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Independent Accountant's Report

To the Management of Visa U.S.A. Inc. ("Visa"):

We have examined Visa management's [assertion](#) for its Certification Authority ("CA") operations at Highlands Ranch, Colorado and Ashburn, Virginia throughout the period April 1, 2016 to March 31, 2017 for its root CA, referred to as Visa ECC Public Root, listed in [Appendix A](#), Visa has:

- disclosed its business, key life cycle management, certificate life cycle management, and CA environment control practices in its:
 - [Visa Public Key Infrastructure Certification Practice Statement, Version 3.1, Effective March 31, 2017](#);
 - Visa Public Key Infrastructure Certification Practice Statement, Version 3.0, Effective March 3, 2016;
 - [Visa Public Key Infrastructure Certificate Policy, Version 3.1, Effective March 31, 2017](#); and
 - Visa Public Key Infrastructure Certificate Policy, Version 3.0, Effective March 3, 2016
- maintained effective controls to provide reasonable assurance that:
 - Visa's Certification Practice Statement is consistent with its Certificate Policy; and
 - 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; 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 [Trust Service Principles and Criteria for Certification Authorities version 2.0](#).

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.

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.

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 any of Visa's services for any customer's intended purpose.

BDO USA, LLP

Certified Public Accountants
St. Louis, Missouri
July 26, 2017



Visa U.S.A. Inc. Management's Assertion

Visa U.S.A. Inc. ("Visa") operates the Certification Authority (CA) services known as the root CA, referred to as Visa ECC Public Root, in scope listed in [Appendix A](#), and provides the following CA services:

- Subscriber registration
- Certificate renewal
- Certificate issuance
- Certificate distribution
- Certificate revocation
- Certificate suspension
- Certificate validation

The management of Visa is responsible for establishing and maintaining effective controls over its CA operations, including its CA business practices disclosure in its [repository](#), CA business practice 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's 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 April 1, 2016 to March 31 2017, Visa has:

- disclosed its business, key lifecycle management, certificate lifecycle management, and CA environment control practices in its:
 - [Visa Public Key Infrastructure Certification Practice Statement, Version 3.1, Effective March 31, 2017](#);
 - Visa Public Key Infrastructure Certification Practice Statement, Version 3.0, Effective March 3, 2016;
 - [Visa Public Key Infrastructure Certificate Policy, Version 3.1, Effective March 31, 2017](#); and
 - Visa Public Key Infrastructure Certificate Policy, Version 3.0, Effective March 3, 2016
- maintained effective controls to provide reasonable assurance that:
 - Visa's Certification Practice Statement is consistent with its Certificate Policy; and
 - 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; 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 [Trust Service Principles and Criteria for Certification Authorities version 2.0](#), 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

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- CA Cryptographic Hardware Lifecycle 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

Visa did not escrow CA keys, nor did Visa provide Integrated Circuit Card Life Cycle Management or Certificate Rekey Services. Visa only provided Subscriber Key Generation and Subscriber Key Storage and Recovery services when the subscriber was Visa or an affiliate of Visa.



Adam Clark, Senior Director of Applied Cryptography



APPENDIX A - IN-SCOPE CA

Root CA

CA Name	Serial Number	SHA1 Thumbprint
CN = Visa ECC Public Root CA OU = Visa International Services Association O = VISA L = Ashburn S = Virginia C = US	51 3e 96 00 00 00 69 bf 6a 55 45 2f 01 28 d9	68 62 66 44 18 e9 9c 2b 43 24 01 a1 b5 36 16 2d d3 00 90 21