

Independent Practitioner's assurance report

To Management of Hongkong Post Certification Authority:

We have been engaged to perform a reasonable assurance engagement to report on the management's assertion of Hongkong Post Certification Authority ("HKPCA") with Certizen Limited ("Certizen") as its agent in providing its extended validation SSL ("EV SSL") Certification Authority ("CA") operations in the Hong Kong Special Administrative Region of the People's Republic of China during the period from 1 December 2019 to 30 November 2020.

Management's Responsibilities

HKPCA with Certizen as its agent is responsible for its assertion, including the fairness of its presentation, and the provision of its described services in accordance with the [Webtrust Principles and Criteria for Certification Authorities – Extended Validation SSL Version 1.6.8](#).

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the Hong Kong Institute of Certified Public Accountants (the "HKICPA"), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies Hong Kong Standard on Quality Control 1 issued by the HKICPA and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Practitioner's Responsibilities

It is our responsibility to express an opinion on the management's assertion based on our work performed and to report our opinion solely to you, as a body, in accordance with our agreed terms of engagement and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

We conducted our work in accordance with Hong Kong Standard on Assurance Engagements 3000 (Revised) "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" issued by the HKICPA. This standard requires that we plan and perform our work to form the opinion.

A reasonable assurance engagement involves performing procedures to obtain sufficient appropriate evidence whether management assertion is fairly stated, in all material respects, in accordance with the [Webtrust Principles and Criteria for Certification Authorities – Extended Validation SSL Version 1.6.8](#). The extent of procedures selected depends on the practitioner's judgment and our assessment of the engagement risk. Within the scope of our work, we performed amongst others the following procedures:

- obtaining an understanding of HKPCA's EV SSL key and certificate lifecycle management business practices, including its controls over the issuance, renewal, and revocation of EV SSL certificates;
- selectively testing transactions executed in accordance with disclosed key and certificate lifecycle management business practices;
- testing and evaluation the operating effectiveness of the controls; and
- performing such other procedures as we considered necessary in the circumstances.

The relative effectiveness and significance of specific controls at HKPCA and their effect on assessments of control risk for subscribers and relying parties are dependent on their interaction with the controls, and

other factors present at individual subscribers and relying party locations. We have performed no procedures to evaluate the effectiveness of controls at individual subscribers and relying party locations.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our qualified opinion.

Inherent Limitation

Because of the nature and inherent limitations of controls, HKPCA's ability to meet the aforementioned criteria may be affected. For example, controls may not prevent, detect, or correct errors, frauds, unauthorized access to systems and information, or failure to comply with internal and external policies or requirements. Also, the projection of any conclusions based on our findings to future periods is subject to the risk that changes may alter the validity of such conclusions.

Basis for Qualified Opinion

The following are the controls, implemented by HKPCA with Certizen as its agent, as set out in the WebTrust Principles and Criteria for Certification Authorities – Extended Validation SSL Version 1.6.8, that did not have any occurrences during the period from 1 December 2019 to 30 November 2020, and therefore, we could not test the operating effectiveness of such controls, due to the fact that only EV SSL certificates were issued for internal use within HKPCA which followed the change management process of HKPCA with Certizen as its agent, and no EV SSL certificates were issued to, and no requests for renewal of EV SSL certificates were received from, any external subscribers during the period from 1 December 2019 to 30 November 2020.

- a) Application enrolment process;
- b) Verification of new application to ensure the validity of the subscribers according to application requirement;
- c) Identification and authentication of new application;
- d) Information included in the Certificate Revocation List ("CRL");
- e) Timely Update of the CRL to ensure that it is updated on the website on a daily basis;
- f) Verification of renewal request;
- g) Identification and authentication of renewal request;
- h) Revocation process to ensure the completeness of revocation procedure according to the receipt date and time;
- i) Retention of all documentation relating to certificate requests (i.e., related to application for EV SSL certificates) and the verification thereof, and all certificates and revocation thereof; and
- j) Retention of audit logs (i.e., related to application for EV SSL certificates) to ensure the completeness of the daily log review, verification of the daily backup tapes, checking of alerts and abnormalities, and authorization.

Qualified Opinion

In our opinion, except for the matter described in the Basis for Qualified Opinion paragraph, the management's assertion, as referred to above is fairly stated in all material respects, in accordance with the [Webtrust Principles and Criteria for Certification Authorities – Extended Validation SSL Version 1.6.8](#).

Emphasis of Matter

Without modifying our opinion, we draw attention to the fact that this report does not include any representation as to the quality of HKPCA's services beyond those covered by the [Webtrust Principles and Criteria for Certification Authorities – Extended Validation SSL Version 1.6.8](#), nor the suitability of any of HKPCA's services for any customer's intended purpose.

Other Matter

HKPCA's use of the WebTrust for Certification Authorities Seal constitutes a symbolic representation of the contents of this report and it is not intended, nor should it be construed, to update this report or provide any additional assurance.

Purpose and Restriction on Use

The accompanying assertion was prepared for obtaining and displaying the WebTrust Seal on HKPCA website using [Webtrust Principles and Criteria for Certification Authorities – Extended Validation SSL Version 1.6.8](#) designed for this purpose. As a result, the accompanying assertion of HKPCA may not be suitable for another purpose. This report is intended solely for the Management of HKPCA in connection with obtaining and displaying the WebTrust Seal on its website for submission of the report to the related authority in connection with [Webtrust Principles and Criteria for Certification Authorities – Extended Validation SSL Version 1.6.8](#).



PricewaterhouseCoopers
Certified Public Accountants

Hong Kong, 29 January 2021



Appendix A – Auditor’s information

Auditor Name	Address
PricewaterhouseCoopers	22/F Prince's Building, Central, Hong Kong

PricewaterhouseCoopers
22/F Prince's Building
Central
Hong Kong

29 January 2021

Dear Sirs,

Assertion by Management as to the Disclosure of Business Practices and Controls over the Hongkong Post Certification Authority EV SSL Certification Authority Services during the period from 1 December 2019 to 30 November 2020

The Postmaster General operates as a Certification Authority (“CA”) known as Hongkong Post Certification Authority (“HKPCA”) through its Root CAs and Subordinate CAs referenced in Appendix A to provide its EV SSL CA Services.

The Government of the Hong Kong Special Administrative Region of the People’s Republic of China has appointed Certizen Limited (“Certizen”) as an agent of HKPCA on 24 June 2019 for operating and maintaining the systems and services of HKPCA from 1 January 2020 to 30 June 2022. As such, HKPCA with Certizen as the agent is responsible for the management assertions of HKPCA’s operations.

HKPCA with Certizen as its agent is responsible for establishing and maintaining effective controls over its EV SSL CA operations, including its EV SSL CA business practices disclosure, EV SSL key lifecycle management controls, and EV SSL certificate lifecycle management controls. These controls contain monitoring mechanisms, and actions are taken to correct deficiencies identified.

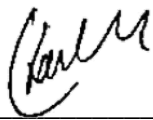
There are inherent limitations in any controls, including the possibility of human error, and the circumvention or overriding of controls. Accordingly, even effective controls can only provide reasonable assurance with respect to HKPCA’s Certification Authority operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

HKPCA with Certizen as its agent has assessed its disclosures of its certificate practices and controls over its EV SSL CA operations. Based on that assessment, in management’s opinion, HKPCA with Certizen as its agent, in providing its CA services in the Hong Kong Special Administrative Region, during the period from 1 December 2019 to 30 November 2020, HKPCA with Certizen as its agent has:

- disclosed its EV SSL certificate lifecycle management business practices in its Pre-Production Certification Practice Statements (“CPS”) published on 21 December 2018, including its commitment to provide EV SSL certificates referenced in Appendix B in conformity with the CA/Browser Forum Guidelines; and
- maintained effective controls to provide reasonable assurance that:
 - the integrity of keys and EV SSL certificates it manages is established and protected throughout their lifecycles; and
 - EV SSL subscriber information is properly collected, authenticated (for the registration activities performed by HKPCA with Certizen as its agent) and verified;

in accordance with Webtrust Principles And Criteria For Certification Authorities – Extended Validation SSL version 1.6.8.

Yours faithfully,



(Charles MAK)
for Postmaster General



(Eva Chan)
for Certizen Limited

Appendix A

List of HKPCA's Root CA:

Reference	Root CA Name	Remarks
1	Hongkong Post Root CA 3	Valid from 3 June 2017
<u>Subject DN</u> C=HK, ST=Hong Kong, L=Hong Kong, O=Hongkong Post, CN=Hongkong Post Root CA 3 <u>SHA-1 Thumbprint</u> 58A2D0EC2052815BC1F3F86402244EC28E024B02 <u>SHA-256 Thumbprint</u> 5A2FC03F0C83B090BBFA40604B0988446C7636183DF9846E17101A447FB8EFD6		

List of HKPCA's Subordinate CA:

Reference	Subordinate CA Name	Remarks
1	Hongkong Post e-Cert SSL CA 3 - 17	Valid from 3 June 2017 for issuance of non-EV SSL certificate
<u>Subject DN</u> C=HK, ST=Hong Kong, L=Hong Kong, O=Hongkong Post, CN=Hongkong Post e-Cert SSL CA 3 - 17 <u>SHA-1 Thumbprint</u> 92797871DC6A0B6EE1417BB657D7ED6FC6F975EB <u>SHA-256 Thumbprint</u> 69ECDBC3147F581DFDCB522D9DEFB260B26784AD4955C74E6A52522CCC4C4408		

2	Hongkong Post e-Cert EV SSL CA 3 - 17	Valid from 3 June 2017 for issuance of EV SSL certificate
<p><u>Subject DN</u></p> <p>C=HK, ST=Hong Kong, L=Hong Kong, O=Hongkong Post, CN=Hongkong Post e-Cert EV SSL CA 3 - 17</p> <p><u>SHA-1 Thumbprint</u></p> <p>6CA9BB1B3BAEF67D6D5414132A7EFB212836639E</p> <p><u>SHA-256 Thumbprint</u></p> <p>C18D53BF9864DD09BCBCACFD672E2566D4C81F6889E36DF5DD425C04211D0763</p>		

Appendix B

List of HKPCA's Pre-Production Certification Practice Statement

Document Names	Version
Pre-Production CPS for e-Cert (Server)	OID = 1.3.6.1.4.1.16030.1.7.4 (The service covered in this Pre-Production CPS has been disclosed, but the service was not made available to the public for the period of 1 December 2019 to 30 November 2020. Certificates were issued for internal use on 21 May 2020 that followed the change management process of HKPCA with Certizen as its agent, using HKPCA's own domain name "eCert.gov.hk", which was to serve the purpose of testing by Mozilla and its CA Community. As no EV SSL certificates were issued to external subscribers, the procedures outlined in the Pre-Production CPS were not fully applicable for sampling checking purpose.)