



KPMG LLP
Suite 1400
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Independent Accountant's Report

To the management of Visa, Inc. ("Visa")

We have examined Visa management's assertion¹ that for its Certification Authority (CA) operations at Highlands Ranch, Colorado and Ashburn, Virginia, throughout the period March 16, 2021 to May 15, 2021 for its ECC and RSA as enumerated in Attachment A, Visa has

- disclosed its business, key lifecycle management, certificate lifecycle management, and CA environmental control practices in its:
 - [Visa Public Key Infrastructure Certificate Practice Statement \(CPS\), Version 3.9, dated April 15, 2021](#); and
 - [Visa Public Key Infrastructure Certificate Policy \(CP\), Version 3.9, dated April 15, 2021](#)
- maintained effective controls to provide reasonable assurance that:
 - Visa's Certification Practice Statement(s) is(are) consistent with its Certificate Policy
 - Visa provides its services in accordance with its Certificate Policy and Certification Practice Statement
- maintained effective controls to provide reasonable assurance that:
 - the integrity of keys and certificates it manages is established and protected throughout their lifecycles;
 - the integrity of subscriber keys and certificates it manages is established and protected throughout their lifecycles;
 - subscriber information is properly authenticated (for the registration activities performed by Visa); and
 - subordinate CA certificate requests are accurate, authenticated, and approved
- maintained effective controls to provide reasonable assurance that:
 - logical and physical access to CA systems and data is restricted to authorized individuals;
 - the continuity of key and certificate management operations is maintained; and
 - CA systems development, maintenance, and operations are properly authorized and performed to maintain CA systems integrity

based on the [WebTrust Principles and Criteria for Certification Authorities v2.1](#). Visa's management is responsible for its assertion. Our responsibility is to express an opinion on management's assertion, based on our examination.

The relative effectiveness and significance of specific controls at Visa 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 subscriber and relying party locations. Our examination did not extend to controls at individual subscriber and relying party locations and we have not evaluated the effectiveness of such controls.



Visa does not escrow its CA keys, does not provide subscriber key generation services, and does not provide certificate rekey services. Visa did not provide any subordinate CA certificate life cycle management services to third party organizations. Accordingly, our examination did not extend to controls that would address those criteria.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether management's assertion is fairly stated, in all material respects. An examination involves performing procedures to obtain evidence about management's assertion. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of management's assertion, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Because of the nature and inherent limitations of controls, Visa's ability to meet the aforementioned criteria may be affected. For example, controls may not prevent, or detect and correct, error, fraud, 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.

As indicated in Visa's assertion, Visa did not issue any external subscriber keys and certificates during the period March 16, 2021 to May 15, 2021. Therefore, we did not perform any tests of operating effectiveness of the controls related to the criteria that Visa has maintained effective controls to provide reasonable assurance that the integrity of subscriber keys and certificates it manages was established and protected throughout their lifecycles and subscriber information was properly authenticated (for the registration activities performed by Visa). Our opinion is not modified with respect to this matter.

In our opinion management's assertion, as referred to above, is fairly stated, in all material respects.

This report does not include any representation as to the quality of Visa's services other than its CA operations at Highlands Ranch, Colorado and Ashburn, Virginia, nor the suitability of any of Visa's services for any customer's intended purpose.

KPMG LLP

San Francisco, California
August 3, 2021



**Assertion by Management as to
Its Disclosure of its Business Practices and its Controls
Over Certification Authority Operations
During the Period from March 1, 2021 through May 15, 2021**

Visa, Inc. ("Visa") operates the Certification Authority (CA) services known as Visa RSA and ECC CAs listed in Attachment A, and provides the following CA services:

- Subscriber registration
- Certificate renewal
- Certificate issuance
- Certificate distribution
- Certificate revocation
- Certificate suspension
- Certificate validation
- Subordinate CA certification

The management of Visa is responsible for establishing and maintaining effective controls over its CA operations, including its CA business practices disclosure on its website, CA business practices management, CA environmental controls, CA key lifecycle management controls, subscriber key lifecycle management controls, certificate lifecycle management controls, and subordinate CA 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 Visa's Certification Authority operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

Visa management has assessed its disclosures of its certificate practices and controls over its CA services. Based on that assessment, in Visa management's opinion, in providing its CA services at Highlands Ranch, Colorado and Ashburn, Virginia, throughout the period March 16, 2021 to May 15, 2021, Visa has:

- disclosed its business, key lifecycle management, certificate lifecycle management, and CA environmental control practices in its:
 - [Visa Public Key Infrastructure Certificate Practice Statement \(CPS\), Version 3.9, dated April 15, 2021](#); and
 - [Visa Public Key Infrastructure Certificate Policy \(CP\), Version 3.9, dated April 15, 2021](#)
- maintained effective controls to provide reasonable assurance that:
 - Visa's Certification Practice Statement is consistent with its Certificate Policy
 - Visa provides its services in accordance with its Certificate Policy and Certification Practice Statement
- maintained effective controls to provide reasonable assurance that:
 - the integrity of keys and certificates it manages is established and protected throughout their lifecycles;
 - the integrity of subscriber keys and certificates it manages is established and protected throughout their lifecycles;

- subscriber information is properly authenticated (for the registration activities performed by Visa); and
- subordinate CA certificate requests are accurate, authenticated, and approved
- maintained effective controls to provide reasonable assurance that:
 - logical and physical access to CA systems and data is restricted to authorized individuals;
 - the continuity of key and certificate management operations is maintained; and
 - CA systems development, maintenance, and operations are properly authorized and performed to maintain CA systems integrity

based on the [WebTrust Principles and Criteria for Certification Authorities v2.1](#), including the following:

CA Business Practices Disclosure

- Certification Practice Statement (CPS)
- Certificate Policy (CP)

CA Business Practices Management

- Certificate Policy Management
- Certification Practice Statement Management
- CP and CPS Consistency

CA Environmental Controls

- Security Management
- Asset Classification and Management
- Personnel Security
- Physical & Environmental Security
- Operations Management
- System Access Management
- System Development and Maintenance
- Business Continuity Management
- Monitoring and Compliance
- Audit Logging

CA Key Lifecycle Management Controls

- CA Key Generation
- CA Key Storage, Backup, and Recovery
- CA Public Key Distribution
- CA Key Usage
- CA Key Archival and Destruction
- CA Key Compromise
- CA Cryptographic Hardware Lifecycle Management

Subscriber Key Lifecycle Management Controls

- Requirements for Subscriber Key Management

Certificate Lifecycle Management Controls

- Subscriber Registration
- Certificate Renewal
- Certificate Issuance
- Certificate Distribution
- Certificate Revocation
- Certificate Suspension
- Certificate Validation

Subordinate CA Certificate Lifecycle Management Controls

- Subordinate CA Certificate Lifecycle Management

During the period March 16, 2021 to May 15, 2021, Visa did not issue any subscriber keys and certificates. As a result, the controls related to the criteria that Visa has maintained effective controls to provide reasonable assurance that the integrity of subscriber keys and certificates it manages is established and protected throughout their lifecycles and subscriber information is properly authenticated (for the registration activities performed by Visa) did not operate, because the circumstances that warrant the operation of those controls did not occur during the period.



Adam Clark
Vice President, Applied Cryptography
Visa Inc.
August 3, 2021

ATTACHMENT A – IN-SCOPE CAs**Root CAs**

CA Name	Serial Number	SHA1 Thumbprint
CN = Visa Public RSA Root CA OU = Visa International Service Association O = VISA C = US	513e9600000db4427eeace0bee148	82ef4c64f057ca0038f0db5b76c24b654d7cda78
CN = Visa Public ECC Root CA OU = Visa International Service Association O = VISA C = US	513e9600000dcd306988c729cfa65	9cb1e6fbc21aaf3d68973cb516e932c44cb9d560

Issuing CA

CA Name	Serial Number	SHA1 Thumbprint
CN = Visa eCommerce Issuing CA - G2 OU = Visa International Service Association O = VISA C = US	513e9600000e5a36d84f4dde48065	fae7046a89b2e6bae0f2bb97e5167073de17cbbe
CN = Visa ECC 3DS Issuing CA - G2 OU = Visa International Service Association O = VISA C = US	513e9600000e7eda96c7a097e21d9	eadbf23920eadfde305b63d888fbd7e65f55f025