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Report of Independent Accountants

S.C. certSIGN S.A.
B-dul Timisoara nr. 5A
Sector 6, Bucharest,
ZIP 061301, Romania

We have examined the accompanying assertion made by the management of S.C. certSIGN S.A., titled "Management's Assertion Regarding the Effectiveness of Its Controls Over the Certification Authority Operations Based on the Trust Services Principles and Criteria for Certification Authorities Version 2.1" that provides its Certification Authority (CA) services at B-dul Timisoara nr. 5A Sector 6, Bucharest, ZIP 061301, Romania for the Root CA and Subordinate CAs referenced in Appendix A during the period from February 09, 2017 through February 08, 2018, S.C. certSIGN S.A. has:

- Disclosed its business, key lifecycle management, certificate lifecycle management, and CA environmental control practices in its:
    - Certification Practice Statement (CPS) (Appendix B No.2 and No.3) and
    - Certificate Policy (CP) (Appendix B No.1)

- Maintained effective controls to provide reasonable assurance that:
    - S.C. certSIGN S.A. - CA's Certification Practice Statements are consistent with its Certificate Policy
    - S.C. certSIGN S.A. - CA provides its services in accordance with its Certificate Policy and Certification Practice Statements

- 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 S.C. certSIGN S.A. - CA); 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 American Institute of Certified Public Accountants (AICPA)'s *Trust Services Principles and Criteria for Certification Authorities 2.1*.

S.C. certSIGN S.A.'s management is responsible for its assertion and for specifying the aforementioned Criteria. Our responsibility is to express an opinion on management's assertion based on our examination.

S.C. certSIGN S.A. makes use of external registration authorities for specific subscriber registration activities as disclosed in S.C. certSIGN S.A.'s business practice disclosures. Our examination did not extend to the controls of external registration authorities.

S.C. certSIGN S.A. does not escrow its CA keys, does not provide subscriber key generation services, and does not provide certificate suspension services. 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 AICPA. Those standards require that we plan and perform our 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, which includes: (1) obtaining an understanding of S.C. certSIGN S.A.'s key and certificate life cycle management business practices, policies, processes and controls, and its suitability of the design and implementation of the controls intended to achieve the Criteria and examining evidence supporting management's assertion and performing such other procedures over key and certificate integrity, over the authenticity and confidentiality of subscriber and relying party information, over the continuity of key and certificate life cycle management operations, and over the development, maintenance and operation of systems integrity as we considered necessary in the circumstances; (2) selectively testing transactions executed in accordance with disclosed key and certificate life cycle management business practices; (3) testing and evaluating the operating effectiveness of the controls; and (4) performing such other procedures as we considered necessary in the circumstances. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, 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.

The relative effectiveness and significance of specific controls at S.C. certSIGN S.A. 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. We have performed no procedures to evaluate the effectiveness of controls at individual subscriber and relying party locations.

Our examination was not conducted for the purpose of evaluating S.C. certSIGN S.A.'s cybersecurity risk management program. Accordingly, we do not express an opinion or any other form of assurance on its cybersecurity risk management program.

There are inherent limitations in the effectiveness of any system of internal control, including the possibility of human error and the circumvention of controls. Because of inherent limitations in its internal control, S.C. certSIGN S.A. may achieve reasonable, but not absolute assurance that all security events are prevented and, for those controls may provide reasonable, but not absolute assurance that its commitments and system requirements are achieved. 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.

Examples of inherent limitations of internal controls related to security include (a) vulnerabilities in information technology components as a result of design by their manufacturer or developer; (b) breakdown of internal control at a vendor or business partner; and (c) persistent attackers with the resources to use advanced technical means and sophisticated social engineering techniques

specifically targeting the entity. Furthermore, the projection of any evaluations of effectiveness to future periods is subject to the risk that controls may become inadequate because of changes in conditions, that the degree of compliance with such controls may deteriorate, or that changes made to the system or controls, or the failure to make needed changes to the system or controls, may alter the validity of such evaluations.

In our opinion, S.C. certSIGN S.A.'s management's assertion referred to above, is fairly stated, in all material respects, based on the aforementioned criteria.

The WebTrust seal of assurance for Certification Authority on S.C. certSIGN S.A.'s website 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.

This report does not include any representation as to the quality of S.C. certSIGN S.A.'s CA services beyond those covered by the *Trust Services Principles and Criteria for Certification Authorities Version 2.1* criteria, or the suitability of any of S.C. certSIGN S.A.'s services for any customer's intended purpose.

Ernst & Young LLP
February 08, 2018

Appendix A

Distinguished Name	Subject Key Identifier	Certificate Serial Number	SHA 256 fingerprint
C=RO, O=certSIGN, OU=certSIGN ROOT CA	e0 8c 9b db 25 49 b3 f1 7c 86 d6 b2 42 87 0b d0 6b a0 d9 e4	20 06 05 16 70 02	eaa962c4fa4a6bafebe415196d351ccd888d4f53f3fa8ae6d7c466a94e6042bb
C=RO, O=certSIGN, OU=certSIGN CA Class 2 G2, CN=certSIGN CA Class 2 G2	45 44 5b 06 21 aa 28 08 86 29 ae 09 cf 9d 42 7f 52 42 7b 19	20 06 05 16 70 03 10 ef 3c 9e c6 dc 4c f9 0d	35c0b8a577d11c94ba665e242de45d6687522a531e391bb4d995d261f3829ab7
C=RO, O=certSIGN, OU=certSIGN Qualified CA Class 3 G2, CN=certSIGN Qualified CA Class 3 G2	50 34 9e 53 76 b9 6d d2 b7 0c 1e 90 83 75 5a ee cb 74 18 8a	20 06 05 16 70 03 11 54 9a cd 82 9c 47 24 b7	c89c24b415a72c9409667e88fb5e6e92a38d5609c3c99e55d99b4b1d458990f9
C=RO, O=certSIGN, OU=certSIGN Enterprise CA Class 3 G2, CN=certSIGN Enterprise CA Class 3 G2	f6 eb 98 9e 40 69 ab 48 60 9d 46 16 ff 9e c0 3b 03 ba 9b fd	20 06 05 16 70 03 0d 54 5d c8 61 3c f7 1a c5	3b27df9dd93c112aa08b062a6ae3973f7e79a5191d7e9b95d7081780e0d6acea
C=RO, O=certSIGN, OU=certSIGN Code Signing CA Class 3 G2, CN=certSIGN Code Signing CA Class 3 G2	bb a6 4e 76 6b aa 84 70 13 c2 a7 e8 68 47 1d 68 c3 7e 3e 6f	20:06:05:16:70:03:15:A5:11:AE:66:B9:7E:F9:15	785854130b14f6f1ee9f984257ababb6255b05a8dbefb7680d33400ac28fe909
C=RO, O=certSIGN, OU=certSIGN SSL DV CA Class 3 G2, CN=certSIGN SSL DV CA Class 3 G2	f5 dc bb fb 89 1e ca 78 81 74 6c b6 4a 6c 25 4d 54 81 7e 06	20:06:05:16:70:03:17:88:7A:0B:E0:D3:4A:C3:AF	ea9a43515e138ff7782fcacdb9c7e8e1a61cfd1d17096ed5ddd1f400d02b03f5
C=RO, O=certSIGN, OU=certSIGN SSL EV CA Class 3 G2, CN=certSIGN SSL EV CA Class 3 G2	36 3b a2 9e 25 87 2a 0f fd 9a 4a 3c 27 da cb a7 79 c3 0c 7f	20:06:05:16:70:03:18:57:92:60:1A:CB:75:E1:27	7826de1be414e454cfcae0d17b17ff0cad12ee68cf487f357b38499e274b0171
C=RO, O=certSIGN, OU=certSIGN Non-Repudiation CA Class 4 G2, CN=certSIGN Non-Repudiation CA Class 4 G2	3f c1 34 9b 39 f6 65 de 86 31 7d ab 35 e8 19 73 95 de f0 55	20 06 05 16 70 03 12 43 f7 6e 5d a8 5e ac f3	3003bf8853427c7b91023f7539853d987c58dc4e11bbe047d2a9305c01a6152c
C=RO, O=certSIGN, OU=Certificat de productie Production certificate, CN=CERTSIGN FOR BANKING SIMPLE SSL PRODUCTION CA V3	20 21 13 32 ca 65 a9 4a 5b 65 f8 41 4e 1d e3 fb b5 5b 7f 60	20:06:05:16:70:03:14:CC:B6:A7:4F:43:EC:DF:8D	cae72f66d61afb9a697338e8f5358d8071bafa4ae4d2717c7e635fb5ea43d365
C=RO, O=certSIGN, OU=Certificat de test Test certificate, CN=CERTSIGN FOR BANKING SIMPLE SSL TEST CA V3	57 78 bb 1e 39 fc 27 6c a6 11 16 5f 52 fa 86 0a 8f 3f 02 63	20:06:05:16:70:03:0F:08:BD:2E:1E:01:A4:73:C7	0ac2b6086eb10db5576a3a1b8eb0e4344082c1b7d832504fcbf95a4804d51834
C=RO, O=certSIGN, OU=Certificat de productie Production certificate, CN=CERTSIGN FOR BANKING QUALIFIED DS PRODUCTION CA V3	a9 07 48 11 b8 b2 95 a0 d5 72 f1 2f 55 2b 98 7c ec 2d 29 9e	20:06:05:16:70:03:13:89:95:FB:4F:BF:85:8B:CF	a53452d589069ebd91423834fec288a78acc6a7b9d4d0f143d8c92e0b83d8e9
C=RO, O=certSIGN, OU=Certificat de test Test certificate, CN=CERTSIGN FOR BANKING QUALIFIED DS TEST CA V3	40 c4 00 1e 25 33 bd 69 60 5e 21 db d8 84 3d e4 0e c5 c6 b8	20:06:05:16:70:03:0E:F4:D2:76:53:C7:01:A2:0B	01379eb7b85f68edc2465b42438097687ebe1eae49319639bfb342efc3cefa1d

Appendix B

No.	The list of audited certificate practices and procedures	Document Links
1.	**Certification Policy** Version 1.5 Date: 25 January , 2016	https://www.certsign.ro/certsign_en/files/certSIGN_CP_EN _v1.5.pdf
2.	**Certification Practice Statement** Version 1.16 Date: 26 November 2017	https://www.certsign.ro/certsign_en/files/certSIGN_CPS_EN_v1.16.pdf
3.	**Certification Practice Statement SSL DV CA Class 3 G2 for SSL DV certificates** Version 1.0 Date: 29 January 2018	https://www.certsign.ro/certsign/files/CPS-DV-V1.1.pdf

Management's Assertion Regarding the Effectiveness of Its Controls Over the Certification Authority Operations Based on the Trust Services Principles and Criteria for Certification Authorities Version 2.1

February 08, 2018

We, as management of S.C. certSIGN S.A., are responsible for operating a Certification Authority (CA) at B-dul Timisoara nr. 5A Sector 6, Bucharest, ZIP 061301, Romania for the Root CA and Subordinate CAs listed in Appendix A.

S.C. certSIGN S.A.'s CA services provide the following certification authority services:

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

Management of S.C. certSIGN S.A. is responsible for establishing and maintaining effective controls over its CA operations, including its CA business practices disclosure on its website (Appendix B), 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.

Controls have inherent limitations, including the possibility of human error and the circumvention or overriding of controls. Accordingly, even effective controls can provide only reasonable assurance with respect to S.C. certSIGN S.A.'s CA operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

Management of S.C. certSIGN S.A. has assessed the disclosure of its certificate practices and its controls over its CA operations. Based on that assessment, in S.C. certSIGN S.A. Management's opinion, in providing its CA services for the Root CA and Subordinate CAs listed in Appendix A at B-dul Timisoara nr. 5A Sector 6, Bucharest, CP 061301, Romania locations during the period from February 09, 2017 through February 08, 2018, S.C. certSIGN S.A. has:

- Disclosed its Business, Key Life Cycle Management, and Certificate Life Cycle Management, and CA Environmental Control practices as below:
  - certSIGN ROOT CA
  - certSIGN CA Class 2 G2
  - certSIGN Qualified CA Class 3 G2
  - certSIGN Enterprise CA Class 3 G2
  - certSIGN Code Signing CA Class 3 G2
  - certSIGN SSL DV CA Class 3 G2
  - certSIGN SSL EV CA Class 3 G2
  - certSIGN Non-Repudiation CA Class 4 G2
  - CERTSIGN FOR BANKING SIMPLE SSL PRODUCTION CA V3
  - CERTSIGN FOR BANKING SIMPLE SSL TEST CA V3
  - CERTSIGN FOR BANKING QUALIFIED DS PRODUCTION CA V3
  - CERTSIGN FOR BANKING QUALIFIED DS TEST CA V3

- Maintained effective controls to provide reasonable assurance that:
  - S.C. certSIGN S.A. - CA's Certification Practice Statements (Appendix B No.2 and No.3) is consistent with its Certificate Policy (Appendix B No.1)
  - S.C. certSIGN S.A. - CA provides its services in accordance with its Certificate Policy and Certification Practice Statements (Appendix B No.2 and No.3)

- Maintained effective controls to provide reasonable assurance that:
  - The integrity of keys and certificates it manages was established and protected throughout their life cycles;
  - The integrity of subscriber keys and certificates it manages was established and protected throughout their life cycles;
  - The Subscriber information was properly authenticated (for the registration activities performed by S.C. certSIGN S.A.); and
  - Subordinate CA certificate requests were accurate, authenticated and approved

- Maintained effective controls to provide reasonable assurance that:
  - Logical and physical access to CA systems and data was restricted to authorized individuals;
  - The continuity of key and certificate management operations was maintained; and
  - CA systems development, maintenance and operations were properly authorized and performed to maintain CA systems integrity

for the Root Keys listed in Appendix A, based on the *Trust Services Principles and Criteria for Certification Authorities Version 2.1*, including the following:

CA Business Practices Disclosure

- Certification Practice Statement (CPS) (Appendix B No.2 and No.3)
- Certificate Policy (CP) (Appendix B No.1)

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
- CA Key Escrow

Subscriber Key Lifecycle Management Controls

- CA-Provided Subscriber Key Generation Services
- CA-Provided Subscriber Key Storage and Recovery Services
- Integrated Circuit Card (ICC) Lifecycle Management
- Requirements for Subscriber Key Management

Certificate Lifecycle Management Controls

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

Subordinate CA Certificate Lifecycle Management Controls

- Subordinate CA Certificate Lifecycle Management

Very truly yours,

S.C. certSIGN S.A.

Appendix A

Distinguished Name	Subject Key Identifier	Certificate Serial Number	SHA 256 fingerprint
C=RO, O=certSIGN, OU=certSIGN ROOT CA	e0 8c 9b db 25 49 b3 f1 7c 86 d6 b2 42 87 0b d0 6b a0 d9 e4	20 06 05 16 70 02	eaa962c4fa4a6bafebe415196d351c cd888d4f53f3fa8ae6d7c466a94e60 42bb
C=RO, O=certSIGN, OU=certSIGN CA Class 2 G2, CN=certSIGN CA Class 2 G2	45 44 5b 06 21 aa 28 08 86 29 ae 09 cf 9d 42 7f 52 42 7b 19	20 06 05 16 70 03 10 ef 3c 9e c6 dc 4c f9 0d	35c0b8a577d11c94ba665e242de45 d6687522a531e391bb4d995d261f3 829ab7
C=RO, O=certSIGN, OU=certSIGN Qualified CA Class 3 G2, CN=certSIGN Qualified CA Class 3 G2	50 34 9e 53 76 b9 6d d2 b7 0c 1e 90 83 75 5a ee cb 74 18 8a	20 06 05 16 70 03 11 54 9a cd 82 9c 47 24 b7	c89c24b415a72c9409667e88fb5e6 e92a38d5609c3c99e55d99b4b1d45 8990f9
C=RO, O=certSIGN, OU=certSIGN Enterprise CA Class 3 G2, CN=certSIGN Enterprise CA Class 3 G2	f6 eb 98 9e 40 69 ab 48 60 9d 46 16 ff 9e c0 3b 03 ba 9b fd	20 06 05 16 70 03 0d 54 5d c8 61 3c f7 1a c5	3b27df9dd93c112aa08b062a6ae39 73f7e79a5191d7e9b95d7081780e0 d6acea
C=RO, O=certSIGN, OU=certSIGN Code Signing CA Class 3 G2, CN=certSIGN Code Signing CA Class 3 G2	bb a6 4e 76 6b aa 84 70 13 c2 a7 e8 68 47 1d 68 c3 7e 3e 6f	20:06:05:16:70:03:15:A5:11: AE:66:B9:7E:F9:15	785854130b14f6f1ee9f984257abab b6255b05a8dbefb7680d33400ac28f e909
C=RO, O=certSIGN, OU=certSIGN SSL DV CA Class 3 G2, CN=certSIGN SSL DV CA Class 3 G2	f5 dc bb fb 89 1e ca 78 81 74 6c b6 4a 6c 25 4d 54 81 7e 06	20:06:05:16:70:03:17:88:7A: 0B:E0:D3:4A:C3:AF	ea9a43515e138ff7782fcacdb9c7e8 e1a61cfd1d17096ed5ddd1f400d02b 03f5
C=RO, O=certSIGN, OU=certSIGN SSL EV CA Class 3 G2, CN=certSIGN SSL EV CA Class 3 G2	36 3b a2 9e 25 87 2a 0f fd 9a 4a 3c 27 da cb a7 79 c3 0c 7f	20:06:05:16:70:03:18:57:92: 60:1A:CB:75:E1:27	7826de1be414e454cfcae0d17b17ff 0cad12ee68cf487f357b38499e274b 0171
C=RO, O=certSIGN, OU=certSIGN Non-Repudiation CA Class 4 G2, CN=certSIGN Non-Repudiation CA Class 4 G2	3f c1 34 9b 39 f6 65 de 86 31 7d ab 35 e8 19 73 95 de f0 55	20 06 05 16 70 03 12 43 f7 6e 5d a8 5e ac f3	3003bf8853427c7b91023f7539853d 987c58dc4e11bbe047d2a9305c01a 6152c
C=RO, O=certSIGN, OU=Certificat de productie Production certificate, CN=CERTSIGN FOR BANKING SIMPLE SSL PRODUCTION CA V3	20 21 13 32 ca 65 a9 4a 5b 65 f8 41 4e 1d e3 fb b5 5b 7f 60	20:06:05:16:70:03:14:CC:B6 :A7:4F:43:EC:DF:8D	cae72f66d61afb9a697338e8f5358d 8071bafa4ae4d2717c7e635fb5ea43 d365
C=RO, O=certSIGN, OU=Certificat de test Test certificate, CN=CERTSIGN FOR BANKING SIMPLE SSL TEST CA V3	57 78 bb 1e 39 fc 27 6c a6 11 16 5f 52 fa 86 0a 8f 3f 02 63	20:06:05:16:70:03:0F:08:BD: 2E:1E:01:A4:73:C7	0ac2b6086eb10db5576a3a1b8eb0e 4344082c1b7d832504fcbf95a4804d 51834
C=RO, O=certSIGN, OU=Certificat de productie Production certificate, CN=CERTSIGN FOR BANKING QUALIFIED DS PRODUCTION CA V3	a9 07 48 11 b8 b2 95 a0 d5 72 f1 2f 55 2b 98 7c ec 2d 29 9e	20:06:05:16:70:03:13:89:95: FB:4F:BF:85:8B:CF	a53452d589069ebd91423834fec28 8a78acc6a7b9d4d0f143d8c92e0b8 3d8e9
C=RO, O=certSIGN, OU=Certificat de test Test certificate, CN=CERTSIGN FOR BANKING QUALIFIED DS TEST CA V3	40 c4 00 1e 25 33 bd 69 60 5e 21 db d8 84 3d e4 0e c5 c6 b8	20:06:05:16:70:03:0E:F4:D2: 76:53:C7:01:A2:0B	01379eb7b85f68edc2465b4243809 7687ebe1eae49319639bfb342efc3c efa1d

Appendix B

No.	The list of audited certificate practices and procedures	Document Links
1.	**Certification Policy** Version 1.5 Date: 25 January , 2016	https://www.certsign.ro/certsign_en/files/certSIGN_CP_EN_v1.5.pdf
2.	**Certification Practice Statement** Version 1.16 Date: 26 November 2017	https://www.certsign.ro/certsign_en/files/certSIGN_CPS_EN_v1.16.pdf
3.	**Certification Practice Statement SSL DV CA Class 3 G2 for SSL DV certificates** Version 1.0 Date: 29 January 2018	https://www.certsign.ro/certsign/files/CPS-DV-V1.1.pdf