information-security-incident)

3.4 Abuse Statistics

GovCERT.HK assisted government departments to take effective and prompt measures to prevent and reduce the risks and impacts of cyber attacks on their information systems, with the types of security issues shown below:



3.5 Publications and Mass Media

To actively reach out to the public, we continued to share tips and best practices against cyber threats through multiple channels.

- We partnered with the Radio Television Hong Kong (RTHK) to broadcast radio episodes “e-World Smart Tips” every week, covering a wide range of topics such as phishing attacks, cyberbullying, digital identity, password management, online shopping, using social media and instant messaging, in a lively and interesting way.

(www.cybersecurity.hk/en/media.php#Radio)

政府資訊科技總監辦公室
網絡安全資訊站

安全使用社交媒體 小貼士 之
應對社交媒體騙案

- 面對突如其來的請求時(如親友請求幫忙接收驗證碼、購買點數卡或匯款等)，應以另一渠道與對方核實
- 切勿點擊可疑訊息內的連結或檔案，以免墮入釣魚陷阱
- 在社交網絡結識朋友要謹慎，不要輕信他們提供的資料或向其匯款
- 網購時應留意價格是否合理、光顧信譽良好的賣家，並盡可能選擇當面交收

- We published practical guidelines and infographics with themes such as safe use of social media, firewall setup and cyber security good habits to educate small and medium enterprises, and the public to protect themselves against cyber attacks.

(www.cybersecurity.hk/en/resources.php)

Information Security Guide
Safe Use of Social Media

Account Security

- Use strong passwords
- Avoid using the same password for multiple accounts
- Activate multi-factor login notification
- Use separate devices
- Pay attention to safe and take appropriate changing password

Privacy Protection

- Understand the privacy policy of the service
- Do not post or disclose

Other Security Tips

Firewall Setup Tips for SMEs

Seven Habits of Cyber Security

1. Security Policy and Security Management
 - Define and document the security requirements with respect to cyber security risks
 - Review and update regularly the security requirements and security policy
 - Disseminate regularly the information on the latest security policy to staff members
2. Endpoint Security
 - Install security software such as antivirus and anti-malware software
3. Basic Firewall Security
 - Update the firewall firmware to the latest version
 - Change all default passwords
 - Do not use default user accounts
4. Design network zones
 - Collectively group devices with similar functions and similar sensitivity requirements
 - Segment that provide web-based services (e.g. email, VPN) should be placed inside the DMZ and secure zone
 - Other servers (e.g. database, financial process, internal server) should be placed in the secure zone
5. Security Monitoring
 - Enable logging features in network devices (e.g. firewall) and servers
 - Control logs within the organisation for periodic review and monitoring
 - Review the logs and security alerts and respond to detected issues in a timely manner
 - Monitor network traffic (e.g. Internet traffic) to detect if there is any abnormal traffic pattern
6. Incident Handling
 - Develop incident response plans for handling various security incidents (e.g. ransomware, data breach, distributed denial-of-service (DDoS) attack, etc.)
 - Backup systems and data regularly
 - Keep backups offline (or better still offsite)
 - Perform regular backup restore drills to ensure that data can be restored properly
7. User Awareness
 - Remind staff members regularly on their roles and responsibilities in protecting the organisation's information assets
 - Perform drills (e.g. simulated phishing attacks) to test staff readiness against common cyber attacks

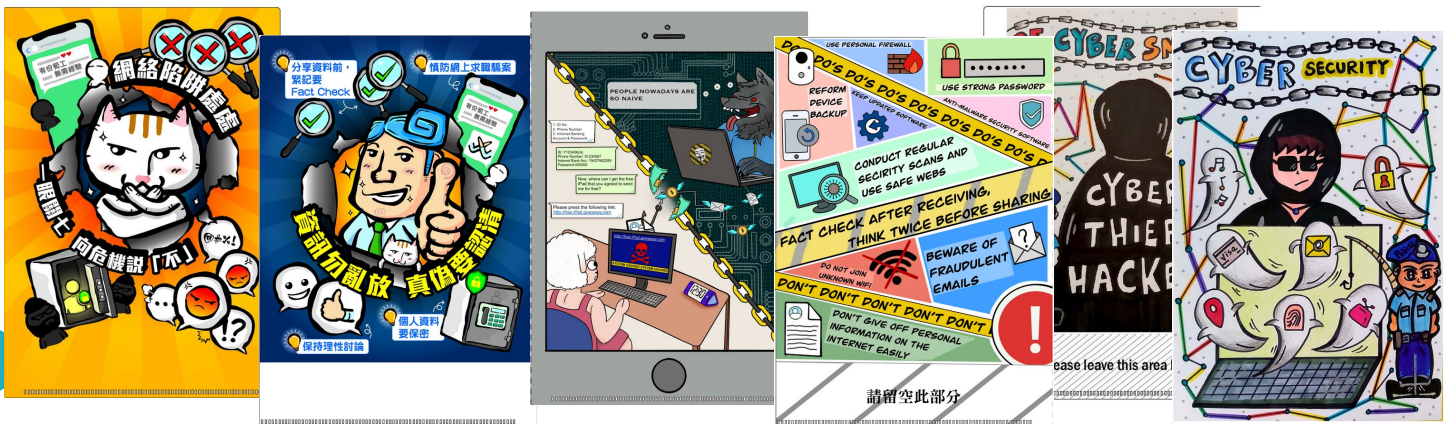
General tips for firewall setup

- Basic Firewall Security
 - Update the firewall firmware to the latest version
 - Change all default passwords
 - Do not use default user accounts
- Design network zones
 - Collectively group devices with similar functions and similar sensitivity requirements
 - Segment that provide web-based services (e.g. email, VPN) should be placed inside the DMZ and secure zone
 - Other servers (e.g. database, financial process, internal server) should be placed in the secure zone
- Configure access control lists
 - Check inbound and outbound access control lists (ACL) to allow designated traffic flow and deny all other traffic
 - The ACL should be made specific to allow or deny the IP addresses' ranges and port numbers
- Test firewall configuration
 - Conduct vulnerability scanning and penetration testing to verify if a firewall is functioning properly
 - Keep a backup of the configuration
- Firewall management
 - Conduct regular reviews and audits, and also properly maintain and review log records to ensure firewall function properly

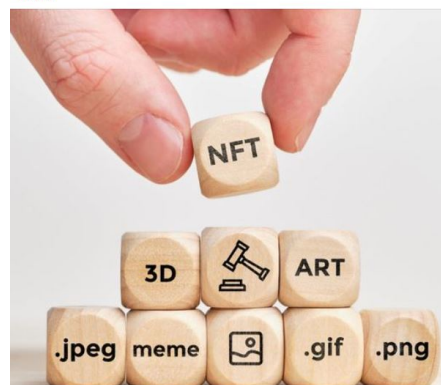
- We organised "Fact Check after Receiving, Think Twice before Sharing" Folder Design Contest. Many creative designs promoting digital etiquette and proper attitude to protect personal information were received.



Winning Entries



- We published a series of posts on the OGCIO Facebook page, with updates and tips on the latest cyber security topics such as phishing, scams, virtual assets and devices security, to enhance communications with the public. (www.facebook.com/OGCIOHK)



3.6 GovCERT.HK Technology Centre

We continued to operate the GovCERT.HK Technology Centre, which provided relevant facilities and equipment to develop the capability of government staff to tackle evolving cyber threats, identify and remediate from potential security weaknesses in a controlled environment.

EVENTS ORGANISED / HOSTED

4.1 Training

In 2022, we organised various webinars and training featuring the latest IT security technologies and solutions, as well as the latest cyber security threats and how to deal with them. Some 2 100 government staff participated in the events with topics such as endpoint security, zero trust security, continuous testing, promotion of various security solutions, and automated vulnerabilities assessment.

4.2 Drills and Exercises

Inter-departmental Cyber Security Drill

GovCERT.HK joined hands with the Cyber Security and Technology Crime Bureau (CSTCB) of HKPF to organise the annual inter-departmental cyber security drills to enhance government department's incident handling capabilities and test their familiarity with the predefined incident response procedures. In 2022, the drill was enhanced with hands-on technical exercises in addition to table-top drills.

Cyber Health Check Exercise

We launched a cyber health check exercise to evaluate the effectiveness of existing security controls and identify potential weaknesses in government Internet-facing systems and mobile applications through a series of technical assessments. The exercise aimed at enhancing the government security posture by adding an extra layer of security verification to government departments' own standing assessment processes.

Anti-Phishing Campaign

We conducted a phishing drill exercise to raise government staff awareness about phishing and improve their capability in defending against phishing attacks.

APCERT Drill

As an Operational Member of APCERT, GovCERT.HK participated in the APCERT Drill with the theme of "Data Breach through Security Malpractice".

4.3 Conferences and Seminars

Build a Secure Cyberspace Promotional Campaign

A series of promotional activities under the theme "Fact Check after Receiving, Think Twice before Sharing" were organised for businesses, organisations, schools and the public to raise their cyber security awareness and strengthen their cyber security postures. Two webinars were organised in May and September 2022 under the campaign.



School Visits and Security Talks for NGOs

To promote cyber security awareness and cyber etiquette, we organised a total of 24 visits to primary and secondary schools, tertiary institutions, and NGOs to deliver information security talks to students, teachers, parents, service recipients and staff of NGOs.

InfoSec Tours with RTHK Radio 2

GovCERT.HK continued to partner with RTHK to produce two online InfoSec Tours with topics of "Internet Etiquette" and "Beware of Email and SMS scams", which delivered information security message in a relaxing way and equipped the public to be a smart Internet user.



Cybersec Infohub Engagement Activities

To encourage the engagement and effective discussion among different sectors, various activities such as sector-specific closed group meetings, technical professional workshops and webinars were arranged under the Cybersec Infohub partnership programme with positive responses received.



LOCAL AND INTERNATIONAL COLLABORATION

5.1 Local Collaboration

Promoting Cyber Security Information Sharing and Collaboration

We continued to promote and operate the Cybersec Infohub with HKIRC to promote closer collaboration and build trust among local information security stakeholders. The programme has attracted over 1 420 organisations and more than 2 460 representatives from various local sectors as of the end of 2022.



Nurturing Cyber Security Talents

We continued to support our working partners to organise various programmes and campaigns to attract the young generation to develop their professional skills in cyber security and join the information security industry in a long run. GovCERT.HK supported the following events:

- Cyber Security Expo 2022 with the theme on technology application and cyber security by CSTCB
- CTF Challenge 2022 by HKCERT
- Cyber Youth Programme 2022 including certified training courses and a game-aided learning platform by HKIRC

Supporting the Small and Medium Enterprises (SMEs)

We also supported our working partners to provide free online training packages and professional advice for SMEs to cope with cyber attacks and minimise the business impacts and financial losses affected by security incidents. GovCERT.HK supported the following initiatives:

- "SME Cyber Security Connection Programme" including engagement with various SME associations and publication of "Incident Response Guidelines for SME" by HKCERT
- "Cybersec Training Hub" with free training resources online by HKIRC

5.2 International Collaboration

To foster closer collaboration with international security experts for sharing experience in information security and strengthening the knowledge of emerging cyber threats, vulnerabilities and appropriate mitigation solutions, GovCERT.HK strived to learn from the CERT community on global trends in international standards development, global information security and data privacy policies, cyber crime initiatives and technological researches.

GovCERT.HK participated in the following events in 2022:

- 2022 China Cybersecurity Week
- APCERT Annual General Meeting and Conference
- APCERT Drill
- APCERT on-line training sessions
- APISC Security Training
- AusCERT Conference
- CNCERT/CC Online Conference for International Partnership
- FIRST Annual Conference

FUTURE PLANS

GovCERT.HK will optimise its services and raise cyber security awareness of government staff and the general public through various activities:

- Review and streamline its operations appropriately to cope with the increasing security threats of emerging technologies;
- Forge closer ties with local, regional and international cyber security partners and the CERT community;
- Organise cross-boundary cyber security drills to enable prompt and efficient response to cyber security incidents; and
- Support our partners to organise various programmes to promote cyber security awareness and nurture cyber security talents.

CONCLUSION

A secure and stable cyber environment is essential to smart city development. GovCERT.HK has been working closely with government departments and working partners in implementing various measures and projects on all fronts, covering community support, talent development and co-operation with the Mainland of China and international communities, etc. We also collaborate proactively with different stakeholders to jointly enhance the awareness of various sectors on cyber security and their defensive capabilities in this regard. Adopting a multi-pronged approach, GovCERT.HK will continue to strive for maintaining a secure and reliable cyberspace.

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