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INDEPENDENT ASSURANCE REPORT

To the management of Entrust Corporation ("Entrust"):

Scope

We have been engaged, in a reasonable assurance engagement, to report on Entrust management's statement that for its Document Signing as a Service ("DSaaS") Certification Authority ("CA") operations in Ottawa, Ontario, Canada, Toronto, Ontario, Canada, Denver, Colorado, USA, Dallas, Texas, USA, and Berkshire, United Kingdom, throughout the period 1 March 2022 to 28 February 2023 (the "Period") for its CAs as enumerated in Attachment A, Entrust has:

- disclosed its business, key lifecycle management, certificate lifecycle management, and CA environmental control practices in its Certification Practice Statements as enumerated in Attachment B

- maintained effective controls to provide reasonable assurance that Entrust 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;
    - subscriber information is properly authenticated (for the registration activities performed by Entrust); 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 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.

Assessment of controls at DSaaS operations in US and UK was limited to the following WebTrust for CA criteria:

CA Environmental Controls

- Security Management
- Asset Classification and Management
- Personnel Security
- Physical and Environmental Security
- Operations Management
- System Access Management
- Disaster Recovery, Backups, and Business Continuity Management
- Monitoring and Compliance
- Audit Logging

CA Key Lifecycle Management Controls

- CA Cryptographic Hardware Lifecycle Management

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Assessment of controls related to DSaaS operations in Canada was limited to the following WebTrust for CA criteria:

CA Environmental Controls

- System Development, Maintenance, and Change Management

Subscriber Key Lifecycle Management Controls

- CA-Provided Subscriber Key Generation Services
- CA-Provided Subscriber Key Storage and Recovery Services
- Requirements for Subscriber Key Management

Entrust DSaaS operations do not provide CA key generation, storage, archive, or management services, integrated circuit card management services, suspension services and do not provide third-party subordinate CA or cross certificate issuance or management services. Accordingly, our procedures did not extend to controls that would address those criteria.

Certification authority's responsibilities

Entrust'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 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 Entrust'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 Entrust 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.

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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.

Other matters

Without modifying our opinion, we noted the following other matters during our procedures:

	Matter topic	Matter description
1	**No instances or occurrences of the control activity during the audit period**	During the examination period there were no instances or occurrences of the following control activity: • **WTCA 4.8 Cryptographic Device Life Cycle Management** No cryptographic device life cycle events occurred for US and UK operation during the audit period. As underlying event had not occurred, related control activities did not operate during period under audit and their operating effectiveness was not tested.

Practitioner's opinion

In our opinion, throughout the period 1 March 2022 to 28 February 2023, Entrust 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 Entrust's services beyond those covered by the WebTrust Principles and Criteria for Certification Authorities v2.2.2, nor the suitability of any of Entrust's services for any customer's intended purpose.

Deloitte LLP

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

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ATTACHMENT A

LIST OF IN SCOPE CAs

Root CAs
1. Entrust.net Certification Authority (2048) 2. Entrust Root Certification Authority - G4 3. Entrust Digital Signing Root Certification Authority - DSR1
Intermediate CAs
4. Entrust Certification Authority – AATL1
Document Signing CAs
5. Entrust Class 3 Client CA - SHA256 6. Entrust Certification Authority - ES QSig1 7. Entrust Certification Authority - ES QSig2 8. Entrust Certification Authority - ES QSeal1 9. Entrust Certification Authority - ES QSeal2 10. Entrust Certification Authority – DS1
Timestamp CAs
11. Entrust Certification Authority - ES QTS1

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CA IDENTIFYING INFORMATION

CA #	Cert #	Subject	Issuer	Serial Number	Key Type	Hash Type	Not Before	Not After	Revoked Date	Extended Key Usage	Subject Key Identifier	SHA256 Fingerprint
1	1	CN=Entrust.net Certification Authority (2048) OU=(c) 1999 Entrust.net Limited OU=www.entrust.net/CPS_2048 incorp. by ref. (limits liab.) O=Entrust.net	CN=Entrust.net Certification Authority (2048) OU=(c) 1999 Entrust.net Limited OU=www.entrust.net/CPS_2048 incorp. by ref. (limits liab.) O=Entrust.net	3863def8	RSA 2048-bits	RSA SHA-1	1999-12-24 17:50:51	2029-07-24 14:15:12			55e481d11180bed889b908a331f9a1240916b970	6dc47172e01cbcb0bf62580d895fe2b8ac9ad4f873801e0c10b9c837d21eb177
2	1	CN=Entrust Root Certification Authority - G4 OU=(c) 2015 Entrust, Inc. - for authorized use only OU=See www.entrust.net/legal-terms O=Entrust, Inc. C=US	CN=Entrust Root Certification Authority - G4 OU=(c) 2015 Entrust, Inc. - for authorized use only OU=See www.entrust.net/legal-terms O=Entrust, Inc. C=US	00d9b5437fafa9390f000000005565ad58	RSA 4096-bits	RSA SHA-256	2015-05-27 11:11:16	2037-12-27 11:41:16			9f38c45623c339e8a0716ce8544ce4e83ab1bf67	db3517d1f6732a2d5ab97c533ec70779ee3270a62fb4ac4238372460e6f01e88
3	1	CN=Entrust Digital Signing Root Certification Authority - DSR1 O=Entrust, Inc. C=US	CN=Entrust Root Certification Authority - G4 OU=(c) 2015 Entrust, Inc. - for authorized use only OU=See www.entrust.net/legal-terms O=Entrust, Inc. C=US	2d37bcd092d2cb88b67f5ccdab71b39b	RSA 4096-bits	RSA SHA-512	2021-11-12 00:00:00	2030-12-30 00:00:00		1.3.6.1.4.1.311.10.3.12, Time Stamping	a6654181f25b87056addfd8a544e8f987bdc23b8	20fc75acb2cad7978c7b006a9b1523bfdaf5490afcf49652c585e4a12f601c85
3	2	CN=Entrust Digital Signing Root Certification Authority - DSR1 O=Entrust, Inc. C=US	CN=Entrust Digital Signing Root Certification Authority - DSR1 O=Entrust, Inc. C=US	6c73c936b185e50b804d5bcec29f83d21a51c1a3	RSA 4096-bits	RSA SHA-512	2021-11-12 18:28:47	2040-12-30 18:28:47			a6654181f25b87056addfd8a544e8f987bdc23b8	e874fe2531eae4a4b6b62f37496bbae90eb1d8fc8cedbebb00a182cfacdc7e61
4	1	CN=Entrust Class 3 Client CA - SHA256 OU=(c) 2015 Entrust, Inc. - for authorized use only OU=See www.entrust.net/legal-terms O=Entrust, Inc. C=US	CN=Entrust.net Certification Authority (2048) OU=(c) 1999 Entrust.net Limited OU=www.entrust.net/CPS_2048 incorp. by ref. (limits liab.) O=Entrust.net	551615150000000051ce160e	RSA 2048-bits	RSA SHA-256	2016-02-25 18:08:16	2029-06-25 18:38:16		TLS Web Client Authentication, E-mail Protection, 1.3.6.1.4.1.311.10.3.12, 2.16.840.1.114027.40.11	069f6f4ea2294e0f0cae17bfb69846efadb83b72	33857338361ecfc4858ddff6b9ef6273e3db856ab9cea1c0e2c65925d1c87978
5	1	C=ES O=Entrust Datacard Europe, S.L. organizationIdentifier=VATES-B81188047 CN=Entrust Certification Authority - ES QSig1	C=US O=Entrust, Inc. CN=Entrust Certification Authority - AATL1	4491ca5825be79842b29b0c37286215f	RSA 4096-bits	RSA SHA-512	2020-07-29 16:33:00	2037-12-19 23:59:00		E-mail Protection, 1.3.6.1.4.1.311.10.3.12, 1.2.840.113583.1.1.5	5a53088a6130a90dead54397d3983b951e2e6d02	b2874b588a94034798319d5d329db265f83a47f315ba5831a4970cb57166d594
6	1	CN=Entrust Certification Authority - ES QSig2 organizationIdentifier=VATES-B81188047 O=Entrust EU, S.L. C=ES	CN=Entrust Digital Signing Root Certification Authority - DSR1 O=Entrust, Inc. C=US	3f967d63188a95bf302f82e516cb991d	RSA 4096-bits	RSA SHA-512	2021-11-16 00:00:00	2040-12-29 00:00:00		1.3.6.1.4.1.311.10.3.12, 1.2.840.113583.1.1.5	f5560d69d7da6ac9d8c9a2096e74bedb80c61700	4671fdead3c5b32d834b36591d41496fcb8a0db7d4f9f4cb9d34eabe0947ee87
7	1	C=ES O=Entrust Datacard Europe, S.L. organizationIdentifier=VATES-B81188047 CN=Entrust Certification Authority - ES QSeal1	C=US O=Entrust, Inc. CN=Entrust Certification Authority - AATL1	13ee348e492f8dd6b5c49cf073f714ab	RSA 4096-bits	RSA SHA-512	2020-07-27 14:39:07	2037-12-19 23:59:00		E-mail Protection, 1.3.6.1.4.1.311.10.3.12, 1.2.840.113583.1.1.5	5680152395717fe72d90d0cd063a4f67637d3d75	1701de38124c4458f32b88ae7e62ac15876c427a3ad3bbae8fd1479ff00030f3
8	1	CN=Entrust Certification Authority - ES QSeal2 organizationIdentifier=VATES-B81188047 O=Entrust EU, S.L. C=ES	CN=Entrust Digital Signing Root Certification Authority - DSR1 O=Entrust, Inc. C=US	12f04c327561e6f51e8d39b47e9884e1	RSA 4096-bits	RSA SHA-512	2021-11-16 00:00:00	2040-12-29 00:00:00		Document Signing (1.3.6.1.4.1.311.10.3.12) Unknown Key Usage (1.2.840.113583.1.1.5)	3618256ed95df710057c272eb8ecfa414a60ed1f	8c31d9375128d4b107f07678eebfff2cca26a4cabb462f257f31a36fe7bce104
9	1	CN = Entrust Digital Signing Certification Authority - DS1 O = Entrust, Inc. C = US	CN = Entrust Digital Signing Root Certification Authority - DSR1 O = Entrust, Inc. C = US	536373ce69ce48b59ab6f202780d6d75	RSA 4096-bits	RSA SHA-384	2022-12-14 14:12:49	2040-12-29 19:59:59		Unknown Key Usage (1.3.6.1.5.5.7.3.36) Document Signing (1.3.6.1.4.1.311.10.3.12) Unknown Key Usage (1.2.840.113583.1.1.5)	80a1841c29b421823c0e5d17fbb21ed1a3e2d82d	EEE2B2C76CF4A1DC6E90C14CC1986D120245294833BD6A739EFBD3EBDE9BB972
10	1	CN = Entrust Certification Authority – ES QTS1 OrganizationIdentifier = VATES-B81188047 O = Entrust EU, S.L. C = ES	CN = Entrust Digital Signing Root Certification Authority – DSR1 O = Entrust, Inc. C = US	10b5a317770d5c645606941116538cdc	RSA 4096-bits	RSA SHA-256	2022-10-03 11:12:28	2040-12-28 20:00:00		Time Stamping (1.3.6.1.5.5.7.3.8)	696382cac2f1119a714332858bae37ca9676be80	253F463FB19E06D188A1F81AB6A3CA78C9352B08DC94DD74CF05336809363812
11	1	C=US O=Entrust, Inc. CN=Entrust Certification Authority - AATL1	CN=Entrust Root Certification Authority - G4 OU=(c) 2015 Entrust, Inc. - for authorized use only OU=See www.entrust.net/legal-terms O=Entrust, Inc. C=US	00c727f51f8f922b020000000005565d8ad	RSA 4096-bits	RSA SHA-512	2020-07-20 15:46:21	2037-12-20 16:16:21		1.3.6.1.4.1.311.10.3.12, 1.2.840.113583.1.1.5, E-mail Protection	63f184dd03bea39f64fa767a47c4567ec06da020	839f9b91c2e49218a66416df181b984e9be634d12a95483d98a6199fc0788d74

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ATTACHMENT B

LIST OF ENTRUST CERTIFICATION PRACTICE STATEMENTS

CPS Name	Version	Date
Entrust Certificate Services Certification Practice Statement	3.12	31 Jan 2023
Entrust Certificate Services Certification Practice Statement	3.11	30 Sep 2022
Entrust Certificate Services Certification Practice Statement	3.10	18 Feb 2022
Entrust EU, S.L. Certification Practice Statement	1.7	1 Aug 2022
Entrust EU, S.L. Certification Practice Statement	1.6	30 Nov 2021

ENTRUST MANAGEMENT'S STATEMENT

Entrust Corporation ("Entrust") operates the Document Signing as a Service Certification Authority ("DSaaS CA") services as enumerated in Attachment A, and provides the following CA services:

- Subscriber registration
- Certificate renewal
- Certificate rekey
- Certificate issuance
- Certificate distribution
- Certificate revocation
- Certificate validation
- Subscriber key generation and management

The management of Entrust is responsible for establishing and maintaining effective controls over its DSaaS 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 Entrust's Certification Authority operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

Entrust management has assessed its disclosures of its certificate practices and controls over its DSaaS CA services. Based on that assessment, in Entrust management's opinion, in providing its DSaaS CA services at Ottawa, Ontario, Canada, Toronto, Ontario, Canada, Denver, Colorado, USA, Dallas, Texas, USA, and Berkshire, United Kingdom, throughout the period 1 March 2022 to 28 February 2023, Entrust has:

- disclosed its business, key lifecycle management, certificate lifecycle management, and CA environment control practices in its Certification Practice Statements as enumerated in Attachment B

- maintained effective controls to provide reasonable assurance that Entrust 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;
    - subscriber information is properly authenticated (for the registration activities performed by Entrust); 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

in accordance with the WebTrust Principles and Criteria for Certification Authorities v2.2.2, including the following:

DSaaS CA operations in US and UK

CA Environmental Controls

- Security Management
- Asset Classification and Management
- Personnel Security
- Physical and Environmental Security
- Operations Management

- System Access Management
- Disaster Recovery, Backups, and Business Continuity Management
- Monitoring and Compliance
- Audit Logging

CA Key Lifecycle Management Controls

- CA Cryptographic Hardware Lifecycle Management

DSaaS CA operations in Canada

Assessment of controls related to DSaaS operations in Canada was limited to the following WebTrust for CA criteria:

CA Environmental Controls

- System Development, Maintenance, and Change Management

Subscriber Key Lifecycle Management Controls

- CA-Provided Subscriber Key Generation Services
- CA-Provided Subscriber Key Storage and Recovery Services
- Requirements for Subscriber Key Management

Entrust DSaaS operations do not provide CA key generation, storage, archive, or management services, integrated circuit card management services, suspension services and do not provide third-party subordinate CA or cross certificate issuance or management services. Accordingly, our statement does not extend to controls that would address those criteria.

No cryptographic device life cycle events occurred for US and UK operations during the audit period. Accordingly, our statement does not extend to controls that would address those criteria.

Bruce Morton
Director, Entrust Certificate Services
18th May 2023

ATTACHMENT A

LIST OF IN SCOPE CAs

Root CAs
1. Entrust.net Certification Authority (2048) 2. Entrust Root Certification Authority - G4 3. Entrust Digital Signing Root Certification Authority - DSR1
Intermediate CAs
4. Entrust Certification Authority – AATL1
Document Signing CAs
5. Entrust Class 3 Client CA - SHA256 6. Entrust Certification Authority - ES QSig1 7. Entrust Certification Authority - ES QSig2 8. Entrust Certification Authority - ES QSeal1 9. Entrust Certification Authority - ES QSeal2 10. Entrust Certification Authority – DS1
Timestamp CAs
11. Entrust Certification Authority - ES QTS1

ATTACHMENT B

LIST OF ENTRUST CERTIFICATION PRACTICE STATEMENTS

CPS Name	Version	Date
Entrust Certificate Services Certification Practice Statement	3.12	31 Jan 2023
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