

INDEPENDENT ASSURANCE REPORT

To the management of Entrust Corporation doing business as AffirmTrust (“AffirmTrust”):

Scope

We have been engaged, in a reasonable assurance engagement, to report on AffirmTrust management’s [statement](#) that for its Certification Authority (CA) operations in Ottawa, Ontario, Canada and Toronto, Ontario, Canada throughout the period 1 March 2022 to 28 February 2023 (the “Period”) for its CAs as enumerated in [Attachment A](#), AffirmTrust has:

- disclosed its SSL certificate lifecycle management business practices in its Certification Practice Statements as enumerated on [Attachment B](#), including its commitment to provide SSL certificates in conformity with the CA/Browser Forum Requirements on the AffirmTrust website, and provided such services in accordance with its disclosed practices
- maintained effective 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 AffirmTrust)
- 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
- maintained effective 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 v2.6](#).

Certification authority’s responsibilities

AffirmTrust’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 – SSL Baseline with Network Security v2.6

Our independence and quality control

We have complied with the relevant rules of professional conduct / code of ethics applicable to the practice of public accounting and related to assurance engagements, issued by various professional accounting bodies, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Canadian Standard on Quality Control 1, *Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance 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 Canadian Standard on Assurance Engagements 3000, *Attestation Engagements Other than Audits or Reviews of Historical Financial Information*, set out in the CPA Canada Handbook – Assurance. 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 AffirmTrust'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 AffirmTrust's network and certificate system security to meet the requirements set forth by the CA/Browser Forum;
- (2) selectively testing transactions executed in accordance with disclosed SSL certificate lifecycle management 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 AffirmTrust 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 March 2022 to 28 February 2023, AffirmTrust 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 – SSL Baseline with Network Security v2.6.

This report does not include any representation as to the quality of AffirmTrust's services beyond those covered by the WebTrust Principles and Criteria for Certification Authorities – SSL Baseline with Network Security v2.6, nor the suitability of any of AffirmTrust's services for any customer's intended purpose.

Use of the WebTrust seal

AffirmTrust'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.

A handwritten signature in black ink that reads "Deloitte LLP". The signature is written in a cursive, slightly stylized font.

Deloitte LLP
Chartered Professional Accountants
Toronto, Ontario, Canada
18th May 2023



ATTACHMENT A

LIST OF IN SCOPE CAs

Root CAs
1. AffirmTrust Commercial 2. AffirmTrust Networking 3. AffirmTrust Premium 4. AffirmTrust Premium ECC 5. AffirmTrust 4K TLSR 2022
DV SSL Issuing CAs
6. AffirmTrust Certificate Authority - DV1 7. AffirmTrust Certificate Authority – DVTLS1
OV SSL Issuing CAs
8. AffirmTrust Certificate Authority - OV1
EV SSL Issuing CAs
9. AffirmTrust Extended Validation CA - EV1 10. AffirmTrust Extended Validation CA - EV2 11. AffirmTrust Extended Validation CA - EV3 12. AffirmTrust Extended Validation CA - EVEC1



CA IDENTIFYING INFORMATION

CA #	Cert #	Subject	Issuer	Serial Number	Key Type	Hash Type	Not Before (UTC)	Not After (UTC)	Revoked Date (UTC)	Extended Key Usage	Subject Key Identifier	SHA256 Fingerprint
1	1	CN=AffirmTrust Commercial O=AffirmTrust C=US	CN=AffirmTrust Commercial O=AffirmTrust C=US	7777062726a9b17c	RSA 2048-bits	RSA SHA- 256	2010-01-29 14:06:06	2030-12-31 14:06:06			9d93c6538b5ecaaf3f9f1e0fe59995bc24f6948f	0376ab1d54c5f9803ce4b2e201a0ee7eef7b57b636e8a93c9b8d4860c96f5fa7
2	1	CN=AffirmTrust Networking O=AffirmTrust C=US	CN=AffirmTrust Networking O=AffirmTrust C=US	7c4f04391cd4992d	RSA 2048-bits	RSA SHA-1	2010-01-29 14:08:24	2030-12-31 14:08:24			071fd2e79cdac26ea240b4b07a50105074c4c8bd	0a81ec5a929777f145904af38d5d509f66b5e2c58fcd531058b0e17f3f0b41b
3	1	CN=AffirmTrust Premium O=AffirmTrust C=US	CN=AffirmTrust Premium O=AffirmTrust C=US	6d8c1446b1a60aee	RSA 4096-bits	RSA SHA- 384	2010-01-29 14:10:36	2040-12-31 14:10:36			9dc067a60c22d926f545aba665521127d845ac63	70a73f7f376b60074248904534b11482d5bf0e698ecc498df52577ebf2e93b9a
4	1	CN=AffirmTrust Premium ECC O=AffirmTrust C=US	CN=AffirmTrust Premium ECC O=AffirmTrust C=US	7497258ac73f7a54	EC 384- bits	ECDSA SHA-384	2010-01-29 14:20:24	2040-12-31 14:20:24			9aa297ac011353526513000c36afe40d5aed63c	bd71fd6da97e4cf62d1647add2581b07d79adf8397eb4ecba9c5e8488821423
5		CN = AffirmTrust 4K TLS Root CA - 2022 O = AffirmTrust C = CA	CN = AffirmTrust 4K TLS Root CA - 2022 O = AffirmTrust C = CA	4261723e9b00a2273bd5871e2d5b404687473a5	EC 384- bits	ECDSA SHA-384	2022-12-13 13:05:48	2047-12-7 13:05:48			07875af4076871d9661be264788037805cdef727	a7dedf5a842167dd12fdaa02080e73295b8b8bea71b2094ea0950945a482fc1
6	1	CN=AffirmTrust Certificate Authority - DV1 OU=See www.affirmtrust.com/repository O=AffirmTrust C=CA	CN=AffirmTrust Commercial O=AffirmTrust C=US	580e00b14e86ce35	RSA 2048-bits	RSA SHA- 256	2017-04-07 15:10:56	2030-12-02 04:00:00		TLS Web Server Authentication, TLS Web Client Authentication	33df7a3e027996ebb60cc063fa75b9222cd91fa	ca4389c89ddfc31bec26c74b44a8498c58b2d838516fa01b14f1393629e58a40
6	2	CN=AffirmTrust Certificate Authority - DV1 OU=See www.affirmtrust.com/repository O=AffirmTrust C=CA	CN=AffirmTrust Commercial O=AffirmTrust C=US	62b4c3eba53918177f127a837b574f96	RSA 2048-bits	RSA SHA- 256	2019-03-21 20:21:37	2030-12-02 04:00:00		TLS Web Server Authentication, TLS Web Client Authentication	33df7a3e027996ebb60cc063fa75b9222cd91fa	4563b936e35ab97576f5aef1935d9bc7e9977841f0573bd2e16bcac9534a6af9
7	1	CN = AffirmTrust 4K TLS Certification Authority - DV1 O = AffirmTrust C = CA	CN = AffirmTrust 4K TLS Root CA - 2022 O = AffirmTrust C = CA	04e911e082864b911d97267aa3388c5a	RSA 4096-bits	RSA SHA- 384	2022-12-14 14:09:01	2040-12-29 19:59:59		Server Authentication (1.3.6.1.5.5.7.3.1) Client Authentication (1.3.6.1.5.5.7.3.2)	45c174f745d033320f133efb8da6179886f5c96	fb327fe14ab3fec5c96d9169a8b536382b97b1b325543c3dcd8a10f8c431e103
8	1	CN=AffirmTrust Certificate Authority - OV1 OU=See www.affirmtrust.com/repository O=AffirmTrust C=CA	CN=AffirmTrust Commercial O=AffirmTrust C=US	187e7f3bf66f23cd	RSA 2048-bits	RSA SHA- 256	2016-11-29 16:49:28	2030-12-02 04:00:00		TLS Web Server Authentication, TLS Web Client Authentication	fe60c30da4a29d214f7a784c62c5db14fc3978c4	ea4ee2faa57ae4b539b63977fe5bb205b6afb32f7a73b2b363e4be02cd8a91e9
8	2	CN=AffirmTrust Certificate Authority - OV1 OU=See www.affirmtrust.com/repository O=AffirmTrust C=CA	CN=AffirmTrust Commercial O=AffirmTrust C=US	53f6a611092e528ed963f19149532204	RSA 2048-bits	RSA SHA- 256	2019-03-21 20:25:32	2030-12-02 04:00:00		TLS Web Server Authentication, TLS Web Client Authentication	fe60c30da4a29d214f7a784c62c5db14fc3978c4	b5fd6f800334f565036b0999f8310b5b0bd7268395d8b267005697af7301c5e8
9	1	CN=AffirmTrust Extended Validation CA - EV1 OU=See www.affirmtrust.com/repository O=AffirmTrust C=CA	CN=AffirmTrust Commercial O=AffirmTrust C=US	40f0bbaa8ae0c098	RSA 2048-bits	RSA SHA- 256	2016-11-29 16:42:17	2030-12-02 04:00:00		TLS Web Server Authentication, TLS Web Client Authentication	dbef65370be547cb35d1901f03c1bc88c7a7ea80	cf88915cf996932c2b4cbe3039076d119bb728b4f31e49b63a5022fe65489a12
9	2	CN=AffirmTrust Extended Validation CA - EV1 OU=See www.affirmtrust.com/repository O=AffirmTrust C=CA	CN=AffirmTrust Commercial O=AffirmTrust C=US	1729551ed68e7fb1edf57300f35d7fd5	RSA 2048-bits	RSA SHA- 256	2019-03-21 20:27:54	2030-12-02 04:00:00		TLS Web Server Authentication, TLS Web Client Authentication	dbef65370be547cb35d1901f03c1bc88c7a7ea80	ed3c991466cbc45b5f1da281028f9587b8219523647e0ca1b47f2c5d27d2920f
10	1	CN=AffirmTrust Extended Validation CA - EV2 OU=See www.affirmtrust.com/repository O=AffirmTrust C=CA	CN=AffirmTrust Premium O=AffirmTrust C=US	5371c8eb0784fd5108e5d4f3e323ec46	RSA 2048-bits	RSA SHA- 256	2019-03-21 20:46:35	2030-12-02 04:00:00		TLS Web Server Authentication, TLS Web Client Authentication	737c9a38683c517c4108fea11f2a1eb461dbcd3c	9df77488c4b74ac32e3cec4c643d001d5c3babfa4001ffd193dca10c8be5cb3a
11	1	CN=AffirmTrust Extended Validation CA - EV3 OU=See www.affirmtrust.com/repository O=AffirmTrust C=CA	CN=AffirmTrust Networking O=AffirmTrust C=US	3424a1ecf8f0a35fe746b7011c43e844	RSA 2048-bits	RSA SHA- 256	2019-03-21 20:38:59	2030-12-02 04:00:00		TLS Web Server Authentication, TLS Web Client Authentication	791eb1c917c71eacbc1c714d7c3e87fbc9509b15	b700ba49af4d19e72fb15a2dac3c213ba44c319fa7da92772b3682e12b781093
12	1	CN=AffirmTrust Extended Validation CA - EVEC1 OU=See www.affirmtrust.com/repository O=AffirmTrust C=CA	CN=AffirmTrust Premium ECC O=AffirmTrust C=US	0202a584c134064dc9f32d207ea37298	EC 384- bits	ECDSA SHA-384	2019-03-21 20:55:07	2030-12-02 04:00:00		TLS Web Server Authentication, TLS Web Client Authentication	c6908c0283d75de3be3b9c2ed5657d2a1060ee5	cde23a52303c3ca67a4bbcc9582ff5c9203aa98cb0f387139308ce2289506a2



ATTACHMENT B

LIST OF AFFIRMTRUST CERTIFICATION PRACTICE STATEMENTS

CPS Name	Version	Date
AffirmTrust Certification Practice Statement	3.13	31 Jan 2023
AffirmTrust Certification Practice Statement	3.12	30 Sep 2022
AffirmTrust Certification Practice Statement	3.11	18 Feb 2022

AFFIRMTRUST MANAGEMENT'S STATEMENT

Entrust Datacard doing business as AffirmTrust ("AffirmTrust") operates the Certification Authority (CA) services as enumerated in [Attachment A](#), and provides SSL CA services.

The management of AffirmTrust is responsible for establishing and maintaining effective controls over its SSL CA operations, including its network and certificate system controls, its SSL CA business practices disclosure on its [website](#), 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 AffirmTrust's Certification Authority operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

AffirmTrust management has assessed its disclosures of its certificate practices and controls over its CA services. In AffirmTrust management's opinion, in providing its SSL and non-SSL Certification Authority (CA) services at Ottawa, Ontario, and Toronto, Ontario, throughout the period 1 March 2022 to 28 February 2023, AffirmTrust has:

- disclosed its SSL certificate lifecycle management business practices in its Certification Practice Statements as enumerated on [Attachment B](#), including its commitment to provide SSL certificates in conformity with the CA/Browser Forum Requirements on the AffirmTrust website, and provided such services in accordance with its disclosed practices
- maintained effective controls to provide reasonable assurance that:
 - the integrity of keys and SSL certificates it manages is established and protected throughout their lifecycles; and
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 - CA systems development, maintenance, and operations are properly authorized and performed to maintain CA systems integrity
- maintained effective 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 v2.7](#)



Bruce Morton
Director, Entrust Certificate Services
18th May 2023

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DV SSL Issuing CAs
6. AffirmTrust Certificate Authority - DV1 7. AffirmTrust Certificate Authority – DVTLS1
OV SSL Issuing CAs
8. AffirmTrust Certificate Authority - OV1
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