



**PAG**  
**PRINCETON AUDIT GROUP**



**CITP**<sup>SM</sup>  
Certified Information<sup>1</sup>



**AICPA/Certification Authority**  
**SSL Baseline and Network Security version 2.2**  
**Independent Auditors Report**  
**December 1, 2017 to November 30, 2018.**

**TrustCor Systems S. de R.L.**  
**Toronto, Canada.**

**SECTION 1**  
**Audit Report**

**Independent Service Auditors' Report**  
**Year 2018**  
**Princeton Audit Group (PAG)**

The Board of Directors  
TrustCor Systems S. de R.L.  
371 Front Street West, #227  
Toronto, ON. M5V 3S8  
CANADA

We have examined the [assertion](#) by the management of TrustCor Systems S. de R.L. (TrustCor-CA) for its Certification Authority (CA) operations at Toronto, Ontario, Canada, throughout the period December 1<sup>st</sup>, 2017 to November 30<sup>th</sup>, 2018 for its CAs as enumerated in Attachment A, in scope for the SSL Baseline Requirements and Network Security Requirements, TrustCor-CA has:

- Disclosed its SSL certificate lifecycle management business practices in its:
  - [TrustCor Systems S. de R.L. Certification Practice Statement v 1.4.2](#) ; and
  - [TrustCor Systems S. de R.L. Certificate Policy v 1.4.2](#) ,including its commitment to provide SSL certificates in conformance with the CA/Browser Forum Requirements on the TrustCor-CA 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 registration activities performed by TrustCor-CA)
- 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.

And, for CAs as enumerated in Attachment A :

- 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

based on the [WebTrust Principles and Criteria for Certification Authorities – SSL Baseline with Network Security v2.2](#). TrustCor-CA’s management is responsible for its assertion. Our responsibility is to express an opinion on management’s assertion based on our examination.

The relative effectiveness and significance of specific controls at TrustCor-CA 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. Our examination did not extend to controls at individual subscriber and relying party locations and we have not evaluated the effectiveness of such controls.

Our examination was conducted in accordance with Section 101, Attestation Engagements (AICPA, Professional Standard) established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the 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. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of management’s assertion, 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.

Because of the nature and inherent limitations of controls, TrustCor-CA’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.

In our opinion management’s assertion, as referred to above, is fairly stated, in all material respects.

This report does not include any representation as to the quality of TrustCor-CA’s services other than its CA operations in Toronto, Canada, nor the suitability of any TrustCor-CA’s services for any customer’s intended purposes.

TrustCor-CA's use of the WebTrust for Certification Authorities — SSL Baseline with Network Security Seal constitutes a symbolic representation of the contents of this report and it is not intended, nor should it be construed, to update the report or provide any additional assurance.

*Vijay Khosla, CPA.CITP, CISA, CISM.*

A handwritten signature in blue ink that reads "V Khosla". The signature is written in a cursive style and is underlined with a single blue stroke.

*Managing Partner*

*11/30/2018*

*Princeton Audit Group, Inc.*  
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## ATTACHMENT “A”

### Certification Practice Statement and Certificate Policy

#### VERSIONS USED DURING THE AUDIT PERIOD

- For the period: December 1st 2017 — February 16th 2018
  - Certification Practice Statement, version 1.3.3
  - Certificate Policy, version 1.3.3
- For the period: February 16th 2018 – August 16th 2018
  - Certification Practice Statement, version 1.4.0
  - Certificate Policy, version 1.4.0
- For the period: August 16th 2018 – October 23rd 2018
  - Certification Practice Statement, version 1.4.1
  - Certificate Policy, version 1.4.1
- For the period: October 23rd 2018 – November 30th 2018
  - Certification Practice Statement, version 1.4.2
  - Certificate Policy, version 1.4.2

## **SECTION 2**

### **Trustcor SSL ASSERTION**





**Assertion of Management as to its Disclosure of its Business Practices and its Controls  
Over its Certification Authority Operations in accordance with Baseline Requirements for SSL/  
TLS Certificates and Network Security during the period from  
December 1st, 2017 through November 30th, 2018**

November 30, 2018

TrustCor Systems S. de R.L. ("TrustCor") operates the Certification Authority (CA) services known as the Root and Subordinate CAs, listed in Appendix A, in scope for the SSL Baseline Requirements and Network Security Requirements and provides SSL CA services.

The management of TrustCor is responsible for establishing and maintaining effective controls over its SSL CA operations, including its network and certificate security system controls, its SSL CA business practices disclosure in its Certification Practice Statement disclosure on its website, and its 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 provide only reasonable assurance with respect to TrustCor's CA operations. Furthermore because of changes in conditions, the effectiveness of controls may vary over time.

TrustCor management has assessed its disclosure of its controls over its CA operations. Based on that assessment, in TrustCor management's opinion, in providing its SSL Certification Authority (CA) services from its CA headquarters in Toronto [Ontario, Canada], with its data centers in Phoenix [Arizona, USA], during the period from December 1, 2017 through November 30, 2018, TrustCor has:

- Disclosed its SSL Certificate Life Cycle Management business practices in its:
  - [Certificate Policy](#) (version 1.4.2); and
  - [Certification Practices Statement](#) (version 1.4.2)including its commitment to provide SSL certificates in conformity with the CA/Browser Forum Requirements on the TrustCor website, and provided such services in accordance with its disclosed practices
- Maintained effective controls to provide reasonable assurance that:
  - subscriber information was properly authenticated (for the registration activities performed by TrustCor);
  - the integrity of keys and certificates which it managed were established and protected throughout their life cycles;

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- 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 life cycle management operations was maintained, and
  - CA systems development, maintenance and operations were properly authorized and performed to maintain CA systems integrity.
- Maintained effective controls to provide reasonable assurances that its meets the Network and Certificate System Security Requirements as set forth by the CA/Browser Forum

based on the [WebTrust® Principles and Criteria for Certification Authorities – SSL Baseline with Network Security – Version 2.2.](#)

A handwritten signature in black ink that reads "Rachel McPherson".

Rachel McPherson  
Vice President, Operations  
November 30, 2018

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## Appendix A – Root and Subordinate CAs involved in SSL certification

CA ID	Subject	Issuer	Serial	Key Type	Sig Alg	Not Before	Not After	SKI	SHA-256 Fingerprint
<b>Root CA Certificates</b>									
CA-1	C=PA, ST=Panama, L=Panama City, O=TrustCor Systems S. de R.L., OU=TrustCor Certificate Authority, CN=TrustCor RootCert CA-1	C=PA, ST=Panama, L=Panama City, O=TrustCor Systems S. de R.L., OU=TrustCor Certificate Authority, CN=TrustCor RootCert CA-1	da:9b:ec:71:f3:03:b0:19	RSA/4096	SHA256/RSA	Feb 4 12:32:16 2016 GMT	Dec 31 17:23:16 2029 GMT	EE:6B:49:3C:7A:3F:0D:E3:B1:09:B7:8A:C8:AB:19:9F:73:33:50:E7	d40e9c86ccd8fe468c1776959f49ea774fa548684b6c406f3909261f4dce2575c
CA-2	C=PA, ST=Panama, L=Panama City, O=TrustCor Systems S. de R.L., OU=TrustCor Certificate Authority, CN=TrustCor RootCert CA-2	C=PA, ST=Panama, L=Panama City, O=TrustCor Systems S. de R.L., OU=TrustCor Certificate Authority, CN=TrustCor RootCert CA-2	25:a1:df:ca:33:cb:59:02	RSA/4096	SHA256/RSA	Feb 4 12:32:23 2016 GMT	Dec 31 17:26:39 2034 GMT	D9:FE:21:40:6E:94:9E:BC:9B:3D:9C:7D:98:20:19:E5:8C:30:62:B2	0753e940378c1bd5e3836e395daea5cb839e5046f1bd0eae1951cf10fec7c965
ECA-1	C=PA, ST=Panama, L=Panama City, O=TrustCor Systems S. de R.L., OU=TrustCor Certificate Authority, CN=TrustCor ECA-1	C=PA, ST=Panama, L=Panama City, O=TrustCor Systems S. de R.L., OU=TrustCor Certificate Authority, CN=TrustCor ECA-1	84:82:2c:5f:1c:62:d0:40	RSA/2048	SHA256/RSA	Feb 4 12:32:33 2016 GMT	Dec 31 17:28:07 2029 GMT	44:9E:48:F5:CC:6D:48:D4:A0:4B:7F:FE:59:24:2F:83:97:99:9A:86	5a885db19c01d912c5759388938cafbbdf031ab2d48e91ee15589b42971d039c
<b>DV SSL Subordinate CA Certificates</b>									
CA1-Site	C=PA, ST=Panama, O=TrustCor Systems S. de R.L., OU=TrustCor Network, CN=TrustCor Basic Secure Site (CA1)	C=PA, ST=Panama, L=Panama City, O=TrustCor Systems S. de R.L., OU=TrustCor Certificate Authority, CN=TrustCor RootCert CA-1 [CA-1]	ff:04:3b:9f:67:7c:dc:49	RSA/4096	SHA512/RSA	Feb 4 13:05:21 2016 GMT	Dec 30 16:20:10 2029 GMT	B7:38:A7:99:92:D7:C6:AA:4E:FB:3E:D3:1C:4E:BD:19:C8:E9:92:4D	fe1ecadbdee0e558068ddbc7b33ab78dd57d0dc22fcc1c360119010375b0a61b

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CA1- Site 2048	C=PA, ST=Panama, O=TrustCor Systems S. de R.L., OU=TrustCor Network, CN=TrustCor Basic Secure Site 2048 (CA1)	C=PA, ST=Panama, L=Panama City, O=TrustCor Systems S. de R.L., OU=TrustCor Certificate Authority, CN=TrustCor RootCert CA-1  [CA-1]	60:b9:a6 :16:70:d d:48:f9	RSA/ 2048	SHA256/ RSA	Feb 5 11:47:59 2016 GMT	Dec 30 16:20:10 2029 GMT	70:89:27:66:D4:13:BB: EE:03:57:1D: 89:52:94:89:09:19:7B: 6D:17	4efaaa1040ac2f44d3dee 206d9522a288d84ec38 ddf59298c926e02f4c9d 9aef
<b>OV SSL Subordinate CA Certificates</b>									
CA2- Site	C=PA, ST=Panama, O=TrustCor Systems S. de R.L., OU=TrustCor Network, CN=TrustCor Enhanced Secure Site (CA2)	C=PA, ST=Panama, L=Panama City, O=TrustCor Systems S. de R.L., OU=TrustCor Certificate Authority, CN=TrustCor RootCert CA-2  [CA-2]	96:6b:e5 :90:bb: 23:ef:2a	RSA/ 4096	SHA512/ RSA	Feb 5 12:04:05 2016 GMT	Dec 30 16:20:10 2029 GMT	91:F7:F1:FC:8E:0A: 76:BE:FA:E6:00:05:AF: D7:02:A2:24:CD:5A:9E	3830db8ea1520b6cdf57 e1e00a5f1297be11d9e6 430c83607176212f85d 2db8
<b>Externally Operated CA Subordinate CA Certificates</b>									
ECA-1 Extern al	C=PA, ST=Panama, O=TrustCor Systems S. de R.L., OU=TrustCor Network, CN=TrustCor External PKI (ECA1)	C=PA, ST=Panama, L=Panama City, O=TrustCor Systems S. de R.L., OU=TrustCor Certificate Authority, CN=TrustCor ECA-1  [ECA-1]	82:25:5d :04:bf: 64:fe:9d	RSA/ 2048	SHA256/ RSA	Feb 5 12:10:46 2016 GMT	Dec 30 16:20:10 2029 GMT	66:C9:D2:44:CC:AD:A5 :D6:96:D3:04:12:DF: 1D:C5:88:0F:5C:8D:BA	7882d9faa49a8bb351f0f c6ed685ef1fc51541d0ce 0a4222074d1d9e16fdc3 0b

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