

Independent Assurance Report

To the Management of OISTE Foundation (OISTE):

Scope

We have been engaged, in a reasonable assurance engagement, to report on OISTE management's assertion that for its Certification Authority (CA) operations at Geneva, Switzerland, as of April 1st, 2019 for its CAs as enumerated in Appendix A, OISTE has:

- disclosed its SSL certificate lifecycle management business practices in its:
 - "OGTM Certification Practice Statement Version 3.0" – 25 February 2019
 - "CP for SSL Certificates Version 1.0" – 25 February 2019

including its commitment to provide SSL certificates in conformity with the CA/Browser Forum Requirements on the OISTE website, and provided such services in accordance with its disclosed practices

- suitably designed, and placed into operation, controls to provide reasonable assurance that:
 - the integrity of keys and SSL certificates it manages is established and protected throughout their lifecycles; and
 - SSL subscriber information is properly authenticated (for the registration activities performed by OISTE)
- suitably designed, and placed into operation 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
- suitably designed, and placed into operation controls to provide reasonable assurance that it meets the Network and Certificate System Security Requirements as set forth by the CA/Browser Forum

in accordance with the WebTrust Principles and Criteria for Certification Authorities – SSL Baseline with Network Security v2.3.



OISTE makes use of external registration authorities for specific subscriber registration activities as disclosed in OISTE's business practices. Our procedures did not extend to the controls exercised by these external registration authorities.

Certification authority's responsibilities

OISTE'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 – SSL Baseline with Network Security v2.3.

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 International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Auren applies International Standard on Quality Control 1, 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.

Auditor's responsibilities

Our responsibility is to express an opinion on management's assertion based on our procedures. We conducted our procedures in accordance with International Standard on Assurance Engagements 3000, Assurance Engagements Other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board. This standard requires that we plan and perform our procedures to obtain reasonable assurance about whether, in all material respects, management's assertion is fairly stated, and, accordingly, included:

- (1) obtaining an understanding of OISTE's SSL certificate lifecycle management business practices including its relevant controls over the issuance, renewal, and revocation of SSL certificates and obtaining an understanding of WISeKey's network and certificate system security to meet the requirements set forth by the CA/Browser Forum
- (2) evaluating the suitability of the design of the controls; and
- (3) performing such other procedures as we considered necessary in the circumstances.

We did not perform procedures to determine the operating effectiveness of controls for any period. Accordingly, we express no opinion on the operating effectiveness of any aspects of OISTE's controls, individually or in the aggregate.

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



Suitability of controls

The suitability of the design of the controls at OISTE 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 suitability of the design of the controls at individual subscriber and relying party locations.

Inherent limitations

Because of the nature and inherent limitations of controls, OISTE'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.

Opinion

In our opinion, as of April 1st, 2019, OISTE 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 – SSL Baseline with Network Security v2.3.

This report does not include any representation as to the quality of OISTE's services beyond those covered by the WebTrust Principles and Criteria for Certification Authorities – SSL Baseline with Network Security v2.3, nor the suitability of any of ABC-CA's services for any customer's intended purpose

A handwritten signature in blue ink, appearing to read "F. Mondragon". The signature is fluid and cursive, with a long, sweeping underline that extends to the left.

F. Mondragon, Auditor

auren

Valencia, SPAIN

April 30th, 2019



APPENDIX A List of CAs in scope

Root CAs					
1.	OISTE	WISeKey	Global Root	GA	CA
2.	OISTE	WISeKey	Global Root	GB	CA
3.	OISTE	WISeKey	Global Root	GC	CA



APPENDIX A: PKI Hierarchy in scope of the Webtrust audit

CA #	Cert #	Subject	Issuer	serialNumber	Key Algorithm	Key Size	Sig Algorithm	notBefore	NotAfter	SKI	SHA256 Fingerprint
1	1	CN=OISTE WISEKey Global Root GA CA, OU=OISTE Foundation Endorsed, OU=Copyright (c) 2005, O=WISEKey, C=CH	CN=OISTE WISEKey Global Root GA CA, OU=OISTE Foundation Endorsed, OU=Copyright (c) 2005, O=WISEKey, C=CH	413D72C7F46B1F81437DF1D22854DF9A	rsaEncryption	2048 bit	sha1WithRSA Encryption	Dec 11 16:03:44 2005 GMT	Dec 11 16:09:51 2037 GMT	B3:03:7E:AE:36:BC:B0:79:D1:DC:94:26:B6:11:BE:21:B2:69:86:94	41C923866AB4CAD6B7AD578081582E020797A6CBDF4FFF78CE8396B38937D7F5
2	2	CN=OISTE WISEKey Global Root GB CA, OU=OISTE Foundation Endorsed, O=WISEKey, C=CH	CN=OISTE WISEKey Global Root GB CA, OU=OISTE Foundation Endorsed, O=WISEKey, C=CH	76B1205274F0858746B3F8231AF6C2C0	rsaEncryption	2048 bit	sha256WithRSAEncryption	Dec 1 15:00:32 2014 GMT	Dec 1 15:10:31 2039 GMT	35:0F:C8:36:63:5E:E2:A3:EC:F9:3B:66:15:CE:51:52:E3:91:9A:3D	6B9C08E86EB0F767CFAD65CD98B62149E5494A67F5845E7BD1ED019F27B86BD6
3	3	CN=OISTE WISEKey Global Root GC CA, OU=OISTE Foundation Endorsed, O=WISEKey, C=CH	CN=OISTE WISEKey Global Root GC CA, OU=OISTE Foundation Endorsed, O=WISEKey, C=CH	212A560CAEDA0CAB4045BF2BA22D3AEA	id-ecPublicKey	384 bit	ecdsa-with-SHA384	May 9 09:48:34 2017 GMT	May 9 09:58:33 2042 GMT	48:87:14:AC:E3:C3:9E:90:60:3A:D7:CA:89:EE:D3:AD:8C:B4:50:66	8560F91C3624DABA9570B5FEA0DBE36FF11A8323BE9486854FB3F34A5571198D



OISTE MANAGEMENT'S ASSERTION

as to its Disclosure of its Business Practices and Controls over its SSL Certification
Authority Operations as of April 1st 2019

The International Organization for the Security of Electronic Transactions (“**OISTE**”) operates the Certification Authority (CA) services known as “**OISTE Global Trust Model**” hierarchy with its Root Certification Authorities as detailed in appendix A, and provides SSL CA services.

The management of **OISTE** is responsible for establishing and maintaining effective controls over its SSL and non-SSL CA operations, including its network and certificate security system controls, its SSL CA business practices disclosure on its website [<https://www.OISTE.com/repository>], SSL key lifecycle management controls, and 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 **OISTE's** Certification Authority operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

OISTE management has assessed its disclosures of its certificate practices and controls over its SSL CA services. Based on that assessment, in **OISTE** management’s opinion, in providing its SSL [and non-SSL] Certification Authority (CA) services at its main and disaster recover datacentres in Switzerland, as of April 1st 2019, **OISTE** has:

- disclosed its business, key lifecycle management, certificate lifecycle management, and CA environment control practices in the documents:
 - “OGTM Certification Practice Statement Version 3.0” – 25 February 2019, available at the link [<https://oiste.org/wp-content/uploads/OGTM-OISTE-Foundation-CPS.v3.0.pdf>]
 - “CP for SSL Certificates Version 1.0” – 25 February 2019, available at [<https://oiste.org/wp-content/uploads/OGTM-CP-SSL-Certificates.v1.0.pdf>], including its commitment to provide SSL certificates in conformity with the CA/Browser Forum Requirements on the **OISTE** website, and provided such services in accordance with its disclosed practices;
- suitably designed, and placed into operation, controls to provide reasonable assurance that:
 - the integrity of keys and SSL certificates it manages is established and protected throughout their lifecycles; and
 - SSL subscriber information is properly authenticated (for the registration activities performed by **OISTE**)
- suitably designed, and placed into operation, 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
- suitably designed, and placed into operation, controls to provide reasonable assurance that it meets the Network and Certificate System Security Requirements as set forth by the CA/Browser Forum

In accordance with the WebTrust Principles and Criteria for Certification Authorities – SSL Baseline with Network Security v2.0, as published at [<http://www.webtrust.org/homepage-documents/item79806.pdf>].

Geneva, April 1st 2019

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Dourgam Kummer
OISTE Administrator

A black ink signature with large, circular loops and a long, sweeping tail.

Philippe Doubre
OISTE President



Appendix A: PKI Hierarchy in scope of the WebTrust SSL and Network Security audit

OISTE WISeKey Global Root GA CA

Subject Name: CN=OISTE WISeKey Global Root GC CA, OU=OISTE Foundation Endorsed, OU=Copyright (c) 2005, O=WISeKey, C=CH

Thumbprint: 41 C9 23 86 6A B4 CA D6 B7 AD 57 80 81 58 2E 02 07 97 A6 CB DF 4F FF 78 CE 83 96 B3 89 37 D7 F5

Valid From: 11th December 2005 To: 11th December 2037

OISTE WISeKey Global Root GB CA

Subject Name: CN=OISTE WISeKey Global Root GB CA, OU=OISTE Foundation Endorsed, O=WISeKey, C=CH

Thumbprint: 6B 9C 08 E8 6E B0 F7 67 CF AD 65 CD 98 B6 21 49 E5 49 4A 67 F5 84 5E 7B D1 ED 01 9F 27 B8 6B D6

Valid From: 1st December 2014 To: 1st December 2039

OISTE WISeKey Global Root GC CA

Subject Name: CN=OISTE WISeKey Global Root GC CA, OU=OISTE Foundation Endorsed, O=WISeKey, C=CH

Thumbprint: E0 11 84 5E 34 DE BE 88 81 B9 9C F6 16 26 D1 96 1F C3 B9 31

Valid From: 9th May 2017 To: 9th May 2042

A handwritten signature in blue ink, consisting of a stylized 'A' followed by a large, loopy 'O' and a trailing flourish.