



KPMG LLP  
Suite 1400  
55 Second Street  
San Francisco, CA 94105

## Independent Accountant's Report

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

We have examined Visa management's assertion that for its Certification Authority (CA) operations at Highlands Ranch, Colorado and Ashburn, Virginia for its Visa eCommerce CAs, Visa Information Delivery CAs, Visa Public ECC Root CAs and Visa Public RSA CAs 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

throughout the period April 1, 2021 to March 31, 2022 based on the [WebTrust Principles and Criteria for Certification Authorities -Version 2.2.1](#)

### Certification Authority's responsibilities

Visa's management 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 -Version 2.2.1](#)



### **Practitioner's responsibilities**

Our responsibility is to express an opinion on Visa management's assertion based on our examination. 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.

We are required to be independent and to meet our other ethical responsibilities in accordance with relevant ethical requirements relating to the engagement.

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.

### **Inherent limitations**

There are inherent limitations in the effectiveness of any system of internal control, including the possibility of human error and the circumvention of controls. For example, because of their nature, controls may not prevent, or detect unauthorized access to systems and information, or failure to comply with internal and external policies or requirements. Also, the projection to the future of any conclusions based on our findings is subject to the risk that controls may become ineffective.

### **Opinion**

In our opinion, Visa 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  
June 17, 2022

**ATTACHMENT A – IN-SCOPE CAs**

**Root CAs**

CA Name	Serial Number	SHA1 Thumbprint	SHA-256 Thumbprint
CN = Visa eCommerce Root OU = Visa International Service Association O = VISA C = US	13 86 35 4D 1D 3F 06 F2 C1 F9 65 05 D5 90 1C 62	70 17 9B 86 8C 00 A4 FA 60 91 52 22 3F 9F 3E 32 BD E0 05 62	69FAC9BD55FB0AC78D 53BBEE5CF1D597989FD 0AAAB20A25151BDF173 3EE7D122
CN = Visa Information Delivery Root CA OU = Visa International Service Association O = VISA C = US	5B 57 D7 A8 4C B0 AF D9 D3 6F 4B A0 31 B4 D6 E2	5A 4D 0E 8B 5F DC FD F6 4E 72 99 A3 6C 06 0D B2 22 CA 78 E4	C57A3ACBE8C06BA1988 A83485BF326F24487753 79849DE01CA43571AF3 57E74B
CN = Visa Public RSA Root CA OU = Visa International Service Association O = VISA C = US	513E96000000DB44 27EEACE0BEE148	82EF4C64F057CA0038F 0DB5B76C24B654D7CD A78	07CD9AA9064A9B94C6A EF8FB784C1BBC1BEDA 08ACBE86878D781A391 67626CF8
CN = Visa Public ECC Root CA OU = Visa International Service Association O = VISA C = US	513E96000000DCD3 06988C729CFA65	9CB1E6FBC21AAF3D689 73CB516E932C44CB9D5 60	E6BE68CE06FE0DA0C14 0F1AEB00B67B636C5EE A9422088929362375CE0 86DB39

**Issuing CA**

CA Name	Serial Number	SHA1 Thumbprint	SHA-256 Thumbprint
CN = Visa eCommerce Issuing CA OU = Visa International Service Association O = VISA C = US	00 D8 74 61 30 41 FC 3C 44 A0 BC C6 5D 6C 36 F1 10	80 7A 77 B2 44 51 57 6C FB 3F B9 1E 97 73 52 27 FA B4 04 DD	3F7FBE7EDB9369B910E 5FA4B9EEC6371B70C96 D83A43BD53ABEBF9246 4C8D112
CN = Visa Information Delivery Internal CA OU = Visa International Service Association O = VISA C = US	22 B0 8F EB CA 60 17 41 68 5F 05 F4 88 E0 F2 C2	B8 E5 C9 B4 42 B7 3F FE BD 21 8F 9A 18 94 8A 70 BD 3B A7 1F	E7373A39C23547270E3 D20B247875FA443F4F2 B665D516260191399038 3766D3
CN = Visa Information Delivery External CA OU = Visa International Service Association O = VISA C = US	17 B4 6E 88 61 1D B7 9C F6 28 47 8E 22 89 85 ED	6F C9 20 C3 F4 3B 4D BA C7 15 7E D7 33 2B 7C 46 DA A3 54 CE	B863A8F0F8DEBC79B89 D87DE941F6F15EC3577 15FA0CF80E84B7A6CDB D8D3443
CN = Visa eCommerce Issuing CA - G2 OU = Visa International Service Association O = VISA C = US	513E96000000E5A3 6D84F4DDE48065	FAE7046A89B2E6BAE0F 2BB97E5167073DE17CB BE	873939DDB087F6E95D6 5D00305EE8B5124BA50 697B4A06ACE22A58B51 991F667

CA Name	Serial Number	SHA1 Thumbprint	SHA-256 Thumbprint
CN = Visa ECC 3DS Issuing CA - G2 OU = Visa International Service Association O = VISA C = US	513E9600000E7ED A96C7A097E21D9	EADBF23920EADFDE30 5B63D888FBD7E65F55F 025	7FC2C2A789BB75E7B2A DF07687B8093B0A1C7B 9E3421422C8547E1E82 C537FCA



**Assertion by Management as to  
Its Disclosure of its Business Practices and its Controls  
Over Certification Authority Operations  
During the Period from April 1, 2021 through March 31, 2022**

Visa, Inc. (“Visa”) operates the Certification Authority (CA) services known as Visa eCommerce CAs, Visa Information Delivery CAs, Visa Public ECC Root CAs and Visa Public RSA 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, 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

throughout the period April 1, 2021 to March 31, 2022, based on the [WebTrust Principles and Criteria for Certification Authorities -Version 2.2.1](#) 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

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**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

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**Subordinate CA Certificate Lifecycle Management Controls**

- Subordinate CA Certificate Lifecycle Management

Visa does not escrow its CA keys, does not provide subscriber key generation services, certificate suspension services, or certificate rekey services. Accordingly, our assertion does not extend to controls that would address those criteria.

DocuSigned by:  
  
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Adam Clark, Vice President Applied Cryptography  
June 17, 2022

**ATTACHMENT A – IN-SCOPE CAs**

**Root CAs**

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CN = Visa Information Delivery Root CA OU = Visa International Service Association O = VISA C = US	5B 57 D7 A8 4C B0 AF D9 D3 6F 4B A0 31 B4 D6 E2	5A 4D 0E 8B 5F DC FD F6 4E 72 99 A3 6C 06 0D B2 22 CA 78 E4	C57A3ACBE8C06BA1988 A83485BF326F24487753 79849DE01CA43571AF3 57E74B
CN = Visa Public RSA Root CA OU = Visa International Service Association O = VISA C = US	513E96000000DB44 27EEACE0BEE148	82EF4C64F057CA0038F 0DB5B76C24B654D7CD A78	07CD9AA9064A9B94C6A EF8FB784C1BBC1BEDA 08ACBE86878D781A391 67626CF8
CN = Visa Public ECC Root CA OU = Visa International Service Association O = VISA C = US	513E96000000DCD3 06988C729CFA65	9CB1E6FBC21AAF3D689 73CB516E932C44CB9D5 60	E6BE68CE06FE0DA0C14 0F1AEB00B67B636C5EE A9422088929362375CE0 86DB39

**Issuing CA**

CA Name	Serial Number	SHA1 Thumbprint	SHA-256 Thumbprint
CN = Visa eCommerce Issuing CA OU = Visa International Service Association O = VISA C = US	00 D8 74 61 30 41 FC 3C 44 A0 BC C6 5D 6C 36 F1 10	80 7A 77 B2 44 51 57 6C FB 3F B9 1E 97 73 52 27 FA B4 04 DD	3F7FBE7EDB9369B910E 5FA4B9EEC6371B70C96 D83A43BD53ABEBF9246 4C8D112
CN = Visa Information Delivery Internal CA OU = Visa International Service Association O = VISA C = US	22 B0 8F EB CA 60 17 41 68 5F 05 F4 88 E0 F2 C2	B8 E5 C9 B4 42 B7 3F FE BD 21 8F 9A 18 94 8A 70 BD 3B A7 1F	E7373A39C23547270E3 D20B247875FA443F4F2 B665D516260191399038 3766D3
CN = Visa Information Delivery External CA OU = Visa International Service Association O = VISA C = US	17 B4 6E 88 61 1D B7 9C F6 28 47 8E 22 89 85 ED	6F C9 20 C3 F4 3B 4D BA C7 15 7E D7 33 2B 7C 46 DA A3 54 CE	B863A8F0F8DEBC79B89 D87DE941F6F15EC3577 15FA0CF80E84B7A6CDB D8D3443
CN = Visa eCommerce Issuing CA - G2 OU = Visa International Service Association O = VISA C = US	513E96000000E5A3 6D84F4DDE48065	FAE7046A89B2E6BAE0F 2BB97E5167073DE17CB BE	873939DDB087F6E95D6 5D00305EE8B5124BA50 697B4A06ACE22A58B51 991F667



CA Name	Serial Number	SHA1 Thumbprint	SHA-256 Thumbprint
CN = Visa ECC 3DS Issuing CA - G2 OU = Visa International Service Association O = VISA C = US	513E9600000E7ED A96C7A097E21D9	EADBF23920EADFDE30 5B63D888FBD7E65F55F 025	7FC2C2A789BB75E7B2A DF07687B8093B0A1C7B 9E3421422C8547E1E82 C537FCA