



## REPORT OF THE INDEPENDENT ACCOUNTANT

To the Management of Symantec Corporation:

We have examined for the Symantec Corporation's (Symantec) Certification Authority (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 and for Verisign, Inc. (Verisign), an independent service organization that provides datacenter hosting services to Symantec at the New Castle, Delaware location:

- a) Symantec's disclosure of its SSL certificate lifecycle management business practices in its Symantec Trust Network (STN) Certification Practices Statement (CPS), the STN Certificate Policy (CP), 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 enumerated in [Attachment B](#), in all material respects:



- a) Symantec disclosed its SSL certificate lifecycle management business practices in its STN CPS, STN CP 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](#).

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 STN CPS, STN CP 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
  - 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.

BDS USA, LLP

St. Louis, Missouri  
January 31, 2018



## Attachment A

### Symantec Trust Network Certification Practice Statement and Certificate Policy Versions in Scope

Policy Name	Version	Date
<a href="#">Symantec Trust Network (STN) Certification Practice Statement</a>	3.8.28	September 8, 2017
Symantec Trust Network (STN) Certification Practice Statement	3.8.27	December 19, 2016
Symantec Trust Network (STN) Certification Practice Statement	3.8.26	September 9, 2016
<a href="#">Symantec Trust Network (STN) Certificate Policy</a>	2.8.24	September 8, 2017
Symantec Trust Network (STN) Certificate Policy	2.8.23	December 19, 2016
Symantec Trust Network (STN) Certificate Policy	2.8.22	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 Symantec Trust Network (STN) 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=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Public Primary Certification Authority - G4	4C79B59A289C763164 F58944D09102DE	58:D5:2D:B9:33:01:A4:FD:29: 1A:8C:96:45:A0:8F:EE:7F:52: 92:82	53:DF:DF:A4:E2:97:FC:FE:07: 59:4E:8C:62:D5:B8:AB:06:B3: 2C:75:49:F3:8A:16:30:94:FD: 64:29:D5:DA:43
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Public Primary Certification Authority - G6	65637185D36F45C68F 7F31F909879282	26:A1:6C:23:5A:24:72:22:9B: 23:62:80:25:BC:80:97:C8:85: 24:A1	B3:23:96:74:64:53:44:2F:35: 3E:61:62:92:BB:20:BB:AA:5D: 23:B5:46:45:0F:DB:9C:54:B8: 38:61:67:D5:29
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Web PKI ECC Root - G1	0E23CC37AC7466480F 6B1A4B01831698	65:91:04:DA:A4:04:93:26:21: 5A:5D:26:31:52:70:D9:AA:BD: 16:1D	92:BB:72:F1:5E:B7:5D:E4:67: C8:4B:43:81:81:03:4B:DA:E9: A0:16:EC:26:43:4B:EE:3C:9B: BA:D8:CD:8A:F0
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Web PKI RSA Root - G1	2D9AD0E39DBD2DAE8 35F446FBB64FD28	77:08:8D:6A:EF:B6:19:1D:E4: 1F:68:85:93:9A:AE:F9:EC:6C: 73:1C	F6:BB:5B:79:85:A8:73:65:94: C1:46:79:FA:31:60:38:14:50: 2A:AE:B5:F4:28:2A:69:98:5D: C8:4A:45:07:77
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=(c) 1999 VeriSign, Inc. - For authorized use only, CN=VeriSign Class 3 Public Primary Certification Authority - G3	9B7E0649A33E62B9D5 EE90487129EF57	13:2D:0D:45:53:4B:69:97:CD: B2:D5:C3:39:E2:55:76:60:9B: 5C:C6	EB:04:CF:5E:B1:F3:9A:FA:76: 2F:2B:B1:20:F2:96:CB:A5:20: C1:B9:7D:B1:58:95:65:B8:1C: B9:A1:7B:72:44
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=(c) 2006 VeriSign, Inc. - For authorized use only, CN=VeriSign Class 3 Public Primary Certification Authority - G5	18DAD19E267DE8BB4 A2158CDCC6B3B4A	4E:B6:D5:78:49:9B:1C:CF:5F: 58:1E:AD:56:BE:3D:9B:67:44: A5:E5	9A:CF:AB:7E:43:C8:D8:80:D0 :6B:26:2A:94:DE:EE:E4:B4:65 :99:89:C3:D0:CA:F1:9B:AF:64 :05:E4:1A:B7:DF
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=(c) 2007 VeriSign, Inc. - For authorized use only, CN=VeriSign Class 3 Public Primary Certification Authority - G4	2F80FE238C0E220F48 6712289187ACB3	22:D5:D8:DF:8F:02:31:D1:8D: F7:9D:B7:CF:8A:2D:64:C9:3F: 6C:3A	69:DD:D7:EA:90:BB:57:C9:3E :13:5D:C8:5E:A6:FC:D5:48:0B :60:32:39:BD:C4:54:FC:75:8B :2A:26:CF:7F:79
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=(c) 2008 VeriSign, Inc. - For authorized use only, CN=VeriSign Universal Root Certification Authority	401AC46421B3132103 0EBBE4121AC51D	36:79:CA:35:66:87:72:30:4D: 30:A5:FB:87:3B:0F:A7:7B:B7: 0D:54	23:99:56:11:27:A5:71:25:DE: 8C:EF:EA:61:0D:DF:2F:A0:78: B5:C8:06:7F:4E:82:82:90:BF: B8:60:E8:4B:3C



Class 3 CA	Serial Number	SHA1 Thumbprint	SHA2 Thumbprint
C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia ECC DV CA - G9	6DFF21109CB0A35940 A7850D70B97913	36:28:72:EA:6F:16:23:5A:90: 0D:90:60:40:2B:38:15:A9:C0: E6:05	15:7D:3A:B9:9D:C5:1A:C9:F5: F4:F1:0C:43:C6:85:42:AC:6B: 16:23:63:8F:1D:51:1E:8E:EA: 11:C4:88:E9:08
C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia ECC DV CA - G9	73410D3D10DB468CE3 53CDE06AB66B74	60:DC:47:B7:99:65:57:83:45: A8:FF:71:2C:BF:B9:F2:6F:4E: 5B:CF	7F:03:8A:44:FC:04:49:18:B6: A8:9E:2B:95:55:7D:4B:43:80: 31:95:8E:62:85:CD:E2:E0:5F: B7:E1:CC:B3:8A
C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia RSA DV CA - G8	2638DC5EB7C68D30A2 D6E83F00479896	3F:B1:7D:9F:02:58:EA:BD:4F: AC:04:E7:74:52:5F:58:C1:0F: 56:D3	D6:4C:1E:38:CB:68:A4:63:62: 37:9A:33:2E:5E:D3:D8:A8:44: 36:65:E6:25:1A:19:B1:40:53: BE:03:03:34:51
C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia RSA DV CA - G8	0AE50428424CE31871 9455EB68F712A5	67:90:18:03:65:A8:DC:D6:52: 94:4D:37:AE:AD:BC:66:6A:90: 91:FC	6C:1F:52:00:A1:15:88:0E:D3: F6:5E:36:CA:79:50:89:96:8E: 50:FB:4E:CC:FF:30:D1:9B:08: 47:90:9C:51:44
C=CN, O=TrustAsia Technologies, Inc., OU=Symantec Trust Network, OU=Domain Validated SSL, CN=TrustAsia DV SSL CA - G5	3A100E7F109E1AC59C C5FFF640D5E442	51:A5:1E:10:E1:FA:FD:5A:2C: 50:08:0E:CD:E5:56:73:AC:E7: 5A:1F	B4:1A:B8:45:CA:B4:DB:9C:B1: :FE:65:05:76:5F:36:A0:86:8A :DC:5D:F4:19:B3:89:79:FB:6A :4F:E4:13:1F:70
C=CN, O=TrustAsia Technologies, Inc., OU=Symantec Trust Network, OU=Domain Validated SSL, CN=TrustAsia DV SSL CA - G6	15C20B71AC2C36527A 07667D871BC6D8	A6:33:0A:ED:72:6F:80:67:B5: 80:04:E1:89:22:76:8A:B5:A9: 11:0B	B9:0E:17:AB:4B:87:78:B1:0F: 9F:28:CB:AA:76:64:DE:2E:E3: D6:6E:1A:FC:57:4D:16:8E:DD :24:A1:03:39:FF
C=CN, O=TrustAsia Technologies, Inc., OU=Symantec Trust Network, OU=Domain Validated SSL, CN=TrustAsia ECC DV SSL CA - G7	25815D93D5C9B8A65E 7F367C01D3C3D2	97:11:31:77:A5:41:19:04:F3: 57:88:B0:3E:E7:9E:18:D5:3B: FA:97	AD:80:6A:93:57:B8:7D:1E:B1: DD:85:A5:A3:C0:92:D0:20:4B :A4:47:FF:4B:37:14:E3:F1:03: 4F:4D:3D:E8:A0
C=CN, O=TrustAsia Technologies, Inc., OU=Symantec Trust Network, OU=Domain Validated SSL, CN=TrustAsia Technologies, Inc. DV SSL CA - G3	5E6A370085B654779E 268474A34F5119	DC:FF:49:03:16:2E:7B:D6:A6: 25:BA:D5:7B:39:42:AE:70:2B: 53:1A	7E:12:64:6B:4C:25:25:74:79: EC:DC:4F:BE:DF:A5:22:5B:F5: C4:52:03:01:EA:BB:1F:FF:A2: 56:6C:93:25:60
C=CN, O=TrustAsia Technologies, Inc., OU=Symantec Trust Network, OU=Domain Validated SSL, CN=TrustAsia Technologies, Inc. DV SSL CA - G4	40EBB46B967DAC2930 E8D93B460D7F01	AB:D1:2B:FD:ED:67:B4:0D:56 :7C:62:3F:EB:3A:C9:F0:5B:91 :48:DF	E2:87:EF:DE:5F:79:1B:80:8D: AC:D5:55:0B:A2:BD:19:0E:74: 30:54:25:7B:3B:25:5B:2E:83: 0F:C1:DA:89:CF
C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL Web PKI RSA DV CA - G1	59F3D4B279D2174E12 85655811AFCA44	22:75:26:FB:3D:48:31:FB:BE: F1:29:D5:BF:16:FB:E2:B3:0A: 0D:4B	47:9A:91:F6:93:68:BE:C9:B4: D8:A6:92:EF:D9:38:D1:E9:48: C7:33:30:2E:E0:B9:C4:90:06: F3:62:F6:65:88
C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL Web PKI RSA DV CA - G1	39E2AFD308BE0130F1 7D0E825A2AF5BC	EB:7C:BA:6F:62:FA:D1:D1:2D :5A:AA:F6:61:AE:03:9D:CA:9 D:97:41	09:BA:1A:34:CA:16:6C:C2:34: 66:01:F1:3C:34:5B:B3:28:9C: 54:B2:23:2D:E7:57:11:99:EA: 0F:E0:50:CD:67
C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO Web PKI RSA DV CA - G1	2917D03AE05D392A44 980C52A4364666	2E:FF:07:98:88:33:08:AB:1F: C7:49:79:A6:9F:8B:9B:41:68: 8F:C3	A3:EC:7D:8B:BB:8B:9F:99:28: 7B:CA:4C:AC:67:A4:65:01:D5 :43:24:AC:B6:A0:78:15:14:ED :D5:11:B1:9E:BE
C=NL, O=Trust Provider B.V., OU=Domain Validated SSL, CN=Trust Provider B.V. Web PKI RSA DV CA - G1	14AFAB551140D28D0F 9D6F97E95EB481	85:FE:52:98:00:30:B9:83:BD: CE:91:D1:5E:DD:98:9B:69:67: 4E:C0	0B:33:61:60:6B:BB:C6:66:26: 8A:46:07:C5:D3:88:60:05:0A: 49:98:1E:0A:F2:9C:26:CD:A8: 3B:33:97:0E:85
C=NL, O=Trust Provider B.V., OU=Domain Validated SSL, CN=Trust Provider B.V. Web PKI RSA DV CA - G1	2F355878F925737BC7 DE3924D0166BF6	E4:50:45:FB:13:6A:4B:2E:0F: 50:E6:40:60:08:7F:46:26:C4: F0:A4	67:FF:03:C0:C0:1D:1F:01:D4: 00:6E:B8:69:B4:53:F1:15:AE: 48:EC:B7:51:7F:29:C3:0C:D0: 1A:FE:76:F4:95



Class 3 CA	Serial Number	SHA1 Thumbprint	SHA2 Thumbprint
C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust Class 3 Web PKI RSA DV CA - G1	6BD1C36F56DEA90626 92F147D2A13172	21:C1:C9:A0:78:C8:39:43:1B: 7C:69:7A:5E:9F:3F:30:DB:F7: C2:E0	7D:EC:B7:88:02:94:C6:81:D6: 19:79:53:4C:1C:2F:1D:88:AD: FA:AE:8A:57:33:CD:2D:B6:73 :0E:05:E2:A5:47
C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust Class 3 Web PKI RSA DV CA - G1	12505462FFDFBFBAFA0 9DB009DB7AA700	F7:D9:8A:CC:BB:0D:40:C2:69 :12:B0:09:06:2B:94:6C:9E:01 :07:B6	3B:FD:23:AE:50:48:3D:76:58: 99:80:B7:67:27:CB:96:51:0A: BC:70:9C:91:7C:4C:3A:43:0D: 7A:43:D1:14:58
C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=RapidSSL Class 3 Web PKI RSA DV CA - G1	2AF4390332BAB50CBC 781CBB3400FF95	4C:03:A7:CE:30:0E:0C:FB:3F: 02:31:39:AD:9A:F4:6E:4B:66: C1:74	40:6C:3B:BD:7D:08:EA:DF:E8 :A6:2E:8A:52:C5:7F:7C:BD:43 :83:DA:ED:BD:32:3E:66:CF:78 :B0:B9:A1:AA:9D
C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=RapidSSL Class 3 Web PKI RSA DV CA - G1	4238AE5F4CB56A05D0 42A983076CA1DF	84:A0:AF:53:56:B6:B8:C6:15: 8A:4A:58:27:5E:A9:45:C1:B9: CE:49	4B:04:99:89:E0:34:CC:16:F5: 86:24:7B:0D:38:78:95:0F:39: 38:2E:28:E1:10:87:42:0B:AF: 2B:6F:27:D6:79
C=US, O=GeoTrust Inc., OU=Extended Validation SSL, CN=GeoTrust Class 3 Web PKI RSA EV CA - G1	77C4E83780DFB3946A 0F6C9F029D76C9	81:79:65:22:37:BC:2D:B5:F5: E1:CC:6D:6D:48:18:7C:CA:58 :59:1B	17:69:80:6F:D5:68:40:9E:98: 5E:1F:30:61:F2:D4:25:CD:B6: F4:19:9E:CC:D3:E7:F4:2B:7C: 07:A5:47:FD:66
C=US, O=GeoTrust Inc., OU=Extended Validation SSL, CN=GeoTrust Class 3 Web PKI RSA EV CA - G1	75206CABFB5ED21CD 96AE287809DC45A	B5:43:0C:91:AA:71:FA:08:E5: 72:DA:AF:C8:36:14:28:77:FF: 63:C0	E8:41:E1:36:D3:85:3D:E0:C9: B8:D3:A7:01:66:AD:EE:A9:76: 7B:F0:94:2E:C8:B1:8A:18:06: DB:A8:72:04:C2
C=US, O=GeoTrust Inc., OU=Organization Validated SSL, CN=GeoTrust Class 3 Web PKI RSA OV CA - G1	630B2556A1B073D087 91A6645CD678C7	43:A9:74:9E:9A:AC:D7:C2:8B: E6:51:25:30:DA:86:FC:94:51: 72:24	E5:7B:96:72:61:9D:2C:58:C6: 80:5A:2A:05:8C:8A:2C:3E:41: 8E:33:7F:95:8E:26:65:BB:1C: F6:DD:2E:D0:41
C=US, O=GeoTrust Inc., OU=Organization Validated SSL, CN=GeoTrust Class 3 Web PKI RSA OV CA - G1	54814F9C7DC8A363A6 17427928AF20CC	9B:CC:FC:B0:60:12:A3:AF:94: F1:86:A6:44:0D:AD:46:04:83: B0:46	FF:60:AD:08:32:C2:94:49:5C: 90:76:BC:C0:09:D2:A4:60:38: ED:98:6F:E7:D1:1E:FA:54:A6: 1E:76:AC:16:88
C=US, O=GeoTrust Inc., OU=Organization Validated SSL, CN=RapidSSL Class 3 Web PKI RSA OV CA - G1	7D9D7433209EE758C0 8D90AC0E0A9AC4	1C:5A:60:C9:8B:00:45:F9:A4: 0F:C0:54:FE:1C:DD:F0:B4:CA: 16:D9	8A:8F:5C:E1:DD:74:54:0A:8A: 57:49:38:93:1F:22:7B:D6:E3: 12:65:6E:7D:F6:BC:6E:3A:0E: B3:D8:90:35:20
C=US, O=GeoTrust Inc., OU=Organization Validated SSL, CN=RapidSSL Class 3 Web PKI RSA OV CA - G1	5F80B9489206D010DE 26FA50AB89E00B	8F:F5:BB:22:77:F9:BE:E3:20: 20:43:D4:48:00:C9:4B:13:53: C1:6B	5D:11:56:44:95:71:2E:AB:67: 24:54:E4:B3:BD:E9:CC:E4:93: 23:15:91:EF:DB:C4:0D:15:2C: 3B:FE:FC:72:36
C=US, O=GeoTrust, Inc., OU=Domain Validated SSL, CN=GeoTrust Class 3 Web PKI ECC DV CA - G1	513E86B5319B102E92 5C9B5E5802B2DA	11:63:C2:3C:BE:9A:96:E0:11: B0:49:B7:80:DE:F7:B8:6D:E4: 66:6F	13:E9:5E:44:CC:D1:32:FD:21: 90:61:BF:9C:86:46:2A:31:9E: F6:C4:90:35:C7:E8:E1:7B:FA: A8:6C:9C:51:03
C=US, O=GeoTrust, Inc., OU=Domain Validated SSL, CN=GeoTrust Class 3 Web PKI ECC DV CA - G1	2C9F3029BAD05E04FC 544C59EAF11F58	40:28:7C:56:06:AC:90:A2:80: B3:09:EE:FD:6B:26:F8:55:E6: 53:4A	C5:EC:25:5A:B5:9D:A0:91:F5: 87:B9:CE:14:61:BD:D6:3A:7D :56:41:1E:49:9F:24:FD:9C:5E :1C:FA:8A:3F:E0
C=US, O=GeoTrust, Inc., OU=Domain Validated SSL, CN=RapidSSL Class 3 Web PKI ECC DV CA - G1	3DB5DD80037303208E 099E6A6BFEC4E8	5D:13:A1:73:E6:79:63:84:84: A7:B4:0C:EB:B3:02:9F:AE:B3: C2:70	CE:A2:3A:E9:7F:B7:3D:36:AA: D2:56:0A:B7:73:0A:1E:9D:7C: 21:C0:8E:80:0C:2B:05:33:C9: 67:30:EF:DE:92
C=US, O=GeoTrust, Inc., OU=Domain Validated SSL, CN=RapidSSL Class 3 Web PKI ECC DV CA - G1	124A1A2A28D54C6558 23973AD388B07A	87:9B:EF:12:03:E4:07:EE:A9: 24:10:BA:12:B7:B8:D7:98:5E: 90:36	23:03:30:E0:21:E9:B0:49:B9: 9A:16:66:9D:B6:8B:38:4C:35: DF:74:4D:6F:E1:85:13:20:B6: A8:BE:67:30:0C



Class 3 CA	Serial Number	SHA1 Thumbprint	SHA2 Thumbprint
C=US, O=GeoTrust, Inc., OU=Extended Validation SSL, CN=GeoTrust Class 3 Web PKI ECC EV CA - G1	1187E856BC92C7B577 394AAACE312AF80	34:01:A4:1A:29:39:CC:64:CE: DB:A7:DE:D6:F5:FE:67:BC:A6 :7D:0E	52:3A:92:33:CA:2B:CE:63:14: 16:36:B5:73:7F:08:29:10:3F: 6B:5D:BE:BB:EF:8A:6E:BE:62: B1:6B:F3:95:0F
C=US, O=GeoTrust, Inc., OU=Extended Validation SSL, CN=GeoTrust Class 3 Web PKI ECC EV CA - G1	120B49D5FFBFB59C25 19F83452EED709	35:F1:AF:D5:BD:00:46:B9:6E: 92:C4:1C:BB:1C:8D:04:55:15: 6F:BF	6A:67:55:BA:10:DC:5D:5E:AE :9B:EE:C7:AC:E8:D9:73:DE:53 :D3:D1:85:01:74:D4:E0:2E:C2 :33:63:E1:2C:C8
C=US, O=GeoTrust, Inc., OU=Organization Validated SSL, CN=GeoTrust Class 3 Web PKI ECC OV CA - G1	1B3E2E1EB2F6BACAD3 66B3C21DEB85E6	16:E1:E3:4B:AE:7E:95:87:EB: AC:53:6D:1A:9B:6E:D8:43:3F: 91:A9	3C:4A:B6:84:92:BC:0D:76:AA :06:DE:99:61:DF:25:77:4C:9E :F2:6C:AF:71:22:D3:99:2E:B8 :B2:FA:31:35:49
C=US, O=GeoTrust, Inc., OU=Organization Validated SSL, CN=GeoTrust Class 3 Web PKI ECC OV CA - G1	38825D02F6311E62DB E9869A326C268E	97:78:88:85:9D:65:45:82:3A: A9:37:BE:20:F3:B9:D2:6C:01: 3A:E8	3D:F7:31:77:2A:8B:6D:73:ED: 8B:F8:24:A9:10:3D:E2:BF:5B: 1A:A0:55:2C:F6:58:7F:EE:82: F6:EA:95:69:80
C=US, O=Oracle Corporation, OU=Symantec Trust Network, CN=Oracle SSL CA - G2	3135BB7E6DE2663AB0 E233E6B0E1A5CC	03:86:D9:39:CF:7B:A7:88:55: 27:34:18:5B:EA:D0:B1:3E:87: 39:14	E4:AF:2F:AE:41:18:7D:58:F2: 09:B0:1B:1D:87:53:C2:DC:CB :3F:60:1C:E8:62:73:E3:7E:87: 38:C2:A5:CC:B5
C=US, O=Oracle Corporation, OU=Symantec Trust Network, OU=Organization Validated SSL, CN=Oracle Web PKI RSA OV CA - G1	4AB435DB9ABB51C2D FC5529EA71FA546	2F:44:11:74:43:88:29:49:97:7 C:BB:05:10:A1:C3:6C:DC:01: 2B:F9	5C:E4:0C:18:02:9E:9D:77:5F: 24:A4:E7:2E:4B:0E:D4:87:CD: 0A:BB:B9:AB:31:10:4D:AA:90 :7C:1A:97:BF:49
C=US, O=Oracle Corporation, OU=Symantec Trust Network, OU=Organization Validated SSL, CN=Oracle Web PKI RSA OV CA - G1	056B9C903E1D3C7658 5B94E106C97E69	8A:74:0F:49:39:A1:58:EE:08: 05:5F:4B:D5:47:3E:52:6F:D5: 7F:08	70:BA:89:67:F6:92:26:9B:0E: 40:08:DA:12:54:D3:7E:A9:FA: 02:FC:1A:EB:A7:C4:AA:C2:20 :3D:A4:81:79:65
C=US, O=Oracle Corporation, OU=VeriSign Trust Network, OU=Class 3 MPKI Secure Server CA, CN=Oracle SSL CA	2585C838A4C935E383 866B6BA2422FC7	4B:E8:0A:AC:65:90:EE:FE:50: 08:A5:A1:DD:33:40:66:54:BA: 32:2A	7F:68:89:FF:E8:B0:20:45:E2: CA:C9:9A:2F:2E:E4:F4:C2:EE: D2:49:34:B6:52:18:72:D3:4B: F8:12:67:1C:4B
C=US, O=Oracle Corporation, OU=VeriSign Trust Network, OU=Class 3 MPKI Secure Server CA, CN=Oracle SSL CA	71636635EBF3823D7E 130959A2D8E5DE	5B:FC:FD:DB:69:63:A8:70:C4: 91:13:A9:15:1C:E3:8A:C5:53: 57:1B	C7:6F:70:98:05:98:C6:6A:8E: 32:7E:17:B4:95:A2:27:62:65: C4:B9:A3:57:5E:FA:1D:55:05: 02:A8:23:D5:91
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit EV CA - G2	71223CA522185EAC44 CF1770D1A8AA5D	0B:69:D3:71:3F:1B:05:84:F1: C8:89:45:A8:5B:4C:EB:5F:CF: D7:21	66:36:36:C0:3F:D0:B5:B1:71: F2:B0:44:07:C3:DF:76:7B:34: 9C:8A:99:0D:87:CE:48:58:98: 16:6E:2B:51:20
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit EV CA - G3	4934B1B39646024939 700C645B4F1FA0	5C:EB:F0:3C:1A:8F:E1:EA:16: 19:57:AC:F9:44:66:D1:A8:8D: 74:C4	4B:2C:BA:18:EF:BC:E6:C3:C4 :A8:0A:AA:BC:95:23:37:00:0C :D9:34:6B:76:8D:06:24:12:A2 :DE:D8:46:ED:C9
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit Extended Validation CA	4D955D20AF85C49F69 25FBAB7C665F89	CA:C5:5F:77:BC:17:B2:47:B0: B9:F5:91:F5:8E:6A:E9:7B:FB: 9E:1B	5A:D4:18:3B:54:F0:E2:76:2D: A8:D9:10:E1:E7:E9:F2:AB:2F: 1B:C4:CE:6A:63:8F:0D:BB:F3: 37:EB:4A:13:9F
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit SSL CA	0BB8A60497D81E27BB F5F2687D12FD04	16:17:2B:72:98:09:74:4A:36: E2:6B:A0:E5:A5:99:86:29:EF: 8A:C3	AD:EB:F8:3F:D3:D3:F9:54:6B: B7:7F:AA:B5:16:DD:93:37:CC :F9:1E:11:98:F7:43:37:76:9E: C6:8E:6E:82:6E
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit SSL CA - G2	567F888DFFA505DA21 E375370091936A	57:7A:8D:F6:E2:62:F9:A7:64: 82:9D:A9:37:5D:94:D2:59:6F: 20:AB	3B:6D:70:13:31:A8:CB:80:94: 43:E4:2A:73:2B:AD:67:5F:22: 5B:15:CC:43:9A:CF:26:A0:95: 87:C8:85:EC:FD





Class 3 CA	Serial Number	SHA1 Thumbprint	SHA2 Thumbprint
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit SSL CA - G2	14DB7E7A40B856200D D8EB382C262BC0	DD:2B:89:2F:DB:0A:69:78:38: 11:51:D6:62:98:0D:53:04:E9: E2:AE	74:EB:30:7A:78:AC:7E:85:70: CC:1B:AE:1C:51:10:2A:60:53: C9:6F:33:32:D7:03:28:5A:74: 3B:CB:D3:5D:9E
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit SSL CA - G2	3F9287BE9D1DA4A37A 9DF6282E775AC4	FE:3C:41:90:1F:36:59:C6:ED: DC:0C:1C:2D:85:D0:B2:0E:64 :96:14	2E:28:61:28:9B:5C:CE:DE:CA: E4:C3:1B:F2:62:E0:FB:0C:29: B6:C1:53:05:73:44:27:31:CA: 65:D8:21:E9:01
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 384 bit Extended Validation CA	7A760B273C322398D3 D4F86B6EBB2D50	38:CC:3D:7E:F8:69:60:4D:B3: 9D:34:FD:B7:BD:66:D0:74:42: E9:B6	77:FE:87:6A:1C:47:63:49:F5: EB:9A:E9:BF:53:F7:81:4A:0A: E4:11:56:26:67:C5:8B:7E:D2: 78:69:C5:40:91
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 384 bit SSL CA	535E42B75BAE2F1EB6 6C725D2F10C6F6	B9:05:04:ED:56:CC:18:39:9D: 23:54:0D:E2:46:68:02:C7:43: 71:0B	14:21:45:83:E5:F4:9C:E2:DB: 88:B9:3C:FE:3F:7D:81:B6:78: C8:6A:FB:CA:92:40:BA:A4:B9 :E4:CE:90:BF:2C
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 EV SSL CA - G2	366585077A8867AB58 F4A094F8103733	E4:99:59:A4:B3:36:AC:BD:2D: AC:75:9B:B5:21:B9:46:03:3E: 82:3A	6C:66:B7:6E:68:D6:C7:9F:AF: E5:C9:4E:9B:7D:0C:F7:53:C7: 15:CC:85:38:7E:11:32:3B:79: 35:F8:61:C1:87
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 EV SSL CA - G3	7EE14A6F6FEFF2D37F 3FAD654D3ADAB4	E3:FC:0A:D8:4F:2F:5A:83:ED: 6F:86:F5:67:F8:B1:4B:40:DC: BF:12	9E:6B:C5:F9:EC:C5:24:60:E8: ED:C0:2C:64:4D:1B:E1:CB:9F :23:16:F4:1D:AF:3B:61:6A:0B :20:58:29:4B:31
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 EV SSL CA - G4	5398D1998C7CBF2310 C0F999A0051833	A5:65:3F:4A:81:6E:00:09:7C: CF:0F:CC:65:6A:89:1B:29:BE: 19:93	31:86:22:33:62:0E:78:93:30: CC:89:3E:8B:5E:66:70:53:31: B8:B8:8B:0E:D3:0A:44:57:4D: 9E:0A:71:C4:F1
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 EV SSL SGC CA - G2	7A0F41DF1CCD14DCB 269298EE22C6A35	37:8F:E7:3E:16:E4:F1:E3:39: 49:B7:60:A3:BD:22:51:49:35: 90:25	B2:74:5D:0A:9B:71:D9:48:F3: 4E:92:1A:F5:9F:34:2A:DF:6E: 40:7D:88:BC:51:D3:8A:C5:2B: 58:3A:0E:BD:15
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Extended Validation SHA256 SSL CA	09B749FD7F0B4916CA 055656CFF6D982	CD:F4:28:A8:90:D3:74:8C:5D: 28:ED:1F:4C:69:49:9A:3E:16: F1:33	1F:9B:31:F8:20:92:9E:BF:A0: 31:17:EC:2B:77:BA:6B:0F:B6: EC:C9:E0:27:68:2A:55:93:78: DA:31:1C:54:EF
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Organizational CA - G4	06A13ADA000BAB77B 356DE957B9280E6	C7:C5:9A:89:91:86:28:21:F2: 35:75:23:DC:40:F8:69:DB:1C: 8F:92	FD:33:AE:FD:33:A1:61:FA:CO: 19:0E:41:DF:9D:D5:0C:33:39: E8:83:C0:3F:49:C4:A2:AB:2B: 89:56:EF:54:D4
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server CA - G4	13B3E302180397668D 5034E0E674E28D	44:9E:3B:9F:21:04:A9:64:09: 32:6D:A6:F2:9B:B4:E8:46:9B: EF:D4	59:F8:CB:7D:7E:9E:13:CB:77: 8F:F6:21:98:EB:E0:55:51:B5: 15:A5:8B:BB:A2:EF:19:C3:3C: 76:0C:82:39:16
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server CA - G4	282E2791793392E428 F221A74EC937AE	CD:EE:2C:D3:C6:EE:A1:1D:B3 :35:AB:DB:9A:D5:6E:EA:F8:EF :C1:F6	56:4D:BC:6A:76:55:0F:D2:D4: F4:BA:C6:44:8A:11:57:B3:3C: BD:8E:0B:3F:D7:6D:72:10:75: 40:96:4A:85:B5
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server CA - G4	513FB9743870B73440 418D30930699FF	FF:67:36:7C:5C:D4:DE:4A:E1: 8B:CC:E1:D7:0F:DA:BD:7C:86 :61:35	EA:E7:2E:B4:54:BF:6C:39:77: EB:D2:89:E9:70:B2:F5:28:29: 49:19:00:93:D0:D2:6F:98:D0: F0:D6:A9:CF:17
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server SHA256 SSL CA	69879419D9E3627074 9DBBE59DC6685E	E7:32:73:E5:3A:CF:E8:0F:41: 0B:3E:F4:6B:18:02:87:A0:04: 40:CD	E0:89:8A:D6:62:47:4B:9F:75: 3C:79:BE:A8:78:03:1C:9A:5D: 63:4A:49:ED:D6:31:0B:96:0A: B0:23:C0:2C:0E
C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 SSP Intermediate CA - G3	45B1BEB5F3D47BFBC1 45F4D9179E22F2	55:DB:7B:0B:02:A0:CD:64:4E: 2B:B7:62:45:F8:F0:89:3A:E9: F9:A9	C4:92:FE:DA:1D:7B:D8:F7:6B :33:19:C4:05:C8:36:86:D9:6E :53:CE:46:AF:A8:29:7F:F8:4B :5B:FD:4B:03:4C



Class 3 CA	Serial Number	SHA1 Thumbprint	SHA2 Thumbprint
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Domain Validated SSL, CN=Symantec Basic DV SSL CA - G1	4C4CD8A0FC4FEAAE1554A87F090EDA87	54:C5:AA:E5:07:D2:12:FD:07:02:E0:90:70:66:1A:FD:59:53:5C:57	52:6E:30:DE:D6:BF:9D:5C:E2:16:F5:0C:83:24:02:B4:8A:B7:0D:55:AE:DA:91:8A:18:73:A5:88:3E:BD:B1:B5
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Domain Validated SSL, CN=Symantec Basic DV SSL CA - G2	1877F66568A782BBA9FB42DAE44E33D7	47:F2:DB:11:60:6B:7A:58:36:C5:B9:58:2C:EF:C3:3A:0D:67:C4:FE	DF:F5:83:E3:A1:ED:35:E5:7D:95:10:48:17:AD:82:3C:05:5F:B9:07:1C:D4:00:43:5B:5F:C7:4E:69:20:81:DB
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Domain Validated SSL, CN=Symantec Class 3 Web PKI ECC DV CA - G1	75422A9AB720ABFDBAD5B45BA3B7CCD6	E5:8B:98:6B:AE:83:96:42:38:BA:5A:D8:90:1E:E6:FA:4E:01:44:30	0B:FE:6B:96:08:54:FC:06:6A:8E:79:6C:81:3A:46:32:46:71:D1:3F:2F:DC:2D:5C:EE:E1:B8:2E:8C:5E:CA:93
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Domain Validated SSL, CN=Symantec Class 3 Web PKI ECC DV CA - G1	6B618A9D16D8319D28664473244F0D23	E5:DC:C3:E5:75:33:17:8B:DA:98:4F:6D:6F:0A:B6:70:61:F4:0D:2F	5C:69:E8:2F:B2:48:F8:0B:5E:43:14:B9:D2:C4:88:3E:D1:4F:5A:06:D5:8F:10:9F:33:50:0E:86:DD:C0:73:8F
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Domain Validated SSL, CN=Symantec Class 3 Web PKI RSA DV CA - G1	4EC6830D3861A32857D7449444EDCD32	0E:E1:0E:D9:94:EE:2D:7F:1E:F7:B7:63:D1:B9:DF:57:0D:F5:C5:94	4D:F2:95:46:78:93:5B:E7:E8:0A:E9:05:11:30:4B:08:FA:04:FF:40:BD:DA:69:CE:E3:33:DA:80:C1:3A:D3:10
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Domain Validated SSL, CN=Symantec Class 3 Web PKI RSA DV CA - G1	3834C6511AF4BD8D785A422DD79847AE	1D:EA:D2:0D:F4:E6:91:E7:F2:40:9B:CA:C1:21:47:D2:F6:54:08:5E:40	08:12:2F:5D:9A:8B:3D:B1:77:E6:CA:20:6E:CB:A6:8C:6E:C2:51:06:68:C7:31:3F:A0:0B:B1:7E:C8:8C:06:9B
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Extended Validation SSL, CN=Symantec Class 3 Web PKI ECC EV CA - G1	594FA398C84602E9A17B0A952AB6419A	5E:05:C1:3A:3F:9C:24:8C:7D:16:95:45:5F:B1:55:B0:E0:61:05:23	EE:F0:DF:01:CB:6B:92:9A:5F:BB:CE:41:14:7F:08:3F:49:C9:39:C9:3A:1B:CF:11:25:C7:F2:12:84:5C:D0:6C
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Extended Validation SSL, CN=Symantec Class 3 Web PKI ECC EV CA - G1	20044AAC18E52902F25460385F9D8BEF	EE:C5:84:18:DB:F2:79:31:DE:5A:F4:1B:B3:17:DF:47:9D:AF:3C:BE	B1:3F:9D:19:08:2D:8C:D7:CD:1B:EB:0A:B7:C2:45:ED:25:2F:21:AE:2A:30:16:3E:91:B6:E8:BE:2E:0E:96:14
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Extended Validation SSL, CN=Symantec Class 3 Web PKI RSA EV CA - G1	51F33CA5691C9A62C6462188572766A0	9D:66:7D:4C:E5:38:A3:3B:D0:6F:76:CA:82:5A:BC:B5:4A:5D:2C:93	56:2E:47:F4:43:A2:C1:DD:F6:41:4D:58:96:25:0F:46:53:C6:12:22:16:74:BD:D9:68:E7:6B:F5:49:3B:29:64
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Extended Validation SSL, CN=Symantec Class 3 Web PKI RSA EV CA - G1	0B6B506566F67A8403D970B7179252CE	BF:63:51:0D:A8:C9:7D:DF:D6:4A:67:68:57:A6:B9:51:22:EE:62:2F	87:B8:50:BD:37:15:C0:10:4B:5E:C9:D5:E8:0B:FE:78:85:0A:AE:41:25:55:9B:BC:DD:E0:85:24:97:0B:5A:FF
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Organization Validated SSL, CN=Symantec Class 3 Web PKI ECC OV CA - G1	50A33F08D1763AF0B88226270141BF02	6C:83:88:18:D8:25:5E:D2:31:13:05:AA:EA:80:0F:7D:2A:C8:65:CB	ED:34:8B:62:45:A3:C1:90:2C:7F:8E:F7:CC:A8:CF:05:4B:94:B8:F1:8C:D7:8A:A7:9A:36:BF:9C:32:99:82:6A



Class 3 CA	Serial Number	SHA1 Thumbprint	SHA2 Thumbprint
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Organization Validated SSL, CN=Symantec Class 3 Web PKI ECC OV CA - G1	435AF47519241BD9A2B878FF639DA2CF	C6:71:AF:FB:65:6E:83:C3:73:42:0D:9B:90:FD:85:EA:EE:B9:A7:B2	88:85:B6:6E:F8:F0:AE:20:1F:51:8D:88:F1:A2:24:54:D6:AD:C3:8B:2E:B4:89:14:55:AD:2C:ED:77:D1:43:2A
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Organization Validated SSL, CN=Symantec Class 3 Web PKI RSA OV CA - G1	7DAF5A80682E3077C1A2B3135D731DF6	AE:0C:B2:38:63:48:AF:85:AE:78:C0:3E:5E:E4:6B:F4:A3:CF:F0:69	A5:A6:B2:EF:89:14:26:EA:B0:F6:10:6B:2B:0B:13:2D:01:A1:CE:C5:20:08:5F:80:64:59:05:94:9B:D3:28:6A
C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Organization Validated SSL, CN=Symantec Class 3 Web PKI RSA OV CA - G1	5DB3C7D2EE0C8E822B5B337C4028A57E	BB:BC:4D:0D:65:4F:BC:6B:C9:3E:35:5A:33:04:BD:8F:13:FF:9F:95	F4:5F:0C:B7:2B:A8:22:76:D1:91:AC:7A:B1:6C:F2:0C:B3:38:B4:73:3F:CC:D5:32:9A:B5:DB:AE:38:45:CA:2F
C=US, O=Thawte, Inc., CN=Thawte SGC CA - G2	18A2236CD727C7528DF67B4B856EFFED	BE:BC:70:D3:DF:2B:3F:8F:55:AE:D9:83:BF:20:F2:E3:B2:1A:36:F6	0C:EB:F9:7D:1F:AB:C6:47:53:79:9F:7A:9A:50:8C:7C:5F:2B:58:B9:28:FB:1B:3C:DC:6C:41:09:C0:CF:2E:99
C=US, O=thawte, Inc., OU=Domain Validated SSL, CN=thawte Class 3 Web PKI ECC DV CA - G1	5F7894773C4212D3802A98932ECAA304	C6:0C:7E:F6:65:37:48:B4:A6:47:26:93:89:50:60:F2:12:26:61:86	3E:86:87:28:08:2E:19:9B:77:3E:DF:91:EB:3E:B9:73:6A:E7:E2:BC:68:7E:42:BA:35:A2:B5:8F:DE:55:6C:82
C=US, O=thawte, Inc., OU=Domain Validated SSL, CN=thawte Class 3 Web PKI ECC DV CA - G1	54D6F61E36A2FEDEDD982B4ECD15D77B	F3:C9:75:22:52:15:92:74:81:1F:98:AD:1D:18:BA:9A:81:1E:5B:9F	B5:85:C6:78:EF:37:6D:0A:1A:E1:30:B2:5E:40:6D:1F:D9:A6:F8:FF:29:EB:DD:82:0C:68:88:79:20:04:EF:90
C=US, O=thawte, Inc., OU=Domain Validated SSL, CN=thawte Class 3 Web PKI RSA DV CA - G1	1C60F646DBD731A3C3A8720F2DD5E873	13:47:6F:79:21:50:D1:E7:91:9B:36:7C:E2:17:E5:6D:F3:2E:19:6C	FA:AE:92:82:05:90:F2:D8:DB:52:1C:20:C9:EF:4B:53:CF:DF:3C:07:C9:0E:17:6A:D9:13:DA:CF:E9:54:81:ED
C=US, O=thawte, Inc., OU=Domain Validated SSL, CN=thawte Class 3 Web PKI RSA DV CA - G1	50DEFC1CB10A7FB5BDBD0624CD8A499F	4D:8A:AD:58:C5:08:97:CD:32:8D:47:7D:06:B8:8B:92:B2:CD:43:8B	45:E2:6A:64:C5:20:9B:59:E2:B8:ED:8F:0C:4F:BD:36:81:DD:E9:7A:4F:A9:DF:B9:8A:F0:30:CD:79:57:DA:5F
C=US, O=thawte, Inc., OU=Extended Validation SSL, CN=thawte Class 3 Web PKI ECC EV CA - G1	086A3FFB8D9EEF924127625C38468C17	16:C5:18:7F:4B:10:12:EF:75:1F:E5:62:64:58:7F:34:5E:67:83:7F	59:5E:FC:F7:F8:92:4A:31:D3:5F:9E:9E:D6:81:2A:88:8B:42:FB:B3:0C:E0:19:E9:69:E6:F1:B7:BC:00:F7:40
C=US, O=thawte, Inc., OU=Extended Validation SSL, CN=thawte Class 3 Web PKI ECC EV CA - G1	42CA5B1F1CD66F8D525FD4D4845D4DD4	52:78:7E:18:6C:FA:34:05:B3:7F:19:F0:D9:DC:9B:AB:08:70:33:99	94:AC:33:E6:72:91:4F:A5:8B:BE:64:4A:58:29:36:79:C8:8E:8A:5E:40:BB:08:FF:F1:CD:9C:37:EE:81:FC:94
C=US, O=thawte, Inc., OU=Extended Validation SSL, CN=thawte Class 3 Web PKI RSA EV CA - G1	5CE64C6CF290B89130F086F99DE0D5A5	22:AA:80:5F:9A:29:AA:81:85:36:3C:B3:60:14:B6:6E:25:36:95:BA	B2:66:AF:8B:13:2B:E6:74:91:76:8B:DD:44:A1:35:DD:17:43:BE:6D:B7:26:FB:24:0E:7D:5C:0B:0F:BE:BA:5A
C=US, O=thawte, Inc., OU=Extended Validation SSL, CN=thawte Class 3 Web PKI RSA EV CA - G1	1AC917AC8164CCB4BEE32A2140CF4450	55:5F:F7:DF:34:78:09:B7:63:07:48:D5:66:E9:C7:5E:EF:55:C2:1E	B0:DA:8C:71:E8:52:0E:CF:3B:9F:A9:3D:AE:E2:F8:C6:DC:D2:5C:1F:7B:8C:02:47:9D:BA:52:23:B6:B0:91:84
C=US, O=thawte, Inc., OU=Organization Validated SSL, CN=thawte Class 3 Web PKI ECC OV CA - G1	28D8605FC5EE25DB987222326ADA4E42	5B:F7:31:65:99:D1:AD:A9:4A:EF:16:3F:16:87:F2:8C:CA:BA:87:BC	83:0C:BC:80:2D:69:CE:FA:22:27:F0:63:18:CB:5B:1E:81:CF:E1:06:16:A8:06:A3:68:76:09:0E:B5:2C:6A:DA



Class 3 CA	Serial Number	SHA1 Thumbprint	SHA2 Thumbprint
C=US, O=thawte, Inc., OU=Organization Validated SSL, CN=thawte Class 3 Web PKI ECC OV CA - G1	4DB3F20FD367B04731 C8AE8B22CAFBF2	CB:3A:FF:9E:C5:F0:00:7E:CB: 7A:09:1F:DD:14:93:C9:BA:53: 5C:EB	90:C9:EA:1E:92:A1:C8:5E:37: CB:2A:2F:BF:74:CC:5E:96:15: AA:19:07:55:ED:E8:EA:6C:7B: AE:33:F1:83:30
C=US, O=thawte, Inc., OU=Organization Validated SSL, CN=thawte Class 3 Web PKI RSA OV CA - G1	0E83FB692744B3FDF2 FA8D868FDCE058	3A:21:C3:0E:0F:96:48:40:02: 70:EA:12:44:CC:66:92:90:B1: 41:9C	57:E6:03:51:F0:DC:CB:85:D4: 3F:4F:91:FD:32:9A:31:57:91: 2D:4A:4E:E6:79:5E:21:A5:D6: 3D:22:36:C2:C2
C=US, O=thawte, Inc., OU=Organization Validated SSL, CN=thawte Class 3 Web PKI RSA OV CA - G1	29464C5CE523DAC758 DA2D917E0A7FE5	42:94:5E:B7:60:55:EF:B6:46: 93:08:0B:71:C7:01:DC:35:F4: BF:10	FE:62:99:E9:D2:12:CA:34:6B: 54:DD:1A:69:4A:E8:4B:43:4A: 63:A8:C3:E6:2C:61:E4:67:73: C8:8D:D8:2F:8E
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, CN=VeriSign Class 3 SSP Intermediate CA	3A0C57CA7B476015E7 3C01C3C58D0E5E	CF:5E:3D:16:02:FC:8A:A8:5E: DC:BD:3F:0A:D0:78:FB:25:D1 :39:05	AD:52:FD:EF:D3:16:26:51:B0: 9E:5F:32:C4:D6:69:92:A0:86: 7D:25:C7:B2:B3:5D:A2:42:55: 5A:F1:85:F5:77
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, CN=VeriSign Class 3 SSP Intermediate CA - G2	1933CE1133857F9988 B1BBB3AE88C67F	A7:43:BC:36:F3:6A:F0:35:52: 66:E3:EC:7D:AA:56:71:3E:ED: EF:20	FA:67:00:F3:8E:E5:6B:47:09: EA:C2:CE:48:1D:7E:6E:11:81: EB:09:16:8B:F7:8C:CB:D7:26: CD:EB:20:58:27
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, CN=VeriSign Class 3 SSP Intermediate CA - G2	316CEB691DCB2E153D 9BFA8A121BD52D	D1:D6:05:84:7B:A3:11:1C:83: EA:EF:32:E4:C8:E2:AE:93:61: 50:54	55:DB:B3:CF:47:94:56:6B:47: 9F:13:B3:2D:23:99:FD:B6:22: F4:5A:4C:2C:4A:B1:73:9E:74: B9:EC:C9:BE:BC
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at <a href="https://www.verisign.com/rpa(c)07">https://www.verisign.com/rpa (c)07</a> , CN=VeriSign Class 3 Extended Validation 1024-bit SSL SGC CA	6EE44E2FF9761AE5C8 4AFFBF2552E474	FA:3E:E1:06:C9:17:CD:FF:9F: CF:46:F3:F2:25:85:FE:B7:4D: C4:CD	49:A0:3A:1A:88:D2:A7:32:E1: D6:29:FB:10:07:81:21:DE:EF: F3:33:D6:A9:8B:59:15:D3:52: 13:51:2E:16:83
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at <a href="https://www.verisign.com/rpa(c)09">https://www.verisign.com/rpa (c)09</a> , CN=VeriSign Class 3 Secure Server CA - G2	1F532AF85493D782 6B5930D6515940	44:32:01:47:89:47:51:13:62: BA:58:E2:25:3C:FD:98:3D:76: D3:24	0E:48:FE:8D:F7:98:36:EF:81: 1C:61:B3:6E:A2:C5:47:05:31: AE:80:04:1D:B6:4D:29:B6:94: B4:A1:C1:BE:1F
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at <a href="https://www.verisign.com/rpa(c)09">https://www.verisign.com/rpa (c)09</a> , CN=VeriSign Class 3 Secure Server CA - G2	2F006ECD177066E75F A3820A791F05AE	76:44:59:78:1B:AC:B0:47:63: A5:D0:A1:58:91:65:26:1F:29: 8E:3B	0A:41:51:D5:E5:8B:84:B8:AC: E5:3A:5C:12:12:2A:C9:59:CD: 69:91:FB:B3:8E:99:B5:76:C0: AB:DA:C3:58:14
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at <a href="https://www.verisign.com/rpa(c)10">https://www.verisign.com/rpa (c)10</a> , CN=VeriSign Class 3 Extended Validation CA - T1	33F5AE11193083147E 5B66F31FED1129	09:BA:2F:C6:04:B7:D6:63:24: 24:70:83:A4:B8:44:57:9A:B7: F0:7E	D8:05:64:43:3E:D3:5C:85:0E: 2A:D5:89:B7:71:3A:4D:AC:01: A0:92:92:86:9B:DB:B8:0E:42: E2:3F:93:36:EA
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at <a href="https://www.verisign.com/rpa(c)10">https://www.verisign.com/rpa (c)10</a> , CN=VeriSign Class 3 Extended Validation SGC CA - T1	1A4CE18725E5C114B8 C98DE0EBA99AD6	C3:70:A4:69:A4:D2:20:BE:C8: 5C:89:73:BF:C3:E6:BC:3E:09: 46:B5	6E:DA:D2:26:1A:A3:D5:3B:E0: :D6:FF:5F:A7:1C:34:A3:4B:25 :3B:0C:63:7B:35:BF:3E:96:65 :40:F7:8B:63:1B
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at <a href="https://www.verisign.com/rpa(c)10">https://www.verisign.com/rpa (c)10</a> , CN=VeriSign Class 3 International Server CA - G3	641BE820CE020813F3 2D4D2D95D67E67	B1:8D:9D:19:56:69:BA:0F:78: 29:51:75:66:C2:5F:42:2A:27: 71:04	6E:21:87:6C:F1:63:47:20:1F: 63:7A:17:8C:B4:2B:17:1D:52: 37:9A:F7:E5:F5:B6:F6:75:5B: 3E:E9:BB:2E:D4



Class 3 CA	Serial Number	SHA1 Thumbprint	SHA2 Thumbprint
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at <a href="https://www.verisign.com/rpa">https://www.verisign.com/rpa</a> (c)10, CN=VeriSign Class 3 International Server CA - G3	326AF958B76C7F6F39 A86850D37FC42D	E5:AC:F7:ED:FC:38:30:AC:D1 :0C:EF:76:08:3B:D3:2F:1F:02 :64:DC	33:02:60:A6:9C:08:87:F1:B9: A4:98:30:2A:EC:FD:A1:7D:E8: 9A:81:9C:7E:57:E2:8C:40:A5: 30:80:BE:10:E8
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at <a href="https://www.verisign.com/rpa">https://www.verisign.com/rpa</a> (c)10, CN=VeriSign Class 3 International Server CA - T1	6A64B0902DCFE7C61B 551ED4F8D3E829	15:B0:5C:48:65:41:0C:6B:3F: F7:6A:4E:8F:3D:87:27:67:56: BD:0C	F7:4D:A4:D9:A6:87:C5:04:64: 99:AE:FC:9F:A8:67:DE:91:A1: A3:94:1A:09:F2:4C:F9:46:03: B7:AB:78:10:8A
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at <a href="https://www.verisign.com/rpa">https://www.verisign.com/rpa</a> (c)10, CN=VeriSign Class 3 Secure Server CA - G3	2CFEB6090EE2ADE2E9 FC223724F1B6BF	12:C9:B2:91:D1:9D:36:32:D4: 4F:10:69:55:1C:46:49:0A:EA: 05:42	5B:9F:35:0C:2A:76:BE:64:BB: 3C:2C:6E:2A:41:4A:ED:DD:0E: :F0:A2:6D:7C:97:FA:7A:F5:7D :52:0C:60:B2:E9
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at <a href="https://www.verisign.com/rpa">https://www.verisign.com/rpa</a> (c)10, CN=VeriSign Class 3 Secure Server CA - G3	6ECC7AA5A7032009B8 CEBCF4E952D491	5D:EB:8F:33:9E:26:4C:19:F6: 68:6F:5F:8F:32:B5:4A:4C:46: B4:76	64:90:35:46:A5:80:58:D1:E6: F1:BE:AD:11:34:ED:E6:6A:68: 31:D2:31:F0:DF:8D:4E:28:53: 5D:7A:30:04:96
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at <a href="https://www.verisign.com/rpa">https://www.verisign.com/rpa</a> (c)10, CN=VeriSign Class 3 Secure Server CA - G3	7916E894B11C76FC5C 43F5168924261F	91:88:F8:85:10:6E:81:EB:AF: BB:11:83:71:3D:11:43:53:6B: 95:E9	31:DC:82:EA:89:15:E2:7D:03: BB:D0:43:36:58:A3:C2:4C:6D: 3A:CF:F4:8C:4F:AA:C0:2F:E8: 7E:94:C9:9A:3B
C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at <a href="https://www.verisign.com/rpa">https://www.verisign.com/rpa</a> (c)10, CN=VeriSign Class 3 Secure Server CA - T1	4DEEDEC8061BDB105 4CD26EAB7F838E8	3C:25:D7:B9:79:97:BE:FB:D5: 3D:D8:AA:8B:36:18:21:EC:F4: A4:75	2C:31:A9:2D:B8:88:91:32:E0: 4A:D5:F4:3D:AF:6D:42:1B:85: 45:10:C6:1E:41:C7:87:CB:5E: 10:E0:96:2D:C7
C=US, O=Wells Fargo & Company, OU=Symantec Trust Network, OU=Organization Validated TLS, CN=Wells Fargo Public Trust Certification Authority 01 G2	3F8B149DCFBE86553F 6D78F4CD24E571	86:14:15:06:B4:C3:61:C9:FC: DF:E5:71:7B:6B:19:76:15:19: 3B:44	8F:FC:B7:E2:35:33:0E:F0:AA: B9:19:DE:AF:C4:F5:E6:21:F6: 6F:AE:DD:A2:D4:C1:25:6D:09 :93:AE:24:EA:21
C=US, O=Wells Fargo & Company, OU=Symantec Trust Network, OU=Organization Validated TLS, CN=Wells Fargo Public Trust Certification Authority 01 G2	464354C0CF3426DEDB 79BE1E93E888F3	A9:90:E2:A9:C9:82:FF:3D:8C: CF:5D:39:76:CC:A9:6D:29:58: CA:8E	7A:21:E2:C1:5E:14:9F:51:6C: D1:E7:30:2E:AB:50:45:2D:DA: 74:04:C4:9D:BE:A9:C2:8B:24: BC:20:F6:3D:A9
C=US, O=Wells Fargo, OU=Symantec Trust Network, CN=Wells Fargo Certificate Authority WS1	50776F58B196C39169 1EE658A90A9D6B	E8:03:9D:FE:57:13:1F:11:D9: D6:77:F7:CF:7C:F5:B6:E8:9D: 98:5D	C2:10:87:41:6B:BF:98:3B:9F: FE:40:F5:D5:6E:E0:FF:D9:4E: B1:E6:66:B0:4A:53:2A:DE:48: 2E:C2:01:D6:7C



## Attachment C - Publicly Disclosed Issues

Public Disclosure	Summary of Issue	Date Reported
<a href="#">Mozilla Bug 1334377</a>	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
<a href="#">Mozilla Bug 1391067</a>	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
<a href="#">Mozilla Bug 1417771</a>	A number of CAs were determined to be non-constrained and not included in prior year audit reports.	November 15, 2017