

INDEPENDENT ASSURANCE REPORT

To the management of Agence Nationale de Certification Electronique (“ANCE” or “TunTrust”):

Scope

We have been engaged, in a reasonable assurance engagement, to report on TunTrust management’s [statement](#) that for its Certification Authority (CA) operations in Ariana, Tunisia, throughout the period 1 October 2022 to 30 September 2023 (the “Period”) for its CAs as enumerated in [Attachment A](#), TunTrust has:

- disclosed its business, key lifecycle management, certificate lifecycle management, and CA environmental control practices in its:
 - [TunTrust PKI Certificate Policy / Certification Practice Statement, v05.1, 12 September 2023](#)
 - [TunTrust PKI Certificate Policy / Certification Practice Statement, v05, 16 January 2023](#)
 - [TunTrust PKI Certificate Policy / Certification Practice Statement, v04.9, 08 April 2022](#)
 - [TnTrust Sign PKI Certificate Policy / Certification Practice Statement V01.2, 12 September 2023](#)
 - [TnTrust Sign PKI Certificate Policy / Certification Practice Statement V01.1, 05 December 2022](#)
 - [TnTrust Sign PKI Certificate Policy / Certification Practice Statement V01, 23 September 2022](#)
- maintained effective controls to provide reasonable assurance that:
 - TunTrust provides its services in accordance with its 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; and
 - subscriber information is properly authenticated (for the registration activities performed by TunTrust)
- maintained effective controls to provide reasonable assurance that:
 - logical and physical access to CA systems and data is restricted to authorised individuals;
 - the continuity of key and certificate management operations is maintained; and
 - CA systems development, maintenance, and operations are properly authorised and performed to maintain CA systems integrity

in accordance with the WebTrust [Principles and Criteria for Certification Authorities v2.2.2](#).

TunTrust does not escrow its CA keys, does not provide subscriber key generation, storage and recovery services, does not provide integrated circuit card management services, does not provide certificate suspension services, and does not provide third-party subordinate CA or cross certificate issuance or management. Accordingly, our procedures did not extend to controls that would address those criteria.

Certification authority’s responsibilities

TunTrust’s management is responsible for its statement, including the fairness of its presentation, and the provision of its described services in accordance with the WebTrust Principles and Criteria for Certification Authorities v2.2.2.

Our independence and quality management

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 behaviour.

The firm applies International Standard on Quality Management (ISQM) 1, Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements 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.

Practitioner's responsibilities

Our responsibility is to express an opinion on management's statement based on our procedures. We conducted our procedures in accordance with International Standard on Assurance Engagements 3000 (Revised), *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 statement is fairly stated, and, accordingly, included:

- (1) obtaining an understanding of TunTrust's key and certificate lifecycle management business practices and its controls over key and certificate integrity, over the authenticity and confidentiality of subscriber and relying party information, over the continuity of key and certificate lifecycle management operations and over development, maintenance and operation of systems integrity;
- (2) selectively testing transactions executed in accordance with disclosed key and certificate lifecycle 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.

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

Relative effectiveness of controls

The relative effectiveness and significance of specific controls at TunTrust 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.

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 unauthorised 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.

Practitioner's opinion

In our opinion, throughout the period 1 October 2022 to 30 September 2023, TunTrust management's statement, as referred to above, is fairly stated, in all material respects, in accordance with the WebTrust Principles and Criteria for Certification Authorities v2.2.2.

This report does not include any representation as to the quality of TunTrust's services beyond those covered by the WebTrust Principles and Criteria for Certification Authorities v2.2.2, nor the suitability of any of TunTrust's services for any customer's intended purpose.

Use of the WebTrust seal

TunTrust's use of the WebTrust for Certification Authorities Seal 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.

Deloitte LLP
Chartered Professional Accountants
Toronto, Ontario, Canada
13 November 2023



ATTACHMENT A

LIST OF IN SCOPE CAs

Root CAs
1. TunTrust Root CA
2. TnTrust Root CA – G1
OV SSL Issuing CA
3. TunTrust Services CA
Other CAs
4. TunTrust Qualified CA (revoked on 03 August 2023)
5. TnTrust CA - QSign1

CA IDENTIFYING INFORMATION

CA #	Cert #	Subject	Issuer	Serial Number	Key Type	Hash Type	Not Before	Not After	Extended Key Usage	Subject Key Identifier	SHA256 Fingerprint
1	1	C=TN, O=Agence Nationale de Certification Electronique, CN=TunTrust Root CA	C=TN, O=Agence Nationale de Certification Electronique, CN=TunTrust Root CA	27b4bd1d08289f6d78e2cedceef25dca3a702990	RSA 4096 -bits	RSA SHA-256	Apr 18 09:42:39 2019 GMT	Apr 18 09:42:39 2044 GMT	Digital Signature, Certificate Sign, CRL Sign	069A9B1F537DF1F5A4C8D3863EA17359B4F74421	BABBCA986946352CF9BF382E880652F4E94DBC4FEDD0F1CC21FA9973C96D65AB
1	2	C=TN, O=Agence Nationale de Certification Electronique, CN=TunTrust Root CA	C=TN, O=Agence Nationale de Certification Electronique, CN=TunTrust Root CA	1302d5e2404c92468616675db4bbbbb26b3efc13	RSA 4096 -bits	RSA SHA-256	Apr 26 08:57:56 2019 GMT	Apr 26 08:57:56 2044 GMT	Certificate Sign, CRL Sign	069A9B1F537DF1F5A4C8D3863EA17359B4F74421	2E44102AB58CB85419451C8E19D9ACF3662CAFBC614B6A53960A30F7D0E2EB41
2	1	C = TN O = AGENCE NATIONALE DE CERTIFICATION ELECTRONIQUE CN = TnTrust Root CA - G1	C = TN O = AGENCE NATIONALE DE CERTIFICATION ELECTRONIQUE CN = TnTrust Root CA - G1	3c892671a75cecc6a9c208028470a2dd39ff676	RSA 8192-bit	RSA sha512	Wednesday, September 21, 2022 16:27:45 GMT	Saturday, September 21, 2047 16:27:45 GMT		cba52528433e52e3554672793d6ffca95904eb56	54e84a8e9da7f3bb14f35c7f9c314b6eab2739eb8086c8000f00c0993c3e694c
3	1	C=TN, O=Agence Nationale de Certification Electronique, CN=TunTrust Services CA	C=TN, O=Agence Nationale de Certification Electronique, CN=TunTrust Root CA	574ebb9529348333d742990c24a4d00c49681e6	RSA 4096 -bits	RSA SHA-256	Apr 18 10:36:54 2019 GMT	Apr 18 10:36:54 2039 GMT	Digital Signature, Certificate Sign, CRL Sign	9F2517CE6F90AB612FC147A9E02F99135DFA2339	598BC438BB33AE8FC2ADBFC701804920E92C1311AFF8FEB49A51D96393987FD8
3	2	C=TN, O=Agence Nationale de Certification Electronique, CN=TunTrust Services CA	C=TN, O=Agence Nationale de Certification Electronique, CN=TunTrust Root CA	601a7c2f6093b7a673da5f8c9c885f37a75897c0	RSA 4096 -bits	RSA SHA-256	Apr 26 10:23:31 2019 GMT	Apr 26 10:23:31 2039 GMT	Certificate Sign, CRL Sign	9F2517CE6F90AB612FC147A9E02F99135DFA2339	063627355C941A1C93FC515CBAEF2F173D4A646DDEB139CB8C75C102222994F
4	1	C=TN, O=Agence Nationale de Certification Electronique, CN=TunTrust Qualified CA	C=TN, O=Agence Nationale de Certification Electronique, CN=TunTrust Root CA	5122200c68e4cce4bc38e5cff0eb2424388aea19	RSA 4096 -bits	RSA SHA-256	Apr 18 12:01:27 2019 GMT	Apr 18 12:01:27 2039 GMT	Digital Signature, Certificate Sign, CRL Sign	286C725FB089109C8E10D630969E8FFCFB9F7436	5D2E8DC2F18664DD9B81BAF880FA8D4021D0FCD57B2E2FF805DAB1C7EE7AFA2
4	2	C=TN, O=Agence Nationale de Certification Electronique, CN=TunTrust Qualified CA	C=TN, O=Agence Nationale de Certification Electronique, CN=TunTrust Root CA	640c4827ee903eafb4d73db2797a91afc985727a	RSA 4096 -bits	RSA SHA-256	Apr 26 09:49:02 2019 GMT	Apr 26 09:49:02 2039 GMT	Certificate Sign, CRL Sign	286C725FB089109C8E10D630969E8FFCFB9F7436	21C266BC3D023249F9F73ECFF03BF15234270D425FE36C8180F623C712DFE28E
5	1	C = TN O = AGENCE NATIONALE DE CERTIFICATION ELECTRONIQUE CN = TnTrust CA - QSign1	C = TN O = AGENCE NATIONALE DE CERTIFICATION ELECTRONIQUE CN = TnTrust Root CA - G1	63ad026b2f40b526906c38d0e6d2ad8b3df29e30	RSA 4096-bit	RSA sha256	Wednesday, September 21, 2022, 17:57:31 GMT	Sunday, September 21, 2042, 17:57:31 GMT		48c0c1b5b68b123614366609a8cb255dba216978	a088363a6b1927e271e184c6f73cf5999f190e6a4a205a4182e017f8121d6331

TUNTRUST MANAGEMENT'S STATEMENT

Agence Nationale de Certification Electronique ("ANCE" or "TunTrust") operates the Certification Authority (CA) services as enumerated in [Table A](#), and provides the following CA services:

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

The management of TunTrust 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 on its website which is available at <https://www.tuntrust.tn/repository>. 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, controls placed into operation can only provide reasonable assurance with respect to TunTrust's operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

TunTrust management has assessed its disclosures of its certificate practices and controls over its CA services. Based on that assessment, in TunTrust management's opinion, in providing its Certification Authority (CA) services at Ariana, Tunisia, throughout the period 1 October 2022 to 30 September 2023, TunTrust has:

- disclosed its business, key lifecycle management, certificate lifecycle management, and CA environmental control practices in its:
 - [TunTrust PKI Certificate Policy / Certification Practice Statement, v05.1, 12 September 2023](#)
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 - CA systems development, maintenance, and operations are properly authorised and performed to maintain CA systems integrity

in accordance with the [WebTrust Principles and Criteria for Certification Authorities v2.2.2](#), including the following:

CA Business Practices Disclosure

- Certification Practice Statement (CPS)

CA Business Practices Management

- Certification Practice Statement Management

CA Environmental Controls

- Security Management
- Asset Classification and Management

- Personnel Security
- Physical and Environmental Security
- Operations Management
- System Access Management
- System Development, Maintenance, and Change Management
- Disaster Recovery, Backups, and 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
- CA Key Destruction
- CA Key Compromise
- CA Cryptographic Hardware Lifecycle Management
- CA Key Transportation
- CA Key Migration

Subscriber Key Lifecycle Management Controls

- Requirements for Subscriber Key Management

Certificate Lifecycle Management Controls

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

TunTrust does not escrow its CA keys, does not provide subscriber key generation, storage and recovery services, does not provide subordinate CA certification, does not provide certificate suspension services, does not provide integrated circuit card management services, does not provide certificate suspension services, and does not provide third-party subordinate CA or cross certificate issuance or management.

Ramzi Khlif, General Director
TunTrust - Agence Nationale de Certification Electronique
13 November 2023


Le Directeur Général
Ramzi KHLIF



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