



REPORT OF THE INDEPENDENT ACCOUNTANT

To the Management of Symantec Corporation:

We have examined for the GeoTrust Certification Authority (CA) operations provided by Symantec Corporation (Symantec) at Mountain View, California, USA; New Castle, Delaware, USA; Melbourne, Australia; Cape Town, South Africa; Dublin, Ireland; Sapporo, Japan; and Kawasaki-shi, Japan and for Verisign, Inc. (Verisign), an independent service organization that provides datacenter hosting services to Symantec for the GeoTrust CA operations at the New Castle, Delaware location:

- a) Symantec's disclosure of its SSL certificate lifecycle management business practices in its GeoTrust Certification Practices Statement and its disclosure of the services and related controls provided by Verisign as enumerated in [Attachment A](#), including Symantec's commitment to provide SSL certificates in conformity with the CA/Browser Forum Requirements on the Symantec website;
- b) the provision of such services in accordance with the disclosed practices; and
- c) the effectiveness of Symantec's controls and Verisign's controls, where applicable, over
 - key and SSL certificate integrity,
 - the authenticity and confidentiality of SSL subscriber and relying party information,
 - continuity of key and SSL certificate lifecycle management operations,
 - development, maintenance, and operation of CA systems integrity, and
 - meeting the network and certificate system security requirements set forth by the CA/Browser Forum

throughout the period December 1, 2016 to October 31, 2017 for its CAs as enumerated in [Attachment B](#).

Symantec's management is responsible for these disclosures and for maintaining effective controls based on the [WebTrust Principles and Criteria for Certification Authorities - SSL Baseline with Network Security v2.2](#). Our responsibility is to express an opinion based on our examination.

The relative effectiveness and significance of specific controls at Symantec 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 attestation standards 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, throughout the period December 1, 2016 to October 31, 2017 for the CAs as enumerated in [Attachment B](#), in all material respects:

- a) Symantec disclosed its SSL certificate lifecycle management business practices in its GeoTrust Certification Practices Statement and the services and related controls provided by Verisign as enumerated in [Attachment A](#), including its commitment to provide SSL certificates in conformity with the CA/Browser Forum Requirements on the Symantec website;
- b) Symantec and Verisign, where applicable, provided such services in accordance with Symantec's disclosed practices;
- c) Symantec and Verisign, where applicable, maintained effective controls over
 - key and SSL certificate integrity,
 - the authenticity and confidentiality of SSL subscriber and relying party information,
 - continuity of key and SSL certificate lifecycle management operations,
 - development, maintenance, and operation of CA systems integrity, and
 - meeting the network and certificate system security requirements set forth by the CA/Browser Forum

based on the [WebTrust Principles and Criteria for Certification Authorities - SSL Baseline with Network Security v2.2](#).

Because of the nature and inherent limitations of controls, Symantec'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, throughout the period December 1, 2016 to October 31, 2017, in all material respects:

- a) Symantec disclosed its SSL certificate lifecycle management business practices in its GeoTrust Certification Practices Statement and the services and related controls provided by Verisign as enumerated in [Attachment A](#), including Symantec's commitment to provide SSL certificates in conformity with the CA/Browser Forum Requirements on the Symantec website;
- b) Symantec and Verisign, where applicable, provided such services in accordance with Symantec's disclosed practices;
- c) Symantec and Verisign, where applicable, maintained effective controls over
 - key and SSL certificate integrity,
 - the authenticity and confidentiality of SSL subscriber and relying party information,



- continuity of key and SSL certificate lifecycle management operations, development, maintenance, and operation of CA systems integrity, and
- meeting the network and certificate system security requirements set forth by the CA/Browser Forum

based on the [WebTrust Principles and Criteria for Certification Authorities - SSL Baseline with Network Security v2.2](#).

This report does not include any representation as to the quality of Symantec's services other than its CA operations at Mountain View, California, USA; New Castle, Delaware, USA; Melbourne, Australia; Cape Town, South Africa; Dublin, Ireland; Sapporo, Japan; and Kawasaki-shi, Japan, nor the suitability of any of Symantec's services for any customer's intended purpose.

During the period, Symantec's internal monitoring processes and various third parties identified issues of noncompliance with respect to the CA/Browser Forum Baseline Requirements Certificate Policy for the Issuance and Management of Publicly-Trusted Certificates version 1.5.1. These issues have been posted publicly in the online forums of the CA/Browser Forum as well as the individual Internet browsers. Symantec's remediation procedures have also been publicly communicated through these forums. These issues, which are enumerated in [Attachment C](#), represent isolated issues and do not represent a systemic impact on the operating effectiveness of Symantec's controls. Our opinion is not modified with respect to these matters.

Effective at the close of business on October 31, 2017, Symantec sold its CA business operations to DigiCert Inc.

Symantec's use of the WebTrust for Certification Authorities Seal - 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 this report or provide any additional assurance.

BDO USA, LLP

St. Louis, Missouri
January 31, 2018



Attachment A

GeoTrust Certification Practice Statement Versions in Scope

| CPS Name | Version | Date |
|---|---------|-------------------|
| GeoTrust Certification Practice Statement | 1.1.21 | September 8, 2017 |
| GeoTrust Certification Practice Statement | 1.1.20 | December 19, 2016 |
| GeoTrust Certification Practice Statement | 1.1.19 | September 9, 2016 |

Description of Services Provided for Symantec and Related Controls Exercised by Verisign at the New Castle, Delaware Location

Symantec has entered into an agreement with Verisign Inc. (Verisign), to provide datacenter hosting services at the New Castle, Delaware datacenter (the datacenter). Verisign performs the same physical and environmental security controls as Symantec has disclosed in Section 5 and Section 6 of the GeoTrust Certification Practice Statement; however, Verisign performs UPS maintenance quarterly, rather than semi-annually.

Verisign has implemented the following physical and environmental security controls to protect Symantec assets at the datacenter. Production systems housed in the datacenter are protected by multiple tiers of physical security, with access to the lower tier required before gaining access to the next highest tier. The datacenter enforces individual access control through the use of two-factor authentication, including biometrics. Physical access to the datacenter is automatically logged. Visitors to the datacenter are required to sign a log at the security office, wear a visitor badge, and be escorted while onsite. The datacenter facilities are manned continuously by on-site security personnel and the premises are continuously video monitored and recorded. Multiple generators, UPS, HVAC and fire suppression systems have been implemented at the datacenter.



Attachment B

List of CAs In-Scope

| Root CA | Serial Number | SHA1 Thumbprint | SHA2 Thumbprint |
|--|--------------------------------------|---|---|
| C=US, O=GeoTrust Inc., CN=GeoTrust Global CA | 23456 | DE:28:F4:A4:FF:E5:B9:2 F:A3:C5:03:D1:A3:49:A7 :F9:96:2A:82:12 | FF:85:6A:2D:25:1D:CD:88: D3:66:56:F4:50:12:67:98:C F:AB:AA:DE:40:79:9C:72:2 D:E4:D2:B5:DB:36:A7:3A |
| C=US, O=GeoTrust Inc., CN=GeoTrust Global CA 2 | 1 | A9:E9:78:08:14:37:58:8 8:F2:05:19:B0:6D:2B:0D :2B:60:16:90:7D | CA:2D:82:A0:86:77:07:2F: 8A:B6:76:4F:F0:35:67:6C:F E:3E:5E:32:5E:01:21:72:DF :3F:92:09:6D:B7:9B:85 |
| C=US, O=GeoTrust Inc., CN=GeoTrust Primary Certification Authority | 18ACB56AFD69B6153A63 6CAFDAFAC4A1 | 32:3C:11:8E:1B:F7:B8:B 6:52:54:E2:E2:10:0D:D6 :02:90:37:F0:96 | 37:D5:10:06:C5:12:EA:AB: 62:64:21:F1:EC:8C:92:01:3 F:C5:F8:2A:E9:8E:E5:33:E B:46:19:B8:DE:B4:D0:6C |
| C=US, O=GeoTrust Inc., CN=GeoTrust Universal CA | 1 | E6:21:F3:35:43:79:05:9 A:4B:68:30:9D:8A:2F:74 :22:15:87:EC:79 | A0:45:9B:9F:63:B2:25:59:F 5:FA:5D:4C:6D:B3:F9:F7:2 F:F1:93:42:03:35:78:F0:73 :BF:1D:1B:46:CB:B9:12 |
| C=US, O=GeoTrust Inc., CN=GeoTrust Universal CA 2 | 1 | 37:9A:19:7B:41:85:45:3 5:0C:A6:03:69:F3:3C:2E :AF:47:4F:20:79 | A0:23:4F:3B:C8:52:7C:A5: 62:8E:EC:81:AD:5D:69:89: 5D:A5:68:0D:C9:1D:1C:B8: 47:7F:33:F8:78:B9:5B:0B |
| C=US, O=GeoTrust Inc., OU=(c) 2007 GeoTrust Inc. - For authorized use only, CN=GeoTrust Primary Certification Authority - G2 | 3CB2F4480A00E2FEEB24 3B5E603EC36B | 8D:17:84:D5:37:F3:03:7 D:EC:70:FE:57:8B:51:9A :99:E6:10:D7:B0 | 5E:DB:7A:C4:3B:82:A0:6A: 87:61:E8:D7:BE:49:79:EB:F 2:61:1F:7D:D7:9B:F9:1C:1 C:6B:56:6A:21:9E:D7:66 |
| C=US, O=GeoTrust Inc., OU=(c) 2008 GeoTrust Inc. - For authorized use only, CN=GeoTrust Primary Certification Authority - G3 | 15AC6E9419B2794B41F6 27A9C3180F1F | 03:9E:ED:B8:0B:E7:A0:3 C:69:53:89:3B:20:D2:D9 :32:3A:4C:2A:FD | B4:78:B8:12:25:0D:F8:78:6 3:5C:2A:A7:EC:7D:15:5E:A A:62:5E:E8:29:16:E2:CD:2 9:43:61:88:6C:D1:FB:D4 |



| Class 3 CA | Serial Number | SHA1 Thumbprint | SHA2 Thumbprint |
|---|----------------------------------|---|---|
| C=CH, O=Hostpoint AG, OU=Domain Validated SSL, CN=Hostpoint DV SSL CA - G1 | 5DC83594AA94674ABD0559D00CA943CA | 0D:BB:0D:76:FC:68:A0:F7:C9:FF:DD:9F:80:35:12:02:BD:31:69:15 | 9F:4E:3C:42:FA:FE:DA:3C:F8:8C:05:CC:4B:4A:F0:C0:AF:30:64:15:C3:0D:3D:1E:EB:ED:EB:F7:D1:77:A9:82 |
| C=CH, O=Hostpoint AG, OU=Domain Validated SSL, CN=Hostpoint DV SSL CA - G2 | 023A8D | 51:F5:6D:08:1A:8D:FD:E5:6E:DA:F1:8A:81:EB:2E:6C:A6:8A:E3:AC | AB:D6:D0:53:FD:BE:35:6D:07:50:50:18:15:86:B0:B9:C2:B8:C0:32:98:AB:CE:64:CE:25:C4:04:01:DF:3B:22 |
| C=CH, O=Hostpoint AG, OU=Domain Validated SSL, CN=Hostpoint DV SSL CA - G2 | 023A8C | E8:69:36:C0:28:9D:99:87:F3:E6:36:98:56:47:B6:7E:79:03:82:F6 | 2F:E0:55:9F:55:57:67:0C:F5:C8:AE:01:22:38:73:B8:83:6C:AE:2C:FD:25:96:1C:C9:8E:E2:B9:43:A2:D6:5A |
| C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia Technologies, Inc. DV SSL CA - G1 | 0F7978CB79BC6DA9536C17E082672514 | 63:69:87:97:95:C1:2B:A5:F3:F4:4D:1A:AB:E2:92:D3:86:C7:33:CC | 39:97:C7:21:89:3B:39:26:D3:93:8A:31:1C:A0:7A:26:1B:2A:E2:2E:01:DC:58:7F:18:1D:FF:15:B9:8B:4E:A6 |
| C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia Technologies, Inc. DV SSL CA - G2 | 023A91 | 63:53:94:51:40:BF:98:77:9F:14:9E:C7:D2:89:2F:39:A3:CB:8F:97 | C1:89:49:E3:65:9F:F7:DF:22:B3:0E:C4:DA:6B:43:41:AF:8B:EE:00:E4:17:7A:7F:86:FF:59:BC:46:B6:BA:40 |
| C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL CA - G1 | 10DA57D151DF993CC13F0D0938320702 | C5:19:F8:F5:47:77:A7:74:B0:4F:31:AC:25:DC:A7:E5:92:8F:83:21 | EF:44:78:EB:09:4C:48:FB:9F:EA:CA:09:73:62:70:49:9C:A5:2E:B0:4E:3F:8E:E4:C1:B2:ED:C9:96:03:98:FD |
| C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL CA - G2 | 023A8F | 63:62:1C:BF:86:A6:F5:72:A3:76:58:2F:BA:69:9D:1E:FF:50:64:C5 | 7D:89:AE:91:8B:25:AF:DF:91:03:6E:EE:5C:15:E5:8C:60:0F:42:26:68:66:A8:DE:01:C7:1D:BC:63:5C:A1:C0 |
| C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL | 023A6E | 9C:86:76:86:68:F1:34:80:E3:DF:CC:40:57:CF:52:12:AD:5B:87:D5 | 2E:7E:65:BB:1A:01:3D:AF:0B:DF:69:38:50:2E:43:E3:82:17:FE:00:D7:6C:A2:F9:9F:7A:A9:E2:98:F4:85:34 |
| C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL - G2 | 023A7C | 89:30:C3:1A:0C:BD:AD:55:83:57:DF:7D:59:A8:CD:58:1C:12:72:F0 | 78:DC:9C:A5:F4:C2:91:3F:3F:B7:4A:C5:2D:FF:FC:D2:30:0D:A5:A7:72:FC:2B:84:C5:3A:2E:74:43:7E:DD:20 |
| C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL - G3 | 3D3C4BFA06D2878F09FBCEB846875F93 | 09:7A:6D:83:23:79:A4:0F:FA:1B:29:67:DE:CB:B7:BA:ED:EA:E8:04 | 4F:D7:34:19:04:6F:90:86:88:26:D5:81:53:69:31:D2:2E:54:94:3E:BC:D0:59:CB:76:21:39:4D:74:93:43:C5 |
| C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL - G4 | 023A89 | 5D:80:02:9A:CD:6B:9F:17:6B:23:7F:4E:21:DC:2C:FF:EF:48:81:DD | BC:3F:0A:DC:5F:F8:6A:4B:37:4D:C6:91:F8:FE:27:3B:1B:87:DC:73:E4:38:24:F5:FE:7F:36:C3:E0:00:83:11 |



| Class 3 CA | Serial Number | SHA1 Thumbprint | SHA2 Thumbprint |
|---|----------------------------------|---|---|
| C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL - G5 | 6989E500A92B4D3D06D47EB455D1CDE5 | 6F:EE:BF:0B:30:E9:DE:52:47:6D:57:77:22:B2:A5:A8:51:10:A5:FF | 8C:88:BA:51:05:29:B6:42:63:CC:B2:1A:73:D8:2B:A5:72:5A:55:C1:44:6F:25:47:BC:E3:01:FC:DC:43:14:DB |
| C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL CA - G4 | 023A88 | 7E:D0:83:AE:25:C7:00:88:68:BF:BE:A7:C1:06:0B:E6:DF:50:8F:8C | 51:39:62:DB:15:55:DE:38:59:28:3A:81:B3:F7:02:DC:25:A5:44:E6:D1:A7:17:F6:05:39:7B:D7:EA:91:3B:76 |
| C=JP, O=NTT DOCOMO, INC., OU=GeoRoot Certification Authority, CN=DKHS Device CA | 0236CD | 68:1B:7A:CE:23:28:00:F1:67:08:D4:2E:8A:A4:12:4A:F5:33:F8:75 | 12:34:65:EE:C4:09:2F:8C:F7:AB:FE:92:B8:C7:01:AC:09:EA:79:A4:98:F1:D3:F6:A0:2C:17:14:F3:9A:84:23 |
| C=JP, O=NTT DOCOMO, INC., OU=GeoRoot Certification Authority, CN=DKHS Device CA | 0236CC | A0:2B:D3:AE:51:5C:AD:6A:93:49:92:11:62:37:BC:3E:25:B6:50:8E | 32:25:1B:9B:B3:D7:64:21:D3:B3:00:FC:ED:47:57:EE:E0:41:67:A7:27:90:4A:C1:88:B3:51:11:1D:26:1F:56 |
| C=JP, O=NTT DOCOMO, INC., OU=GeoRoot Certification Authority, CN=DKHS Device CA - G2 | 023A80 | 1C:F9:42:06:E4:A8:00:BC:96:CF:CB:F1:44:F2:87:38:27:A8:8E:17 | F7:AE:9B:58:70:DC:DA:43:19:05:AE:A0:3B:39:93:A3:4E:87:7B:87:6B:78:41:52:81:7F:1C:58:65:7E:37:C4 |
| C=JP, O=NTT DOCOMO, INC., OU=GeoRoot Certification Authority, CN=DKHS Device CA - G2 | 023A81 | C0:EC:D0:61:AC:BA:34:35:7A:EA:F6:07:79:8B:03:4A:59:29:42:2B | 56:CB:B0:FF:C4:14:E8:88:22:A5:0E:9F:42:D4:68:20:38:1D:8C:2A:AE:EF:56:E0:56:68:17:ED:30:F2:7A:27 |
| C=NL, O=Intermediate Certificate, OU=Domain Validated SSL, CN=Intermediate Certificate DV SSL CA | 023A60 | B8:8B:12:4D:AF:3C:56:5B:49:3A:C9:31:B5:DB:AC:29:4F:12:97:1B | 8C:27:45:35:22:89:E9:94:B3:EA:34:94:45:B1:CF:64:18:E5:17:40:E1:61:4F:8B:56:67:DA:D2:99:0A:AE:FB |
| C=NL, O=Intermediate Certificate, OU=Domain Validated SSL, CN=Intermediate Certificate DV SSL CA - G2 | 023A7B | 7A:D6:B0:09:15:1B:F9:55:CA:CB:BF:A0:14:A0:8B:7E:BA:4F:D3:91 | D8:76:A0:81:FB:38:27:BA:22:A4:08:7D:F6:75:12:6F:F8:A9:6A:AB:90:36:4B:C6:1F:62:CE:8E:95:07:AA:93 |
| C=NL, O=Intermediate Certificate, OU=Domain Validated SSL, CN=Intermediate Certificate DV SSL CA - G3 | 48311FB72B93A88919860E2F9A2387E3 | B9:C6:48:4C:97:E0:26:66:3E:BA:54:12:38:79:0E:6B:11:6C:69:8D | E8:6B:C1:6C:C6:49:1E:5F:4B:99:76:31:38:42:B3:D0:2C:99:EA:26:3A:EB:1D:C2:23:D8:98:FA:87:C8:48:45 |
| C=NL, O=Trust Provider B.V., OU=Domain Validated SSL, CN=Trust Provider B.V. DV SSL CA - G1 | 7F2CF12628D31B32782845B40F560CAE | E5:01:A0:64:1A:31:08:21:FC:B2:A0:67:7E:C5:9E:82:B1:F8:59:D6 | D6:EA:10:61:C2:8B:3D:B9:6F:F5:BA:A1:40:AB:57:14:E6:B0:B4:F5:D7:1A:BC:CD:24:2A:49:B9:B9:F4:DC:27 |
| C=NL, O=Trust Provider B.V., OU=Domain Validated SSL, CN=Trust Provider B.V. DV SSL CA - G2 | 023A8E | C2:86:BC:CD:A5:70:09:28:1B:21:0B:CC:4A:E1:83:FF:D0:9F:11:D7 | 81:05:1C:35:5E:C9:F5:A8:9F:BA:91:D1:A5:BD:3F:05:01:EA:CD:80:EF:93:B2:18:00:3D:95:CF:25:1A:76:70 |



| Class 3 CA | Serial Number | SHA1 Thumbprint | SHA2 Thumbprint |
|--|----------------------------------|---|---|
| C=US, O=GeoTrust Inc., CN=GeoTrust EV SSL CA - G4 | 6E8A90EBCFF0448A720D0805D082A544 | 30:56:B3:43:48:5B:9D:55:F3:E2:B1:77:A8:95:BB:04:63:EE:3E:FD | 95:B0:9D:02:12:2F:A8:AE:62:35:78:0F:6E:A6:50:3E:76:7A:C0:21:A0:87:4F:E8:31:CE:80:3A:50:EA:8F:D7 |
| C=US, O=GeoTrust Inc., CN=GeoTrust EV SSL CA - G5 | 3CB6BC2996B37A14A792D1E5D8EC335A | 71:71:C0:5A:62:7D:7C:63:5F:8A:4D:F4:0F:7A:F5:B8:1B:DE:B7:6D | 5B:2A:E8:AB:F5:E7:E5:63:BB:C3:4C:97:A2:25:54:E8:23:93:D7:AC:C0:9C:17:65:E5:04:AE:08:C1:57:B5:AC |
| C=US, O=GeoTrust Inc., CN=GeoTrust EV SSL CA - G6 | 010019F5AA7269F88C1E1C1211EC8D4F | B7:20:88:E6:F1:87:89:06:8F:01:B2:5B:13:1A:7E:64:AA:A9:5E:59 | 41:9B:0C:9A:D6:B8:72:A8:B1:BB:87:34:1A:F6:3E:E9:2E:69:B2:7B:99:66:62:E7:33:03:2F:12:88:10:8D:FB |
| C=US, O=GeoTrust Inc., CN=GeoTrust EV SSL CA - G7 | 0100200B7C009A10A6DC0BE9EFA8FEF8 | 6B:F6:9B:90:22:C0:89:DF:4B:49:BA:21:2B:8A:92:66:D7:5A:44:66 | 54:6C:AF:F9:06:0E:EF:30:F4:F3:E0:22:55:FB:F5:13:1E:65:7C:17:10:C9:A6:50:02:01:33:A8:18:BE:C1:C8 |
| C=US, O=GeoTrust Inc., CN=GeoTrust Extended Validation SHA256 SSL CA | 5418A02AD0BF5719DDF72336B147F0BA | E2:8A:01:56:B0:3C:75:E0:5F:81:97:96:FF:E9:F9:8B:BA:B6:F1:E3 | BC:9E:22:3C:C4:22:75:CC:03:41:90:DF:2D:01:79:B5:5B:73:2D:5A:C5:31:13:7A:7B:52:2D:CF:E0:4A:05:92 |
| C=US, O=GeoTrust Inc., CN=GeoTrust Extended Validation SSL CA - G2 | 0B1DB1A919F24C3C4EFCB57A6A4E6CBF | C4:FA:37:41:B7:A7:F1:F6:C2:3D:24:F4:20:9F:5A:49:CD:5E:55:C6 | C7:B5:7A:02:F9:37:AE:0B:E3:E2:10:27:03:05:92:C9:D4:7A:70:D7:01:3E:B3:AA:94:DB:C3:B7:B5:AB:06:62 |
| C=US, O=GeoTrust Inc., CN=GeoTrust SHA256 SSL CA | 4182127D12D9C6B321394312566400B8 | 2C:9A:FC:A5:55:8A:C6:A3:25:C4:D0:27:63:16:D4:5F:06:B4:DD:37 | D9:E0:C6:4A:B2:7A:64:D7:9C:CC:F4:2A:34:EC:75:A2:51:A7:E5:43:35:3C:19:E9:84:A7:0E:B2:F5:46:CD:FF |
| C=US, O=GeoTrust Inc., CN=GeoTrust SSL CA - G2 | 023A63 | 4F:56:64:48:58:82:9F:FB:85:A7:70:17:1A:CC:F9:F8:40:7A:13:7B | 90:AF:11:E5:77:C7:2C:94:0B:40:EC:2F:3D:50:50:73:10:09:1E:E6:19:6C:9C:16:B2:28:88:22:64:A4:D8:08 |
| C=US, O=GeoTrust Inc., CN=GeoTrust SSL CA - G2 | 023A62 | 95:6B:79:1B:2C:DD:61:FD:26:65:4B:37:58:57:0E:4A:EF:DD:23:1F | 5F:7C:89:EB:86:98:C2:0E:5B:A9:EA:23:F0:D1:2E:DB:C8:DB:1E:1D:27:62:64:B0:D4:D1:59:A0:DE:DF:BD:8F |
| C=US, O=GeoTrust Inc., CN=GeoTrust SSL CA - G3 | 023A6F | 5A:EA:EE:3F:7F:2A:94:49:CE:BA:FE:EC:68:FD:D1:84:F2:01:24:A7 | 07:45:41:EC:DF:88:ED:99:2E:D5:AD:E3:EC:DD:EF:27:A2:6B:A1:B4:44:80:A1:95:C0:A8:DA:DA:E2:52:1D:8E |



| Class 3 CA | Serial Number | SHA1 Thumbprint | SHA2 Thumbprint |
|--|----------------------------------|---|---|
| C=US, O=GeoTrust Inc., CN=GeoTrust SSL CA - G4 | 023A79 | AC:8F:7C:5B:C8:6E:F1:89:6F:2D:16:1C:32:A5:7A:AB:37:D3:64:DA | 21:1D:DF:50:59:22:9B:35:77:76:0D:62:3D:51:48:DB:92:F2:D0:52:6E:A5:30:3E:7E:EA:03:00:D9:FA:FF:3F |
| C=US, O=GeoTrust Inc., CN=RapidSSL CA - G2 | 023A6C | A1:89:08:F0:9A:C3:9F:2C:97:EA:F2:57:72:B2:BA:19:5E:AE:DD:E7 | 0D:CD:C0:7E:CA:BB:BF:E3:8A:46:06:BA:66:39:87:CD:B3:BD:98:17:FC:67:D1:DD:0C:F0:94:AC:8C:A2:78:7D |
| C=US, O=GeoTrust Inc., CN=RapidSSL SHA256 CA | 023A71 | C8:6E:DB:C7:1A:B0:50:78:F6:1A:CD:F3:D8:DC:5D:B6:1E:B7:5F:B6 | E6:68:3E:88:31:5C:D1:CB:40:3C:0C:EA:49:0F:7C:4B:4C:82:C9:1C:D4:85:03:74:89:AA:DB:AA:90:83:9F:61 |
| C=US, O=GeoTrust Inc., CN=RapidSSL SHA256 CA - G2 | 48E99440D436491CB8B8823D094394C7 | 2E:49:16:B0:7F:3D:E9:0D:37:F2:0D:C0:AB:06:C9:BB:D8:43:DC:24 | 92:EF:2F:5B:55:35:70:60:7D:C2:9C:80:10:E7:AB:C1:62:83:FE:35:5F:95:5A:24:82:54:29:0A:26:0A:9E:BB |
| C=US, O=GeoTrust Inc., CN=RapidSSL SHA256 CA - G3 | 023A77 | 0E:34:14:18:46:E7:42:3D:37:F2:0D:C0:AB:06:C9:BB:D8:43:DC:24 | BC:3F:03:A4:36:24:0E:DB:A5:F8:37:14:F6:F6:77:E3:4B:37:F9:B1:F0:C0:8C:1E:55:8D:98:1E:27:9E:82:09 |
| C=US, O=GeoTrust Inc., CN=RapidSSL SHA256 CA - G4 | 281C8929661443804263553A3240AEB3 | DC:07:7C:4A:B3:42:2F:60:8C:EE:83:D9:09:8B:FC:3A:72:26:D6:A7 | 5B:87:E2:22:F2:03:46:FA:36:28:81:6E:D6:CE:71:FA:AB:A0:85:7F:B8:BC:BA:73:77:6E:A1:FA:56:CD:00:57 |
| C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL CA | 0236D2 | BA:E3:0B:15:DB:B1:54:4C:F1:94:D0:76:B7:5B:7B:B9:E3:D6:B7:60 | C2:7F:D4:B8:5E:96:D3:77:7C:68:AB:7D:F6:AA:4E:62:6B:F3:FF:8C:72:B1:CE:81:D1:EB:78:BA:BE:B1:A0:74 |
| C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL CA - G2 | 023A6B | E0:8B:1B:52:E7:8C:97:57:02:08:17:60:F2:16:D3:72:E1:83:EC:5C | DE:DB:31:CB:CE:C5:F9:9D:38:E8:6E:CC:4D:76:94:5D:F4:0F:2E:54:7C:94:E4:B0:12:40:94:87:5A:F6:A5:58 |
| C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL CA - G3 | 023A73 | 55:83:E3:E1:A7:51:17:21:1E:AF:C8:5E:D1:15:BB:C1:AC:96:9D:B5 | 51:CF:0F:FF:C3:25:3F:C0:13:AF:78:6F:95:B1:90:10:9F:8C:87:F3:4D:FD:1C:EC:44:C4:58:88:78:9F:53:55 |
| C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL CA - G4 | 023A78 | 35:E5:40:F4:D3:6E:94:D9:00:5B:18:DC:E2:7C:A2:AE:8C:A0:02:0D | 8B:C1:B9:D7:DE:FC:CA:1C:CD:09:BA:CD:A8:8F:27:76:20:92:F1:ED:4A:34:AE:5E:46:02:BB:9C:C9:15:C5:06 |
| C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL SHA256 CA | 5E631640DD196632B493A3300790D756 | 86:8E:B3:38:C9:C0:D3:72:71:D1:D3:79:27:16:07:97:04:10:7A:85 | 78:4A:CA:10:63:BE:47:00:B3:A6:2F:45:C2:F9:3B:7E:EF:8B:F2:30:FB:86:96:10:E8:64:FC:4B:3A:23:D0:9F |



| Class 3 CA | Serial Number | SHA1 Thumbprint | SHA2 Thumbprint |
|---|-----------------------------------|---|--|
| C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL SHA256 CA - G2 | 1127EA3641C63623324773D52372B202 | A9:F3:F9:E7:06:F2:63:F C:AF:80:A2:90:C3:98:69 :A2:C4:91:CE:56 | 3F:DF:78:8A:5A:65:E6:A2: 9D:8C:15:50:D8:24:49:06: A3:B8:A7:B7:D3:DA:9B:DE: DD:74:8E:41:83:A7:63:C9 |
| C=US, O=GeoTrust, Inc., CN=GeoTrust ECC EV SSL CA | 0F0C3729FDF4955BF865 EBC5EEF432FC | FF:7D:03:52:18:E8:46:D C:A8:D9:04:BE:24:39:C5 :3D:B5:F7:D8:AC | C1:31:49:9F:D8:6B:21:3D: B5:DE:FA:AF:D5:31:11:C2: 8A:2D:DA:F4:BA:46:5C:82: 65:A7:2D:6C:F7:39:B6:68 |
| C=US, O=GeoTrust, Inc., CN=GeoTrust SSL CA | 0236D0 | 78:0A:06:F6:E9:B4:06:1 C:AD:0C:65:02:71:06:06 :EB:53:5F:1C:26 | D4:C4:C9:98:19:F3:A5:F2: C6:26:1C:94:44:C6:2A:8B: 26:3B:39:BC:6A:CC:E3:5C: DC:AB:E2:72:D5:03:7F:B2 |
| C=US, O=GeoTrust, Inc., CN=GeoTrust True Credentials CA 3 | 023A61 | 3C:24:FD:4E:7F:02:55:D 7:ED:A2:3D:96:75:54:97 :C6:52:A4:D9:60 | 5D:74:ED:61:D0:B3:11:E9: 81:BB:CF:0F:41:9A:35:FA: 9F:A1:EC:70:FF:1A:EB:74: 2D:73:BC:FE:BA:06:CF:FF |
| C=US, O=GeoTrust, Inc., CN=RapidSSL CA | 0236D1 | C0:39:A3:26:9E:E4:B8:E 8:2D:00:C5:3F:A7:97:B5 :A1:9E:83:6F:47 | 6D:5B:C9:79:46:1C:72:64: E1:71:00:10:CD:7D:4E:A3: EC:57:FA:11:21:5F:04:FF: A5:16:AE:61:95:9A:B2:B2 |
| C=US, O=GeoTrust, Inc., OU=Domain Validated SSL, CN=GeoTrust Secure Site Starter DV SSL CA - G1 | 4DC436F724F684DB8C79 499993F0994E | 84:7E:D8:BD:0A:46:F1:0 A:89:B1:3D:C3:A1:1F:95 :B3:22:D3:F1:3C | 62:FB:9B:6C:D2:63:3B:92: D9:1D:B2:64:CE:67:8A:9B: 19:C5:75:41:4A:B1:0A:D4: 6D:15:7F:07:BB:A2:6E:FF |
| C=US, O=GeoTrust, Inc., OU=Domain Validated SSL, CN=Secure Site Starter DV SSL CA - G2 | 42C7E6E9845223DD101F 3631D58708AD | 99:16:1F:DB:4C:5A:40:8 8:75:7F:42:E0:D1:15:7B :38:1D:5E:E1:71 | 64:85:36:13:C2:43:63:99:6 0:3D:0D:56:0B:52:F0:4B:B 8:F8:1A:81:74:6E:42:38:98 :83:A4:F5:9A:45:64:D5 |
| C=US, O=GeoTrust, Inc., OU=Domain Validated SSL, CN=Secure Site Starter DV SSL CA - G3 | 023A85 | F0:02:9E:79:4D:51:80:6 3:4B:34:AE:E2:9F:29:13: 58:23:2F:AA:04 | 2F:CC:00:9A:AF:DB:28:E9: 25:64:30:41:0A:6F:A6:E7:6 A:F0:93:01:B1:04:4F:EA:A A:CA:B0:02:15:AA:39:E1 |
| C=US, O=GeoTrust, Inc., OU=For Internal Use Only, CN=RapidSSL Enterprise CA | 023A5A | 49:EA:7A:73:31:F1:31:2 E:5C:58:B7:C3:07:32:53 :FC:46:16:E4:D3 | 2A:40:0E:47:8B:9F:56:C1:3 7:62:A4:97:54:14:4B:6B:8 C:4A:5A:1D:C8:E7:B3:1E:4 4:1D:0D:BD:1A:6A:4B:E4 |
| C=US, O=GeoTrust, Inc., OU=For Internal Use Only, CN=RapidSSL Enterprise CA | 023A5B | B5:DA:CA:45:79:09:34:3 7:CE:0F:DD:C6:33:D2:D D:B1:ED:0E:7C:72 | 87:AA:71:AF:03:2E:36:BD: 69:DA:F4:01:4F:CA:D8:F2: 73:3A:A0:0D:EA:B9:59:33: 5A:E3:86:6E:4B:6D:3A:1D |
| C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA | 023A5C | AF:83:5B:6C:3F:58:DF:1 F:CF:E5:3C:DC:57:51:53 :2C:F0:F0:78:2D | 8F:DA:7A:88:13:54:6F:9A: 7C:B0:65:CD:32:D3:65:0D: 5B:56:A2:B7:F9:42:B9:49:9 A:EB:42:A8:6A:3E:9D:56 |



| Class 3 CA | Serial Number | SHA1 Thumbprint | SHA2 Thumbprint |
|---|--------------------------------------|---|---|
| C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA - G2 | 023A7A | 2B:1E:D6:E9:4F:6C:88:F 4:A7:AF:7C:A9:5F:FC:EF :30:A2:B5:0D:50 | 6F:F6:F6:3F:6A:0D:3D:63: 44:6C:DA:A5:23:D2:62:73: B1:26:C0:2F:92:2E:05:D7: 3C:47:48:EB:89:B8:63:93 |
| C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA - G3 | 6525B603299E50D5FB1D 92120F7E0622 | EF:20:DE:67:87:91:5C:1 E:74:69:2E:5C:8A:52:6F :70:37:EA:54:60 | 80:D9:ED:B4:5B:7F:59:2C: D3:02:54:E5:5B:C3:16:BB: F4:4E:47:DF:C0:C0:04:A3: 83:28:1C:03:F3:45:BA:39 |
| C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA - G4 | 023A87 | C4:E3:1F:D9:A1:30:9C:0 C:F8:C9:27:4D:2A:32:26 :CB:5C:6B:D2:6B | ED:67:93:70:83:B0:73:9F:3 0:23:96:F9:74:AF:B4:1B:FB :A6:48:47:39:67:78:0B:2C: 59:B8:8A:C4:12:1A:D4 |
| C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA - G5 | 0CBEE62D6194EB94B579 926557FB3011 | A1:32:4C:43:09:CB:02:0 2:23:A0:06:C1:E0:78:F8 :10:0C:68:BE:7F | 9F:E3:06:E6:63:E4:59:64:4 6:44:F6:0A:71:53:A2:21:43 :6F:B9:70:1A:0E:BD:91:24: EE:F8:15:9D:15:CB:43 |



Attachment C - Publicly Disclosed Issues

| Public Disclosure | Summary of Issue | Date Reported |
|-------------------------------------|---|------------------|
| Mozilla Bug 1334377 | Mis-issued certificates were reported for domains that were not properly validated. Symantec determined these were related to a larger issued with external registration authorities and discontinued relationships with external registration authorities. | January 26, 2017 |
| Mozilla Bug 1391067 | Certificates were issued with metadata-only subject fields, invalid dnsNames, and Common Name not in the SAN. It was also reported the internet browser indicated Symantec did not respond to Problem Reports within the required 24 hours. | August 16, 2017 |
| Mozilla Bug 1409735 | The RapidSSL product mis-issued a certificate with properly performing the required Certification Authority Authorization record check. | October 18, 2017 |