



REPORT OF THE INDEPENDENT ACCOUNTANT

To the management of DigiCert, Inc. (“DigiCert”):

Scope

We have examined DigiCert management’s [assertion](#), that for its Certification Authority (“CA”) operations at California, Utah and Virginia, in the United States of America, and Kawasaki and Sapporo, Japan, throughout the period November 1, 2019 to September 30, 2020 for its CAs enumerated in [Attachment B](#), DigiCert has:

- disclosed its business, key lifecycle management, certificate lifecycle management, and CA environmental control practices in the applicable versions of its DigiCert Certification Practices Statement (“CPS”) and DigiCert Certificate Policy (“CP”) as enumerated in [Attachment A](#)
- maintained effective controls to provide reasonable assurance that:
 - the applicable versions of its CPS are consistent with the applicable versions of its CP; and
 - DigiCert provides its services in accordance with its CP and CPS
- 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; 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

based on the [WebTrust Principles and Criteria for Certification Authorities v2.2](#).

DigiCert does not escrow its CA keys and does not provide certificate suspension services. Accordingly, our examination did not extend to controls that would address those criteria.



Certification Authority's Responsibilities

DigiCert's management is responsible for its assertion, 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.](#)

Independent Accountant's Responsibilities

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 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.

Relative Effectiveness of Controls

The relative effectiveness and significance of specific controls at DigiCert 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.

Inherent Limitations

Because of the nature and inherent limitations of controls, DigiCert'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.

Independent Accountant's Opinion

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 DigiCert's services other than its CA operations at California, Utah and Virginia, in the United States of America, and Kawasaki and Sapporo, Japan, nor the suitability of any of DigiCert's services for any customer's intended purpose.



Other Matters

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

Matter Topic		Matter Description
1	Certificate Content	DigiCert disclosed in Mozilla Bug 1593814 that three (3) of its Issuing CAs created in 2017 had incorrect printableString in the Subject:organizationName field.
		DigiCert disclosed in Mozilla Bug 1618256 that its investigation into the content of the Subject fields of their certificates resulted in the discovery of 31 OV SSL certificates with organization names greater than 64 characters and 2 OV SSL certificates with non-informational Organizational Unit fields with a "-" character.
		DigiCert disclosed in Mozilla Bug 1654967 that a newly created subordinate CA was missing the CRL Distribution Points extension. After an internal review, a total of 11 CAs had content issues conflicting with the Baseline Requirements.
		DigiCert disclosed in Mozilla Bug 1649951 and Mozilla Bug 1651461 that it was notified of nine (9) subordinate CA certificates with the OCSP Signing value in the Extended Key Usage field present, but without the id-pkix-ocsp-nocheck extension present, as required by RFC 6960. DigiCert did not revoke each of the CAs within the required the seven (7) day timeline.
		DigiCert disclosed in Mozilla Bug 1624527 and Mozilla Bug 1639802 it was notified of instances of issued certificates which used a known compromised public key. DigiCert began to revoke that key in the appropriate timeframe but issued a new certificate to the same subscriber with the same compromised key before proper controls were in place.
2	Subscriber Registration	DigiCert disclosed in Mozilla Bug 1595921 that a system patch caused a code error that resulted in 123 OV SSL and 36 EV SSL certificates to skip the domain control validation process before issuance.
3	Certificate Revocation	DigiCert disclosed in Mozilla Bug 1650910 , it was notified six (6) subordinate CAs were issuing EV SSL certificates, but were not included on respective WebTrust EV SSL reports. DigiCert did not revoke each of the CAs within the required the seven (7) day timeline.



Matter Topic		Matter Description
		DigiCert disclosed in Mozilla Bug 1649277 that it did not provide a preliminary report within 24 hours of receiving a Certificate Problem Report from a third party due to a manual process error.
		DigiCert disclosed in Mozilla Bug 1639801 that it missed the 24 hour revocation requirement for four (4) certificates that were reported as having compromised private keys.
4	Certificate Status	DigiCert disclosed in Mozilla Bug 1640805 a number of OCSP responses were not updated after more than 24 hours following a revocation.
		DigiCert disclosed in Mozilla Bug 1662346 that a bug introduced into their on-demand OCSP responder service caused all subscriber certificate responses to be returned as "good." The on-demand responder was in the process of being retired and was fixed shortly before being permanently shut down.

We have noted any instances of possible non-conformance above that are relevant to the CAs enumerated in [Attachment B](#). DigiCert's assertion notes all instances of possible non-conformance, addressed by DigiCert, during the engagement period, regardless of the particular CAs enumerated in [Attachment B](#).

The World Health Organization classified the COVID-19 outbreak as a pandemic in March 2020. Based on the rapid increase in exposure globally, the gravity or length of the impact of the COVID-19 outbreak cannot be estimated at this time.

Use of the WebTrust Seal

DigiCert's use of the WebTrust for Certification Authorities Seal constitutes a symbolic representation of the contents of this report and it is not intended, nor should it be construed, to update this report to provide any additional assurance.

BDO USA, LLP

December 21, 2020



ATTACHMENT A - CERTIFICATION PRACTICE STATEMENT VERSIONS IN-SCOPE

Certificate Policies

Policy Name	Version	Effective Date
DigiCert Certificate Policy	5.4	September 29, 2020
DigiCert Certificate Policy	5.3	July 16, 2020
DigiCert Certificate Policy	5.2	May 22, 2020
DigiCert Certificate Policy	5.1	March 27, 2020
DigiCert Certificate Policy	5.0	February 6, 2020
DigiCert Certificate Policy	4.20	November 22, 2019
DigiCert Certificate Policy	4.19	July 25, 2019

Policy Name	Version	Effective Date	Date incorporated into DigiCert CP
DigiCert Certificate Policy for Symantec Trust Network	2.12	June 25, 2019	February 6, 2020

Certification Practice Statements

Policy Name	Version	Effective Date
DigiCert Certification Practices Statement	5.4	September 29, 2020
DigiCert Certification Practices Statement	5.3	July 16, 2020
DigiCert Certification Practices Statement	5.2	May 22, 2020
DigiCert Certification Practices Statement	5.1	March 27, 2020
DigiCert Certification Practices Statement	5.0	February 6, 2020
DigiCert Certification Practices Statement	4.20	November 22, 2019
DigiCert Certification Practices Statement	4.19	July 25, 2019

Policy Name	Version	Effective Date	Date incorporated into DigiCert CPS
DigiCert Certification Practices Statement for Symantec Trust Network	3.13	June 25, 2019	February 6, 2020

Policy Name	Version	Effective Date	Date incorporated into DigiCert CPS
DigiCert Certification Practices Statement for GeoTrust and RapidSSL	1.6	June 25, 2019	February 6, 2020

Policy Name	Version	Effective Date	Date incorporated into DigiCert CPS
DigiCert Certification Practices Statement for Thawte-Branded Certificates	3.7.23	June 25, 2019	February 6, 2020



ATTACHMENT B - LIST OF CAs IN SCOPE

Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=IE/O=Baltimore/OU=CyberTrust/CN=Baltimore CyberTrust Root	16AF57A9F676B0AB126095AA5EBADEF22AB31119D644AC95CD4B93DBF3F26AEB	5/12/2000	5/12/2025
/O=Cybertrust, Inc/CN=Cybertrust Global Root	960ADF0063E96356750C2965DD0A0867DA0B9CBD6E77714AEAFB2349AB393DA3	12/15/2006	12/15/2021
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Assured ID Root CA	3E9099B5015E8F486C00BCEA9D111EE721FABA355A89BCF1DF69561E3DC6325C	11/10/2006	11/10/2031
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Assured ID Root G2	7D05EBB682339F8C9451EE094EEBFefa7953A114EDB2F44949452FAB7D2FC185	8/1/2013	1/15/2038
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Assured ID Root G3	7E37CB8B4C47090CAB36551BA6F45DB840680FBA166A952DB100717F43053FC2	8/1/2013	1/15/2038
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root CA	4348A0E9444C78CB265E058D5E8944B4D84F9662BD26DB257F8934A443C70161	11/10/2006	11/10/2031
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root G2	CB3CCBB76031E5E0138F8DD39A23F9DE47FFC35E43C1144CEA27D46A5AB1CB5F	8/1/2013	1/15/2038
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root G3	31AD6648F8104138C738F39EA4320133393E3A18CC02296EF97C2AC9EF6731D0	8/1/2013	1/15/2038
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert High Assurance EV Root CA	7431E5F4C3C1CE4690774F0B61E05440883BA9A01ED00BA6ABD7806ED3B118CF	11/10/2006	11/10/2031
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Trusted Root G4	552F7BDCF1A7AF9E6CE672017F4F12ABF77240C78E761AC203D1D9D20AC89988	8/1/2013	1/15/2038
/C=US/O=GeoTrust Inc./CN=GeoTrust Global CA	FF856A2D251DCD88D36656F450126798CFABAAD40799C722DE4D2B5DB36A73A	5/21/2002	5/21/2022
/C=US/O=GeoTrust Inc./CN=GeoTrust Primary Certification Authority	37D51006C512EAAB626421F1EC8C92013FC5F82AE98EE533EB4619B8DEB4D06C	11/27/2006	7/16/2036
/C=US/O=GeoTrust Inc./OU=(c) 2007 GeoTrust Inc. - For authorized use only/CN=GeoTrust Primary Certification Authority - G2	5EDB7AC43B82A06A8761E8D7BE4979EBF2611F7DD79BF91C1C6B566A219ED766	11/5/2007	1/18/2038



Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US/O=GeoTrust Inc./OU=(c) 2008 GeoTrust Inc. - For authorized use only/CN=GeoTrust Primary Certification Authority - G3	B478B812250DF878635C2AA7EC7D155EAA625EE82916E2CD294361886CD1FBD4	4/2/2008	12/1/2037
/C=US/O=GeoTrust Inc./CN=GeoTrust Universal CA	A0459B9F63B22559F5FA5D4C6DB3F9F72FF19342033578F073BF1D1B46CBB912	3/4/2004	3/4/2029
/C=US/O=GeoTrust Inc./CN=GeoTrust Universal CA 2	A0234F3BC8527CA5628EEC81AD5D69895DA5680DC91D1CB8477F33F878B95B0B	3/4/2004	3/4/2029
/C=US/O=thawte, Inc./OU=Certification Services Division/OU=(c) 2006 thawte, Inc. - For authorized use only/CN=thawte Primary Root CA	8D722F81A9C113C0791DF136A2966DB26C950A971DB46B4199F4EA54B78BF9F	11/17/2006	7/16/2036
/C=US/O=thawte, Inc./OU=(c) 2007 thawte, Inc. - For authorized use only/CN=thawte Primary Root CA - G2	A4310D50AF18A6447190372A86AFAF8B951FFB431D837F1E5688B45971ED1557	11/5/2007	1/18/2038
/C=US/O=thawte, Inc./OU=Certification Services Division/OU=(c) 2008 thawte, Inc. - For authorized use only/CN=thawte Primary Root CA - G3	4B03F45807AD70F21BFC2CAE71C9FDE4604C064CF5FFB686BAE5DBAAD7FDD34C	4/2/2008	12/1/2037
/C=US/O=VeriSign, Inc./OU=VeriSign Trust Network/OU=(c) 1999 VeriSign, Inc. - For authorized use only/CN=VeriSign Class 1 Public Primary Certification Authority - G3	CBB5AF185E942A2402F9EACBC0ED5BB876EEA3C1223623D00447E4F3BA554B65	10/1/1999	7/16/2036
/C=US/O=VeriSign, Inc./OU=VeriSign Trust Network/OU=(c) 1999 VeriSign, Inc. - For authorized use only/CN=VeriSign Class 2 Public Primary Certification Authority - G3	92A9D9833FE1944DB366E8BFAE7A95B6480C2D6C6C2A1BE65D4236B608FCA1BB	10/1/1999	7/16/2036
/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	EB04CF5EB1F39AFA762F2BB120F296CBA520C1B97DB1589565B81CB9A17B7244	10/1/1999	7/16/2036
/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	69DDD7EA90BB57C93E135DC85EA6FCD5480B603239BDC454FC758B2A26CF7F79	11/5/2007	1/18/2038
/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	9ACFAB7E43C8D880D06B262A94DEEEE4B4659989C3D0CAF19BAF6405E41AB7DF	11/8/2006	7/16/2036
/C=US/O=VeriSign, Inc./OU=VeriSign Trust Network/OU=(c) 2008 VeriSign, Inc. - For authorized use only/CN=VeriSign Universal Root Certification Authority	2399561127A57125DE8CEFEA610DDF2FA078B5C8067F4E828290BFB860E84B3C	4/2/2008	12/1/2037



Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Class 3 Public Primary Certification Authority - G6	B32396746453442F353E616292BB20BBAA5D23B546450FDB9C54B8386167D529	10/18/2012	12/1/2037
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Class 3 Public Primary Certification Authority - G4	53DFDFA4E297FCFE07594E8C62D5B8AB06B32C7549F38A163094FD6429D5DA43	10/18/2012	12/1/2037
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Class 2 Public Primary Certification Authority - G6	CB627D18B58AD56DDE331A30456BC65C601A4E9B18DEDCEA08E7DAAA07815FF0	10/18/2011	12/1/2037
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Class 1 Public Primary Certification Authority - G6	9D190B2E314566685BE8A889E27AA8C7D7AE1D8AADDBA3C1ECF9D24863CD34B9	10/18/2011	12/1/2037
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Class 2 Public Primary Certification Authority - G4	FE863D0822FE7A2353FA484D5924E875656D3DC9FB58771F6F616F9D571BC592	10/5/2011	1/18/2038
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Class 1 Public Primary Certification Authority - G4	363F3C849EAB03B0A2A0F636D7B86D04D3AC7FCFE26A0A9121AB9795F6E176DF	10/5/2011	1/18/2038
/C=US/O=Verizon Business/OU=OmniRoot/CN=Verizon Global Root CA	68AD50909B04363C605EF13581A939FF2C96372E3F12325B0A6861E1D59F6603	7/30/2009	7/30/2034
/C=ZA/ST=Western Cape/L=Durbanville/O=Thawte/OU=Thawte Certification/CN=Thawte Timestamping CA	6B6C1E01F590F5AFC5FCF85CD0B9396884048659FC2C6D1170D68B045216C3FD	1/1/1997	12/31/2020
/C=US/O=WFA Hotspot 2.0/CN=Hotspot 2.0 Trust Root CA - 03	A3CC68595DFE7E86D8AD1772A8B5284ADD54ACE3B8A798DF47BCCAFB1FDB84DF	12/8/2013	12/8/2043
/O=Cybertrust, Inc/CN=Cybertrust Global Root	802447EE521CC666CDB7BBAE93A385E55F200D76A3D1356A85445AC4CBDBED12	1/8/2014	12/15/2030
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Web PKI ECC Root - G1	92BB72F15EB75DE467C84B438181034BD9A016EC26434BEE3C9BBAD8CD8AF0	9/21/2017	9/20/2042
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Web PKI RSA Root - G1	F6BB5B7985A8736594C14679FA31603814502AAEB5F4282A69985DC84A450777	9/21/2017	9/20/2042



Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Federated ID Root CA	CF2A86C82850FF66301730352EC16546D611985EF8C936657C23B6EBE5F0AAB7	1/15/2013	1/15/2033
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert High Assurance EV Root CA	071B8B4B13AD7B2BE09FDD7FBDF3482460838098C21519B83B3150F8E919832D	8/13/2018	11/4/2022

Cross-Signed Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/O=Cybertrust, Inc/CN=Cybertrust Global Root	24905145BD9B9BFE99C60354B49951BE0E709F1634CFBD0E370FEB9F068ED6C3	12/3/2014	12/3/2024
/O=Cybertrust, Inc/CN=Cybertrust Global Root	64B3542D1BC972F58A1D179F3D0B9652BE434F3AE3842E0C447880D4D623A4DE	4/23/2014	4/23/2024
/O=Cybertrust, Inc/CN=Cybertrust Global Root	9BB5CC8427AF276BF216A748AD25785D17ACBABBDE4282E606DA5262CD940F38	8/18/2010	8/18/2020
/O=Cybertrust, Inc/CN=Cybertrust Global Root	9F61D09768DA33F7F99F7E7EAD935902224943B4C9AD07B629F745C0B08475B7	4/23/2014	4/23/2021
/O=Cybertrust, Inc/CN=Cybertrust Global Root	D775784887CDBD7E9FCB2A9D589D367A0B6238DA1EAF51DC71C99B89B99229E0	4/23/2014	4/23/2021
/O=Cybertrust, Inc/CN=Cybertrust Global Root	E71D8C3BAF43F6B3352DF574A9F0D4A2065BF03DA179514B1FCC5D9BEC8C8FCD	12/3/2014	12/3/2024
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root CA	6DACBB8945137B1DAD4211B0436EFBE06F12ACE36904973B45AE25740823D369	12/7/2016	5/10/2025
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root G2	2D4FAD3455AB61397401ABBB518922F84336B67E02FC8D2DB283825C4AB981BB	11/6/2017	11/5/2022
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root G2	AADADD5A879D2EB8C41A89597291292709D42052F5B6399541C694C3B7353CD1	4/3/2018	4/2/2028
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root G3	53A5E32ACC5714ED20C7778C655D1EE97EC07156074C8B016E2CFC73E9D2712B	11/6/2017	11/5/2022



Cross-Signed Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert High Assurance EV Root CA	89DAADB41BA698BB378AEE84EAC96121D20F8C2FCA63EC686D9307229AD3EB2E	6/18/2014	6/18/2021
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert High Assurance EV Root CA	CBF8FB77660167E6BAACD0DF77CDA397D0117EE2BEEA23B935317F8BB5B5E3B0	12/7/2016	5/10/2025
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Trusted Root G4	AD8EB32C9DA91DDC855F382745990147DC6F23D9FBB04FC9D476B1EE20FC71D8	7/1/2013	10/22/2023
/C=US/O=Verizon Business/OU=OmniRoot/CN=Verizon Global Root CA	B90EEAE931E5E2B7D335F149DA6C2210986000D214FFDB62A72F7332D63731AF	4/9/2014	4/9/2024
/C=US/O=Verizon Business/OU=OmniRoot/CN=Verizon Global Root CA	D96CBC03B523CD3315918651CF4862162887DD563AFB2352D3F34BB94576F93D	5/13/2014	5/13/2024
/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	D9BC973F88909696DA10833197944CA58AC4A88847779C9133374267100EEC58	11/8/2006	11/7/2021
/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	61436A4ED63E31F22EEFAC26B525796CF5EBF89A77E73C0ADCC84DE979B1C5E0	11/5/2007	5/11/2020
/C=US/O=VeriSign, Inc./OU=VeriSign Trust Network/OU=(c) 2008 VeriSign, Inc. - For authorized use only/CN=VeriSign Universal Root Certification Authority	FB2BD3598144356DCBD2B259E8F3EBD0B0F6EE180C15EF553B82D199EF07F39A	4/2/2008	12/10/2019
/C=US/O=VeriSign, Inc./OU=VeriSign Trust Network/OU=(c) 2008 VeriSign, Inc. - For authorized use only/CN=VeriSign Universal Root Certification Authority	1512DFAEDF9153FFACB70BC805BA32CB6F9CB3D095B64E6659E652C3CA335A32	4/2/2008	12/10/2019
/C=US/O=VeriSign, Inc./OU=VeriSign Trust Network/OU=(c) 2008 VeriSign, Inc. - For authorized use only/CN=VeriSign Universal Root Certification Authority	C9D89EC4FC9CAC1E49432294E8A7AA30117AB3E4E0199B9E297D6BE10FC6E2DF	4/2/2008	12/10/2019
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=DigiCert Universal Transition Root	88A07073D4527069DC9E978053F35729705C058302648ED02E5FCE6561459E61	12/8/2017	12/7/2022
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Transition ECC Root	DB98194E55B936D26E6CB3F460A262EB6CA66337E7BFF17A0BFC083251F63626	11/6/2017	11/5/2022
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Transition RSA Root	0D88900DBB68C6CA5471F653FCACD407EBD7B1519046F9E0B8CED3C274FD11A1	11/6/2017	11/5/2022



Cross-Signed Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=DigiCert Transition Root G3	0F57B96FA7B31247EC39CB307D38CA2BF3B29F54AFD50A351D18533529517B46	12/8/2017	12/7/2022
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=GeoTrust Primary Transition Root	F54F6CED56CF682B570A6CAEC313E9482760DE12E8F928AE30452C4C66AC761A	12/8/2017	12/7/2022
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=thawte Primary Transition Root	DBA1097710F3C629943C23DC7503AC82B9142825EF049F1C26538DB36B480549	12/8/2017	12/7/2022
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=thawte Primary G3 Transition Root	85743AEA6A97C13445E0824C2E1FE502B97ADD124A97EF5120FE07F55812FC33	12/8/2017	12/7/2022
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=thawte Primary Transition Root	C5D814672CF65B953E6F69E702C7C23A5EBDA45796AA58834121DFB0D06C0846	12/8/2017	12/8/2037
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=thawte Primary G3 Transition Root	B8FFC04C86B15041DB8F3AADA47FEAF097E8590AAF28A0E59CDBADB7756A6634	12/8/2017	12/8/2037
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=GeoTrust Primary Transition Root	B89B256ACD7C8BFC5C136A8570575350219E9D55879A85A7EC0CC0C1283C24A3	12/8/2017	12/8/2037
CN=DigiCert Universal Transition Root; OU=www.digicert.com; O=DigiCert, Inc; C=US	AF0E363CAE6DF489F2976A284D12D4C33C94B135FA77F89E89298D7491E99974	12/8/2017	12/8/2037
CN=DigiCert Transition Root G3; OU=www.digicert.com; O=DigiCert, Inc; C=US	7E6AF50A3A9DD01737204D912B7721F7C0809CCCE64284578992049AAACE34B0B	12/8/2017	12/8/2037
CN=DigiCert Transition RSA Root; OU=www.digicert.com; O=DigiCert Inc; C=US	E52B44CD1E6A9ADA0A0409D1CC5D73A6F417603D70E6F5DC5483AB8ADAEF3CA4	11/2/2017	11/2/2037
CN=DigiCert Transition ECC Root; OU=www.digicert.com; O=DigiCert Inc; C=US	45BF04DCA5DE7A6339F1DF835BC9013457B487FDB4308E4080C6423C8E4B2705	11/2/2017	11/2/2037

Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust TLS RSA CA G1	C06E307F7CFC1D32FA72A4C033C87B90019AF216F0775D64978A2ECA6C8A230E	11/2/2017	11/2/2027



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte TLS RSA CA G1	4BCC5E234FE81EDE4EAF883AA19C31335B0B26E85E066B9945E4CB6153EB20C2	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=RapidSSL TLS RSA CA G1	4422E963EE53CD58CC9F85CD40BF5FFEC0095FDF1A154535661C1C06BCADC69B	11/2/2017	11/2/2027
/C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL TLS RSA CA G1	2A41BA819EB6125AF5CB4B8B0E9E954ECE798C2A7EE43DCDAF7D395987C4D552	11/2/2017	11/2/2027
/C=US, O=Oracle Corporation, OU=Organization Validated SSL, CN=Oracle TLS RSA CA G1	319896E3954D510DA3A4B75387E8C870B3BC2C3228D8550916EBE9ABDCB7F921	11/2/2017	11/2/2027
/C=NL, O=Trust Provider B.V., OU=Domain Validated SSL, CN=Trust Provider B.V. TLS RSA CA G1	009871C3A4C607311E5AE92F01095F9BF76100B8794AB0A9A5210E6794C8607C	11/2/2017	11/2/2027
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia TLS RSA CA G8	036A18F5F0EB9DD5EE02B7854DF5C33845601D8939CFB7B607F69D142C01D909	11/2/2017	11/2/2027
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO TLS RSA CA	A8AD1C25CC580B2131FCC6FC6D6513746F38EA99BD162C81B5C5393495175B18	11/2/2017	11/2/2027
/C=US, O=Wells Fargo & Company, OU=Organization Validated TLS, CN=Wells Fargo TLS Public Trust CA	3B8812E6F851B6F933DC23ED764082FB5F50DE3C2DDDEBCC9CA240B7ACACE4D1	11/2/2017	11/2/2027
/C=CH, O=Hostpoint AG, OU=Domain Validated SSL, CN=Hostpoint TLS RSA CA	F7FBDEB82BE99D41CDCA419FC91859D3E5286C076204E0E903D678BB213ED89B	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust TLS ECC CA G1	A838405EBB03F5DFD8D4A9572AE6E0E3F356EC4EC134375A59DB7B195DC3EC44	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte TLS ECC CA G1	AE82201F565E0439B7F4AD689327594EB974A4F781B1A6CBFED59BD382317F13	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=RapidSSL TLS ECC CA G1	FC16D53203BD9187D69CC99D2DA551076B4DCB298140D6751F7A012966C99FDD	11/2/2017	11/2/2027
/C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL TLS ECC CA G1	BD193C475E4E67938BEF34122B98B558A2882E7ED94369A6CB011320EF15623C	11/2/2017	11/2/2027
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia TLS ECC CA G9	877F24CE70F4A3047E4EA70BEC1BC31BE9B6533ADFF3A393FF9BFB3C81029446	11/2/2017	11/2/2027



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust ECC CA 2018	D8E269A6EB08CBC337AD6578C72135787484C99D2FB08CCED029E806BE1040FC	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust RSA CA 2018	8CC34E11C167045824ADE61C4907A6440EDB2C4398E99C112A859D661F8E2BC7	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=RapidSSL ECC CA 2018	A0D1523A0BF663550EB9081E9BDEDA12814F9570B7697D95DF2EA53D4FF75E3	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=RapidSSL RSA CA 2018	C790B47128447EC0B60F22BFCB795D71C326DD910EE12CBB4CC5A86191EB91BC	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte ECC CA 2018	6E62CBE3E42A41C50405B3E2F1A44257683267856184AF9C02112070AC836936	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte RSA CA 2018	9A5EECEE9C7D898BD81DC3BF066DAF6AEFB8DB1C59676206D2BFDD682312C6F6	11/6/2017	11/6/2027
/C=US, O=Wells Fargo & Company, OU=Organization Validated TLS, CN=Wells Fargo Public Trust Certification Authority 01 G2	DB89314466DE24D66551105FC1D381D66D6D9139E820531C298954654C3DC978	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust EV ECC CA 2018	BF3558F877E89D27DAA60DA9671676570DFBEB215D84AC5A37122D6776B78F6E	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust EV RSA CA 2018	185C0AE470423B9D4678A7C1055B5B48D90705505B794E215C063851336981F4	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte EV ECC CA 2018	F74C3B2C7E455D654D9EE5AAA712789CCB267B961C1A1CE48A69C860CD193678	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte EV RSA CA 2018	93569B26AA535E3E07C891C6BD2FA9DC0939C24DB4B3726AD8531EDB17C497CA	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Encryption Everywhere DV TLS CA - G1	15EB0A75C673ABFBD2FAFC02823C91FE6CBC36E00788442C8754D72BEC3717	11/27/2017	11/27/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Encryption Everywhere DV TLS CA - G2	B1AC8CFB181B9C9354E1775FCBDFCFE7898C5CC9A17D76315B57C112EEE55234	11/27/2017	11/27/2027
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 2 SSP CA - G2	3C18176FEBA1D20C8BFA7B484066E2A5825A226237E1E7BE3828E6F6C3771B23	3/21/2013	3/20/2023



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=U.S. Nuclear Regulatory Commission, OU=External Basic, CN=NRC Basic CA G2	C40D6AB75F7E5D11CF7B0404AC7E4321A7A8B0DDF7631328F3D7CC80D6644E2B	3/21/2013	3/19/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID TLS CA	D7737E5F2D3FFCA429902E9F388CFD6C5959CD35A0FC103CEE2F7E93D1C66A52	2/9/2018	2/9/2030
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site CA	D3533B732A518A6DA68EF266085E11DFD114C0EB0092CD43530A44D54B913ED1	2/9/2018	2/9/2030
/C=CN, O=WoTrus CA Limited, CN=WoTrus EV SSL Pro CA	070531383CCD100D3E9CD964DB07AA5E845A0686F2EAE3BC8A627B182057B1F1	2/9/2018	2/9/2028
/C=CN, O=WoTrus CA Limited, CN=WoTrus OV SSL Pro CA	09033FE23996FE4A59C4C0F523D2560E31DFE4C17D8EA1403D429A971F4BD65A	2/9/2018	2/9/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert EV Code Signing CA (SHA2) G1	8A78B966C73D769040C1A81C32168CEF8B9B9E96ECC2D33CC4ABB5A0CF8C1C67	4/27/2018	4/27/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Assured ID Code Signing	4ADB819C250A2E183313405499D8735299C88F970A5019A27566B27E5818F41B	4/27/2018	4/27/2028
/C=GR, O=ALPHA BANK, OU=Symantec Trust Network, CN=ALPHA BANK CA - G2	9A18343733255374D2A96D770EB7A7B76EC44A8975F6F06AF784BF3EF5E1F7D4	7/12/2016	12/7/2024
/C=GB, O=TRUSTCUBES LIMITED, 1.3.6.1.4.1.519.1=223013701, 1.3.6.1.4.1.52266.1=984500505FE80CD0NE58, OU=www.trustcubes.com, CN=TrustCubes ICA G1	2106CC7907C64B8A5DA2FC338EE94DFFF10EF711DEDDB4FC694EE092EC532B1D	7/18/2018	7/18/2028
/C=US, O=Glosten, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Glosten Public CA	2F90242229ABEBE362CD49B05971B10FE2F64C8289A5A6EAE25817E280B29876	7/17/2018	7/16/2023
/C=US, O=Thomson Reuters Special Services LLC, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Thomson Reuters Special Services CA	BFC05BC249D92B892CE288A0E85F0E96BB9150F741719D9B73EB41EB89D49241	3/5/2015	3/4/2025
/C=GB, O=Anglo American plc, OU=Symantec Trust Network, OU=Terms of use at https://www.trustwise.com/rpa (c)12, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Anglo American CA	693FB9067E62E07DF35507098F28A582571D7818412E5A9D67B4316CE81D5440	12/16/2014	3/19/2022
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert TLS ICA GeoTrust PCA-G3	95D9A8D30F6B1C069C296B3E106BC3CE01EB84AD57860D0F46BF7F15D053B1C0	1/17/2019	1/16/2029



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert TLS ICA Thawte PCA	0944A4C4D673AB925F4BB9ECB0738A7A7C5A480D7219F1F287EA0FD259E87F14	1/17/2019	1/16/2029
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert TLS ICA Thawte PCA-G3	56E4F454D982DCDCE611B7B707DB12C533EAC29A25F4A5307E1C065713B0DC8E	1/17/2019	1/16/2029
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert TLS ICA VRSN PCA-G5	DD6915403ED7CB00F7704792C8084C5EE0C7DE4B28F4F1AC09658DBC34EA9071	1/17/2019	1/16/2029
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert TLS ICA VRSN Universal	BA5B6E5DFEBDAE1C80BD72790BC85BCC6538AB4613023DA706CE826415F5E5B3	1/17/2019	1/16/2029
/C=US, O=Fidelity National Information Services, Inc., OU=Class 2 Managed PKI Individual Subscriber CA, CN=SGN FISGLOBAL PUBLIC CA	0AD6A7334A5A23C986980F6FECD25006B563A0B6F1BCAA65C0345BA2D96928D3	1/8/2019	1/8/2024
/C=AR, O=Banco Santander Rio S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Banco Santander Rio - Empleados G2	CAFD79E03631E7C8B1E017CB7CD1673944D9089EF7CA7057E3AC9BD20DC0408B	1/31/2019	3/31/2023
/C=AR, O=Banco Santander Rio S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Banco Santander Rio - G2	6F75860B5669D449D32F949E98EB11B2FCC33840A0F6753912BDE76BD3D529EC	1/31/2019	3/31/2023
/C=CH, O=World Intellectual Property Organization, OU=Class 2 Managed PKI Individual Subscriber CA, CN=WIPO CA - G4	16D809ED155C2AC7E9489E1A204116C9D16EFBE4C91F53369725A2B395535E28	1/29/2019	1/29/2024
/C=AR, O=Banco Itau Argentina S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Banco Itau Argentina - G2	40E944C8F7317BF79F447602C62842A4CDA9FC979AE355F9CE2FB7A81CB528E8	2/12/2019	1/18/2023
/C=NL, O=SupremeSSL, OU=www.supremessl.com, CN=GeoTrust SupremeSSL 1 CA	354FCFC6162A0EE2205DBEF68931E78033ECE9D125E0824E49BAEBF82DFDD167	5/7/2019	5/7/2029
/C=NL, O=SupremeSSL, OU=www.supremessl.com, CN=GeoTrust SupremeSSL 1 ECC CA	6861BBD4CBEDA2AA01066BF476BF8F2FE6EA9F008CB0AC8E1755E2A328FA5933	5/7/2019	5/7/2029
/C=NL, O=SupremeSSL, OU=www.supremessl.com, CN=GeoTrust SupremeSSL EV 1 CA	0FB6CE80909D19AFEE6A88C959E9E9AA6466715BCE05C6449FEB530A086DAF14	5/7/2019	5/7/2029



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=NL, O=SupremeSSL, OU=www.supremessl.com, CN=GeoTrust SupremeSSL EV 1 ECC CA	2FBA8FE915415049AA942857CB53137FFD3D9E5A47B27B5782DAB9B4DA7D624D	5/7/2019	5/7/2029
/C=US, O=Symantec Corporation, OU=Windows Phone Enterprise Applications, CN=Symantec Enterprise Mobile CA for Microsoft - G2	65E5B094657AA1D7161BA5710F024FE8DDF21ADB6270A20BAE0814183AA85370	5/24/2017	3/13/2032
/C=CN, O=WoSign CA Limited, CN=WoSign EV SSL Pro CA	891EE2E23282E5076C9AE9047DE8EA900E066F81D6DCD9B843C59078B0F105BC	5/23/2017	5/23/2027
/C=CN, O=WoSign CA Limited, CN=WoSign OV SSL Pro CA	AA61C2927DC89DB225CA9A17D600373D058F696D86D10E2BD7B5E8F44A97EED1	5/23/2017	5/23/2027
/C=CN, O=WoSign CA Limited, CN=WoSign EV Code Signing Pro CA	F6DFDED61FF88EF10B9E6DCFBCE0F1615E05866CEBAFCD6D48AEE80132C70347	5/23/2017	5/23/2027
/C=US, O=Government of the District of Columbia, OU=Office of the Chief Technology Officer, CN=DC Government SHA2 Assured ID Intermediate CA	FB1147E7AB97A29BB9C1140ABF3DE831F4C5F60D11B90FEC999A0816375D8457	7/13/2017	7/13/2027
/C=US, O=Government of the District of Columbia, OU=Office of the Chief Technology Officer, CN=DC Government SHA2 EV Intermediate CA	F12241EE34C03A608D34DBC0EA465E1BD1AA13091554F9D4D086253FF3CE83D4	7/13/2017	7/13/2027
/C=JP, O=Cybertrust Japan Co., Ltd., CN=Cybertrust Japan Secure Server ECC CA	C3683F7D91754219DADA4E8DC30E4B18BD3928B53D3AB93D07384BC5871CE355	7/13/2017	7/13/2032
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Universal Root Managed PKI Individual Subscriber CA, CN=Symantec Shared Individual Email Certificate Authority	B7021BCF346E8502B1275F80057F3B97467AC8B8A761608340ECF8484EC3848C	8/22/2017	8/21/2027
/C=IT, O=Telecom Italia Trust Technologies S.r.l., OU=Digital Identity and Security, CN=Trust Technologies Global Client CA	AA6A2380A7E8254DAD4620AE0895DE74047F33F5268758DCF27C4D280B384A50	8/24/2017	5/10/2025
/C=IT, O=Telecom Italia Trust Technologies S.r.l., OU=Digital Identity and Security, CN=Trust Technologies Global CA	191E0B48B78B7EFA4822A465AD69B34405B878D10BD853D8E57CB8B9D9E50B8B	8/24/2017	5/10/2025
/C=JP, O=Cybertrust Japan Co., Ltd., CN=Cybertrust Japan ECC EV CA	92E3770B1EB44F84C2F2CB0097C2FD7126BD212B41C2610E78DDFD8946761738	8/24/2017	8/24/2032
/C=US, O=United Launch Alliance, LLC, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=ULA CA - G3	232AD338F64E3FC71048E1D6CCC96EA6FD5782274AA96FD618F5425087BA2FFE	8/31/2017	8/30/2027



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL ECC CA G1	8D7373F38E63D830C0CEAA2C33330F21A2C77408EE3CFBC595C0D2F3D32F4224	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Class 3 ECC CA G1	CBAE2767EE8CD7FB49B662B422F721DB4522EB674CDBF16CB6209E45CC4CB99E	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust Class 3 ECC CA G1	64E6E095926F52475116C164D6A85E9B21322A2B4867DF7E72A1C632F8C74143	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=RapidSSL Class 3 ECC CA G1	6D63EAA731823D80E47624BE60BAFAB79D9E4030D43E3D02E185BD5B77E4665B	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte Class 3 ECC CA G1	D7642057CA17E00635CC41053F14919984888E6570BE2D966A1FAE83A64A4E30	11/2/2017	11/2/2027
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia ECC CA G9	45B2A3A4D06EE652E940FABCA5CD8721C1FB7FEED8B75B0CC7F067E1D26E2CFE	11/2/2017	11/2/2027
/C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL RSA CA G1	706ECB21B096F6FFCCDC9EBE5AA1B776F64DB8FAE7F0A5C032C71041E502B98F	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Class 3 RSA CA G1	81E071B01F01DC43EE458C0E1BDCBC848B47462C26B4CE19EE9015416BC6DF89	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust Class 3 RSA CA G1	15C81322DA22F1EE7C8231ACC0B52E4F17A7AE6B30811BA2F667E648FF82D8AA	11/2/2017	11/2/2027
/C=CH, O=Hostpoint AG, OU=Domain Validated SSL, CN=Hostpoint RSA CA	A8C0A92B0D90E8216CCCA34C1A1683B34EB4758D460C892CA8C512A8A2ACCO8F	11/2/2017	11/2/2027
/C=US, O=Oracle Corporation, OU=Organization Validated SSL, CN=Oracle RSA CA G1	461FB462E51D54A59A041CD5A651760AE847AE1C27C103887D52EC095F68E73C	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=RapidSSL Class 3 RSA CA G1	433A09FFDDB2EED82EEA9F918C860C04CBEAB1381A48DFE2C48E42E13D35AF81	11/2/2017	11/2/2027
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO RSA CA	B2BB26D271DC82BB647354B6F718D0ABF1B4D67411A0EDAFF1AA959BE5DED37E	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte Class 3 RSA CA G1	8FC1C1763F6317AB09061C5A78D4E9D67001EFE0A79FE40573B048C06EB21658	11/2/2017	11/2/2027



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=NL, O=Trust Provider B.V., OU=Domain Validated SSL, CN=Trust Provider B.V. RSA CA G1	126505E929334CC3C73EE826E5A4E1C4ADB90C710805759F6CB69FFACB76A276	11/2/2017	11/2/2027
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia RSA CA G8	48C4A1C5395E2B499D2E3EBE26EEFA91D11CF35DD5FA14937EEE5E807A2FF487	11/2/2017	11/2/2027
/C=US, O=Wells Fargo & Company, OU=Organization Validated TLS, CN=Wells Fargo Public Trust CA	D8D7627D0F5D0AD09155B2C9347307925EF3E7F6364F231969C0D2E4C71962F0	11/2/2017	11/2/2027
/C=US, O=Wells Fargo & Company, OU=Organization Validated TLS, CN=Wells Fargo Public Trust Certification Authority 01 G2	CF7CFA4F9DBCCBCA6D20EFDEBEAD4E173B34E76BDA1EB1E619F44E06E95FC208	11/15/2017	11/15/2027
/C=US, O=Aetna Inc, CN=Aetna Inc. Secure EV CA2	1DDFDDF883E3945B2CB24FA5B83788379C5AB058422AB979DF66C77473988687	12/8/2017	12/8/2027
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia TLS ECC CA	68D0B2E8C85BF009B4DB39AC8B5E2FA8E1FD9FD1E5028704EA9288C7E472AAEB	12/8/2017	12/8/2027
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia TLS RSA CA	79F1F5AB697DEBF195F5B7DA65F95399682EDAEB80115B9D42A6AE5E2FA98802	12/8/2017	12/8/2027
/C=US, O=DigiCert, Inc, OU=www.digicert.com, CN=thawte Primary Issuing CA G3	F6CF5D6FF850D14DB082CC9CF7C056BC60E36B1E54F1CCA3E24BDF393948978D	12/8/2017	12/8/2027
/C=US, O=DigiCert, Inc, OU=www.digicert.com, CN=thawte Primary Issuing CA	9A9FC39029ABE132D674D032D199CB8431AAC878DABCE6E9E1AECB81EC99F4CC	12/8/2017	12/8/2027
/C=US, O=DigiCert, Inc, OU=www.digicert.com, CN=GeoTrust Primary Issuing CA	F7A84E24E8E0D89154874721C5B641F48A1EF0FF3B198F53BE021DB53F097BD0	12/8/2017	12/8/2027
/C=US, O=DigiCert, Inc, OU=www.digicert.com, CN=DigiCert Universal Issuing CA	622A42A28CAD83D962771D9D09BD307877D4AB513B4FE0CF2E5851E79FFA6FE	12/8/2017	12/8/2027
/C=US, O=DigiCert, Inc, OU=www.digicert.com, CN=DigiCert Transition Issuing CA G3	25B66390DD425867EC0DE58A6B198F5985BE58A43A4605E1A0B8C6F35B92D7EE	12/8/2017	12/8/2027
, O=CertiSur S.A., OU=Symantec Trust Network, CN=CertiSur Class 2 CA - G3	041E70B7DDDD0F2F90F285C4C71E0E20533312A10773794A21B5791EC8755958	8/18/2015	8/17/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CL, O=CertiNet S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=CertiNet S.A. Firma Electronica Avanzada - G2/emailAddress=certinet@certinet.cl	163DDECF86B4708A77705D106FD630C30331B1070C4BD9A36374AC0A68A83DD7	8/18/2015	9/15/2024
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Dealer CA	76790AE708EFBB366BA192A68D50810AE53E82A497CFF3911F888A21E04FE2D7	4/5/2012	4/4/2022
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS EDC CA	4F5C36419568CB1E7084FB82DACDD1015ADB1D57B5C3E3F17F7F7CA092977432	6/19/2012	6/18/2022
/C=BR, O=Certisign Certificadora Digital S.A., OU=Symantec Trust Network, CN=Certisign Class 2 CA - G3	011B074C1D1D22A927406597AB4E5114F5C045612EC98CC429A1A93E1986E6F6	9/22/2015	9/21/2025
/C=BR, O=Certisign Certificadora Digital S.A., OU=Symantec Trust Network, CN=Certisign Class 2 CA - G3	8E7EA258F74372F88E0B182FA60B7F83ECFBBB6F1FFE6145BF24F74416CD02CC	9/22/2015	9/21/2025
/C=CA, O=Canadian Imperial Bank of Commerce, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=CIBC Trusted CA G2	4BB800C7CC2F02A34FFD99ED7577361551CBC24C6352B814C657FE504F3F09FB	6/16/2015	6/15/2020
/C=US, O=City of New York, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=City of New York Office of the Actuary - G2	A3E2E9FDC693C7536CD3A9ABC8E09705C113DD391635C6239BBFF21DA258C96F	6/11/2015	6/10/2025
/C=GB, O=Clifford Chance LLP, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Clifford Chance LLP CA - G2	D0EFB840228EB4DAAAB3970AAE0E6487415412B3159351CF01738EAE486E5B5F	8/27/2015	8/26/2020
/C=US, O=Spirit AeroSystems, Inc., OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Spirit AeroSystems CA - G2	DCD9AAD1D33AA733017584C91C4E4DD05198CBA0B071CE5FEDAFAB6163FF6B11	2/23/2010	2/22/2020
/C=US, O=SRI International, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=SRI International CA - G2	8F11E6AE162CD9472CAB0B6C023A56D8A442BD5981DD0CDBBCD5D501923223B7	11/15/2012	11/14/2022
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Test EDC CA - G2	26661F230442332E5F8F109C05A3FAA3EA339C29D22B07B8D1A048C693FA1F0C	9/3/2015	9/2/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Test NF CA	D9E9093FBD728E05240FDB4D0DF46B7BEB9AB7E9554D30CB49D4681D6344C75F	6/19/2012	6/18/2022
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Test NF CA - G2	597D5A286729E73A324E5665CEE4B97FDD5A9FD14EBA4B903319A16CFC946680	9/3/2015	9/2/2025
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Test OTL CA	FD9A6C86AE90E3F7D5511EF968357B0D0D74FEC0C71C037CC9B29F3F2940F9F9	4/5/2012	4/4/2022
/C=SE, O=Tetra Pak International SA, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Tetra Laval Group CA - G2	456A6B18FA9B1D6864AD02A1B3E6D737F664427FE326C1CF6D658083F52CC5F1	8/27/2010	8/26/2020
/C=US, O=Texas Department of Transportation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Texas Department of Transportation CA G2	7A72D9097A8D547EF7F94223E186EBB4467B7C3425DF73E68BF0E10CF364D420	11/18/2014	11/17/2019
/C=US, O=HP Inc, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Collaboration Certification Authority	B864FF6DE0CB1BEAF6AA5C68DB8769C91F18E1721E22AC3ECDD91C0889D77078	6/11/2015	6/10/2025
/C=MU, O=The Mauritius Commercial Bank Limited, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=The Mauritius Commercial Bank Limited CA	0A646FDC704F494A67739A7E99FD74955BB0AF1ABA622CEFE000B39557C5FC81	9/30/2014	9/29/2024
/C=US, O=Thomson Reuters Holdings Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Thomson Reuters - LEDO CA	F5DF7A85240E93C602EE9C6F77C2B126C7A37CED8F34DD714B82C47F31F3544D	12/20/2016	12/19/2026
/C=US, O=Thomson Reuters Special Services LLC, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Thomson Reuters Special Services CA	D9A0EBD95D3C903FA75DC1EA19F1963760CF7939183A66033460F91DE1D37372	3/5/2015	3/4/2020
/C=NL, O=KPN Telecom B.V., OU=VeriSign Trust Network, CN=KPN Telecom B.V. CA - G2	04832F085D97CBA843F46D650FD6F5A7E1458462706EBAF9E0B9E9FEFC052350	12/3/2008	12/2/2023



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=DE, O=LfA Foerderbank Bayern, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=LfA Foerderbank Bayern - G2	315AC96789B49D48A1C420F32F9A4A73F4871AF75A4CA53CF41CE3FB3E2E76FC	6/16/2015	6/15/2025
/C=US, O=State Street Bank and Trust Company, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=State Street Bank and Trust - Global Markets CA	2C68D776FFD51155D98957A66043F896E2BC69CB1943570389350057A2C70616	7/10/2015	7/9/2025
/C=US, O=Moog, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Moog, Inc. M2 CA	01C235311274307F4457E079E1E11CCB0AB5B2A9F9919B269A5D304821F93FB8	7/19/2012	7/18/2022
/C=MY, O=MSC Trustgate.com Sdn., OU=Symantec Trust Network, CN=MSC Trustgate.com Class 2 CA - G2	5AF4C5B2DE3AD0860264F63C736DE4B90897D795A48223624BEBE8419FD22CF0	9/29/2011	9/28/2021
/C=MY, O=MSC Trustgate.com Sdn., OU=Symantec Trust Network, CN=MSC Trustgate.com Class 2 CA - G2	EACB06CBB7B251C6BF464DB4B670DCDC9254C9AF3938C110CEE74D00EA0A263	9/29/2011	9/28/2021
/C=GR, O=ADACOM S.A., OU=Symantec Trust Network, CN=ADACOM Class 2 CA - G4	4BFADB4EB30D4DE92BC23823E950E4C48E86D729A11BC76F18790E38F34A0550	12/9/2014	12/8/2024
/C=ZA, O=Absa Bank Limited, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Absa Bank Limited Public CA	02302C4CF831335C9DD145DF91A8C1C703008FD234215D0E187895092BD81AD4	6/8/2017	6/7/2027
/C=SE, O=Tetra Pak International SA, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Tetra Laval Group CA - G2	AFC58CD8D641AFB589D6317BD6D0A16A6992E045E4B4855777C6A9C3F63125D3	8/27/2010	8/26/2020
/C=IT, O=Trust Italia S.p.A., OU=Symantec Trust Network, CN=Trust Italia Class 2 CA - G3	5040F179448145C3E9629D27343D3401DFF907C0D0807DA4AFDBB926D66A8C09	10/27/2015	10/26/2025
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS EDC CA - G2	BC8EB15B0FEE05D953758E1D2C29A9E7D1E1B5AFD5659AB95E981F6F75BD1D71	9/3/2015	9/2/2025
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS NF CA	8DE6CA4D03ADF19A56B3CDD6DCA843C51189D0A2BB60D84B9AD01EBC741F5F22	6/19/2012	6/18/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS NF CA - G2	22261C8F0BCD85571AF2F801C47712E6C16DCAE3C7DFC4CD2451D9C538B349D1	9/3/2015	9/2/2025
/C=US, O=Computer Sciences Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=AGC Public CA	5E71C746D45EBCFD6D2DCE4A2DABCCD9335E3AD8D63B349989341911ECD70E88	11/11/2014	11/10/2024
/C=MY, O=MSC Trustgate.com Sdn., OU=Symantec Trust Network, CN=MSC Trustgate.com Class 2 CA - G2	69D455F481C2BB240476BDFC04F25D17AF7FADE203EEC6B31910A9AA4D0A86D7	9/29/2011	9/28/2021
/C=CH, O=OFAC Societe Cooperative, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=OFAC VPN CA	E67E5B407C8B01698049F45F3A6F7721A68FE125C1275989460AC14C10E61BAC	9/6/2011	9/5/2021
/C=US, O=Oracle Corporation, OU=VeriSign Trust Network, CN=Oracle Root CA	C40469CF7C6561AF3288E2FFDD439AC4F0C9CEA933597C07D0D510FC820282AD	2/8/2011	2/7/2021
/C=GB, O=ARM Ltd, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Partner Services CA - G2	0DB17C39CBE7EFB951E6BAE1253EA647F6A632512581B7E21CD51C5AFE01E470	2/12/2015	2/11/2020
/C=ID, O=PT Astra Daihatsu Motor, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=PT Astra Daihatsu Motor CA	C0F393D5027D52A5643A2E38D4F79B1D958D40FB6CDF1AC2571CE61004BDED26	5/31/2016	5/30/2021
/C=ID, O=PT Astra Daihatsu Motor, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=PT Astra Daihatsu Motor CA	9FF4EC074FE370818B15ABA1BBDCB0A4DBE3F8420A993A7B5176BCC7FB4E4EAD	5/31/2016	5/30/2026
/C=DK, O=APMM A/S, OU=VeriSign Trust Network, CN=APMM Certificate Authority	0CB82687CD03AD535A4276924064799A49E43D39A897CC86216C4FD52347B937	9/22/2011	9/21/2021
/C=DK, O=APMM A/S, OU=VeriSign Trust Network, CN=APMM Certificate Authority	DC6E4F6022E9FCC946BC7D36EEC384666B644C087196399E5A2DA96FF1159045	9/22/2011	9/21/2021
/C=US, O=SCF Arizona, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=SCF Arizona CA	BE3A962B7AF931D7ADFAF7452FE85270020EF853A5DD334AED80D29E892F0391	11/11/2010	11/10/2020



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=The ServiceMaster Company, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=ServiceMaster CA	2E26D155C1B812404C41E7360CF1D93D4664AE267274F64B8114BBE7981E83B2	8/2/2011	8/1/2021
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS OTL CA	C7367403CF6D5C13D9690187926EF896CE6E74135080C9AFD8C8B1532467AE50	4/5/2012	4/4/2022
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Test Dealer CA	4325F2A8870CB6A9BF08664D697323F62546C40907F885D6A6407071B4A9B540	4/5/2012	4/4/2022
/C=CA, O=SAQA, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=SGSI CA G2	C77E2D10AD55D5CBB1BA364355C2B6778AF0724A77152B3B411965581B4E3C6F	5/14/2015	5/13/2020
/C=AU, O=BHP Billiton Group Operations Pty Ltd, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=BHP Billiton Group Operations Pty Ltd Secure Email CA	0A9DBB4BE5DDB8EEF54EE13B36EB97DD8BEBFD7B0AFA8B9C9A215EB724A4E88D	8/18/2011	8/17/2021
/C=AU, O=BHP Billiton Group Operations Pty Ltd, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=BHP Billiton Group Operations Pty Ltd Secure Email CA	67C0A4826293FCFC61E57FB496443C84F035496E2120FC80C551AD3C3775E368	8/18/2011	8/17/2021
/C=AU, O=BHP Billiton Operations Pty Ltd, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=BHPB Secure Email for External Parties CA	2EA4E7E0AC42B3BC3DA2D9A7887209BC8CC7958CEE1B52D25B4BE30D6E95AEA8	10/6/2011	10/5/2021
/C=US, O=Blue Cross and Blue Shield of Florida, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Blue Cross and Blue Shield of Florida CA G3	BBCA83E909A956AA38BA04EA5FC6A6A13F99495DA1E23981BE5BEDE03970450A	5/3/2016	5/2/2026
/C=US, O=Blue Cross Blue Shield of Florida, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Blue Cross Blue Shield of Florida CA G2	2B6B476D7B6F01188226DC5A735AB94427B7000D31FFFD9678E9E704A8BF4BB2	3/1/2011	2/28/2021



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Blue Cross Blue Shield of Florida, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Blue Cross Blue Shield of Florida CA G2	F85A6F15474371B4CACB753CC09C3BED7139E9C35B21E95771C227297FF025E2	3/1/2011	2/28/2021
/C=US, O=Blue Cross and Blue Shield of Florida, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Blue Cross Blue Shield of Florida CA G3	30C955BBF62B0E73573DDD9564A51235ED40B3B5BDD5E9B5561D64F96AD65D6	5/5/2016	5/4/2026
/C=US, O=International Business Machines Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=IBM Certification Authority G3	CB16C58F10AFFDA46A0FC05BF49F0B707C579EC52E3527EEBA0448F9B8C16E99	11/10/2016	11/9/2026
/C=US, O=Symantec Corporation, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 Shared Intermediate Certificate Authority	CB387E392A90E8B1A382BE8EDB9E7B2943E9002F73A563F18B06142218F1118C	3/3/2011	3/2/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 Shared Intermediate Certificate Authority - G2	68E63395029061641385B8AFF77F6D66F2D1FD87A821630D27EC3645C9FE235D	4/23/2015	4/22/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 Shared Intermediate Certificate Authority	0FE7E3781F9603BBED69B2145842FA8782F552BD35F3D438D69578794014E91E	6/7/2011	6/6/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 Shared Intermediate Certificate Authority	5265BCA0D31C47DB16C359C5DA88B4C310FA0D4AB1A86FF7E2D5BFA1546C5559	6/7/2011	6/6/2021
/C=US, O=Administrative Office of the U.S. Courts, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=AO USC ROOT CA	70FC4F59FA70CBB6A24B2B6444E0D09733B1C4A9F28A6B206C110579055E1FD2	3/5/2011	3/4/2021
/C=FI, O=Nokia Solutions and Networks, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Nokia Solutions and Networks CA	0B5F13974CEB577E1CC39DFFADF616FCF0C17ECA6747201AEBA6AF3BC20CE4F4	10/10/2013	10/9/2023



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CH, O=OFAC Societe Cooperative, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=OFAC VPN CA	F7720B968EE05292842A5AA13F4DB9A02F67DADC7340CDC28A17BEB1AA5A7322	9/6/2011	9/5/2021
/C=US, O=CDC, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=CDC Secure Data Network CA G2	70A0FE0EDCB4898E5BB09DF8FC6B8978E02A287EDB10175870E81E1491340C5C	11/30/2010	11/29/2020
/C=MK, O=KIBS AD Skopje, OU=VeriSign Trust Network, CN=KIBS Verba CA	DC6D1DAF475DD116449FDF69FE8DE710698854292A1767DC73364644A5B345AE	2/23/2010	2/22/2025
/C=MK, O=KIBS AD Skopje, OU=Symantec Trust Network, CN=KibsTrust Certification Authority	FE56D842A2A2B903E050971480E7DEA2CD85E427F367150BC449C640C3B0245B	10/13/2015	10/12/2025
/C=MK, O=KIBS AD Skopje, OU=Symantec Trust Network, CN=KibsTrust Certification Authority	7736BC50A3B06348AD5DC3149D2BB53EA1C766381061DAF4A18EE99C48DDD03B	10/13/2015	10/12/2025
/C=DK, O=A.P. Moller - Maersk A/S, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=A.P. Moller - Maersk Certification Authority	CDC453969304BEE6A58D9BABC0AAC4C4CE2156A1C172A2585E546079144E4E58	5/3/2011	5/2/2021
/C=DK, O=A.P. Moller - Maersk A/S, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=A.P. Moller - Maersk Certification Authority	8AA77BB7ADA3B50AFF1DDD9012C5D73B0D9F8722BEDFCEE0B1DC0ACCB0DD1E0E	5/3/2011	5/2/2021
/C=GR, O=ADACOM S.A., OU=Symantec Trust Network, CN=ADACOM Class 2 CA - G4	EC28782BFB997875946D078C3A9C6481D34D5F775D29F0F8CB80010C9331398	12/9/2014	12/8/2024
/C=NL, O=KPN Corporate Market B.V., OU=Symantec Trust Network, CN=KPN Corporate Market Class 2 CA	1AED19D0E4F63058B17FFE2A552975F03FCBDE8367B287171E575868BE14F938	3/16/2012	3/15/2022
/C=US, O=Federal Retirement Thrift Investment Board, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Thrift Savings Plan CA - G2	6FE969B0E32956CDA827A4084F9330C9559BB910291B9A4107C3C470774411D1	6/11/2013	6/10/2023
/C=IT, O=Trust Italia S.p.A., OU=Symantec Trust Network, CN=Trust Italia Class 2 CA - G3	3372E8E80644340E8BA0BACCB2AE757747A6CAB8977947AA14EC8838F2F01D34	10/27/2015	10/26/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Identive Group, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=idOnDemand CA G2	B812A3156BBB9F0AABF8F36BE72A95388936272070C4860DBDD4955F0D59B486	9/5/2013	9/4/2023
/C=US, O=Identive Group, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=idOnDemand SHA-2 CA G2	36CAB8A86139B82476AE824EE4939A92088E6F16C2BD270EE349BF9D5A9E3384	9/5/2013	9/4/2023
/C=US, O=Invesco Ltd, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Invesco Extranet CA	DDEB32691328D2D9D85591053D653975EBEB9E5BDC83DE9A04DFEED08CDE500D	5/19/2010	5/18/2020
/C=US, O=Invesco Ltd, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Invesco Global Cash Management CA	2CDD110A38D21C06E305396F85A1BE3AAE1D8D8F1B81D1E0D74FE845431C1D99	5/19/2010	5/18/2020
/C=SG, O=National University of Singapore, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=National University of Singapore CA	C7AF67FF082E57B203C0E9501C62BDBBC10339CB8BD89E4F91E8827DF826E7DD	9/9/2010	9/8/2020
/C=SG, O=National University of Singapore, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=National University of Singapore CA - G2	438BA9C85C9A8C5506ACD1146ADA068B777A32FA2C78A6D4AB57241174881AB2	9/18/2014	9/17/2024
/C=US, O=National Geospatial-Intelligence Agency, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=NGA CA G2	0BA8FF64F0D4975401EFB89283FA19C86FCB70B4FAC922F16F3CCB7AA71F7365	4/23/2015	4/22/2020
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Persona Not Validated, CN=Symantec Class 1 Individual Subscriber CA - G4	CF47B370761E9CA40096CDB0C34B61429957E410780339A0D005D73E371204E	9/1/2011	8/31/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Persona Not Validated, CN=Symantec Class 1 Individual Subscriber CA - G5	42A5FBCA2D6AA262FF62333AB78699CE1E4BF1CF5F49F806FD324CBE5BB62CF4	10/1/2015	9/30/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 1 Individual Subscriber CA - G6	51E7542B47AD3849D1C363E6D539DA703DC12CD16CE985FE6D792C5DCDF453CB	10/27/2016	10/26/2026
/C=JP, O=VeriSign Japan K.K., OU=Symantec Trust Network, CN=VeriSign Japan Class 1 CA - G5	9CEBC030750F1A1BADCO6C998558AE209DFCCA68A80D38C161A85DC5AF68DD48	7/24/2012	7/23/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CH, O=World Intellectual Property Organization, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 1 Managed PKI Individual Subscriber CA, CN=WIPO CA - G2	FA073D67B4229BD063FEC770E272EF256C196D4B1D720059818826ED02AC7811	9/28/2010	9/27/2020
/C=CH, O=World Intellectual Property Organization, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 1 Managed PKI Individual Subscriber CA, CN=WIPO CA - G2	5C1115A78C98B9B40A232DE8CCA58CDE880DD73835D40EA15F4E3FA6B4E2B286	9/28/2010	9/27/2020
/C=AR, O=Banco Itau Argentina S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Banco Itau Argentina - G2	C951DAECBDC59763C6681825DBED0780C3E8921E1E76E9AAD3146F1B0C18F9B9	1/19/2016	1/18/2021
/C=AR, O=Banco Santander Rio S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Banco Santander Rio - Empleados G2	4100F6070323E58BB5159290C24D3005601F875687665B48EC4DF65E3F1A8AC2	11/19/2015	11/18/2020
/C=AR, O=Banco Santander Rio S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Banco Santander Rio - G2	C7B68879237403950E17F2BE6204834843211E04D3A885632568A77636E5BF3D	8/18/2015	8/17/2020
/C=AR, O=Bolsa de Cereales, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Bolsa de Cereales - G2	54E37620BF05CEAFBB2286EB251F69434C84677B8122299AF2E07750341268E2	8/18/2015	7/25/2022
/C=AR, O=CertiSur S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante CertiSur	C856F854F6FC94EC4D496E6CDAE6C66AA2D8CAFDBF87C928B9898E327B962A3F	4/28/2016	4/27/2021
/C=US, O=Agilent Technologies, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Agilent Public CA G2	6BE4732E5C0FBB61A4F8B2EED0A1C47AB7FCFA559FD5EF3D5250D20E74503A83	4/23/2013	4/22/2023
/C=US, O=Fannie Mae, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Fannie Mae Shared Online CA	D39495B310669DC6BFF57D547C53E3FF9E7B452BB609272C981F514CCA0B146F	12/20/2016	12/19/2026



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=General Electric Company, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=GE SMIME Issuing CA 2.1	68E39EC9E02D54008A7A716DD35A3D2F0A1FD8F8F34DAE235446150C6F48BC7E	7/16/2015	7/15/2025
/C=US, O=General Electric Company, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=GE SMIME Issuing CA 2.1	2D53B8177062E4C7CEA79EEBF62BFA52A5B18BC9B89483597E5714E4E9B52315	7/16/2015	7/15/2025
/C=NL, O=KPN B.V., OU=Symantec Trust Network, CN=KPN Class 2 CA	23729AAD519FB732411BAA541EEA75A64713EF761AFBA1C2C3CF825D29D35909	2/11/2016	2/10/2026
/C=NL, O=KPN Corporate Market B.V., OU=Symantec Trust Network, CN=KPN Corporate Market Class 2 Certification Authority	7782F8635019E02E5B71B274F5778AF4717EBEB162BDC54BD5234774B22969BD	3/16/2012	3/15/2027
/C=MY, O=MSC Trustgate.com Sdn. Bhd., OU=Symantec Trust Network, CN=MSC Trustgate.com Class 2 CA-G3	885BCCECD14002A069F57E861F6919C175E791C2CA605B494DD7960684B3A093	4/4/2017	4/3/2027
/C=MY, O=MSC Trustgate.com Sdn. Bhd., OU=Symantec Trust Network, CN=MSC Trustgate.com Class 2 CA-G3	6A0392DD4B5BAAF82054607FCD6F51C73E726AF444E2400382D75C4FD20C2B3F	4/4/2017	4/3/2027
/C=AU, O=NBN Co Limited, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=NBN Co Limited Public Issuing CA - G2	758F496C9928A3C67E0D50D03D2E2CAAFF733D427E57AB5FEE7D5AC4153C4071	2/10/2015	2/9/2025
/C=ZA, O=Nedbank Limited, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Nedbank Limited Public CA	267D014C81E6D02ED5898306B64D7B5EA91BAF9DB3183CF3BC64C25D2B35CAE6	9/10/2015	9/9/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 2 Signing RSA Intermediate CA	66F7B0147C09F9DA79E63800A96F649DA7E59757F876F08126D07E8FB8542488	1/22/2015	1/21/2030
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Japan Class 2 CA	AB62A0A1DE53BA06E771438E5D0526D3D8B0235330C65AA4BF80D855908E2DC4	4/15/2014	4/14/2024
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Japan Class 2 CA	8C82B76FCA9CED6A0C6A7B3141CCB585EC941921EC0B33D956CB29071851C7D9	4/15/2014	4/14/2024
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Japan Class 2 Managed PKI Individual Subscriber CA	0B525D378D857FF1807CFD331BE1592142291E98094C6ADCF942B58400500BA	12/18/2014	12/17/2019



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Japan Class 2 Managed PKI Individual Subscriber CA	D44A188BF66A9B681C3125DA7F1D1C05011F265552CED99A10F9F67FAE4EB12D	12/18/2014	12/17/2019
/C=US, O=Veritas Technologies LLC, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Veritas Technologies LLC Class 2 Employee CA	1AB7DCA7F8B28027F2B71FBBA8CB87162FE112C47AC4D09638C8EA01915A177D	9/10/2015	9/9/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 2 Individual Signing RSA CA	8B9218D93DB5377CFE7D5923E7016D379D446F0019C47B9B4EA737AEDF86A558	1/22/2015	1/20/2030
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 2 Individual Signing RSA CA	4E74475D2C33E1DD4732306B79712B5EE6997C2DBDF596CC8BD1362163DAA4F4	1/22/2015	1/20/2035
/C=JP, O=Astellas Pharma Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Astellas Global SMIME CA - G2	B2ED9A6D9B6C48DD1494EE0CD4802179F6208C7F75894DE2607E16573BE464AE	4/15/2014	10/22/2022
/C=JP, O=Japan Exchange Group, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Corporate CA - G3	75DF381EC1FDBD3F5F662A3CFCF2F7A35C5F58CFB26AF977D9B8ABB82DCEE208	7/2/2015	7/1/2020
/C=JP, O=DAIICHI SANKYO COMPANY, LIMITED, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=DAIICHI SANKYO COMPANY Public CA - G2	68361FD0131D79AC91C9939F3E5479CA32E2BE419A7CF519E026F992234509EE	4/15/2014	8/27/2022
/C=JP, O=The Financial Futures Association of Japan, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=FFAJ Public CA - G2	FE27C2688969B46B83A585AAF53E009AD0D75B4DF64EAB9C085B8F3EBC8EF252	2/16/2016	2/15/2021
, O=NTT DOCOMO, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.co.jp/rpa(c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=NTT DOCOMO Group CA - G2	A75939F270BA6F23ECEE83C70A3755EB46449FE2707FF01D626FB745158F9413	4/15/2014	8/15/2021
/C=JP, O=Symantec Japan, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Class2 Individual Certificate Service CA	9268449725E5DE18F8A76548BBEC1F8C845B17387590E1855BFFCA5B02CF6C28	1/22/2015	4/13/2024
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 1 Individual Subscriber CA - G7	9B502B941AF5713ACCBAB4F77008F7A1A3C4A71E3BABDB07006AE6729EC5D954	10/27/2016	10/26/2026



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Japan Class 1 CA	D6A3574E4C2AA2D15397D5A9BEFCF8380910CC0148BAB86A0B9FF40E2659BCE8	4/15/2014	4/14/2024
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Japan Class 1 CA	5077797A1815E48287385898618908BD7ED182D03725F03B02F13BFFD6652F6A	4/15/2014	4/14/2024
/C=JP, O=VeriSign Japan K.K., OU=Symantec Trust Network, CN=VeriSign Japan Class 1 CA - G5	02E9E323CD6F98374079523514C3783AC1003AB80ABCBA0EE2258C418EAC44CC	7/24/2012	7/23/2022
/C=JP, O=VeriSign Japan K.K., OU=Symantec Trust Network, CN=VeriSign Japan Class 1 CA - G5	41AA85FB17777092F6F704ED1C17BF138A643E43BA8B26044A67D06333C0066C	7/24/2012	7/23/2022
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 2 Signing ECC Intermediate CA	FD02510CEC145E5266860482DD4C328609C1A788AF3FCB10A09678DE30F46B95	1/22/2015	1/21/2030
/C=AU, O=Attorney Generals Department, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Attorney Generals Department Public CA	CEF711147D8B0A1DC5200B8383BED23C1D294F2F89EBFE179D2501EA5E24AB8A	7/21/2015	7/20/2025
/C=JP, O=Bank Of Japan, OU=Symantec Trust Network, OU=Class 1 Managed PKI Individual Subscriber CA, CN=Gaitame CA - G3	58F0778CB9969B09B24BDC96A03091B0AA98BAFF9C23F82B78B061035D85A65F	9/6/2012	7/22/2022
/C=JP, O=Bank Of Japan, OU=Symantec Trust Network, OU=Class 1 Managed PKI Individual Subscriber CA, CN=Gaitame CA - G3	D20118563ACC4AB2D1DF217E3974D00877F71D2B74959F43FED33C45EBF5FB31	9/6/2012	7/22/2022
CN=Sun Microsystems Inc Root CA; OU=VeriSign Trust Network; O=Sun Microsystems Inc	356A86A3A0B9FFC707EEF818CEC7FD9C148FA4A92C137B1BE9557CFD2BD0B8B5	6/2/2005	6/1/2020
/C=US, O=Adobe Systems Incorporated, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Enterprise Services CA - G2	EA78912AE2E15549DDA02D74CC05A18DADC218DD05C13F045B26433D23732F33	10/16/2012	10/15/2022
/C=CL, O=E-Sign S.A., OU=Symantec Trust Network, CN=E-Sign C2 Firma Electronica Avanzada Consumer Individual CA G2/emailAddress=e-sign@e-sign.cl	BE4D872225F013B6E17595AA29F3C0B9F85C403E6C9B483550B069E4A2F47BFE	11/15/2012	11/14/2022
/C=DE, O=Heuer und Partner - Rechtsanw\xC3\xA4lte mbB, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Fedderson Heuer Public CA	A402AA0AE53F484A07BF4E35B55D1274127650AD6145E243B719330B92B2A10A	1/5/2016	1/4/2026



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=AU, O=Fuji Xerox Businessforce Pty. Limited, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Fuji Xerox Businessforce CA - G2	92587CDC27A5C019B413AA94D21944AC8562E8DAA8C78AEA17C623D1B77714DE	6/4/2015	6/3/2025
/C=US, O=United Launch Alliance, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=ULA CA - G2	4A84F84E880F3D96C3BFBA2AED67B0EE300FBEE0A4A90D736EF738A089FD6B17	4/25/2017	4/24/2027
/C=US, O=University of Houston, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=University of Houston CA - G2	69FF03E05230DFD61E4D6F6DD6662808C65A85CBE8FEA5E43FBF387128E8B4F4	6/18/2015	6/17/2025
/C=US, O=University of Houston, OU=Symantec Trust Network, CN=University of Houston Intermediate CA	8AD8E95B7B83F0BC772BEB75FFE0C51F65C77B63B0821ADC13CDC5AC9C27267	2/7/2012	2/6/2022
/C=US, O=United Services Automobile Association, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=USAA Digital ID CA	B96663787F915266F4A0F4B63A28124C8F0D8E41A68CEF6A7E05A7F550E9DA4E	11/4/2009	11/3/2019
/C=US, O=United Services Automobile Association, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=USAA Digital ID CA	8EFECFB4D59F1A7E46751F1A3E5539CB99DB3DF1B68CBC2F200EDC303816877D	11/4/2009	11/3/2019
/C=US, O=Westinghouse Electric Company LLC, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Westinghouse Access Programs CA	66E31B54C25AC738B01C6B1E08EA74EA5A9BD19DCD25851F207FD08FB95EC6A3	8/19/2010	8/18/2020
/C=US, O=ARINC Incorporated, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=ARINC Public CA - G2	8A8D4CA774F54964578B371ABD8B055937E8B7A0CDB659A3150EB6488930E661	12/2/2010	12/1/2020
/C=AU, O=ASCIANO EXECUTIVE SERVICES PTY LTD, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Asciano CA	5FC7C6E19AF873E0941D7C6AB344D3E6E4F73DD67693FADF2A9C6438AC1A1A	11/3/2015	11/2/2025
/C=US, O=ATT Services Inc, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=ATT Services Inc Email Certificates CA - G2	AE7A31EB7007A6F64237387343C083D11950F1D6D546EDDAD8B5AA3DAC30B70C	3/3/2016	3/2/2026



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Avaya, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, OU=Avaya IT, CN=Avaya Client Services Users CA	7F56D7819A1A39B416669EAC8B65153C81C816F0162D70FBCD6077CBD1B98554	4/9/2015	4/8/2020
/C=CL, O=E-Sign S.A., OU=Symantec Trust Network, CN=E-Sign C2 Firma Electronica Avanzada Consumer Individual CA G2/emailAddress=e-sign@e-sign.cl	52A5E31287A0F89159F7BB4BD3A6A270DEE583A77261F6D00DD92D8C9424E800	11/15/2012	11/14/2022
/C=CL, O=E-Sign S.A., OU=VeriSign Trust Network, CN=E-Sign S.A. Class 2 CA - G2	F1980F99B8260267F4B7295CEAF9289AEC528999768B587A2C4B049AD1625B7D	12/21/2009	12/20/2019
/C=CL, O=E-Sign S.A., OU=VeriSign Trust Network, CN=E-Sign S.A. Class 2 CA - G2	967F3B9A49DF88BA8A0F2BB42F28B05CE27D4999E31451EA36A876934F6F6815	12/21/2009	12/20/2019
/C=CL, O=E-Sign S.A., OU=Symantec Trust Network, CN=E-Sign SC Class 2 Consumer Individual Subscriber CA - G2/emailAddress=e-sign@e-sign.cl	C34A5709122DC9EAF3021B979D4843FBB41C5B24326BECE84D2F686675A1B6EC	11/15/2012	11/14/2022
/C=CL, O=E-Sign S.A., OU=Symantec Trust Network, CN=E-Sign SC Class 2 Consumer Individual Subscriber CA - G2/emailAddress=e-sign@e-sign.cl	72F0E3B1B8CD1A86BDF7D022DA4131C302293CAE820B28A597BC84D041B8971D	11/15/2012	11/14/2022
/C=US, O=SunGard Brokerage and Securities Services LLC, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=SunGard Public CA G2	CC0F030F8302FFE2BCF5C784A3FD12D72422B8D65732A6DA0518B4CA4DEF3E83	3/5/2015	3/4/2020
/C=AU, O=Sydney Trains, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Sydney Trains CA	BD80A335B5EBB7279960E0B5802257C256062895F33D3DCBC0B7CB7199DFA75F	11/24/2015	11/23/2025
/C=US, O=Bartlett Regional Hospital, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Bartlett Regional Hospital UA PKI CA	A604BB5F3A785AF64ABE2831D70AE0A69BC9754BB33ABEA3C1EDA94036068BAF	11/4/2009	11/3/2019
/C=US, O=Bartlett Regional Hospital, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Bartlett Regional Hospital UA PKI CA	4E1952C94E6D3DFE05871A4571C1812CE04CEC404988ACB9F4EC435994B4BF44	11/4/2009	11/3/2019
/C=US, O=QTC Management Inc, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=QTC Management Inc CA - G2	765A29596F5F74EEA3BDAC0670E7DF42BFDB708765AD4F892FEEF714C214E7AE	4/26/2016	4/25/2021



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=DE, O=RWE Dea AG, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=RWE Dea AG CA	7FC6CAB96C16C850F457DCBBFB893539EA2664395F2409693789F41BFD64714E	12/11/2014	12/10/2024
/C=US, O=Bridgewater Associates, LP., OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Bridgewater Associates CA	D8E79EBED997B764E6D0DF624F2DBB4EFF2A1B6049C6F1A1A1E88263C43DB221	10/12/2010	10/11/2020
/C=US, O=Brown Brothers Harriman & Co., OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Brown Brothers Harriman & Co. CA - G2	CFBF988B04B41842824B287999092EB3AB6CD8DFCEB49BD3D5D48345A5B4818B	2/8/2011	2/7/2021
/C=US, O=Brown Brothers Harriman & Co., OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Brown Brothers Harriman & Co. CA - G2	7082427CD46834AEF6655ABADD898DE01F9E1A988E753401EF81A0A37410AB78	2/8/2011	2/7/2021
/C=US, O=Yaana Technologies, LLC, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Yaana	7C73C0E9D52BC63E713110DA4705C7CECCB4D49F1F5FED0B6D1A707E63A4E31C	1/6/2015	1/5/2025
/C=KR, O=KECA, Inc., OU=Symantec Trust Network, CN=CrossCert Class 2 CA - G3	25A0B8C9773E4460E19971EF781BE81BDB7704ED5E486B267866A3AB6C2C0D44	6/4/2015	6/3/2025
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Test EDC CA	889957D00561EF99867402A901359C772029AD43CCBE46B82BF2E7193D385411	6/19/2012	6/18/2022
/C=US, O=Spirit AeroSystems, Inc., OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Spirit AeroSystems CA - G2	4D765D117CB1B1BB26A63682ADB51326AE5006E788F90FF822F1FDA96BCEA2C7	2/23/2010	2/22/2020
/C=US, O=Brown Brothers Harriman & Co., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Brown Brothers Harriman G3 CA	B3FAEBD9495096D2C5B26CE20D7DE785DFF83CEA63BF9BC6605BC08B89996224	6/10/2014	6/9/2024
/C=GB, O=British Telecommunications plc, OU=VeriSign Trust Network, CN=BT Class 2 CA - G2	A0BD4E39E6FE415F8B1ABA4773C3EA60905ED61F8EA27875CC03E9A94D441CB6	6/13/2008	6/12/2023



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=GB, O=British Telecommunications plc, OU=Symantec Trust Network, CN=BT Class 2 CA - G3	4FD95AFC505C1CCB5ADA4BA00B049456FC8F7BFB73AD0C1A9B61F2F8E8EE4279	12/16/2014	12/15/2024
/C=PE, O=Cosapi Data S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Cosapi Data Public CA - G2	AFCD78EBA95C0801A2FEBAE6F695D469AF346215C5A3E554F161D23C4BB40F91	5/12/2016	5/11/2026
/C=US, O=General Electric Company, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=GE Enterprise SMIME CA 2.1	5C854634778E6DDC076ABAA36E5B8F4F45140578BD3A45AF09B7F23C34F032AD	6/16/2015	6/15/2025
/C=CA, O=Goldcorp Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Goldcorp Class 2 Certificate Authority	B97867E65B805D78153D5349389C7E54695A45DDB2A4A015CAD8069C63FCF669	9/15/2011	12/31/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 Employee CA - G3	2F320624CC3EBC01796080BEDEB5B2ED916F02A0AE5F537EDC4766BC455659DD	1/6/2015	1/5/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 MPKI Individual Subscriber CA - G3	A67582B9277224D9801027217156D283136B29FD2F33031781F604EB807970D7	11/15/2016	11/14/2026
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 MPKI Individual Subscriber CA - G3	E79BACE9FF58B8EE6D3BD94AE8ADB13DF42DFD86B3701BFF8EDFF5C4E84BAE91	11/15/2016	11/14/2026
/C=US, O=SRI International, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=SRI International CA - G2	5B6A31D14ED98E8CF23A115BC45E87B8ECD82A937A29DBE0EFBA3C8133494B74	11/15/2012	11/14/2022
/C=US, O=eGlobalCustody, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=eGlobalCustody G3 CA	2DE8DD6BE750435D703D60CF87D203AF12D1E0F2960691888F47546EED9087D6	6/10/2014	6/9/2024
/C=SE, O=Volvo Car Corporation AB, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Volvo Car Corporation CA	00712AC5314A938E0D6188AE8D4C3566AE6C6AE9EB006FBAA5DE4239AF4427A5	3/29/2011	3/28/2021
/C=US, O=Voya Financial, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Voya Public Issuing CA1	63B7404D57FE17FD7E32DAC98D934EC98AB69F64D0338987193657A64364BE60	3/4/2016	3/3/2026



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CL, O=E-Sign S.A., OU=VeriSign Trust Network, OU=Terms of use at https://www.e-sign.cl/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Admin - AR Estado de Chile CA	5635665EB67A4164CAA9E452C2F48423CBEFE06507559EBAA369A05158597F1A	12/21/2009	12/19/2019
/C=CL, O=E-Sign S.A., OU=VeriSign Trust Network, OU=Terms of use at https://www.e-sign.cl/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Admin - AR Estado de Chile CA	7B4FCFEAC70BD4AFBFA2D83035DC63EDA128FC099B3DCAFCF76A66B0B68EC6E	12/21/2009	12/19/2019
/C=CL, O=E-Sign S.A., OU=VeriSign Trust Network, OU=Terms of use at https://www.e-sign.cl/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=AR Estado de Chile CA/emailAddress=e-sign@e-sign.cl	7B82A65F1A003D333C48E566A97D73923C186762C07AE976AB456EEDEF284B0B	12/21/2009	12/19/2019
/C=CA, O=GREEN SHIELD CANADA, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=GREEN SHIELD CANADA CA	6A7146319034A1F380E6B32A8FAC0069EB1D332477F4EAD33762F8A614A552F2	12/2/2010	12/1/2020
/C=US, O=Hewlett Packard Enterprise Company, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Hewlett Packard Enterprise Collaboration CA	2EAA4251B3FFDD3AE904833A08B7FE1E7717C17082455C07F6F6DA902CBAC5D0	3/17/2015	3/16/2025
/C=US, O=Honeywell International Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Honeywell International CA G2	19550DF2A43B367AFA194C34F3C3CBF8678E346691F895F429871EEADA53F7F8	6/7/2012	6/6/2022
/C=GR, O=ALPHA BANK, OU=Symantec Trust Network, CN=ALPHA BANK CA - G2	D4F4E97198211E5D9E80284EE4DFA1CEBF4DFCABFDD3265FCF3D642512D4FCC7	7/12/2016	12/7/2024
/C=CL, O=E-Sign S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=E-Sign Firma Electronica Avanzada para Estado de Chile CA/emailAddress=e-sign@e-sign.cl	5DEDD29F82C4BB95F2EE6CB7247E7E6C5DDDF6F8A342C40A98EF14F7DE077A5CF	5/1/2012	12/19/2019
/C=US, O=Honeywell International Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Honeywell International Co-branded CA	7C932E8709835BEC74AAB6F02E958DF70995B3FED5FE4C375D66B1228555D8ED	12/5/2012	12/4/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Honeywell International Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Honeywell International Co-branded QA CA	87C0BAE275BF11F25AE3290B3E810D97E8297F276C576CDAA9AEB5FAEFC4CD22	2/14/2013	2/13/2023
/C=US, O=Oracle Corporation, OU=VeriSign Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=IPsec CA	8CDCEB62473FE6AEA3FA7CE065BFB092D45233563C33AB16CD9985B7A0A14A07E	2/8/2011	2/7/2021
/C=US, O=Oracle Corporation, OU=VeriSign Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Object Signing CA	FD70A50412710BB79FB42BD39785DC4780ED732A158296251A6DAFBC0602698	8/11/2011	2/6/2021
/C=DK, O=Maersk Line A/S, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Maersk Line Certification Authority	0059C30A64B18C372D316EB373C4D687091ED202C4499AB8C1D5D3D0F12F1689	9/22/2011	9/21/2021
/C=BE, O=Safmarine, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Safmarine Certification Authority	4C3F6F5576A934FC5976583CC4C3039B00A8F91011B6104DF1D7EE48C282F94B	9/22/2011	9/21/2021
/C=JP, O=Symantec Japan, Inc., OU=Symantec Trust Network, OU=Class 1 Managed PKI Individual Subscriber CA, CN=Application Service CA	2B3188332031E548FE424A7A3ABB47701FA089D9D0EEAE35585CA72974BDA69C	4/28/2015	4/27/2022
/C=JP, O=KYOCERA COMMUNICATION SYSTEMS Co.,Ltd., OU=Symantec Trust Network, OU=Class 1 Managed PKI Individual Subscriber CA, CN=DATACENTER CA - G2	EA70CA9465E25593BAB909A9DBF8F095C0B20BFBB54F1D185D464CCC8A431F4B	4/15/2014	6/6/2022
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 2 Individual Signing ECC CA	109AEA4F367823989B6C3638A56933ADC682EEBB2F655A16E6363263B4A729DB	1/22/2015	1/20/2030
/C=NL, O=KPN B.V., OU=Symantec Trust Network, CN=KPN Class 2 CA	CABB66C975781962D732B9312EF3908CA3ED6F5CBB76D6322E5EA2B47836F4D3	2/11/2016	2/10/2026
/C=GB, O=VocaLink, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=IT Security G3	D9B3BAC62CDA54446DBAD249D9A19EBB8DEA89A0AC1AD27DE99CD34E77376419	2/17/2015	2/16/2020
/C=US, O=SecurityMetrics, OU=www.securitymetrics.com, CN=SecurityMetrics DigiCert EV CA	6B2328E7FFF598B2ADF90B7F3EA42B45FA606D78E2B117B7D60E99E828CF7565	10/30/2012	10/30/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=SecurityMetrics, OU=www.securitymetrics.com, CN=SecurityMetrics DigiCert CA	F32DEAF22CE724661F53D5287311AFF2541EB38ECAFA9DD877B94023E3A11B1F	10/30/2012	10/30/2022
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Extended Validation CA	1A8D790AF9B2B34D7DD6AF61B5AA4CF1380B86095CBAC2BCAB35BD566D0180C3	4/27/2018	4/27/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro Extended Validation CA	3883E6DE4917A46B594ECC2D2AC6A95D43E7EAA8E089A91F9BC104FF16DF8DE6	4/27/2018	4/27/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro Extended Validation ECC CA	C3804DE51E8C17052220AE1CAD3D383E54D5B7DC28843C42F0DBD9913C1E8658	4/27/2018	4/27/2028
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia ECC EV TLS Pro CA	2DAAC6FDFAC16C548C53FF1198254D7E937761D22A1E7CC5C1A9462E971461F5	4/27/2018	4/27/2028
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia EV TLS Pro CA	4AFFE4FEF39464D1788C660AF591D5E601B261C4811DF0A3DD9D61CAFE8E5ED8	4/27/2018	4/27/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro CA	BA6A0C1170E1C7323860749B5E7B0ED365975D8FC90740B15D70F843A2394942	4/27/2018	4/27/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro ECC CA	A206644F57AFD10B94169498858981C16D633858CE0C88B57CF14FA2A92AACFD	4/27/2018	4/27/2028
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia ECC OV TLS Pro CA	F1CACA6AB2350A7668C13E41960908681DAFCC7E368DCB8D47FEFCF9631390481	4/27/2018	4/27/2028
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia OV TLS Pro CA	33E8A4ED48930760CE1AD7A2D44F079B22F660052753976109E6FC74752552BD	4/27/2018	4/27/2028
/C=CN, O=TrustAsia Technologies, Inc., OU=www.trustasia.com, CN=TrustAsia Secure Email CA	047217772051D292238F3355F5C5435E9B84364CCD143FC49F9C31CD605439F0	4/27/2018	4/27/2028
/C=CN, O=TrustAsia Technologies, Inc., OU=www.trustasia.com, CN=TrustAsia Secure Enterprise Email CA	3D774B65EE95FD6EFD1C8732B57E607C9BEE423C36E46F6E1CC8CA1F0AE62E23	4/27/2018	4/27/2028
/C=CH, O=World Intellectual Property Organization, OU=DigiCert Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=WIPO CA - G3	641658371E97E16332C051D9AFD1321F770C2012033D63360A6A96739DC9C357	5/3/2018	5/2/2023
/C=US, O=APX Inc, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=APX Public CA	8B1C10711C007BE2ABF9BF6C79CE5EBD5F8EAC36D5037228237AEFB236BF2A91	4/4/2014	4/3/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=GB, O=British Telecommunications plc, OU=Symantec Trust Network, CN=BT Class 2 CA - G3	AA257A6CE4A1EB7F6A508B5037D81DE2782C8D8AEA0127DE1E31150218BEDA75	12/16/2014	12/15/2024
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site CA	B26EB310F8FAF0EF5B0D0B71AA65EC050FA3ADE29134FB438AB6440288FA6E67	5/17/2018	5/17/2030
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Extended Validation CG CA	38FDF62507CEDEE16B1455E96BD23D5C6F6C5654D68C7E3B27238D2C73744A86	9/24/2018	12/14/2021
/C=US, O=Wi-Fi Alliance, CN=WFA Hotspot 2.0 Intermediate CA	AE0D0BA5AC3EEB823F5CA77331A99D7FDB2EC231D7CE47B7C208E3830E08A891	12/9/2013	12/9/2023
/C=US, O=Wi-Fi Alliance, CN=WFA Hotspot 2.0 Intermediate CA	FEA342D00D1A355CF51569EF7E0F617ABB0F22D6D1E73DAA11DCB4D407975543	11/25/2013	11/25/2023
/C=US, O=Abbott Laboratories Inc., CN=Abbott Laboratories Secure Code Signing CA	5F1A82C09CBAE239D4E3F0704C970755547E53E3CF290F9479FE7E98665FEF0F	6/7/2016	6/7/2026
/C=IT, O=Postecom S.p.A., OU=Servizi di Certificazione, CN=Postecom CS5	61A01EA7E8D8016CCEF92FF13E3DBE082E0779C4CB64BF6F0C316258D6210F5C	4/26/2016	4/26/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Assured ID Timestamping CA	CA8D0F4736454AECBEC5DEEC80998C9EBF41D06C728F3C76CCA24151BC62D463	1/7/2016	1/7/2031
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Assured ID Code Signing CA	51044706BD237B91B89B781337E6D62656C69F0FCFFBE8E43741367948127862	10/22/2013	10/22/2028
/C=US, O=.NET Foundation, CN=.NET Foundation Projects Code Signing CA	024F162B1D09F6A0868C38B4C8B4257C1EEA6C5A31589416D520CF1624917EB3	4/27/2018	4/27/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust Code Signing CA - G2	8D7C499D7FE9EEEC05D9EB42F03EFE402807919803E8E6CD6C1F2BF5EF6A7D8F	7/18/2018	7/18/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA1 Assured ID Code Signing CA - G1	82AD46ECDE882413106B1C83EF65DC02DB0C65B3870F6F744B62283DF6FA1D56	7/18/2018	7/18/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Assured ID Code Signing CA - G3	9CDFD82596D1BAC9E44D3E491E2C07D8DCC920419915FD6F361CF70A1E433B10	7/18/2018	7/18/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust Code Signing CA	78A95ED82180A1C33A9F34EDB75E6774FD4BB73AA2C7C4121453DDB627DB1BAF	7/18/2018	7/18/2028



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID Code Signing CA-1	E57208CBFD286CE9718267E44491CB5B435C95BB09DC9720F5B64B25AC7974CD	2/10/2011	2/10/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Assured ID Code Signing CA - G2	2A9D0D018BB49FDEA14D6C16E9BA0A942F2833B9AADFFBAD1306E301B495CFB7	7/18/2018	7/18/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance Code Signing CA-1	BEAF46D0FF62645F56BE11830DDEF663379619F337E85713491C83AE179481D	2/10/2011	2/10/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert EV Code Signing CA (SHA2) G2	EDCD88B6BD77FC8A2680E2ECB8FFBAC45898DFA0FDE983425E0F1BEB058C04B6	7/18/2018	7/18/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert EV Code Signing CA (SHA2) G3	2B0A972DC0DAE218E9477396D3D82DEB82DE118867DD19E1D2FFFD958CBB6DA9	7/18/2018	7/18/2028
/C=JP, O=DigiCert Japan G.K., OU=www.digicert.co.jp, CN=DigiCert Secure Site Japan CA	AD14A68BEC949E84F6063419D63465D137C2ADD3E3A85E00E9E3EE82E5B4018F	11/20/2018	11/20/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Secure Site Korea CA	6555D661D37F249A23C2D5F83479E78051B6DE76A147B506D6BEA2882B4D066	11/20/2018	11/20/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte Partner CA	635AF6889F49060FE0E7BABC0F23314FB118F3B18243DD17F47D8647A69684B1	11/20/2018	11/20/2028
/C=US, O=Riverbed Technology, Inc., CN=Riverbed Certificate Issuer	BB39497035ED9583D286CDE70FB644EB95806598092B1E8D8F11BC035D7A476A	11/20/2018	11/20/2028
/C=US, O=Riverbed Technology, Inc., CN=RVBD Certificate Issuer	72563CC98ADA2C5D2126542ACC908154AEB1F9D6F7E83A55C09744C7D7ADDDBA	11/20/2018	11/20/2028
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert TLS ICA GeoTrust Global	516D856D0353BA69FFEB9C1EBA035D780844857006ECE99C051EC19C10C36CD5	1/22/2019	5/20/2022
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Secure Site ECC CA-1	99935E20424535EC016F337B2BE68F1349DE66CCE4CA5AB367F8F3738215B833	2/15/2019	2/15/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Secure Site Korea ECC CA	EF9138993654DF92D2FB5860E28DE8818A9F49DB56ECB689A67A7FC2D5881DD2	3/25/2019	3/25/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Secure Site Korea EV CA	C022D5CEAA275F2A6268FA79AC35653B3A730DEFA41F9CD8817D6D159BD33097	3/25/2019	3/25/2029



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Secure Site Korea EV ECC CA	B0505BF2947F0807ABAE2D42C19343EAF08D1DDE3F8745B0589A57362792E470	3/25/2019	3/25/2029
/C=US, O=Hewlett Packard Enterprise Company, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Hewlett Packard Enterprise Collaboration CA G21	B6E4C8D9D575A61404DE568E27BD6F3048D7B0F803065E2F6526260BDCA3D211	4/1/2019	4/1/2029
/C=US, O=Hewlett Packard Enterprise Company, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Hewlett Packard Enterprise Collaboration CA G22	AB480D8F7D720A161C9671843EADAEAAAABC5447EFD9EF8F3470874D927CCB861	4/1/2019	4/1/2029
CN=DigiCert SHA1 Code Signing ICA VRSN PCA3-G1; OU=www.digicert.com; O=DigiCert, Inc.; C=US	F6A54A76C4A0B529ADC8D457B503A7B3ADF8B0AEAAE8EE72D0FEFD2372E8199B	5/9/2019	8/1/2028
/C=DE, O=Henkel AG & Co. KGaA, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Henkel Secure E-mail CA	7D89BA7764CFF6FE2EE9AD44838D56C5D57F3DD736F96068DE9B0A1710FB3D47	5/29/2019	5/29/2024
/C=US, O=DigiCert, Inc., CN=DigiCert PKI Platform C2 Shared SMIME Individual Subscriber CA	55F3A359F0A26D72FF244C2EE396FD51BC2400EA250C91EFC355E2F8103C9939	6/4/2019	6/4/2029
/C=US, O=DigiCert, Inc., CN=DigiCert PKI Platform Class 3 Shared SMIME Organization CA	7F755DC2B9EE99EB02D71CB1805059AAABB5EB3E8558DCA8C09A1D0DE258D767	5/29/2019	5/29/2029
/C=US, O=DigiCert Inc, OU=DigiCert Organizational E-Mail Certificate, CN=DigiCert SHA2 Assured ID CA - G1	87BBAD4C915D56D2E74F044D7220B957D4A853D9A1818B52F3625417DB655E3A	5/17/2019	5/17/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert CN RSA EV CA G1	B131905CC7221270613B529AC9E786AA230ABFE154A0ACBE452BC350BD1EFE4B	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Extended Validation CA G2	B6EB4F8AD197073FE5203F8FCEBFD5C509CDE9CA3AA65EC59D203831424192D4	6/20/2019	6/20/2029
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia ECC EV TLS Pro CA G2	C0DD060FF8CE556F35683D564E0E66B2907178808693F83F3AA642326BF6D0C8	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro Extended Validation ECC CA G2	70DC86F9F7750B74B1DEC8CD352EC25837C36E640F7148E08464EF5901E5A589	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust EV CN RSA G1	C87CE03AFFB5DE6319C219971F2ED2D8F6F5389E2D53B2DD2C562A5C9827FC0	6/20/2019	6/20/2029



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia EV TLS Pro CA G2	0D51B6CDCF34A9F22144787F3FD920DC8800FB60490BFC8D289A1953E0FBDA4D	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte CN RSA EV CA G1	ADA188F830C313F6046488EC341F1ED4AF793C6DC28C58600445DFBEB4163746	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro Extended Validation CA G2	40D69920EA05456FA0117DE608B8A8013790B542097E343EC1CBCE2DFB9713B0	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert CN RSA CA G1	03CE9BC71B91FDB7CB3C5235CAE0701CB486BBD628D4AADE5841FC5F0AA37A46	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site CA G2	F614AE2B101484F15F66F4DDA56EE6EB422728F179D94399EDE19AC1D85A8BD3	6/20/2019	6/20/2029
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia OV TLS Pro CA G2	DBDFA91ACC4DB8AD83FCC7978E35D62F6E32E55108273C8EC998E3133580D664	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro CA G2	02FED3BA2E6A7843A318A981BC847061FD282D9E8847FFA9F54D785B6B81D6F3	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte CN RSA CA G1	7867AAE905EB8D55635FFEBBF8CF05A63B9B390665DE2367AC1073E92913728	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust CN RSA CA G1	23DDF08B22373D86158EB9C99FDB5366B19804560531372DD20DCE3FB766F56C	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro ECC CA G2	DA3BE2B6A6D9715C1295A42BE526E0001D10E5D7540F06E7631B34E644934848	6/20/2019	6/20/2029
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia ECC OV TLS Pro CA G2	70357B9E56D3FB3C6C009C38C7181454C462908DFBCE6D54D60DFE1E506E14FD	6/20/2019	6/20/2029
/C=US, O=Alcon Vision, LLC, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Alcon Public Online CA	4F8137882B6D7B7F1ABBCFDED0082F0E5CDEC870BA3923EF84D08DDE42E43749	7/2/2019	7/2/2029
/C=US, O=Solenis LLC, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Solenis Public Online CA	0F3284B306AC422986C8F560EA46226FD8425519A6F61AA9C55AB508274B82D2	7/2/2019	7/2/2029
/C=SA, O=Saudi Telecom Company, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Saudi Telecom Company Email CA	E33076FFB5267DF419F72DE06C46E2C6CA44FF4383B5316CF7D6E628E98D9BFD	7/2/2019	7/2/2029



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=ZA, O=Nedbank Limited, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Nedbank Limited Public CA	4946337D3954305F36770EE8317F67CFE9F3943576828BF55C1538476B4A20D8	7/2/2019	5/12/2025
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Encryption Everywhere ECC DV TLS CA	1E4FC34D26E0793D559E322FE111F1E19A9D2E34BC25D3C427B032A48D2C5B6A	7/23/2019	7/23/2029
/C=US, O=Netflix, Inc., CN=Netflix Public SHA2 RSA CA 1	227AC6E5AEBB0A356D4C87317CC8CD683D1C4C67129CEE2AA394AD38C0725C93	8/1/2019	7/31/2029
/C=ZA, O=Absa Group Limited, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Absa Group Limited Public CA	8FB88641F4E231CE81436375138A5B36D2A06A3CC2A49E5B1F4699981BE1E451	8/5/2019	8/5/2029
/C=IL, O=ITsMine LTD, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=ITsMine Document Signing CA	965BD258388DDDD4EA7BAAFB7754DF49F896CF02E15BE0925DE33B0038E9925F	8/5/2019	8/5/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Global Client CA G2	A449DBAB6D4C035FAAFD9D045891FE98ABD73D286268A8A83F854145551692E3	9/23/2019	9/23/2034
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Global Client CA G3	BA361260FF1D46031686305E082DE836D4A320466E0DE9E013F00CEDDD62317	9/23/2019	9/23/2034
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID Client CA G2	9E12D6E13DDD53A890A2B3A37423AE5E457731A7B34A153992F1EF1F5489A45E	9/23/2019	9/23/2034
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID Client CA G3	14FAFCA84BDB8B0EC32719272BE730FE18D6FC29301C5CF789400596EC429AFE	9/23/2019	9/23/2034
/C=US, O=FedEx Corporation, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=FedEx Public Online CA	AA942E512B4287D5BEEC85A1C5A81C2DDD136B3CC7065B6830F0685110530412	9/23/2019	9/23/2029
/C=US, O=Symantec Corporation, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Symantec Class 2 Employee CA - G4	1D082DDDED16D4E4E49163893D9244978EBC54228F4B811278B55AB299C4C48E	9/23/2019	9/23/2029
/C=US, O=International Business Machines Corporation, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=IBM Certification Authority G4	60F53E603B0EFA71C6CC34B6E87C1145F70DC942C89F71763D90FE18E7AC589E	9/23/2019	9/23/2029
/C=DE, O=Duerr IT Service GmbH, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Duerr Group Global IT CA	B48CF36ABB49825C3B7C407866958C24085C938C60C7C1A48A18D00859CA348C	9/23/2019	9/23/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Common Securitization Solutions LLC, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=CSS Public Issuing CA	00BFE5177DA40E040506A04417FB4B8064816B5D875852A07FC3A36700091080	10/31/2019	10/31/2029
/C=SA, O=Saudi Enaya Cooperative Insurance Company, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Saudi Enaya Public Issuing CA	8F76367A7ADAE4642258E6586A2A9642A00F3ECBB1EB725F18B5E7AD3D95AED9	10/31/2019	10/31/2024
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert Extended Validation CA-3 G3	DA7E5778F62F87655B8FD24A89E651E57329DC9C0765A71158CE56443CA44E95	11/12/2019	11/12/2029
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert Global CA-3 G2	9B2DD4FBEE941F6510F716C04969B36428892765461701EF47D41B3289475D50	11/12/2019	11/12/2029
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert SHA2 Extended Validation Server CA-3	085A0714524DF7AE9919A6F597884439E12A533E61552D29D6A18C35096FC548	11/12/2019	11/12/2029
/C=DE, O=OSRAM Continental GmbH, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=OSRAM Continental Secure Email CA	D87A91DAC26D64E3659507119E80B11BE37ADA87A8D6C01E4E175DBB32B1A0D3	11/26/2019	11/26/2029
/C=US, O=Avaya Inc, OU=Avaya IT, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Avaya Client Services Users CA 2	1FFA0D1F55CE4A0507E8C38E8B557B88CBDD690D903D996B1F7850D81D6A4A93	11/26/2019	11/26/2029
/C=GB, O=Kainos Software Ltd, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=KAINOS-PUBLIC-TRUST	802E0B133D61441A0A6AF799DC5E4B260972990D6DCB87DC0ACFC585D9082610	11/26/2019	11/26/2029
/C=US, O=Cloudflare, Inc., CN=Cloudflare Inc RSA CA-2	AEC863898F284D6CD4C6A3F6C3E6523480A359C33DAF66FAD3381849B8BB018B	1/27/2020	12/31/2024
/C=US, O=Cloudflare, Inc., CN=Cloudflare Inc ECC CA-3	3ABBE63DAF756C5016B6B85F52015FD8E8ACBE277C5087B127A60563A841ED8A	1/27/2020	12/31/2024
/C=US, O=SRI International, CN=SRI International CA - G3	A6D9A37927349DE7464C8DA63F601CE55C214BEFD7B324679E64E1B30F75CEFF	1/27/2020	1/27/2030
/C=US, O=Adobe Inc, CN=Adobe Public Issuing CA	7B6BA0B173658101250395D547643037A68216155270BC9BA46B358C3B77E90E	2/5/2020	2/5/2030
/C=SE, O=Volvo Car Corporation AB, CN=Volvo Car Corporation CA	B1D29BE013CF27982AAAB694785A3E9F5A169A682F8B8D38677694670C428288	2/5/2020	2/5/2030



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Netflix, Inc., CN=Netflix Public SHA2 RSA CA 2	BD3A6BA80EBBC83A75D62F779F5D6CCD9ABB7AB6A8DFA471B496E81CD6610314	2/14/2020	2/13/2030
/C=US, O=CrowdStrike, Inc., CN=CrowdStrike Global EV CA	8CD728F9C3391BA4360A10C66CA484C807651D6207F10633669ED8881FE91BF5	2/21/2020	11/9/2031
/C=NL, O=Trust Provider B.V., CN=Trust Provider B.V. TLS RSA EV CA G2	B23A29C312A7A80B0FE6B4E71B909CAE92AD649E88766E56C9EE8E1D7C013945	2/21/2020	2/21/2030
/C=NL, O=Trust Provider B.V., CN=Trust Provider B.V. TLS ECC EV CA G1	9C35E8907B549A26002942A7918E32E144503FE342261B07D82BB0D49D73D912	2/21/2020	2/21/2030
/C=US, O=DigiCert Inc, CN=DigiCert Basic RSA CN CA G2	CB57B3FF2040CB269497625BC90FA9D7B4ED4938C6F60F42F69AFDF508AC2993	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert Basic ECC CN CA G2	97C4B44316055F26A52A1F664CE385800A964A8552C99D2BCAFD618E6D8074A0	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=GeoTrust RSA CN CA G2	E3C24279DD6A337F881B1BC692E878F4A31AFE95851F208F94800B0C24D88C38	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=GeoTrust ECC CN CA G2	7CAEEC680E6497FC5109073F83816E798F27F8968A2663C1C95711B548192E35	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert Trust Service CA	75AC8E41D9A7CC758D3998FE030F638CFD28855823DA4E9B56954CFBDE054EB6	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert Trust Service ECC CA	F269AC00B410003F72DC628AFB3D950279630C7C5D0C82148A0FD24DF4DA4301	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert Basic EV RSA CN CA G2	B41A4864F0D4EC4EA632D01B3E7F232775E55E22B3BFD8642EE1292280D0E47A	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert Basic EV ECC CN CA G2	D619F3257B98756D28811D3CEE9ADAD8BCAE1B4367BBB0C73F6B5E558FBA4563	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert High Assurance Trust Service EV CA	72D0F7CBF4529B80C34A7CBB438BD1D0E1FC26E80E59CBD4FD7314FCDDF0E994	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert High Assurance Trust Service ECC EV CA	E9529B428FB67390BC6455D79BA2434E816C54FE4F359930CB709DB256FDDF94	3/4/2020	3/4/2030



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, CN=GeoTrust EV ECC CN CA G2	FC01B58FC78B9C59211784C2E25BF1D012A1E23F337218847A62EB4145EE4AB6	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=GeoTrust EV RSA CN CA G2	8937E90E1495C9A78EFB18182D43FDC73FCD292AB6347A12B9077DE878530E62	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site CN CA G3	6AF5C4EAC180289B94A77A5D231E3865FFE934F3E6A24BF487EB4E2BFD809A4B	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site ECC CN CA G3	00C0CBA95CBFE1E270814275F32B505D6E5916C2B6DA67FAF4DD309EE6E86CBE	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site Pro CN CA G3	A66C97AE59DFF9EA015E73C744EE5520745F101A395C497D19E1F168D39AFCD0	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site Pro ECC CN CA G3	985140919342239C89086B22DFCAA4508590B11A3DE0A423E25EBC3DDAF8910D	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=Thawte RSA CN CA G2	95141A355A5A2AA3E011221CAB9FE73810FDB5D88135864F03E4D852BD0BBEDB	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=Thawte ECC CN CA G2	58E89F4F70410DA00B41473CFA413FA0737ED2729F3ED77BE29A7F4705377147	3/13/2020	3/13/2030
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia OV TLS Pro CA G3	D0E8A51ACAAB9AF82767E2EF16543C2CC635551B5DE0DAE25D6AAC71E7862870	3/13/2020	3/13/2030
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia ECC OV TLS Pro CA G3	756AAB900E3F5C762734B6461FC32A9DD341EA1D4A04283409233C39787A867E	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site EV CN CA G3	139AC36BD85398BBB4588687C20DC36827D03A5F42AADF87F02BECC4BE9BFC2	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site EV ECC CN CA G3	A4B2B47545559F5FFFB7CDDA7A1220E62FB74D1B7A9A4D4DACB2B2A839CE7456	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site Pro EV CN CA G3	B75AEE9836FEFBC446F288A2970B84FC60AAF9EFBD2CB9F82F7581790DE4B8DC	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site Pro EV ECC CN CA G3	BC91379A21E7BDE11B455BF1D51186331682805A4A353A8EE258F7A03706C664	3/13/2020	3/13/2030



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, CN=Thawte EV RSA CN CA G2	69919D820EDF582ADBCF8E092A9284D901772EE2B419EA9DE1F5872C791FC6FA	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=Thawte EV ECC CN CA G2	EA1F3BFB4D3296B467D4B582559D6518D676D5AFC7D1C24BE80252F79191046F	3/13/2020	3/13/2030
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia EV TLS Pro CA G3	9DB0A20C305541E15E818A880D06579876A9C901B8EECD968482C58D9BA7F0A7	3/13/2020	3/13/2030
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia ECC EV TLS Pro CA G3	8D83D69FA615AA2683B13D7894482C542B0BCF18BB92D30F015FB42471AFBB66	3/13/2020	3/13/2030
/C=JP, O=Mitsubishi Electric Information Network Corporation, CN=Enterprise Premium Public CA	6D7B31B61ADB78EBC6A766296886209EA8E74F4600DAE47B78DA3F08BE79F4E5	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Assured ID TLS CA G2	77CD51784A693D9482E7EA694E4053BCFD9DF65580FBCE14B2A7527C081803E1	3/25/2020	3/25/2030
/C=NO, O=Telenor Norge AS, CN=Telenor Norge B2B2 CA	DDA4BE3F78C6D742B100146C26011B41752AEBB810C04588C3AF81F0D3451118	3/25/2020	3/25/2030
/C=US, O=Thomson Reuters Special Services LLC, CN=Thomson Reuters Special Services CA - G2	B84D709820A8FEB41CE1872E237260B446F99BD3CC158F7738D9146B13FAE64E	3/25/2020	3/25/2030
/C=JP, O=ZIPAIR Tokyo, K.K., CN=ZIPAIR-Public-CA	7E882B1CC5439B7FB95A05943C5A8F40DAE75AADBB6B624C55EDD94624EFA0E3	3/25/2020	3/25/2025
/C=NO, O=Telenor Norge AS, CN=Telenor Norge AS EDC CA G2	56D58B26F45BF3878AF4397016A96AF486E9895F66C5F3B73175120B3B4E4A48	4/29/2020	4/29/2030
/C=NO, O=Telenor Norge AS, CN=Telenor Norge AS NF CA G2	5752C5FBDC03543F0CEC6CD294CD965D8D32C4EAA993D550F24491ECF9B73836	4/29/2020	4/29/2030
/C=NO, O=Telenor Norge AS, CN=Telenor Norge AS Dealer G2 CA	9C33CB6A76596752A0C7E51C72D480CE7876C772794EBEE5841FA07035E6E8E0	4/29/2020	4/29/2030
/C=CH, O=STMicroelectronics International N.V., CN=STMicroelectronics Public User CA1	CE15B88ECA32A371D0B51B3B04759055D6A8FF0C3D1A0D60488DF356DC050E55	4/29/2020	4/29/2030
/C=NO, O=Telenor Norge AS, CN=Telenor Norge AS OTL CA G2	70340886D08FE1B093158F11A4CC2B2AD45A67F402632A040E9067C6E447E4FE	4/29/2020	4/29/2030



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=JP, O=Mitsubishi Electric Information Network Corporation, CN=Enterprise Premium Public CA	4A45559AD89684BB439FCD2CC4C5EC0F92EE0692CD6B9763957DE31A2F467CCA	4/29/2020	4/29/2030
/C=US, O=DigiCert Inc, CN=DigiCert High Assurance CA-3b	4E30F8004C18D3D798EC5A7734346B5A5EBE8D54423CE98257FC57735A6F738D	5/28/2020	11/9/2031
/C=US, O=DigiCert Inc, CN=GeoTrust ECC CN CA G3	52DDE89FDD6F610473F9314C7A8B1AC442F8AA833AA5D773006FDA758C9FF1EC	6/9/2020	6/9/2030
/C=JP, O=Mitsubishi Electric Information Network Corporation, CN=Enterprise Premium Public CA	DF025DCE2A36411BE5EB6590C161EFD2652EC2B3F70D5C651F90D023C46F3A00	6/9/2020	6/9/2030
/C=AU, O=NBN Co Limited, CN=NBN CO Limited Public Issuing CA - G3	4708DD6D092D7FB5958F5B43501F6173FB9669EDB05AFD4BBCCDD2D5068D8D0	6/9/2020	6/9/2030
/C=US, O=DigiCert Inc, CN=GeoTrust RSA CN CA G3	8A023C08E4A1AAC925B34C5C7965A8D0527565AEA130ABB915E508CD33AFB45	6/9/2020	6/9/2030
/C=US, O=DigiCert Inc, CN=DigiCert Trust Service CA G1	64616B62820D458F7C71E3449ECCF3F3E4735B76879860C1C660DF23438607EA	6/9/2020	6/9/2030
/C=US, O=DigiCert Inc, CN=DigiCert Trust Service ECC CA G2	B5FECC2F696C850323FC7A85C65B50A4C5E1BFBF823E266AB0A46F013B2C0EB2	6/12/2020	6/12/2030
/C=US, O=DigiCert Inc, CN=DigiCert Trust Service ECC CA G1	017CBB9C3BF9F115E6DB26E47C90EFA6A7FAEE4F7D348AE2808E1C7A8CCB107	6/9/2020	6/9/2030
/C=DE, O=Legacy Technologies GmbH, CN=Legacy Technologies Intermediate	1032C6001ED664A0CD343B138BCB6860E2111011C3D5F06540F5BE41147812A5	7/2/2020	7/2/2030
/C=US, O=DigiCert Inc, CN=DigiCert EV RSA CA G2	9588EF74199E45ACEFCCFC0C47010E9F2A37A1DD44C61A4E1C6B334DA5AF614	7/2/2020	7/2/2030
/C=US, O=DigiCert Inc, CN=GeoTrust EV RSA CA G2	2D140F20B8A96E2B4D2F1CC5ACA5E5A1E7DC56A7491E510906960F38D2D21AEF	7/2/2020	7/2/2030
/C=US, O=DigiCert Inc, CN=Thawte EV RSA CA G2	3286691412F30ECE5C065FD62F4392A4762D1E77815338359DF390299FBD61EF	7/2/2020	7/2/2030
/C=US, O=VMware, Inc., CN=VMware Issuing SM	2996B56FE08307B04F8963B83F4AFAC25F47C34B33C25DB399F3A850D158C9F1	7/2/2020	7/2/2030



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, CN=GeoTrust TLS DV RSA Mixed SHA256 2020 CA-1	8C43C5E340EC640F93EA774AC5353CCA9042F764FF837F870D8B64763C458A41	7/16/2020	5/31/2023
/C=US, O=DigiCert Inc, CN=GeoTrust TLS DV RSA Mixed SHA256 2021 CA-1	1D80CD18A794F1F4850EDC33C6048F02E85386A47F3CE836974A8E452A60D7F2	1/1/2021	9/30/2022
/C=US, O=DigiCert Inc, CN=RapidSSL TLS DV RSA Mixed SHA256 2020 CA-1	E6FA484A858940D101978555454AA466531AB6C4ABC4AD2B000626AAAC0D04F9	7/16/2020	5/31/2023
/C=US, O=DigiCert Inc, CN=RapidSSL TLS DV RSA Mixed SHA256 2021 CA-1	6060EAB180122EB14F22EDE465B4A9A70E29E70FB182EBF01D5B1333F2E73242	1/1/2021	9/30/2022
/C=SA, O=Saudi Basic Industries Corporation (SABIC), CN=Saudi Basic Industries Corporation Issuing CA	3AB4DE79829AF704A1DD79B13892BBAE44B2770F88AE833450F5B1D33802F0C4	7/16/2020	7/16/2030
/C=SG, O=National University of Singapore, CN=National University of Singapore CA - G3	7C29A15B74F9171BE581630394B83791120EABCBA8B9387538BDF50F9D96EAFE	7/16/2020	7/16/2030
/C=US, O=DigiCert Inc, CN=DigiCert Assured ID TLS EV RSA Mixed SHA256 2020 CA-2	0AFA0F7BBFB8EEB76F451139138F8806CC56A6285AAD7CC11957F4BD09AE48C1	7/18/2020	5/31/2023
/C=US, O=thawte, Inc., CN=thawte Extended Validation SHA256 SSL CA	7920B8E18D2FC12D81C2FAB90A63B1B52AB329CE7CD1CB7CA094CDF9D600F492	4/9/2013	4/8/2023
/C=US, O=Thawte, Inc., CN=Thawte SSL CA	0855414AF5F5FD7E264F8B002A39CCED67E5952E89B61B680CC847BAA34944DE	2/8/2010	2/7/2020
/C=US, O=GeoTrust Inc., CN=GeoTrust Extended Validation SHA256 SSL CA	BC9E223CC42275CC034190DF2D0179B55B732D5AC531137A7B522DCFE04A0592	4/9/2013	4/8/2023
/C=US, O=GeoTrust Inc., CN=GeoTrust Extended Validation SSL CA - G2	C7B57A02F937AE0BE3E21027030592C9D47A70D7013EB3AA94DBC3B7B5AB0662	8/23/2012	8/22/2022
/C=US, O=DigiCert Inc, CN=DigiCert Global CA G3	F7541CF69D1DE1AC953ABC1FAD6F7807A34EDFE9E12C11E66A195930C23AD6C6	8/1/2013	8/1/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Extended Validation Server CA	403E062A2653059113285BAF80A0D4AE422C848C9F78FAD01FC94BC5B87FEF1A	10/22/2013	10/22/2028
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Secure Server CA - G3	64903546A58058D1E6F1BEAD1134EDE66A6831D231F0DF8D4E28535D7A300496	2/8/2010	2/7/2020



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit SSL CA	ADEBF83FD3D3F9546BB77FAAB516DD9337CCF91E1198F74337769EC68E6E826E	12/20/2012	12/19/2022
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Secure Server CA - G3	31DC82EA8915E27D03BBD0433658A3C24C6D3ACFF48C4FAAC02FE87E94C99A3B	2/8/2010	2/7/2020
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID CA-1	425E72C87FF22855D9908B71AB4C64B0D2F248287097690C62FE733F631DE38F	11/10/2006	11/10/2021
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID Code Signing CA-1	3C8B0D5C2ADF2F7090A9B8FF452A4141833DEAA05B5F44E9513DB94BFDF1D6BD	2/11/2011	2/10/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Document Signing CA	B9C3073AAD74B368832F5497958E279B1D2777CAF8841713B28AB10A4BAA0810	11/5/2013	11/5/2028
/C=US, O=Cerner Corporation, OU=Cerner Resonance, CN=Cerner Corporation Resonance Intermediate CA	64284AA5F8DC8697D43D9737CF4E266625414E449C019667714537FF7EDE31B7	11/11/2015	11/11/2021
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Assured ID CA	A542BCA09C5E4579C619774AE59082BCE0F86D261C5A7A5A0F6217C10279EA7C	11/5/2013	11/5/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Secure Auth CA	24E9F20AC167BB8F09DE8A1E9968CC53F0B5F3A4948F51B8647B40B186C75EBE	4/23/2014	4/23/2029
/C=US, O=Fresenius Kabi AG, OU=Fresenius Kabi USA, CN=Data Management Intermediate Certificate Authority	54837EF7B5AC4AA23606A15EF30DE46E9BB7E23E60F6ED4F2612092B94EDC68F	8/25/2015	8/25/2025
/C=US/ST=CA/L=Mountain View, O=Google, Inc., CN=Google CA1	438F473EBFC8884EF5D3E0D52D264CDBE56CA382D9EBFC689D77489409F55A6E	8/25/2015	8/25/2025
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA Code Signing CA 3	B7C6EBDC2A1B65EF1836DC00250C44E15703121052C1AB6B9D0385A058153AE3	11/18/2014	11/18/2024
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA Code Signing CA 3 G3	794C63DB244BA73FB286F15DAB8D0CA5425508381E98844954E63823BB5D7F74	12/9/2014	12/9/2024
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA Personal CA 3	DD4E0C17900F3FC2A5B7B773AE40218AD73216B5CE5D285EBFFCE8830D0F034A	11/18/2014	11/18/2024
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA Personal CA 3 G3	C123F5AFACC9F9096809850355E5BF78CA9377348111B5167A964DDEDC044DE9	12/9/2014	12/9/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3	BEB8EFE9B1A73C841B375A90E5FFF8048848E3A2AF66F6C4DD7B938D6FE8C5D8	11/18/2014	11/18/2024
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3 G3	C9D6913F3FEDDEFF184C9EE1D7E17C5AEC90886EED5CC3D6E98105831C8C0E0B	12/9/2014	12/9/2024
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA eScience Personal CA 3	FDA947208BFA3203A6C57B8714A647B7009E5168E88951345450B1D2D3F91A7D	11/18/2014	11/18/2024
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA eScience SSL CA 3	E1BE6BBBB70F5A241E736FC44C6A2160BF6CE19B95EDD67BF7BE896E83778745	11/18/2014	11/18/2024
/C=US, O=Sonavation, Inc., OU=sonavation.com, CN=Sonavation IoT CA	4C56CA7A3C10EB58765E0FFCF8035C57C9F3BDB014862F676756CF789193F10E	5/19/2015	5/19/2025
/C=US, O=DigiCert Grid, OU=www.digicert.com, CN=DigiCert Grid Trust CA G2	28CBB4E0D9C4EE6D04AC8F14717605AE3A4BD8CBF8D081B27AF6EDB2F3D76A32	1/8/2014	1/8/2029
/C=US, O=DigiCert Grid, OU=www.digicert.com, CN=DigiCert Grid Trust CA	1E0A3AB993157717281D42ABF801EB64DEED500E4168CA706D6A71D8103C73A2	12/7/2011	12/7/2026
/C=US, O=Plex, Inc., CN=Plex Devices High Assurance CA	48A7C9C5A36734FC9E204D63CE6BBBCD9E21C1978604760CD8D30D6F4C67B67C	1/14/2015	1/14/2025
/C=US/ST=Minnesota/L=Minneapolis, O=Optum, CN=Optum Public Trust CA 1	253E3C9732DF8874C3D54DA522C1711142C98C2CEA7664635152A89A03EE9364	4/28/2015	4/28/2025
/C=US, O=NCC Group, CN=NCC Group Secure Server CA G4	B7DFDC27E5FF9F35EFEC9F4BC532C35F727789B69C90A0489B40247299D97038	7/30/2014	7/30/2029
/C=US, O=DigiCert Inc, CN=DigiCert Global CA G2	8FAC576439C9FD3EF153B51F9EDD0D381B5DF7B87559CEBECA04297DD44A639B	8/1/2013	8/1/2028
/C=US, O=DigiCert Inc, CN=DigiCert Assured ID CA G2	93C381CB07B353A920C2A7BED6BEBF195C68279DD0527D37F20BDD0D99C330FA	8/1/2013	8/1/2028
/C=US, O=DigiCert Inc, CN=DigiCert Assured ID CA G3	634FDF26C994E76A2918D9EFC4CAB9C6FCB344EF642A79C89192BCDA0ED52F4C	8/1/2013	8/1/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert EV Code Signing CA	376377FD1FAF4B8A5B1472647A70B941039A62D74CFE99447E48616F8D63A978	4/18/2012	4/18/2027



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance CA-3	21EB37AB4CF6EF8965EC1766409CA76B8B2E03F2D1A388DF734208E86DEEE679	4/2/2008	4/3/2022
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance Code Signing CA-1	007D2C8B15786232BAC0EAA31F60AAE06DC572921BAD0D46C77107D8C2DCA4B3	2/11/2011	2/10/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance EV CA-1	541AF019961760EF19E8FB4134E6D43085B5E5E087F30197DC42B2097E10487E	11/9/2007	11/10/2021
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 High Assurance Code Signing CA	C51B83A0DE49A201A5FBE947032C04702F8CA7C2D02ADF28B73D42C8ACD1C362	10/22/2013	10/22/2028
/C=US, O=NCC Group, CN=NCC Group Secure Server CA G2	6075DA5CECD15D6584C5560322D5C09FC2199E52DEA7921D91040AA75248672E	7/30/2014	7/30/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 High Assurance Server CA	19400BE5B7A31FB733917700789D2F0A2471C0C9D506C0E504C06C16D7CB17C0	10/22/2013	10/22/2028
/C=US, O=Aetna Inc, CN=Aetna Inc. Secure EV CA	0A163600631BD66267FB7AEAD25C538B2B7D72AD6416A2BBD285F654BB642F6D	12/9/2014	12/9/2024
/C=US, O=Plex, Inc., CN=Plex Devices High Assurance CA2	50D3D71FC0CD7E36ADAE32221FEFBE8CC29B2676BA326C09B8FA1B24DBE75514	5/19/2015	5/19/2025
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3	BE6A0D9E1D115F2293F6ABF11B3EC8E882E24426EEEB09AAA503597993E77A25	11/18/2014	11/18/2024
/C=US, O=DigiCert Inc, CN=DigiCert ECC Secure Server CA	458446BA75D932E914F23C2B57B7D192EDDBC2181D958E1181AD5251747A1EE8	3/8/2013	3/8/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Global CA-1	3C750409882486D64151F4CBB5BD61432A4A7BF42F48A85198D245A64AEA2117	11/10/2006	11/10/2021
/C=US, O=DigiCert Inc, CN=DigiCert Secure Server CA	94D4ECE2ED9A5457B969A13B260489E9A5FE4790A041F27A3EB4126C84418EF9	3/8/2013	3/8/2023
/C=US, O=DigiCert Inc, CN=DigiCert Cloud Services CA-1	2F6889961A7CA7067E8BA103C2CF9B9A924F8CA293F11178E23A1978D2F133D3	8/4/2015	8/4/2030
/C=US, O=NCC Group, CN=NCC Group Secure Server CA G3	963056B0D941D9DBE27AC778053D85E43CC79F476AD34CFDD799C27E381840EB	7/30/2014	7/30/2029



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert EV Code Signing CA (SHA2)	C7460B0EDDA1B44C8E2164B234EBECC3962A6A37A936B74A6E7D46682938F084	4/18/2012	4/18/2027
/C=US, O=DigiCert Inc, CN=DigiCert Trusted Server CA G4	6E8D952FDBABAD8DE3D61E094393739B5A47371A52BDCB2A3C2F8C43622F640F	8/1/2013	8/1/2028
/C=US, O=DigiCert Inc, CN=DigiCert SHA2 Secure Server CA	154C433C491929C5EF686E838E323664A00E6A0D822CCC958FB4DAB03E49A08F	3/8/2013	3/8/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance Intermediate CA (SHA2)	47511629F2BC3B7CF84EFEC9F32798A43AF6252E550B6CAE76A38558712E37D8	12/7/2011	12/7/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID Intermediate CA (SHA2)	C2B4BBEF4A1A643F334ED0850F928876D2AE3AE3642B986014D68C673C04D081	12/7/2011	12/7/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Baltimore EV CA	D46931E0182DD655EA0C16E6DD99F8E61AFFE401F734C6CA8EA0056A968EAF81	10/14/2015	5/10/2025
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Extended Validation Intermediate CA (SHA2)	802C2AD1D215E57CDC9010EA437ACE399B657194FBD40E3BB5E00B080E6496DF	12/7/2011	12/7/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Baltimore CA-1 G2	BF1CB0E213D8D3C70BAE89429FC16DE2C74F755963D1B9B488BD0260DBC91B9C	10/14/2015	5/10/2025
/C=US/ST=CA/L=San Francisco, O=CloudFlare, Inc., CN=CloudFlare Inc ECC CA-2	6172D7A1996CBEF71A0182DD44B99E9C035742A9EBD0311AA73AA4733344C5A6	10/14/2015	10/9/2020
/C=US/ST=CA/L=San Francisco, O=CloudFlare, Inc., CN=CloudFlare Inc RSA CA-1	328C5991D8383E27D0EBE910BF66C0AF3D748A85D3011A52D88F1D8C8635647F	10/14/2015	10/14/2020
/C=US, O=Harris Corp, OU=Florida HIE, CN=Florida HIE Exchange CA G2	AB8EE98A4B2B97E5905ECE80A64304C143AB38D9508FF7286F68235E0DB68A27	11/11/2015	11/11/2020
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Extended Validation CA G3	7C0912E5DE8478BB86E8EA46BA5AE65DC3870BCEFCBC2F46795EEECF648CFBE7	11/11/2015	11/11/2030
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated Trust CA	E5BBDCCAD572EC9D2DD96E0E5EBF049A9181F070F1E33CC1635AD8EC487D2177	11/18/2011	11/18/2023
/C=US, O=Orion Health Inc., OU=Orion Health Direct Secure Messaging, CN=Orion Health Direct Secure Messaging CA	A4106DA85F7B34A6D3DE37884D1528916B84F046FFB7D4AAC521117B0C6995F3	10/21/2013	10/23/2023



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=North Carolina Health Information Exchange, OU=Orion Health Direct Secure Messaging, CN=North Carolina Health Information Exchange CA	C4A842434ADB52809526B6D1E869A265F535B69BB16454A301667CC942678D58	3/5/2014	3/5/2024
/C=US, O=Alaska eHealth Network, Inc., OU=Orion Health Direct Secure Messaging, CN=Alaska eHealth Network CA	437859303D0183862A96F6ABF8B03F2A69D4CBD317217666015E1ABA3C84AA11	10/22/2013	10/22/2023
/C=US, O=Greenville Health System, OU=Orion Health Direct Secure Messaging, CN=Greenville Health System CA	06433FCA9F753980B526236DD72846EC1B20770BFCC7D3188DD67BC0ECFB7782	3/5/2014	3/5/2024
/C=US, O=Huntsville Hospital System, OU=Orion Health Direct Secure Messaging, CN=Huntsville Hospital System CA	20E3E88747A8D88E11A527521032DC8CAE92BC33B45C93EEE04F624A70DC920A	3/5/2014	3/5/2024
/C=US, O=Inland Empire EHR Resource Center, OU=Inland Empire Health Information Exchange, CN=Inland Empire Health Information Exchange	1E72D83ED9499CBA686968452BE591C48816EC9181391A5D03C1F4D3BA1658DC	1/8/2014	1/8/2024
/C=US, O=Louisiana Health Care Quality Forum, OU=Orion Health Direct Secure Messaging, CN=Louisiana Health Care Quality Forum CA	3E4F09D65438B5CF7E456288C08FE9F47ED4E3ED669279C81AEFAB0BAFB86A09	10/22/2013	10/22/2023
/C=US, O=Mary Washington Healthcare, OU=Orion Health Direct Secure Messaging, CN=Mary Washington Healthcare CA	1180C33AE1F23228923F6AE698C9C10DC729E0D811FC8B2EC02726E2DC26E2E4	3/5/2014	3/5/2024
/C=US, O=Mississippi Division of Medicaid, OU=Orion Health Direct Secure Messaging, CN=Mississippi Division of Medicaid CA	1757291A3D7D0BB5B9B9CF8802F1B2AE173E56B0935970FC86B63A27499DB5E2	1/8/2014	1/8/2024
/C=US, O=New Hampshire Health Information Organization Corporation, OU=Orion Health Direct Secure Messaging, CN=New Hampshire Health Information Organization CA	37E9A271EB4725C93CDAF183562C7D7D9EA8FC139F8374FFE418D77D32428FE0	10/22/2013	10/22/2023
/C=US, O=North Dakota Information Technology Department, OU=Orion Health Direct Secure Messaging, CN=North Dakota Information Technology Department CA	6ECF658CCEA8B29BE60C85904F4ADD7CCB7950CF58C97BBF60D57CEA49A2703D	1/10/2014	1/10/2024
/C=US, O=Orion Health Inc., OU=Orion Health Direct Secure Messaging, CN=Orion Health Direct Secure Messaging Public HISP CA	D34138ED1458AE7DE4EDEA36ED3992E4F46E6EC9CF1E633E538DE9FF0F38F8E5	10/22/2013	10/22/2023
/C=US, O=Rush Health, OU=Orion Health Direct Secure Messaging, CN=Rush Health CA	DB12B1D3F8CC52FFF4874F0A8B85E9FB6A2050861B1B1C61481A743AC0D33D5A	4/23/2014	4/23/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Western Connecticut Health Network, OU=Orion Health Direct Secure Messaging, CN=Western Connecticut Health Network CA	415322F3970C8CD0F54311E0F93C5F5C37BA3059FDB10F5240AC20934717F840	3/5/2014	3/5/2024
/C=US, O=Axesson Inc., OU=www.axesson.com, CN=Axesson Direct CA	BF4655F16AA338D7C7FF2BDC949A524BD4797B8B3C8341C608C9F65CB1CB8177	1/8/2014	1/8/2024
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Accredited Direct Med CA	0E78434EC8AD6613562C8390D8B3306FC6087E0593C7D5AC2FAF9AD263879745	8/6/2013	8/6/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Direct Non-Provider CA	1AEDDADDC1ED748543EAF5960DF96AD51E21A3164F30A0640CB0732365D39062	2/11/2014	2/11/2024
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated Healthcare CA	54C3F501042CDCC09AE8143CB192BD5E5724C9C88A6AB395A94A1A7AFC26CE7C	2/11/2014	2/11/2024
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Provisional Direct Med CA	C61029C8EEE3CE08755D562BB50C5F75E0EF849214970B13BD99185367D1D119	6/3/2014	6/3/2024
/C=US, O=Medicity Inc., OU=www.medicity.com, CN=Medicity Direct CA	231BA402E28B3495F3BE0CAD87078D9B8FBD86041116AF9B8047E7B1CFFA82D0	2/13/2014	2/13/2024
/C=US, O=Michiana Health Information Network, OU=www.mhin.com, CN=MHIN Direct CA	EAEFEB08D568E7F6CF6D892CAB6A22E14F20C6F10E3A418CFB42B12309333367	1/8/2014	1/8/2024
/C=US, O=Oregon Health Authority, CN=Oregon Health Authority Direct CA	86FFEA40F36FA6913278710FEABA9B206F3288DA3FD1C652BC5B5895A2B1A877	3/5/2014	3/5/2024
/C=US, O=Indian Health Service, OU=directihs.net, CN=Indian Health Service-RPMS DIRECT Messaging CA	C07E9037CB81012D3046613285C14B63A0284964A4F5A821FC3B18ECDEBA0A66	4/4/2014	4/4/2024
/C=US, O=RelayHealth, CN=RelayHealth Direct CA	77537682E9A0B2C5BD5E62BC1CB35ECEB38FCBEBF7D2DC326F7E420F0DDBEDB3	4/4/2014	4/4/2024
/C=US, O=Adobe Systems Incorporated, OU=Adobe Systems Incorporated, DMBU, CN=Adobe Analytics - DigiCert CA	D5C009312F845C5EC8506EAD560D62447BFF4A60A9C25210511217AD6DE76AED	4/18/2013	4/18/2021
/C=US, O=Anne Arundel Medical Center, OU=AAMC Direct Messaging, CN=AAMC Direct Intermediate CA	BB1C01E884DD0919AB94D5AF5575CD6FEB71E560B2B58735A78B150A10D54BF3	5/28/2015	5/28/2025
/C=US, O=Quest Diagnostics Care360, OU=Care360 Direct Messaging, CN=Care360 Direct Intermediate CA	2D602B1F166D6316DAFD46B4B1EDD6DCFC54D2AF8A944BE358858FD504AAA16B	8/25/2015	8/25/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=iShare Medical, CN=iShare Medical Direct Intermediate CA	4C0A5888C34AA01B745F4EBA268696B2CCB3F4AA31C8EDCB3AFE8FA84CB74CC1	1/14/2015	1/14/2025
/C=US, O=Corepoint Health, CN=Corepoint Direct Intermediate CA	CD2640957CF88610470CEFD409D85D9BE05962F7D6C2999C4F431ABCCC34118C	1/14/2015	1/14/2025
/C=US, O=MRO Corporation, OU=MRO HIE Solutions, CN=MRO Direct Intermediate CA	E25DE970AA8B685CDF55417897F65DE64C63A55D61EE9E4B830261DCFBFFFB4	10/21/2014	10/21/2024
/C=US, O=MedicaSoft LLC, OU=MedicaSoft Direct Messaging, CN=MedicaSoft Direct Intermediate CA	51A6E2ED41040AAE8E089FBABFE26A38D656F5B0855635352FEE9598286BB021	4/28/2015	4/28/2025
/C=US, O=Mirth, OU=NextGen Share, CN=Mirth Direct Intermediate CA	CC9FAAD83C3350943D4E45FA416C4F8BC564F7AA94CF4B2D2BCE74209D0464C9	9/26/2014	9/26/2024
/C=US, O=MobileMD Health Services, OU=MobileMD, CN=MobileMD Direct Intermediate CA	33CF1F5C9396D7EE9E8283B2E76F400E50450575EB15AD02C956C1C5575B184D	10/21/2014	10/21/2024
/C=US, O=Cerner Corporation, OU=Cerner Direct, CN=Cerner Corporation Direct Intermediate CA	09DE7FA739EE47C06291845F2E0E8A9E1C7CC2900AD354CF167316E02386BD9B	9/26/2014	9/26/2024
/C=US, O=Rochester RHIO, OU=Rochester RHIO HISP, CN=Rochester RHIO Intermediate CA	43202B9E870659921F9DA26EDA9E47BF6990DB031A0BC0B23AFA1E7968ED3E99	10/21/2014	10/21/2024
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Governmental Direct CA	5F665CBACC1E37171EA83EA85C570F9861CAF77BAC8886ABC4BB19B3698C094A	9/25/2015	9/25/2025
/C=US, O=Inpriva Inc, CN=Inpriva Direct Federated CA	5AE4F777426BBC5AA85986CA48D319270C5536210DC8EA1A28D502F6B3595138	11/18/2011	11/18/2021
/C=US, O=INTEGRIS, OU=INTEGRIS DIRECT Messaging HISP, CN=INTEGRIS Direct Intermediate CA	97D276C5FDF2DC94539ABB9E17BC3995730CD51739EAE95B0F67B39E99905F11	11/18/2014	11/18/2024
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID L3 CA	85760F77DB0FD0D93C21EE036488EAB09B82CF49B7849831038209B5B1081363	1/7/2014	1/7/2023
/C=US, O=Allina Health System, OU=Information Services, CN=Allina Health Connect HIE Intermediate CA	826C6AA610EF190BE2D7C03E22D032405B289804E3319E233C4C37FFBF305F1A	12/8/2015	12/8/2025
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Baltimore CA-2 G2	F9690880819F06CDCC0B2F224B207F2AF6003FB57339B8679A160FA95208D62D	12/8/2015	5/10/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Compugroup Medical, Inc, OU=IT, CN=CompuGroup Medical Certificate Authority	B604026A3590392ABEFB6B18E8176453656115D2A0060F713E191A9FD076532A	12/8/2015	12/8/2025
/C=US, O=Optioncare, OU=Orion Health Direct Secure Messaging, CN=Optioncare CA	89CFBC8FBFF7FE026B6CF2EA688419BDE8BBC1FB451329C865D6C6CBCF6BD097	3/1/2016	3/1/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance EV CA-1	4C4943B9EAA14EA2A69B8A7E4D8DA89081EEA11C87E8229B9B74F68A7AD33B79	11/10/2006	11/10/2021
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID CA-1	B8F44E4B1F8697DF54BB3D0F1E67596CE2FE9DABA85AF4E6F2A2E74396F8C56D	11/10/2006	11/10/2021
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance CA-3	57D8D5B832616B7823466A0C372770D16A5DCF246581F0F58373E51C7E1E5316	4/3/2007	4/3/2022
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance CA-3	DCB400ACC249FB8483415FC2650BC90488CA96643118CB0E4F4424B21C3AA5A4	10/12/2011	4/3/2022
/C=IT, O=Postecom S.p.A., OU=Servizi di Certificazione, CN=Postecom CS4	C1685683F3C8590E88580197F219CAB99E5482A1568635F596D09867B2F405BD	4/26/2016	4/26/2023
/C=JP, O=NTT DOCOMO, INC., OU=GeoRoot Certification Authority, CN=DKHS Device CA	123465EEC4092F8CF7ABFE92B8C701AC09EA79A498F1D3F6A02C1714F39A8423	8/12/2009	5/19/2022
/C=US, O=GeoTrust Inc., CN=RapidSSL SHA256 CA - G4	5B87E222F20346FA3628816ED6CE71FAABA0857FB8BCBA73776EA1FA56CD0057	6/30/2015	6/29/2025
/C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL CA - G3	51CF0FFFC3253FC013AF786F95B190109F8C87F34DFD1CEC44C45888789F5355	6/11/2014	5/20/2022
/C=JP, O=NTT DOCOMO, INC., OU=GeoRoot Certification Authority, CN=DKHS Device CA - G2	56CBB0FFC414E88822A50E9F42D46820381D8C2AAEEF56E0566817ED30F27A27	2/10/2015	5/19/2022
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL - G5	8C88BA510529B64263CCB21A73D82BA5725A55C1446F2547BCE301FCDC4314DB	12/17/2015	12/16/2025
/C=US, O=GeoTrust, Inc., CN=RapidSSL CA	6D5BC979461C7264E1710010CD7D4EA3EC57FA11215F04FFA516AE61959AB2B2	2/19/2010	2/18/2020
/C=US, O=GeoTrust Inc., CN=RapidSSL CA - G2	0DCDC07ECABBBFE38A4606BA663987CDB3BD9817FC67D1DD0CF094AC8CA2787D	6/5/2013	5/20/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=GeoTrust, Inc., OU=For Internal Use Only, CN=RapidSSL Enterprise CA	87AA71AF032E36BD69DAF4014FCAD8F2733AA00DEAB959335AE3866E4B6D3A1D	3/8/2011	3/5/2021
/C=US, O=GeoTrust Inc., CN=RapidSSL SHA256 CA	E6683E88315CD1CB403C0CEA490F7C4B4C82C91CD485037489AADBAA90839F61	12/11/2013	5/20/2022
/C=US, O=GeoTrust Inc., CN=GeoTrust EV SSL CA - G5	5B2AE8ABF5E7E563BBC34C97A22554E82393D7ACC09C1765E504AE08C157B5AC	9/9/2014	9/8/2024
/C=US, O=GeoTrust Inc., CN=RapidSSL SHA256 CA - G2	92EF2F5B553570607DC29C8010E7ABC16283FE355F955A248254290A260A9EBB	6/10/2014	6/9/2024
/C=US, O=GeoTrust, Inc., OU=Domain Validated SSL, CN=Secure Site Starter DV SSL CA - G3	2FCC009AAFDB28E9256430410A6FA6E76AF09301B1044FEAAACAB00215AA39E1	12/1/2015	5/20/2022
/C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL CA	C27FD4B85E96D3777C68AB7DF6AA4E626BF3FF8C72B1CE81D1EB78BABEB1A074	2/26/2010	2/25/2020
/C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL CA - G2	DEDB31CBCEC5F99D38E86ECC4D76945DF40F2E547C94E4B0124094875AF6A558	6/4/2013	5/20/2022
/C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL CA - G4	8BC1B9D7DEFCCA1CCD09BACDA88F27762092F1ED4A34AE5E4602BB9CC915C506	8/29/2014	5/20/2022
/C=US, O=GeoTrust Inc., CN=RapidSSL SHA256 CA - G3	BC3F03A436240EDBA5F83714F6F77E34B37F9B1F0C08C1E558D981E279E8209	8/29/2014	5/20/2022
/C=US, O=GeoTrust, Inc., OU=Domain Validated SSL, CN=Secure Site Starter DV SSL CA - G2	64853613C2436399603D0D560B52F04BB8F81A81746E42389883A4F59A4564D5	12/1/2015	11/30/2025
/C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL SHA256 CA - G2	3FDF788A5A65E6A29D8C1550D8244906A3B8A7B7D3DA9BDEDD748E4183A763C9	6/30/2015	6/29/2025
/C=US, O=GeoTrust, Inc., CN=GeoTrust ECC EV SSL CA	C131499FD86B213DB5DEFAAFD53111C28A2DDAF4BA465C8265A72D6CF739B668	1/7/2016	1/6/2026
/C=US, O=GeoTrust Inc., CN=GeoTrust EV SSL CA - G4	95B09D02122FA8AE6235780F6EA6503E767AC021A0874FE831CE803A50EA8FD7	10/31/2013	10/30/2023
/C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL SHA256 CA	784ACA1063BE4700B3A62F45C2F93B7EEF8BF230FB869610E864FC4B3A23D09F	6/10/2014	6/9/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL	2E7E65BB1A013DAF0BDF6938502E43E38217FE00D76CA2F99F7AA9E298F48534	8/6/2013	5/20/2022
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL - G2	78DC9CA5F4C2913F3FB74AC52DFFFC2300DA5A772FC2B84C53A2E74437EDD20	9/8/2014	5/20/2022
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL - G3	4FD73419046F90868826D581536931D22E54943EBCD059CB7621394D749343C5	6/30/2015	6/29/2025
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL - G4	BC3F0ADC5FF86A4B374DC691F8FE273B1B87DC73E43824F5FE7F36C3E0008311	12/17/2015	5/20/2022
/C=US, O=GeoTrust Inc., CN=GeoTrust SSL CA - G2	90AF11E577C72C940B40EC2F3D50507310091EE6196C9C16B228882264A4D808	8/27/2012	5/20/2022
/C=US, O=GeoTrust Inc., CN=GeoTrust SSL CA - G4	211DDF5059229B3577760D623D5148DB92F2D0526EA5303E7EEA0300D9FAFF3F	9/8/2014	5/20/2022
/C=NL, O=Intermediate Certificate, OU=Domain Validated SSL, CN=Intermediate Certificate DV SSL CA	8C2745352289E994B3EA349445B1CF6418E51740E1614F8B5667DAD2990AAEFB	6/1/2012	5/21/2022
/C=NL, O=Intermediate Certificate, OU=Domain Validated SSL, CN=Intermediate Certificate DV SSL CA - G2	D876A081FB3827BA22A4087DF675126FF8A96AAB90364BC61F62CE8E9507AA93	9/8/2014	5/20/2022
/C=US, O=GeoTrust, Inc., OU=Domain Validated SSL, CN=GeoTrust Secure Site Starter DV SSL CA - G1	62FB9B6CD2633B92D91DB264CE678A9B19C575414AB10AD46D157F07BBA26EFF	9/1/2015	8/31/2025
/C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL CA - G2	7D89AE918B25AFDF91036EEE5C15E58C600F42266866A8DE01C71DBC635CA1C0	2/16/2016	5/20/2022
/C=CH, O=Hostpoint AG, OU=Domain Validated SSL, CN=Hostpoint DV SSL CA - G2	ABD6D053FDBE356D075050181586B0B9C2B8C03298ABCE64CE25C40401DF3B22	1/19/2016	5/20/2022
/C=US, O=GeoTrust Inc., CN=GeoTrust SHA256 SSL CA	D9E0C64AB27A64D79CCCF42A34EC75A251A7E543353C19E984A70EB2F546CDDF	5/23/2013	5/22/2023
/C=US, O=GeoTrust, Inc., CN=GeoTrust SSL CA	D4C4C99819F3A5F2C6261C9444C62A8B263B39BC6ACCE35CDCABE272D5037FB2	2/19/2010	2/18/2020
/C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL CA - G1	EF4478EB094C48FB9FEACA09736270499CA52EB04E3F8EE4C1B2EDC9960398FD	2/16/2016	2/15/2026



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=NL, O=Intermediate Certificate, OU=Domain Validated SSL, CN=Intermediate Certificate DV SSL CA - G3	E86BC16CC6491E5F4B9976313842B3D02C99EA263AEB1DC223D898FA87C84845	6/30/2015	6/29/2025
/C=US, O=Oracle Corporation, OU=VeriSign Trust Network, OU=Class 3 MPKI Secure Server CA, CN=Oracle SSL CA	C76F70980598C66A8E327E17B495A2276265C4B9A3575EFA1D550502A823D591	10/12/2010	10/11/2020
/C=US, O=GeoTrust Inc., CN=GeoTrust SSL CA - G3	074541ECDFF88ED992ED5ADE3ECDDEF27A26BA1B44480A195C0A8DADAE2521D8E	11/5/2013	5/20/2022
/C=US, O=GeoTrust, Inc., CN=GeoTrust True Credentials CA 3	5D74ED61D0B311E981BBCF0F419A35FA9FA1EC70FF1AEB742D73BCFEBA06CFFF	8/22/2012	5/21/2022
/C=US, O=GeoTrust Inc., OU=GeoTrust Authentication Services, CN=GeoTrust True Identity CA 2	FF1D35ED464063D6031C71E414262CC2310E8C547AB7F7CF2955C9E0349E533F	1/28/2011	1/25/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server SHA256 SSL CA	E0898AD662474B9F753C79BEA878031C9A5D634A49EDD6310B960AB023C02C0E	4/9/2013	4/8/2023
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Shared Public Organization CA - SHA1	A829444AD2FB48079A595FBB88C4E658EE2089A5E129B89AAACCE851198FFD7	7/11/2013	7/10/2023
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Shared Public Organization CA - SHA256	2F72019CB45B07AB05CB1BB8ECC3076D7072660B57A29E42EBE2AA57B83BC60B	7/11/2013	7/10/2023
/C=CH, O=Hostpoint AG, OU=Domain Validated SSL, CN=Hostpoint DV SSL CA - G1	9F4E3C42FAFEDA3CF88C05CC4B4AF0C0AF306415C30D3D1EEBEDEBF7D177A982	1/19/2016	1/18/2026
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Admin Intermediate Certificate Authority	6D0BD6E1AC0EC398EE8537906D98F378FC7AB49C1E296AF233374FA5A271DB34	6/7/2011	6/6/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit EV CA - G2	663636C03FD0B5B171F2B04407C3DF767B349C8A990D87CE485898166E2B5120	5/12/2015	5/11/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit Extended Validation CA	5AD4183B54F0E2762DA8D910E1E7E9F2AB2F1BC4CE6A638F0DBBF337EB4A139F	12/20/2012	12/19/2022
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 384 bit Extended Validation CA	77FE876A1C476349F5EB9AE9BF53F7814A0AE411562667C58B7ED27869C54091	12/20/2012	12/19/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Oracle Corporation, OU=VeriSign Trust Network, OU=Class 3 MPKI Secure Server CA, CN=Oracle SSL CA	7F6889FFE8B02045E2CAC99A2F2EE4F4C2EED24934B6521872D34BF812671C4B	10/12/2010	10/11/2020
/C=US, O=Oracle Corporation, OU=Symantec Trust Network, CN=Oracle SSL CA - G2	E4AF2FAE41187D58F209B01B1D8753C2DCCB3F601CE86273E37E8738C2A5CCB5	1/6/2015	1/5/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit SSL CA - G2	2E2861289B5CCEDECAE4C31BF262E0FB0C29B6C1530573442731CA65D821E901	5/12/2015	5/11/2025
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Extended Validation SGC CA - T1	6EDAD2261AA3D53BE0D6FF5FA71C34A34B253B0C637B35BF3E966540F78B631B	5/13/2010	5/12/2020
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit SSL CA - G2	3B6D701331A8CB809443E42A732BAD675F225B15CC439ACF26A09587C885ECFD	5/12/2015	5/11/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 EV SSL CA - G3	9E6BC5F9ECC52460E8EDC02C644D1BE1CB9F2316F41DAF3B616A0B2058294B31	10/31/2013	10/30/2023
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 EV SSL SGC CA - G2	B2745D0A9B71D948F34E921AF59F342ADF6E407D88BC51D38AC52B583A0EBD15	10/31/2013	10/30/2023
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Extended Validation SHA256 SSL CA	1F9B31F820929EBFA03117EC2B77BA6B0FB6ECC9E027682A559378DA311C54EF	4/9/2013	4/8/2023
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Managed PKI Administrator CA - G4	5D81D0AA3476F48A5A675D6D3E6AB766BDC8AA167A1A94D79DF91B4251082FA4	1/6/2015	1/5/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 384 bit SSL CA	14214583E5F49CE2DB88B93CFE3F7D81B678C86AFBCA9240BAA4B9E4CE90BF2C	12/20/2012	12/19/2022
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 EV SSL CA - G2	6C66B76E68D6C79FAFE5C94E9B7D0CF753C715CC85387E11323B7935F861C187	10/31/2013	10/30/2023
/C=US, O=Symantec Corporation, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, CN=Symantec Class 3 Organizational CA - G2	05BDD9A7C6706D39D6DB1A580AAFF67D4673027B6CF01FD15367D8ED84A890F0	3/16/2011	3/15/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Insattningsgaranti Service CA, CN=Symantec Class 3 Organizational CA - G3	CF6F24FFE48F8408A75CFADF2B65F8A4E4172F3B7C24C41B5B7481D24018197C	6/21/2011	6/20/2021



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Registration Authority Intermediate CA	83C935F34C50B7665409404AFE5DFA07ADC85C7B52B2BEF0AC6E993C00545D76	6/7/2011	6/6/2021
/C=US, O=Symantec Corporation, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, CN=Symantec Class 3 Organizational CA - G2	DDE4BEBF262C9D8DF5CB54FE4F5995191EAF58ADC892FE5AED3128AC0D1916C7	3/16/2011	3/15/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server CA - G4	EAE72EB454BF6C3977EBD289E970B2F5282949190093D0D26F98D0F0D6A9CF17	10/31/2013	10/30/2023
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server CA - G4	564DBC6A76550FD2D4F4BAC6448A1157B33CBD8E0B3FD76D72107540964A85B5	10/31/2013	10/30/2023
/C=US, O=Thawte, Inc., CN=Thawte SGC CA - G2	0CEBF97D1FABC64753799F7A9A508C7C5F2B58B928FB1B3CDC6C4109C0CF2E99	7/29/2010	7/28/2020
/C=US, O=thawte, Inc., CN=thawte SSL CA - G2	B7A8AF2A4A43F0A86B15604DE6461209C9CD76894D8B0748BC99D9A797013BB0	10/31/2013	10/30/2023
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Extended Validation CA - T1	D80564433ED35C850E2AD589B7713A4DAC01A09292869BDBB80E42E23F9336EA	5/13/2010	5/12/2020
/C=US, O=Thawte, Inc., CN=Thawte Code Signing CA - G2	AF840CA2B9DFB776BF81AA94C401BC440C52E5C590C43607A13D6680D83E3349	2/8/2010	2/7/2020
/C=US, O=Thawte, Inc., OU=Domain Validated SSL, CN=Thawte DV SSL CA	D2573831FA5376B1C7DC0DBB0EF58813E9070618FA5A21E13F5E9F2B65E0A320	2/18/2010	2/17/2020
/C=US, O=thawte, Inc., OU=Domain Validated SSL, CN=thawte DV SSL CA - G2	9F2511A23E70D95FB62798508A676CC38964100936A6E6D3CAE77154C0290F02	6/10/2014	6/9/2024
/C=US, O=thawte, Inc., OU=Domain Validated SSL, CN=thawte DV SSL SHA256 CA	537C5C8072363E147C84D21D0D2248B6B99A9A8A43311659835EC33926DA2860	6/10/2014	6/9/2024
/C=US, O=thawte, Inc., CN=thawte ECC EV SSL CA	EAD62F42BB369DD43CF6131AC2D8D72E4F9FEE85E69D45DAAFFE326AAC2A46F1	1/7/2016	1/6/2026
/C=US, O=thawte, Inc., CN=thawte EV SSL CA - G2	37F6BD9BEE0C74F608DD474B56A72F8183077DFC2662AF79BFE3D4FABCFOB1C4	10/31/2013	10/30/2023



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=thawte, Inc., CN=thawte EV SSL CA - G3	1A99019F9D412A64454749EDAA8E7DC46673D644DF3CE15CC655735EA0DF86FE	10/31/2013	10/30/2023
/C=NL, O=Trust Provider B.V., OU=Domain Validated SSL, CN=Trust Provider B.V. DV SSL CA - G1	D6EA1061C28B3DB96FF5BAA140AB5714E6B0B4F5D71ABCCD242A49B9B9F4DC27	1/21/2016	1/20/2026
/C=NL, O=Trust Provider B.V., OU=Domain Validated SSL, CN=Trust Provider B.V. DV SSL CA - G2	81051C355EC9F5A89FBA91D1A5BD3F0501EACD80EF93B218003D95CF251A7670	1/21/2016	5/20/2022
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 International Server CA - T1	F74DA4D9A687C5046499AEFC9FA867DE91A1A3941A09F24CF94603B7AB78108A	5/13/2010	5/12/2020
/C=US, O=thawte, Inc., CN=thawte SHA256 SSL CA	3F3AF9C9CC2C7599EF8F6DD7CA516CFC1797D7D12002254F3BFD0D4D0FE9DE86	5/23/2013	5/22/2023
/C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA	8FDA7A8813546F9A7CB065CD32D3650D5B56A2B7F942B9499AEB42A86A3E9D56	4/11/2011	4/8/2021
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 International Server CA - G3	6E21876CF16347201F637A178CB42B171D52379AF7E5F5B6F755B3EE9BB2ED4	2/8/2010	2/7/2020
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Secure Server CA - G3	5B9F350C2A76BE64BB3C2C6E2A414AEDDD0EF0A26D7C97FA7AF57D520C60B2E9	2/8/2010	2/7/2020
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Secure Server CA - T1	2C31A92DB8889132E04AD5F43DAF6D421B854510C61E41C787CB5E10E0962DC7	5/13/2010	5/12/2020
/C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA - G2	6FF6F63F6A0D3D63446CDAA523D26273B126C02F922E05D73C4748EB89B86393	9/8/2014	5/20/2022
/C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA - G3	80D9EDB45B7F592CD30254E55BC316BBF44E47DFC0C004A383281C03F345BA39	6/30/2015	6/29/2025
/C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA - G4	ED67937083B0739F302396F974AFB41BFBA648473967780B2C59B88AC4121AD4	12/17/2015	5/20/2022
/C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA - G5	9FE306E663E459644644F60A7153A221436FB9701A0EBD9124EEF8159D15CB43	12/17/2015	12/16/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Wells Fargo, OU=Symantec Trust Network, CN=Wells Fargo Certificate Authority WS1	C21087416BBF983B9FFE40F5D56EE0FFD94EB1E666B04A532ADE482EC201D67C	8/25/2015	8/24/2025
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia Technologies, Inc. DV SSL CA - G2	C18949E3659FF7DF22B30EC4DA6B4341AF8BEE00E4177A7F86FF59BC46B6BA40	4/5/2016	5/20/2022
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia Technologies, Inc. DV SSL CA - G1	3997C721893B3926D3938A311CA07A261B2AE22E01DC587F181DFF15B98B4EA6	4/5/2016	4/4/2026
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Domain Validated SSL, CN=Symantec Basic DV SSL CA - G1	526E30DED6BF9D5CE216F50C832402B48AB70D55AEDA918A1873A5883EBDB1B5	6/7/2016	6/6/2026
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Domain Validated SSL, CN=Symantec Basic DV SSL CA - G2	DF583E3A1ED35E57D95104817AD823C055FB9071CD400435B5FC74E692081DB	6/7/2016	6/6/2026
/C=US/ST=SC, O=SCHIEX, OU=SCHIEX Direct Messaging, CN=SCHIEX Direct CA	443C8158264710C0B768A8170E59BF1FAE4079D2BC39939A79FA839174ED81AE	6/7/2016	6/7/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID L1 CA	CAB016C5EA32061BD065FE13A55A40FA61058B27B34A7F8D175F7101EE063E3B	10/30/2012	10/30/2022
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID L2 CA	91FDEB52D4265120B843B195D1B6CDB5CE61251865A45A3E920E610FDDA660D3	1/7/2014	1/7/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID L4 CA	EFB2A3F37273D3589047919825EA5337E9B938A8C178B61C18C2B4270B9665AC	10/30/2012	10/30/2022
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID US L3 CA	EB84FC0B403D9B689297A5D83EA186838E3B777BC618EFDA162A75B7FEA666C1	1/8/2014	1/8/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID US L4 CA	6797436214EFEE67CDE7D70358D4D8B00DFBF78D5C87C62B4A7E790D73DD7BD9	4/18/2013	4/18/2023
/C=US, O=Aetna Inc, CN=Aetna Inc. Secure CA2	5D28761CBF304EAFCD127B34D614FE179AC7744F1552AF1C31298425AD05A275	12/9/2014	12/9/2024
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance CA-3	COA4A1AC05E03096A3B2AB8A38502B39E2614E11397BEE73D0A66B8ACEF7A283	4/3/2008	4/3/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance EV CA-1	8FC1469B8005BFEBDBF67F514E795FE1F17EA239A2A6934857F2428ADCE6D24F	11/10/2007	11/10/2021
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance EV CA-2	1188F831C949A62E9CD4F60E36F72544F0AF924DE07F9DA992E26E44C996EEEE0	3/23/2007	3/23/2022
/C=US, O=The Koble Group, LLC, OU=Orion Health Direct Secure Messaging, CN=The Koble Group CA	A576C29481F5A2ACB1DF47500629A60F96F6ACA324E878FFDCFABD85E5649AEF	6/21/2016	6/21/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert ECC Extended Validation Server CA	FDC8986CFAC4F35F1ACD517E0F61B879882AE076E2BA80B77BD3F0FE5CEFF8862	6/21/2016	6/21/2031
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit EV CA - G3	4B2CBA18EFBCE6C3C4A80AAABC952337000CD9346B768D062412A2DED846EDC9	1/7/2016	1/6/2026
/C=CN, O=TrustAsia Technologies, Inc., OU=Symantec Trust Network, OU=Domain Validated SSL, CN=TrustAsia DV SSL CA - G6	B90E17AB4B8778B10F9F28CBA7664DE2EE3D66E1AFC574D168EDD24A10339FF	8/11/2016	8/10/2026
/C=CN, O=TrustAsia Technologies, Inc., OU=Symantec Trust Network, OU=Domain Validated SSL, CN=TrustAsia DV SSL CA - G5	B41AB845CAB4DB9CB1FE6505765F36A0868ADC5DF419B38979FB6A4FE4131F70	8/11/2016	8/10/2026
/C=US, O=California Integrated Data Exchange, Inc., OU=Orion Health Direct Secure Messaging, CN=Cal INDEX CA	A5226F33474B53392665298B48F4E6129824E98BD4D38DF4E31EBBCF14FA33CD	7/12/2016	7/12/2026
/C=US, O=Abbott Laboratories Inc., CN=Abbott Laboratories Secure Server CA	6C69E201656440EB98CD0875764A1ED19015ED8C4427601ACA9C68AFA8973959	7/12/2016	7/12/2026
/C=US, O=Cisco Systems, Inc., CN=Cisco Meraki CA	199EE58009555DAE2CDA0626931C64391D6A88CCCB1F9F0B2EE80B667F581C06	7/12/2016	7/12/2026
/C=US, O=Abbott Laboratories Inc., CN=Abbott Laboratories Secure Authentication CA	DB99A4F284CCF10B26DE7B7A5D651725B857CBC871EBB33028D67B55510EFC9D	8/23/2016	8/23/2026
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 EV SSL CA - G4	31862233620E789330CC893E8B5E66705331B888B0ED30A44574D9E0A71C4F1	1/7/2016	1/6/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA-2 RADIUS CA	524CF7331C4EE353EEB1ECD74E1F801A0F1F08DFA0322092F42205AFC3A17675	9/20/2016	9/20/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Cybertrust Japan Issuing CA-1	87942388D29A46C06FE1E56AAB791594D0FB2E8EABF124048F130EEA9BEDD3FD	9/1/2016	9/1/2026



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=JP, O=Cybertrust Japan Co., Ltd., CN=Cybertrust Japan Extended Validation Server CA	0E10BDDDEE7512DBD79EBF0B4F48FEED7C83C2BD3DD81765565F4FF110B7BFA42	12/7/2016	12/7/2031
/C=JP, O=Cybertrust Japan Co., Ltd., CN=Cybertrust Japan Secure Server CA	33D57359831F87754E6E755D6B5B56E7E71297DDDFEA1D6397086604280F6FFC	12/7/2016	12/7/2031
/C=CN, O=TrustAsia Technologies, Inc., OU=Symantec Trust Network, OU=Domain Validated SSL, CN=TrustAsia ECC DV SSL CA - G7	AD806A9357B87D1EB1DD85A5A3C092D0204BA447FF4B3714E3F1034F4D3DE8A0	12/13/2016	12/12/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert EV Server CA G4	710024B37BD9F0E1537C18A4C20F9A31C4B485D1248C643F20B4C00F3716BA85	1/17/2017	1/17/2032
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server CA - G4	59F8CB7D7E9E13CB778FF62198EBE05551B515A58BBBA2EF19C33C760C823916	10/31/2013	10/30/2023
/C=US, O=GeoTrust Inc., CN=GeoTrust EV SSL CA - G7	546CAFF9060EEF30F4F3E02255FBF5131E657C1710C9A650020133A818BEC1C8	5/1/2017	4/29/2027
/C=US, O=GeoTrust Inc., CN=GeoTrust EV SSL CA - G6	419B0C9AD6B872A8B1BB87341AF63EE92E69B27B996662E733032F1288108DFB	5/1/2017	4/29/2027
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit SSL CA - G2	74EB307A78AC7E8570CC1BAE1C51102A6053C96F3332D703285A743BCBD35D9E	5/12/2015	5/11/2025
/C=US, O=Symantec Corporation, CN=Symantec Time Stamping Services CA - G2	83C1EA9E9EFCA283B840E167F9EA79C4E32ACD33834F59D138FCDAB9D8806B20	10/18/2012	5/20/2022
/C=US, O=Symantec Corporation, CN=Symantec SAS EV Code Signing CA	E865F583A928CCB6A7286B94E7920EE1F4998C030B438689E9583BCCD6AC5261	1/12/2016	1/11/2026
/C=US, O=thawte, Inc., CN=thawte SHA256 Code Signing CA	C4D18E0A58E4EFFD17ED77C840B613EF15F551076EA92C2B77F6609A6C2557C7	12/10/2013	12/9/2023
/C=US, O=thawte, Inc., CN=thawte SHA256 Code Signing CA - G2	F76F0D8AD330ACFD4C5BD05A58A1CF155DE00BE2C98F4E78999BE24E80A2ABCBF	7/22/2014	7/21/2024
/C=US, O=thawte, Inc., CN=thawte EV Code Signing CA	F376F6E5BF660F6BEDB768DCD1303EADD4A96F2ED7A97717E878FAE6BB5959FA	3/1/2016	2/28/2026



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
CN=VeriSign Class 3 - TEST ONLY - SGC CA; OU=FOR TEST PURPOSES ONLY, VeriSign Trust Network, Terms of use at https://www.verisign.com/rpa (c)07; O=VeriSign, Inc.; C=US	4B87C6E567D2C156EDB9352357BD8B16E97B1BBBAA5B3073D7F82D505EA0FE3D	1/1/2020	2/28/2020
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Registration Authority Intermediate CA	5B690E1CD2BC0016E4DB2AABAB503745E41F86B2448F2EC06D29F24999DEBCA2	6/7/2011	6/6/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Organizational CA - G4	E3710F0C667E589DE8E4AEA37E701AFAF3FBB6275762E6FEA3FD6629544279D6	5/6/2014	5/5/2024
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 International Server CA - G3	330260A69C0887F1B9A498302AECFDA17DE89A819C7E57E28C40A53080BE10E8	2/8/2010	2/7/2020
/C=US, O=Symantec Corporation, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, CN=Symantec Class 3 Organizational CA - G2	F5068C4293A26A0E420D02AE4BEF27008377E3E7ECD8E5CF194428162E3C40F4	3/16/2011	3/15/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Admin Intermediate Certificate Authority	062A76E5196E4C6220ACA7D32AA419761101374C11866C3627D5F8A055ECE2CE	6/7/2011	6/6/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Organizational CA - G4	6F6B2D4A309A156C61977FBCCF7D2AC9F59623FFCCEAC3E4EE5A83A18D895275	5/6/2014	5/5/2024
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Organizational CA - G4	FD33AEFD33A161FAC0190E41DF9DD50C3339E883C03F49C4A2AB2B8956EF54D4	5/6/2014	5/5/2024
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Extended Validation Code Signing CA - G2	F726C8891336B1B97CBC86F596F1267FC180152122573E76D5145A7C64E2CFF7	3/4/2014	3/3/2024
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Code Signing 2010 CA	D0F90BBF6EE8629E4A31CFDBAA2202E324AF2F5F456967DD83CA5B3684C34297	2/8/2010	2/7/2020
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 SHA256 Code Signing CA	582DC1D97A790EF04FE2567B1EC88C26B03BF6E99937CAE6A0B50397AD20BBF8	12/10/2013	12/9/2023
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Code Signing 2010 CA	F45C03B5683E3EA8F0ABC5F14E749FBBF632766596D9074B000D68B76226F7A3	2/8/2010	2/7/2020



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Code Signing 2010 CA	0CFC19DB681B014BFE3F23CB3A78B67208B4E3D8D7B6A7B1807F7CD6ECB2A54E	2/8/2010	2/7/2020
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Insattningsgaranti Service SHA256 CA, CN=Symantec Class 3 Organizational CA - G5	5CCA1F2FF39A4A8924A3606036D8AADE2E23C024EFCAFF3DC2C66759FEF776FB	10/7/2014	10/6/2024
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Extended Validation Code Signing CA	169DAF83C0870AB8927C99D3FC0774DDF34FBA28B02B881DCD0B633B6D71B2BA	6/7/2012	6/6/2022
/C=NZ, O=IBM New Zealand Limited, OU=Symantec Trust Network, CN=IBM New Zealand Limited Public CA	A6AE7959A195749CA887386FA04482BD169DC1157E312D301B0D5C333FAF2B02	2/3/2015	2/2/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Extended Validation Code Signing CA - G3	C267DC115D57DD0226279B346DF1953DD2C07A85CB48A0D899FD5724F5AF681F	5/12/2016	5/11/2026
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec SHA256 TimeStamping CA	F3516DDCC8AFC808788BD8B0E840BDA2B5E23C6244252CA3000BB6C87170402A	1/12/2016	1/11/2031
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 SHA256 Code Signing CA - G2	2042E38FC57388F1DB3222C7AB5BE11C6EDB7E454BF45487AE44FF2D6A2B7645	7/22/2014	7/21/2024
/C=US, O=Catholic Health Initiatives, OU=Orion Health Direct Secure Messaging, CN=Catholic Health Initiatives CA	151A3591B765D02C359EEC9C56ED8DDAD0C54E756A497D02BF979FA8DD5D95BB	8/19/2014	8/19/2024
/C=US, O=High Mark HIE, LLC, OU=Orion Health Direct Secure Messaging, CN=Highmark Tapestry HIE CA	1B68286DEFCE036512A5DAC76C8ABD067D33A07D4E0DEF7707089C980075E192	8/19/2014	8/19/2024
/C=US, O=Jax Health Records - SV HIE, OU=Orion Health Direct Secure Messaging, CN=Jax HR Saint Vincents HIE CA	3D2928A2988227CE4EBC319AA34E6552E9D98839D5CE2114E79F8F5EC2BF9DE0	2/16/2015	2/16/2025
/C=US, O=Keystone Health Information Exchange (KeyHIE), OU=Orion Health Direct Secure Messaging, CN=KeystoneHIE KeyHIE CA	D1C2009D472835AFBA94CC8ACB06DD0C727138AE1E73834394D27B0C06CF1265	8/19/2014	8/19/2024
/C=US, O=Massachusetts Health Information Highway (Mass Hlway), OU=Orion Health Direct Secure Messaging, CN=Mass Hlway CA	23BA3A97C580DF2C316624D7FA5F7663580261CB2048142C73A3E86B113EB26D	9/25/2015	9/25/2025
/C=US, O=New Mexico Health Information Collaborative, OU=Orion Health Direct Secure Messaging, CN=New Mexico Health Information Collaborative CA	10BEDDC480AA27563480B1BCAAB6C25B52995EA836E9A2ACE83F8F59206E2496	9/26/2014	9/26/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Oklahoma State Department of Health, OU=Orion Health Direct Secure Messaging, CN=Oklahoma State Department of Health CA	77ABE65DF4BE94E5EC222FC905E1233F8C77D6B3AE2933346A0C2FC3B2F1F560	2/16/2015	2/16/2025
/C=US, O=Sutter Health, a California nonprofit public benefit corporation, OU=Orion Health Direct Secure Messaging, CN=Sutter Health CA	603D69822381A0BFC274BBED67009BC7DF133CB902FA242CF58BF727D23D5495	10/21/2014	10/21/2024
CN=KPN Class 2 CA G2; O=KPN B.V.; C=NL	2B75F77E2DFB69B4484E0EC2DFB62BFC4068289609B9CDF59038943C7871B39B	7/16/2020	6/6/2031
CN=DigiCert QV EV TLS ICA G1; O=DigiCert, Inc.; C=US	6A7B2AA3414039A663D5D8BBAB8256A3979A84C332BF5E1EE8F6D0E0ADA84668	3/16/2020	3/14/2030
CN=DigiCert QV TLS ICA G1; O=DigiCert, Inc.; C=US	93E33AF7DA3030530D090C9C55762CADE7EAE943F834349D1057A90EB67F306B	3/16/2020	3/14/2030
/C=KR, O=KECA, Inc., OU=Symantec Trust Network, CN=CrossCert Class 2 CA - G3	3B7555AE65312A21B141F610288E5F533C68AB0DB5FB9580F37EB2218D0C2798	6/4/2015	6/3/2025
/C=US, O=Symantec Corporation, CN=Symantec SAS Code Signing CA	279A055E2C41A9105FDFD26343229D0D38125872455C43344DDEBCAE5A0BF736	3/6/2014	5/20/2022
/C=US, O=Symantec Corporation, CN=Symantec SHA1 SAS Code Signing CA	F82CF9003A28693F430C7E939581097BA097C93AEE510A105D7822324F364C9A	10/8/2015	5/20/2022
/C=US, O=Symantec Corporation, CN=Symantec Time Stamping Services CA - G2	0625FEE1A80D7B897A9712249C2F55FF391D6661DBD8B87F9BE6F252D88CED95	12/21/2012	12/30/2020
/C=US, O=Symantec Corporation, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, CN=Symantec Class 3 Admin Intermediate Certificate Authority	F71B3E31B6CE7D735E781DB156CDD77F993A3B7A14195058D9A6D15C0A97C3B3	3/3/2011	3/2/2021
/C=US, O=Symantec Corporation, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, CN=Symantec Class 3 Registration Authority Intermediate CA	CFA1F19379D9F0A3FC8D44064966B69712760AE47591D8651B7633175469A8A7	3/3/2011	3/2/2021
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Code Signing 2010 CA	193A2A64C82C920CBC2A3A2D032AA1F8E5F7F3483058710F0B6A0FBBEB697B69	2/8/2010	2/7/2020



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=AR, O=Bolsa de Comercio de Rosario, OU=DigiCert Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Bolsa de Comercio de Rosario - G3	0A0C200DF9CF5459ADF0DD42DC2EEE10B1318C5B1C5245167269511F65B1AE65	1/18/2018	1/17/2023
/C=US, O=Comcast Corporation, CN=Comcast Trusted User CA	5764D931D3FB3819BB5CD19DD09E075A3320114F079292494A4F64E92634808F	1/17/2017	1/17/2027
/C=US, O=Comcast Corporation, CN=Comcast Trusted User RSA CA	9B8DD7F84D5AD52AADDEA5729A6DA865FF28EE944A8379FC274103B9B5F094D9	1/31/2017	1/31/2027
/C=US, O=Imprivata, OU=www.imprivata.com, CN=Imprivata Secure ID CA-1	B49B1B7209D1A83F6CDBBA743AD720ACC24440FB9002F9DDB3C6F2F5CE337A47	10/25/2016	10/25/2026
/C=US, O=National Geospatial-Intelligence Agency, CN=NGA CA G3	357985D17EF02893AB63FE0EE4C464B8AD3A4B05EF72B27AE73D7258C8996FB8	2/5/2020	2/5/2025
/C=US, O=SAIC, OU=PKI, CN=SAIC Public Email CA 2018 01	B4739E90912D31F2829F69D60F62C5954DC98EEF9A7EF3477447692C4A440D65	2/9/2018	2/9/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID CA-1	D86702A71F553FAEC066CE25EA5B6682470539E28C6A300F6A410A720A2C7CF2	1/15/2013	1/15/2023
/C=US, O=DigiCert, Inc., CN=DigiCert Class 3 SSP Intermediate CA - G4	59FFA4D4929E0BD48AA35B02CCAC2E13A8D147B9D146BFBFD00FDE736264D00E	5/14/2020	5/14/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated Trust CA	81CCD4FEA59F241D1AE7720CB3C07010D8DCB02BE0C584FB8EA920921DA6A654	11/18/2011	11/18/2023
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert Direct Secure ID CA-1	F4DC08264086D51D0A4CFA5ED05C337120AF9899206395418B4CE9BBC507564A	10/25/2016	10/25/2026
/C=US, O=Anthem, Inc., CN=Anthem Direct CA	F9ECB6EC9845F124392FE8C1B6BE0D18CB667834ADCF44DF8DFB316323673454	3/22/2017	3/22/2027
/C=US, O=GSI Health, OU=GSI Direct Messaging, CN=GSI Health Direct CA	812D54BEDF8EC9C7082EFD4B9FE5E44E420FEFDA282EB03D33DA77DEC5C0B5A5	10/25/2016	10/25/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID L3 CA	9EB1E7AB3D9559088B9926A6569CFB645FBDC72A758815B1B1C78A0159FB6863	12/16/2019	2/28/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 SSP Intermediate CA - G3	C0F74D740D4D3EB02F97D954540C83FE0C5384FAD44ED04EDB2868E7BE3195B6	12/18/2019	10/25/2020
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID L3 CA	504AEDFBB9D65D11926B1352295737F31F687246E5A2D49634667795DA47958A	2/28/2019	2/28/2022
/C=DE, O=Deutscher Sparkassen Verlag GmbH, OU=VeriSign Trust Network, CN=S-TRUST Class 2 CA - G2	7F0158C34ED46B2048B9FC42167330FBF914E57C612BA120812D6F739B0F06EC	4/8/2010	4/7/2020
/C=DE, O=Deutscher Sparkassen Verlag GmbH, OU=VeriSign Trust Network, CN=S-TRUST Class 1 CA - G1	A3030DFA5983940D6A7AF6FBBAA0DAA9A5B9B2EC80498091FEC212E84EF8A064	3/31/2011	3/30/2021
/C=DE, O=Deutscher Sparkassen Verlag GmbH, OU=Symantec Trust Network, CN=S-TRUST Class 2 CA - G6	E5C0DDB7F5CE0BC0A6BFAB6FB3322518CFF30C1D7ACC88A160C060132186CBBE	10/17/2013	10/16/2023
/C=DE, O=Deutscher Sparkassen Verlag GmbH, OU=Symantec Trust Network, CN=S-TRUST Class 2 CA - G6	F4E8C138E42C8F63375AF668909213336C5C9ED72AA81C3B641D1F68AA9AB83A	10/17/2013	10/16/2023
/C=DE, O=Deutscher Sparkassen Verlag GmbH, OU=Symantec Trust Network, CN=S-TRUST Class 2 CA - G3	8565A2A0D4410B84D253F5A13AF7A097A64B1EC71F7007CD271136B532FE1113	7/15/2014	7/14/2024
/C=DE, O=Deutscher Sparkassen Verlag GmbH, OU=Symantec Trust Network, CN=S-TRUST Class 2 CA - G3	3AE18264FA23039D26EE2EBDF243A20F1B656BFF330CA44C23DDDD31C960ED7D	7/15/2014	7/14/2024
/C=US, O=GeoTrust Inc, OU=GeoTrust TimeStamping CA, CN=GeoTrust TimeStamping CA I	D36027A85FE1EDCBA4F1BA92C3C8B37864E862D2B4A02B8FF643F582609F6A08	3/7/2006	3/7/2021
/C=US, O=GeoTrust Inc, OU=GeoTrust TimeStamping CA, CN=GeoTrust TimeStamping CA I	321DF681FB13682259A572BE65FDD88E6C9A2CB21F945683D3B704517BC192E4	3/7/2006	3/7/2021
/C=US, O=Google Trust Services, CN=GTS CA 1D3	92C0FB93FB7CA0A1A33C193F1B1CD1CABD2E40DEBA40278A0BB103F75B8640C7	5/29/2018	5/28/2021
, CN=BT Class 2 DigiCert PKI Platform CA, O=British Telecommunications plc/C=GB	843782303040BFB33576766E1700696DE0FC14887BE293D7265EB59ECE4ED9CC	8/6/2019	6/6/2031
/C=US, O=Amazon, OU=Server CA 1B, CN=Amazon	4A1FF6BBF481170D3B773CEC1F3A84DE3B5096575CDBF8B08432209318CA0FBD	10/21/2015	10/21/2040
/C=US, O=Amazon, OU=Server CA 3B, CN=Amazon	ECC295B6DDC084BA7179FB53BDD1D422CB6C0A8D94F154D4A5B17780B7279ED	7/16/2018	7/16/2028



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Amazon, OU=Server CA 1B, CN=Amazon	F55F9FFCB83C73453261601C7E044DB15A0F034B93C05830F28635EF889CF670	10/22/2015	10/19/2025
/C=US, O=DigiCert Inc, CN=DigiCert SHA2 Secure Server CA	C1AD7778796D20BCA65C889A2655021156528BB62FF5FA43E1B8E5A83E3D2EAA	9/23/2020	9/22/2030
/C=US, O=DigiCert Inc, CN=DigiCert TLS Hybrid ECC SHA384 2020 CA1	D79A2D5E03295C0E9FEAE36D021EBD5209700AB1A9E817A43F30FA3C66F78D21	9/23/2020	9/22/2030
/C=US, O=Cisco Systems, Inc., CN=Cisco Meraki CA2	CDBCBEF16E37237702FACC4B55D3AB92A17CFA17835E13377AA4D2BA0FD47A02	9/24/2020	7/12/2026
/C=US, O=Plex, Inc., CN=Plex Devices High Assurance CA3	FB6060848440AA4594FE8109741EFAB40C56732B26C67C36D6DC945BB2FE13CF	9/24/2020	5/19/2025
/C=US, O=DigiCert Inc, CN=DigiCert TLS RSA SHA256 2020 CA1	25768713D3B459F9382D2A594F85F34709FD2A8930731542A4146FFB246BEC69	9/24/2020	9/23/2030
/C=US, O=DigiCert Inc, CN=DigiCert Global G2 TLS RSA SHA256 2020 CA1	1F8EB9E9A8E066CC5B3833E06B3129764B622639D5B163F600E1C79120BF3EED	9/24/2020	9/23/2030
/C=US, O=Aetna Inc, CN=Aetna Inc. Secure CA2	DDCBB4F3051D6E601310EB0E46B5BB99C5E8B99F7A539E367A987DEA030E318E	9/24/2020	12/9/2024
/C=US, O=Aetna Inc, CN=Aetna Inc. Secure EV CA	A1448A015E1399C5A891812F0E88C6D847B221D21F9326A6626BA43A0EB612D9	9/24/2020	12/9/2024
/C=US, O=Bloomberg LP, CN=Bloomberg TLS CA	440B37416F2DE852CA386150D611EC0AF31DD58D8A27F882815A7EA3EE6848EE	9/24/2020	9/23/2030
/C=US, O=DigiCert Inc, CN=DigiCert Trusted G4 TLS RSA SHA384 2020 CA1	4F35C6B9C100905FF25BB01C0A20EBE335BCEEF249CE9FFA1E11E062ED66FCD1	9/24/2020	9/23/2030
/C=US, O=DigiCert Inc, CN=DigiCert Global G3 TLS ECC SHA384 2020 CA1	338EDB04FB8BEAF07A10749E7F4E538DE0715DAFB6478D58063FB7C8BDB0C30D	9/24/2020	9/23/2030
/C=US, O=DigiCert Inc, CN=DigiCert Baltimore TLS RSA SHA256 2020 CA1	38F73647F1ECAECC0FC5AFE68AC30E0C26171E9F232F4530729412408FD53626	9/24/2020	5/11/2025
/C=US, O=DigiCert Inc, CN=DigiCert Baltimore SMIME RSA SHA256 2020 CA1	D1E87FFD17F95602571D08ADBDA469A04B14258996EC09776CD953582AF0B87E	9/24/2020	5/11/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=AU, O=Fuji Xerox Businessforce Pty. Limited, CN=Fuji Xerox Businessforce CA - G2	A12A8446C0E1E5CF4079642B31A0675ECFD1D09FAD2E4884591F380026D9EAEF	9/25/2020	9/24/2030
/C=US, O=Brown Brothers Harriman & Co., CN=Brown Brothers Harriman Public Issuer CA	FB586897D15FF353CFE83F9B214D234310A191E0CC63C0808E40E981754DD5A6	9/25/2020	9/24/2030
/C=US, O=eGlobalCustody, CN=eGlobalCustody Public Issuer CA	1E1E62AE4F4721617A2CA0E3F7CA6D843AE7530151B9D8C19B5D07D4BDB33324	9/25/2020	9/24/2030
/C=DE, O=Daiichi Sankyo Europe GmbH, CN=Daiichi Sankyo Europe GmbH Issuing CA	A34B4B3BA3B93302804740CFF3F01A9C0FD9CFFEE5A193C997B87C5BE43A9E94	9/25/2020	9/24/2030
/C=US, O=Common Securitization Solutions LLC, CN=CSS Public Issuing CA G2	D040BEF3C50B536E2E8DA2AD7721A772C76B718FF10165D5AA88674C233E3766	9/25/2020	9/24/2030
/C=US, O=General Electric Company, CN=GE SMIME Issuing CA 3	BDE2A6CEC1A1C04C2E423C1457949F180ED086E021BBF090556BE3CE6AD1863F	9/25/2020	9/24/2030
/C=DE, O=OSRAM Continental GmbH, CN=OSRAM Continental Secure Email CA - G2	B5D61B50ACB993A27EF05D4324A04A671CEE7502E62BA5E9122CC2100BDF6CF	9/25/2020	9/24/2030
/C=US, O=Fannie Mae, CN=Fannie Mae Shared Online CA G2	28F7CD588FC5B0DF460DD4C678F9DC51077A0E89D38DCCBA09BC1AEEE9D698C1	9/25/2020	9/24/2030
/C=US, O=Honeywell International Inc., CN=Honeywell International Co-branded CA - G2	B78DFC942032C042CD45490E3B32433CA167067B330B52CB1453EA3AD5819080	9/25/2020	9/24/2030
/C=US, O=DigiCert Inc, CN=DigiCert Cloud Services CA-1	5F88694615E4C61686E106B84C3338C6720C535F60D36F61282ED15E1977DD44	9/25/2020	9/24/2030
/C=US, O=Michigan Health Information Shared Services, CN=MIDIGATE CA	4290A2532669E53D6B9A86AAB0AF8B604AC34897442E1836F15D84FCDEDE5A5B	11/6/2017	1/13/2023
/C=US, O=Trinity Health, CN=Trinity Health Direct CA	FA46B1274813237715FD1F4AE72E0112BAD095250E98DCDA416E71E49E0FF7E6	8/24/2017	1/13/2023



DIGICERT, INC. MANAGEMENT'S ASSERTION

DigiCert, Inc. ("DigiCert") operates the Certification Authority ("CA") services for its CAs enumerated in [Attachment B](#) 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
- Subordinate CA certification

The management of DigiCert is responsible for establishing and maintaining effective controls over its CA operations, including its CA business practices disclosure on its [repository](#), 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 DigiCert's CA operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

DigiCert management has assessed its disclosures of its certificate practices and controls over its CA services. Based on that assessment, in DigiCert management's opinion, in providing its CA services at California, Utah and Virginia, in the United States of America, and Kawasaki and Sapporo, Japan, throughout the period November 1, 2019 to September 30, 2020, DigiCert has:

- disclosed its business, key lifecycle management, certificate lifecycle management, and CA environmental control practices in the applicable versions of its DigiCert Certification Practices Statement ("CPS") and DigiCert Certificate Policy ("CP") as enumerated in [Attachment A](#)
- maintained effective controls to provide reasonable assurance that:
 - the CPS is consistent with its CP; and
 - DigiCert provides its services in accordance with its CP and CPS
- 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; 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

based on [WebTrust Principles and Criteria for Certification Authorities v2.2](#), including the following:

CA Business Practices Disclosure

- Certificate Practice Statement (CPS)
- Certificate Policy (CP)

CA Business Practices Management

- Certificate Policy (CP) Management
- Certification Practice Statement (CPS) Management
- CP and CPS Consistency

CA Environmental Controls

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

CA Lifecycle Management Controls

- CA Key Generation
- CA Key Storage, Backup, and Recovery
- CA Public Key Distribution
- CA Key Usage
- CA Key Archival
- CA Key Destruction
- CA Key Compromise
- CA Cryptographic Hardware Lifecycle Management
- CA Key Transportation
- CA Key Migration



Subscriber Key Lifecycle Management Controls

- CA-Provided Subscriber Key Generation Services
- CA-Provided Subscriber Key Storage and Recovery Services
- Integrated Circuit Card (ICC) Lifecycle Management
- Requirements for Subscriber Key Management

Certificate Lifecycle Management Controls

- Subscriber Registration
- Certificate Renewal
- Certificate Rekey
- Certificate Issuance
- Certificate Distribution
- Certificate Revocation
- Certificate Validation

Subordinate CA Certificate and Cross Certificate Lifecycle Management Controls

- Subordinate CA Certificate and Cross Certificate Lifecycle Management

DigiCert does not escrow its CA keys and does not provide certificate suspension services. Accordingly, our assertion does not extend to controls that would address those criteria.

DigiCert has disclosed the following matters publicly on Mozilla's Bugzilla platform:

Bug ID	Summary	Opened	Closed	Resolution
1550645	DigiCert: CAA Checking Issue	5/9/19	5/22/20	FIXED
1556906	DigiCert: Apple: Non-compliant Common Name Length	6/4/19	12/24/19	FIXED
1556948	DigiCert Validation Scope Incident	6/4/19	11/26/19	FIXED
1563573	DigiCert: Failure to disclose Unconstrained Intermediate within 7 Days	7/4/19	2/1/20	FIXED
1573937	DigiCert/Verizon: Qualified 2019 Audit Statements	8/14/19	2/2/20	FIXED
1576013	DigiCert: JOI Issue	8/22/19	11/13/20	FIXED
1593814	DigiCert: & character in a printableString in ICA	11/4/19	12/24/19	FIXED
1595921	DigiCert: Domain validation skipped	11/12/19	1/24/20	FIXED
1596931	DigiCert: Verizon CPS lacks problem reporting instructions	11/15/19	12/3/19	FIXED
1613505	DigiCert: WTCA / WTBR Audit 2019 - Matters to be resolved	2/5/20	5/18/20	FIXED
1618256	DigiCert: Failure to properly encode Subject name	2/26/20	4/6/20	FIXED
1624527	DigiCert: Issuance of Cert with Compromised Key	3/24/20	7/20/20	FIXED
1627152	DigiCert: OCSP NextUpdate	4/2/20	5/19/20	FIXED



Bug ID	Summary	Opened	Closed	Resolution
1639032	DigiCert: "Internet Widgits Pty Ltd" in organizationalUnitName	5/18/20	8/2/20	FIXED
1639801	DigiCert: Failure to revoke key-compromised certificates within 24 hours	5/21/20	11/19/20	FIXED
1639802	DigiCert: Failure to revoke key-compromised certificate	5/21/20	7/6/20	FIXED
1640805	DigiCert: delayed publication of revocation information	5/25/20	8/5/20	FIXED
1646866	DigiCert: Failure to revoke invalid serialNumber EV certificates within 5 days	6/18/20	6/20/20	INVALID
1647084	DigiCert / Microsoft: inconsistent disclosure of externally-operated intermediate	6/20/20	8/2/20	FIXED
1649277	DigiCert: Failure to provide a preliminary report within 24 hours.	6/29/20	10/31/20	FIXED
1649951	DigiCert: Incorrect OCSP Delegated Responder Certificate	7/1/20	Open as of Report Date	---
1650910	DigiCert: Inconsistent EV audits	7/6/20	10/7/20	FIXED
1651461	DigiCert: Failure to revoke within 7 days: OCSP ECU issue	7/8/20	Open as of Report Date	---
1651828	DigiCert: Delay of revocation for EV audit inconsistency incident	7/9/20	8/13/20	FIXED
1653475	DigiCert: Key Size Not Divisible By 8	7/16/20	8/2/20	FIXED
1654967	DigiCert: Malformed ICA	7/23/20	12/15/20	FIXED
1662346	DigiCert: OCSP responder returning invalid responses	8/31/20	10/21/20	FIXED
1664325	DigiCert: SHA-256 hash algorithm used with ECC P-384 key	9/10/20	9/11/20	DUPLICATE

DigiCert, Inc.

Jeremy Rowley
Chief Product Officer

December 21, 2020



ATTACHMENT A - CERTIFICATION PRACTICE STATEMENT VERSIONS IN-SCOPE

Certificate Policies

Policy Name	Version	Effective Date
DigiCert Certificate Policy	5.4	September 29, 2020
DigiCert Certificate Policy	5.3	July 16, 2020
DigiCert Certificate Policy	5.2	May 22, 2020
DigiCert Certificate Policy	5.1	March 27, 2020
DigiCert Certificate Policy	5.0	February 6, 2020
DigiCert Certificate Policy	4.20	November 22, 2019
DigiCert Certificate Policy	4.19	July 25, 2019

Policy Name	Version	Effective Date	Date incorporated into DigiCert CP
DigiCert Certificate Policy for Symantec Trust Network	2.12	June 25, 2019	February 6, 2020

Certification Practice Statements

Policy Name	Version	Effective Date
DigiCert Certification Practices Statement	5.4	September 29, 2020
DigiCert Certification Practices Statement	5.3	July 16, 2020
DigiCert Certification Practices Statement	5.2	May 22, 2020
DigiCert Certification Practices Statement	5.1	March 27, 2020
DigiCert Certification Practices Statement	5.0	February 6, 2020
DigiCert Certification Practices Statement	4.20	November 22, 2019
DigiCert Certification Practices Statement	4.19	July 25, 2019

Policy Name	Version	Effective Date	Date incorporated into DigiCert CPS
DigiCert Certification Practices Statement for Symantec Trust Network	3.13	June 25, 2019	February 6, 2020

Policy Name	Version	Effective Date	Date incorporated into DigiCert CPS
DigiCert Certification Practices Statement for GeoTrust and RapidSSL	1.6	June 25, 2019	February 6, 2020

Policy Name	Version	Effective Date	Date incorporated into DigiCert CPS
DigiCert Certification Practices Statement for Thawte-Branded Certificates	3.7.23	June 25, 2019	February 6, 2020



ATTACHMENT B - LIST OF CAs IN SCOPE

Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=IE/O=Baltimore/OU=CyberTrust/CN=Baltimore CyberTrust Root	16AF57A9F676B0AB126095AA5EBADEF22AB31119D644AC95CD4B93DBF3F26AEB	5/12/2000	5/12/2025
/O=Cybertrust, Inc/CN=Cybertrust Global Root	960ADF0063E96356750C2965DD0A0867DA0B9CBD6E77714AEAFB2349AB393DA3	12/15/2006	12/15/2021
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Assured ID Root CA	3E9099B5015E8F486C00BCEA9D111EE721FABA355A89BCF1DF69561E3DC6325C	11/10/2006	11/10/2031
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Assured ID Root G2	7D05EBB682339F8C9451EE094EEBFefa7953A114EDB2F44949452FAB7D2FC185	8/1/2013	1/15/2038
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Assured ID Root G3	7E37CB8B4C47090CAB36551BA6F45DB840680FBA166A952DB100717F43053FC2	8/1/2013	1/15/2038
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root CA	4348A0E9444C78CB265E058D5E8944B4D84F9662BD26DB257F8934A443C70161	11/10/2006	11/10/2031
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root G2	CB3CCBB76031E5E0138F8DD39A23F9DE47FFC35E43C1144CEA27D46A5AB1CB5F	8/1/2013	1/15/2038
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root G3	31AD6648F8104138C738F39EA4320133393E3A18CC02296EF97C2AC9EF6731D0	8/1/2013	1/15/2038
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert High Assurance EV Root CA	7431E5F4C3C1CE4690774F0B61E05440883BA9A01ED00BA6ABD7806ED3B118CF	11/10/2006	11/10/2031
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Trusted Root G4	552F7BDCF1A7AF9E6CE672017F4F12ABF77240C78E761AC203D1D9D20AC89988	8/1/2013	1/15/2038
/C=US/O=GeoTrust Inc./CN=GeoTrust Global CA	FF856A2D251DCD88D36656F450126798CFABAAD40799C722DE4D2B5DB36A73A	5/21/2002	5/21/2022
/C=US/O=GeoTrust Inc./CN=GeoTrust Primary Certification Authority	37D51006C512EAAB626421F1EC8C92013FC5F82AE98EE533EB4619B8DEB4D06C	11/27/2006	7/16/2036



Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US/O=GeoTrust Inc./OU=(c) 2007 GeoTrust Inc. - For authorized use only/CN=GeoTrust Primary Certification Authority - G2	5EDB7AC43B82A06A8761E8D7BE4979EBF2611F7DD79BF91C1C6B566A219ED766	11/5/2007	1/18/2038
/C=US/O=GeoTrust Inc./OU=(c) 2008 GeoTrust Inc. - For authorized use only/CN=GeoTrust Primary Certification Authority - G3	B478B812250DF878635C2AA7EC7D155EAA625EE82916E2CD294361886CD1FBD4	4/2/2008	12/1/2037
/C=US/O=GeoTrust Inc./CN=GeoTrust Universal CA	A0459B9F63B22559F5FA5D4C6DB3F9F72FF19342033578F073BF1D1B46CBB912	3/4/2004	3/4/2029
/C=US/O=GeoTrust Inc./CN=GeoTrust Universal CA 2	A0234F3BC8527CA5628EEC81AD5D69895DA5680DC91D1CB8477F33F878B95B0B	3/4/2004	3/4/2029
/C=US/O=thawte, Inc./OU=Certification Services Division/OU=(c) 2006 thawte, Inc. - For authorized use only/CN=thawte Primary Root CA	8D722F81A9C113C0791DF136A2966DB26C950A971DB46B4199F4EA54B78BF9F	11/17/2006	7/16/2036
/C=US/O=thawte, Inc./OU=(c) 2007 thawte, Inc. - For authorized use only/CN=thawte Primary Root CA - G2	A4310D50AF18A6447190372A86AFAF8B951FFB431D837F1E5688B45971ED1557	11/5/2007	1/18/2038
/C=US/O=thawte, Inc./OU=Certification Services Division/OU=(c) 2008 thawte, Inc. - For authorized use only/CN=thawte Primary Root CA - G3	4B03F45807AD70F21BFC2CAE71C9FDE4604C064CF5FFB686BAE5DBAAD7FDD34C	4/2/2008	12/1/2037
/C=US/O=VeriSign, Inc./OU=VeriSign Trust Network/OU=(c) 1999 VeriSign, Inc. - For authorized use only/CN=VeriSign Class 1 Public Primary Certification Authority - G3	CBB5AF185E942A2402F9EACBC0ED5BB876EEA3C1223623D00447E4F3BA554B65	10/1/1999	7/16/2036
/C=US/O=VeriSign, Inc./OU=VeriSign Trust Network/OU=(c) 1999 VeriSign, Inc. - For authorized use only/CN=VeriSign Class 2 Public Primary Certification Authority - G3	92A9D9833FE1944DB366E8BFAE7A95B6480C2D6C6C2A1BE65D4236B608FCA1BB	10/1/1999	7/16/2036
/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	EB04CF5EB1F39AFA762F2BB120F296CBA520C1B97DB1589565B81CB9A17B7244	10/1/1999	7/16/2036
/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	69DDD7EA90BB57C93E135DC85EA6FCD5480B603239BDC454FC758B2A26CF7F79	11/5/2007	1/18/2038



Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/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	9ACFAB7E43C8D880D06B262A94DEEEE4B4659989C3D0CAF19BAF6405E41AB7DF	11/8/2006	7/16/2036
/C=US/O=VeriSign, Inc./OU=VeriSign Trust Network/OU=(c) 2008 VeriSign, Inc. - For authorized use only/CN=VeriSign Universal Root Certification Authority	2399561127A57125DE8CEFEA610DDF2FA078B5C8067F4E828290BFB860E84B3C	4/2/2008	12/1/2037
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Class 3 Public Primary Certification Authority - G6	B32396746453442F353E616292BB20BBA5D23B546450FDB9C54B8386167D529	10/18/2012	12/1/2037
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Class 3 Public Primary Certification Authority - G4	53DFDFA4E297FCFE07594E8C62D5B8AB06B32C7549F38A163094FD6429D5DA43	10/18/2012	12/1/2037
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Class 2 Public Primary Certification Authority - G6	CB627D18B58AD56DDE331A30456BC65C601A4E9B18DEDCEA08E7DAAA07815FF0	10/18/2011	12/1/2037
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Class 1 Public Primary Certification Authority - G6	9D190B2E314566685BE8A889E27AA8C7D7AE1D8AADD8A3C1ECF9D24863CD34B9	10/18/2011	12/1/2037
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Class 2 Public Primary Certification Authority - G4	FE863D0822FE7A2353FA484D5924E875656D3DC9FB58771F6F616F9D571BC592	10/5/2011	1/18/2038
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Class 1 Public Primary Certification Authority - G4	363F3C849EAB03B0A2A0F636D7B86D04D3AC7FCFE26A0A9121AB9795F6E176DF	10/5/2011	1/18/2038
/C=US/O=Verizon Business/OU=OmniRoot/CN=Verizon Global Root CA	68AD50909B04363C605EF13581A939FF2C96372E3F12325B0A6861E1D59F6603	7/30/2009	7/30/2034
/C=ZA/ST=Western Cape/L=Durbanville/O=Thawte/OU=Thawte Certification/CN=Thawte Timestamping CA	6B6C1E01F590F5AFC5FCF85CD0B9396884048659FC2C6D1170D68B045216C3FD	1/1/1997	12/31/2020



Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US/O=WFA Hotspot 2.0/CN=Hotspot 2.0 Trust Root CA - 03	A3CC68595DFE7E86D8AD1772A8B5284ADD54ACE3B8A798DF47BCCAFB1FDB84DF	12/8/2013	12/8/2043
/O=Cybertrust, Inc/CN=Cybertrust Global Root	802447EE521CC666CDB7BBAE93A385E55F200D76A3D1356A85445AC4CBDBED12	1/8/2014	12/15/2030
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Web PKI ECC Root - G1	92BB72F15EB75DE467C84B438181034BDAE9A016EC26434BEE3C9BBAD8CD8AF0	9/21/2017	9/20/2042
/C=US/O=Symantec Corporation/OU=Symantec Trust Network/CN=Symantec Web PKI RSA Root - G1	F6BB5B7985A8736594C14679FA31603814502AAEB5F4282A69985DC84A450777	9/21/2017	9/20/2042
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Federated ID Root CA	CF2A86C82850FF66301730352EC16546D611985EF8C936657C23B6EBE5F0AAB7	1/15/2013	1/15/2033
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert High Assurance EV Root CA	071B8B4B13AD7B2BE09FDD7FBDF3482460838098C21519B83B3150F8E919832D	8/13/2018	11/4/2022

Cross-Signed Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/O=Cybertrust, Inc/CN=Cybertrust Global Root	24905145BD9B9BFE99C60354B49951BE0E709F1634CFBD0E370FEB9F068ED6C3	12/3/2014	12/3/2024
/O=Cybertrust, Inc/CN=Cybertrust Global Root	64B3542D1BC972F58A1D179F3D0B9652BE434F3AE3842E0C447880D4D623A4DE	4/23/2014	4/23/2024
/O=Cybertrust, Inc/CN=Cybertrust Global Root	9BB5CC8427AF276BF216A748AD25785D17ACBABBDE4282E606DA5262CD940F38	8/18/2010	8/18/2020
/O=Cybertrust, Inc/CN=Cybertrust Global Root	9F61D09768DA33F7F99F7E7EAD935902224943B4C9AD07B629F745C0B08475B7	4/23/2014	4/23/2021
/O=Cybertrust, Inc/CN=Cybertrust Global Root	D775784887CDBD7E9FCB2A9D589D367A0B6238DA1EAF51DC71C99B89B99229E0	4/23/2014	4/23/2021
/O=Cybertrust, Inc/CN=Cybertrust Global Root	E71D8C3BAF43F6B3352DF574A9F0D4A2065BF03DA179514B1FCC5D9BEC8C8FCD	12/3/2014	12/3/2024



Cross-Signed Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root CA	6DACBB8945137B1DAD4211B0436EFBE06F12ACE36904973B45AE25740823D369	12/7/2016	5/10/2025
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root G2	2D4FAD3455AB61397401ABBB518922F84336B67E02FC8D2DB283825C4AB981BB	11/6/2017	11/5/2022
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root G2	AADADD5A879D2EB8C41A89597291292709D42052F5B6399541C694C3B7353CD1	4/3/2018	4/2/2028
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Global Root G3	53A5E32ACC5714ED20C7778C655D1EE97EC07156074C8B016E2CFC73E9D2712B	11/6/2017	11/5/2022
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert High Assurance EV Root CA	89DAADB41BA698BB378AEE84EAC96121D20F8C2FCA63EC686D9307229AD3EB2E	6/18/2014	6/18/2021
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert High Assurance EV Root CA	CBF8FB77660167E6BAACD0DF77CDA397D0117EE2BEEA23B935317F8BB5B5E3B0	12/7/2016	5/10/2025
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Trusted Root G4	AD8EB32C9DA91DDC855F382745990147DC6F23D9FBB04FC9D476B1EE20FC71D8	7/1/2013	10/22/2023
/C=US/O=Verizon Business/OU=OmniRoot/CN=Verizon Global Root CA	B90EEAE931E5E2B7D335F149DA6C2210986000D214FFDB62A72F7332D63731AF	4/9/2014	4/9/2024
/C=US/O=Verizon Business/OU=OmniRoot/CN=Verizon Global Root CA	D96CBC03B523CD3315918651CF4862162887DD563AFB2352D3F34BB94576F93D	5/13/2014	5/13/2024
/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	D9BC973F88909696DA10833197944CA58AC4A88847779C9133374267100EEC58	11/8/2006	11/7/2021
/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	61436A4ED63E31F22EEFAC26B525796CF5EBF89A77E73C0ADCC84DE979B1C5E0	11/5/2007	5/11/2020
/C=US/O=VeriSign, Inc./OU=VeriSign Trust Network/OU=(c) 2008 VeriSign, Inc. - For authorized use only/CN=VeriSign Universal Root Certification Authority	FB2BD3598144356DCBD2B259E8F3EBD0B0F6EE180C15EF553B82D199EF07F39A	4/2/2008	12/10/2019



Cross-Signed Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US/O=VeriSign, Inc./OU=VeriSign Trust Network/OU=(c) 2008 VeriSign, Inc. - For authorized use only/CN=VeriSign Universal Root Certification Authority	1512DFAEDF9153FFACB70BC805BA32CB6F9CB3D095B64E6659E652C3CA335A32	4/2/2008	12/10/2019
/C=US/O=VeriSign, Inc./OU=VeriSign Trust Network/OU=(c) 2008 VeriSign, Inc. - For authorized use only/CN=VeriSign Universal Root Certification Authority	C9D89EC4FC9CAC1E49432294E8A7AA30117AB3E4E0199B9E297D6BE10FC6E2DF	4/2/2008	12/10/2019
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=DigiCert Universal Transition Root	88A07073D4527069DC9E978053F35729705C058302648ED02E5FCE6561459E61	12/8/2017	12/7/2022
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Transition ECC Root	DB98194E55B936D26E6CB3F460A262EB6CA66337E7BFF17A0BFC083251F63626	11/6/2017	11/5/2022
/C=US/O=DigiCert Inc/OU=www.digicert.com/CN=DigiCert Transition RSA Root	0D88900DDB68C6CA5471F653FCACD407EBD7B1519046F9E0B8CED3C274FD11A1	11/6/2017	11/5/2022
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=DigiCert Transition Root G3	0F57B96FA7B31247EC39CB307D38CA2BF3B29F54AFD50A351D18533529517B46	12/8/2017	12/7/2022
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=GeoTrust Primary Transition Root	F54F6CED56CF682B570A6CAEC313E9482760DE12E8F928AE30452C4C66AC761A	12/8/2017	12/7/2022
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=thawte Primary Transition Root	DBA1097710F3C629943C23DC7503AC82B9142825EF049F1C26538DB36B480549	12/8/2017	12/7/2022
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=thawte Primary G3 Transition Root	85743AEA6A97C13445E0824C2E1FE502B97ADD124A97EF5120FE07F55812FC33	12/8/2017	12/7/2022
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=thawte Primary Transition Root	C5D814672CF65B953E6F69E702C7C23A5EBDA45796AA58834121DFB0D06C0846	12/8/2017	12/8/2037
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=thawte Primary G3 Transition Root	B8FFC04C86B15041DB8F3AADA47FEAF097E8590AAF28A0E59CDBADB7756A6634	12/8/2017	12/8/2037
/C=US/O=DigiCert, Inc/OU=www.digicert.com/CN=GeoTrust Primary Transition Root	B89B256ACD7C8BFC5C136A8570575350219E9D55879A85A7EC0CC0C1283C24A3	12/8/2017	12/8/2037



Cross-Signed Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
CN=DigiCert Universal Transition Root; OU=www.digicert.com; O=DigiCert, Inc; C=US	AF0E363CAE6DF489F2976A284D12D4C33C94B135FA77F89E89298D7491E99974	12/8/2017	12/8/2037
CN=DigiCert Transition Root G3; OU=www.digicert.com; O=DigiCert, Inc; C=US	7E6AF50A3A9DD01737204D912B7721F7C0809CCCE64284578992049AAACE34B0B	12/8/2017	12/8/2037
CN=DigiCert Transition RSA Root; OU=www.digicert.com; O=DigiCert Inc; C=US	E52B44CD1E6A9ADA0A0409D1CC5D73A6F417603D70E6F5DC5483AB8ADAEF3CA4	11/2/2017	11/2/2037
CN=DigiCert Transition ECC Root; OU=www.digicert.com; O=DigiCert Inc; C=US	45BF04DCA5DE7A6339F1DF835BC9013457B487FDB4308E4080C6423C8E4B2705	11/2/2017	11/2/2037

Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust TLS RSA CA G1	C06E307F7CFC1D32FA72A4C033C87B90019AF216F0775D64978A2ECA6C8A230E	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte TLS RSA CA G1	4BCC5E234FE81EDE4EAF883AA19C31335B0B26E85E066B9945E4CB6153EB20C2	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=RapidSSL TLS RSA CA G1	4422E963EE53CD58CC9F85CD40BF5FFEC0095FDF1A154535661C1C06BCADC69B	11/2/2017	11/2/2027
/C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL TLS RSA CA G1	2A41BA819EB6125AF5CB4B8B0E9E954ECE798C2A7EE43DCDAF7D395987C4D552	11/2/2017	11/2/2027
/C=US, O=Oracle Corporation, OU=Organization Validated SSL, CN=Oracle TLS RSA CA G1	319896E3954D510DA3A4B75387E8C870B3BC2C3228D8550916EBE9ABDCB7F921	11/2/2017	11/2/2027
/C=NL, O=Trust Provider B.V., OU=Domain Validated SSL, CN=Trust Provider B.V. TLS RSA CA G1	009871C3A4C607311E5AE92F01095F9BF76100B8794AB0A9A5210E6794C8607C	11/2/2017	11/2/2027



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia TLS RSA CA G8	036A18F5F0EB9DD5EE02B7854DF5C33845601D8939CFB7B607F69D142C01D909	11/2/2017	11/2/2027
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO TLS RSA CA	A8AD1C25CC580B2131FCC6FC6D6513746F38EA99BD162C81B5C5393495175B18	11/2/2017	11/2/2027
/C=US, O=Wells Fargo & Company, OU=Organization Validated TLS, CN=Wells Fargo TLS Public Trust CA	3B8812E6F851B6F933DC23ED764082FB5F50DE3C2DDDEBCC9CA240B7ACACE4D1	11/2/2017	11/2/2027
/C=CH, O=Hostpoint AG, OU=Domain Validated SSL, CN=Hostpoint TLS RSA CA	F7FBDEB82BE99D41CDCA419FC91859D3E5286C076204E0E903D678BB213ED89B	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust TLS ECC CA G1	A838405EBB03F5DFD8D4A9572AE6E0E3F356EC4EC134375A59DB7B195DC3EC44	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte TLS ECC CA G1	AE82201F565E0439B7F4AD689327594EB974A4F781B1A6CBFED59BD382317F13	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=RapidSSL TLS ECC CA G1	FC16D53203BD9187D69CC99D2DA551076B4DCB298140D6751F7A012966C99FDD	11/2/2017	11/2/2027
/C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL TLS ECC CA G1	BD193C475E4E67938BEF34122B98B558A2882E7ED94369A6CB011320EF15623C	11/2/2017	11/2/2027
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia TLS ECC CA G9	877F24CE70F4A3047E4EA70BEC1BC31BE9B6533ADFF3A393FF9BF3C81029446	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust ECC CA 2018	D8E269A6EB08CBC337AD6578C72135787484C99D2FB08CCED029E806BE1040FC	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust RSA CA 2018	8CC34E11C167045824ADE61C4907A6440EDB2C4398E99C112A859D661F8E2BC7	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=RapidSSL ECC CA 2018	A0D1523A0BF663550EB9081E9BDEEDA12814F9570B7697D95DF2EA53D4FF75E3	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=RapidSSL RSA CA 2018	C790B47128447EC0B60F22BFCB795D71C326DD910EE12CBB4CC5A86191EB91BC	11/6/2017	11/6/2027



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte ECC CA 2018	6E62CBE3E42A41C50405B3E2F1A44257683267856184AF9C02112070AC836936	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte RSA CA 2018	9A5EECEE9C7D898BD81DC3BF066DAF6AEFB8DB1C59676206D2BFDD682312C6F6	11/6/2017	11/6/2027
/C=US, O=Wells Fargo & Company, OU=Organization Validated TLS, CN=Wells Fargo Public Trust Certification Authority 01 G2	DB89314466DE24D66551105FC1D381D66D6D9139E820531C298954654C3DC978	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust EV ECC CA 2018	BF3558F877E89D27DAA60DA9671676570DFBEB215D84AC5A37122D6776B78F6E	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust EV RSA CA 2018	185C0AE470423B9D4678A7C1055B5B48D90705505B794E215C063851336981F4	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte EV ECC CA 2018	F74C3B2C7E455D654D9EE5AAA712789CCB267B961C1A1CE48A69C860CD193678	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte EV RSA CA 2018	93569B26AA535E3E07C891C6BD2FA9DC0939C24DB4B3726AD8531EDB17C497CA	11/6/2017	11/6/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Encryption Everywhere DV TLS CA - G1	15EB0A75C673ABFBDCD2FAFC02823C91FE6CBC36E00788442C8754D72BEC3717	11/27/2017	11/27/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Encryption Everywhere DV TLS CA - G2	B1AC8CFB181B9C9354E1775FCBDFCFE7898C5CC9A17D76315B57C112EEE55234	11/27/2017	11/27/2027
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 2 SSP CA - G2	3C18176FEBA1D20C8BFA7B484066E2A5825A226237E1E7BE3828E6F6C3771B23	3/21/2013	3/20/2023
/C=US, O=U.S. Nuclear Regulatory Commission, OU=External Basic, CN=NRC Basic CA G2	C40D6AB75F7E5D11CF7B0404AC7E4321A7A8B0DDF7631328F3D7CC80D6644E2B	3/21/2013	3/19/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID TLS CA	D7737E5F2D3FFCA429902E9F388CFD6C5959CD35A0FC103CEE2F7E93D1C66A52	2/9/2018	2/9/2030
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site CA	D3533B732A518A6DA68EF266085E11DFD114C0EB0092CD43530A44D54B913ED1	2/9/2018	2/9/2030



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CN, O=WoTrus CA Limited, CN=WoTrus EV SSL Pro CA	070531383CCD100D3E9CD964DB07AA5E845A0686F2EAE3BC8A627B182057B1F1	2/9/2018	2/9/2028
/C=CN, O=WoTrus CA Limited, CN=WoTrus OV SSL Pro CA	09033FE23996FE4A59C4C0F523D2560E31DFE4C17D8EA1403D429A971F4BD65A	2/9/2018	2/9/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert EV Code Signing CA (SHA2) G1	8A78B966C73D769040C1A81C32168CEF8B9B9E96ECC2D33CC4ABB5A0CF8C1C67	4/27/2018	4/27/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Assured ID Code Signing	4ADB819C250A2E183313405499D8735299C88F970A5019A27566B27E5818F41B	4/27/2018	4/27/2028
/C=GR, O=ALPHA BANK, OU=Symantec Trust Network, CN=ALPHA BANK CA - G2	9A18343733255374D2A96D770EB7A7B76EC44A8975F6F06AF784BF3EF5E1F7D4	7/12/2016	12/7/2024
/C=GB, O=TRUSTCUBES LIMITED, 1.3.6.1.4.1.519.1=223013701, 1.3.6.1.4.1.52266.1=984500505FE80CD0NE58, OU=www.trustcubes.com, CN=TrustCubes ICA G1	2106CC7907C64B8A5DA2FC338EE94DFFF10EF711DEDDB4FC694EE092EC532B1D	7/18/2018	7/18/2028
/C=US, O=Glosten, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Glosten Public CA	2F90242229ABEBE362CD49B05971B10FE2F64C8289A5A6EAE25817E280B29876	7/17/2018	7/16/2023
/C=US, O=Thomson Reuters Special Services LLC, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Thomson Reuters Special Services CA	BFC05BC249D92B892CE288A0E85F0E96BB9150F741719D9B73EB41EB89D49241	3/5/2015	3/4/2025
/C=GB, O=Anglo American plc, OU=Symantec Trust Network, OU=Terms of use at https://www.trustwise.com/rpa (c)12, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Anglo American CA	693FB9067E62E07DF35507098F28A582571D7818412E5A9D67B4316CE81D5440	12/16/2014	3/19/2022
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert TLS ICA GeoTrust PCA-G3	95D9A8D30F6B1C069C296B3E106BC3CE01EB84AD57860D0F46BF7F15D053B1C0	1/17/2019	1/16/2029
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert TLS ICA Thawte PCA	0944A4C4D673AB925F4BB9ECB0738A7A7C5A480D7219F1F287EA0FD259E87F14	1/17/2019	1/16/2029
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert TLS ICA Thawte PCA-G3	56E4F454D982DCDCE611B7B707DB12C533EAC29A25F4A5307E1C065713B0DC8E	1/17/2019	1/16/2029



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert TLS ICA VRSN PCA-G5	DD6915403ED7CB00F7704792C8084C5EE0C7DE4B28F4F1AC09658DBC34EA9071	1/17/2019	1/16/2029
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert TLS ICA VRSN Universal	BA5B6E5DFEBDAE1C80BD72790BC85BCC6538AB4613023DA706CE826415F5E5B3	1/17/2019	1/16/2029
/C=US, O=Fidelity National Information Services, Inc., OU=Class 2 Managed PKI Individual Subscriber CA, CN=SGN FISGLOBAL PUBLIC CA	0AD6A7334A5A23C986980F6FECD25006B563A0B6F1BCAA65C0345BA2D96928D3	1/8/2019	1/8/2024
/C=AR, O=Banco Santander Rio S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Banco Santander Rio - Empleados G2	CAFD79E03631E7C8B1E017CB7CD1673944D9089EF7CA7057E3AC9BD20DC0408B	1/31/2019	3/31/2023
/C=AR, O=Banco Santander Rio S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Banco Santander Rio - G2	6F75860B5669D449D32F949E98EB11B2FCC33840A0F6753912BDE76BD3D529EC	1/31/2019	3/31/2023
/C=CH, O=World Intellectual Property Organization, OU=Class 2 Managed PKI Individual Subscriber CA, CN=WIPO CA - G4	16D809ED155C2AC7E9489E1A204116C9D16EFBE4C91F53369725A2B395535E28	1/29/2019	1/29/2024
/C=AR, O=Banco Itau Argentina S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Banco Itau Argentina - G2	40E944C8F7317BF79F447602C62842A4CDA9FC979AE355F9CE2FB7A81CB528E8	2/12/2019	1/18/2023
/C=NL, O=SupremeSSL, OU=www.supremessl.com, CN=GeoTrust SupremeSSL 1 CA	354FCFC6162A0EE2205DBEF68931E78033ECE9D125E0824E49BAEBF82DFDD167	5/7/2019	5/7/2029
/C=NL, O=SupremeSSL, OU=www.supremessl.com, CN=GeoTrust SupremeSSL 1 ECC CA	6861BBD4CBEDA2AA01066BF476BF8F2FE6EA9F008CB0AC8E1755E2A328FA5933	5/7/2019	5/7/2029
/C=NL, O=SupremeSSL, OU=www.supremessl.com, CN=GeoTrust SupremeSSL EV 1 CA	0FB6CE80909D19AFEE6A88C959E9E9AA6466715BCE05C6449FEB530A086DAF14	5/7/2019	5/7/2029
/C=NL, O=SupremeSSL, OU=www.supremessl.com, CN=GeoTrust SupremeSSL EV 1 ECC CA	2FBA8FE915415049AA942857CB53137FFD3D9E5A47B27B5782DAB9B4DA7D624D	5/7/2019	5/7/2029



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Symantec Corporation, OU=Windows Phone Enterprise Applications, CN=Symantec Enterprise Mobile CA for Microsoft - G2	65E5B094657AA1D7161BA5710F024FE8DDF21ADB6270A20BAE0814183AA85370	5/24/2017	3/13/2032
/C=CN, O=WoSign CA Limited, CN=WoSign EV SSL Pro CA	891EE2E23282E5076C9AE9047DE8EA900E066F81D6DCD9B843C59078B0F105BC	5/23/2017	5/23/2027
/C=CN, O=WoSign CA Limited, CN=WoSign OV SSL Pro CA	AA61C2927DC89DB225CA9A17D600373D058F696D86D10E2BD7B5E8F44A97EED1	5/23/2017	5/23/2027
/C=CN, O=WoSign CA Limited, CN=WoSign EV Code Signing Pro CA	F6DFDED61FF88EF10B9E6DCFBCE0F1615E05866CEBAFCD6D48AEE80132C70347	5/23/2017	5/23/2027
/C=US, O=Government of the District of Columbia, OU=Office of the Chief Technology Officer, CN=DC Government SHA2 Assured ID Intermediate CA	FB1147E7AB97A29BB9C1140ABF3DE831F4C5F60D11B90FEC999A0816375D8457	7/13/2017	7/13/2027
/C=US, O=Government of the District of Columbia, OU=Office of the Chief Technology Officer, CN=DC Government SHA2 EV Intermediate CA	F12241EE34C03A608D34DBC0EA465E1BD1AA13091554F9D4D086253FF3CE83D4	7/13/2017	7/13/2027
/C=JP, O=Cybertrust Japan Co., Ltd., CN=Cybertrust Japan Secure Server ECC CA	C3683F7D91754219DADA4E8DC30E4B18BD3928B53D3AB93D07384BC5871CE355	7/13/2017	7/13/2032
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Universal Root Managed PKI Individual Subscriber CA, CN=Symantec Shared Individual Email Certificate Authority	B7021BCF346E8502B1275F80057F3B97467AC8B8A761608340ECF8484EC3848C	8/22/2017	8/21/2027
/C=IT, O=Telecom Italia Trust Technologies S.r.l., OU=Digital Identity and Security, CN=Trust Technologies Global Client CA	AA6A2380A7E8254DAD4620AE0895DE74047F33F5268758DCF27C4D280B384A50	8/24/2017	5/10/2025
/C=IT, O=Telecom Italia Trust Technologies S.r.l., OU=Digital Identity and Security, CN=Trust Technologies Global CA	191E0B48B78B7EFA4822A465AD69B34405B878D10BD853D8E57CB8B9D9E50B8B	8/24/2017	5/10/2025
/C=JP, O=Cybertrust Japan Co., Ltd., CN=Cybertrust Japan ECC EV CA	92E3770B1EB44F84C2F2CB0097C2FD7126BD212B41C2610E78DDDFD8946761738	8/24/2017	8/24/2032
/C=US, O=United Launch Alliance, LLC, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=ULA CA - G3	232AD338F64E3FC71048E1D6CCC96EA6FD5782274AA96FD618F5425087BA2FFE	8/31/2017	8/30/2027



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL ECC CA G1	8D7373F38E63D830C0CEAA2C33330F21A2C77408EE3CFBC595C0D2F3D32F4224	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Class 3 ECC CA G1	CBAE2767EE8CD7FB49B662B422F721DB4522EB674CDBF16CB6209E45CC4CB99E	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust Class 3 ECC CA G1	64E6E095926F52475116C164D6A85E9B21322A2B4867DF7E72A1C632F8C74143	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=RapidSSL Class 3 ECC CA G1	6D63EAA731823D80E47624BE60BAFAB79D9E4030D43E3D02E185BD5B77E4665B	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte Class 3 ECC CA G1	D7642057CA17E00635CC41053F14919984888E6570BE2D966A1FAE83A64A4E30	11/2/2017	11/2/2027
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia ECC CA G9	45B2A3A4D06EE652E940FABCA5CD8721C1FB7FEED8B75B0CC7F067E1D26E2CFE	11/2/2017	11/2/2027
/C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL RSA CA G1	706ECB21B096F6FFCCDC9EBE5AA1B776F64DB8FAE7F0A5C032C71041E502B98F	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Class 3 RSA CA G1	81E071B01F01DC43EE458C0E1BDCBC848B47462C26B4CE19EE9015416BC6DF89	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust Class 3 RSA CA G1	15C81322DA22F1EE7C8231ACC0B52E4F17A7AE6B30811BA2F667E648FF82D8AA	11/2/2017	11/2/2027
/C=CH, O=Hostpoint AG, OU=Domain Validated SSL, CN=Hostpoint RSA CA	A8C0A92B0D90E8216CCCA34C1A1683B34EB4758D460C892CA8C512A8A2ACC08F	11/2/2017	11/2/2027
/C=US, O=Oracle Corporation, OU=Organization Validated SSL, CN=Oracle RSA CA G1	461FB462E51D54A59A041CD5A651760AE847AE1C27C103887D52EC095F68E73C	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=RapidSSL Class 3 RSA CA G1	433A09FFDDB2EED82EEA9F918C860C04CBEAB1381A48DFE2C48E42E13D35AF81	11/2/2017	11/2/2027
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO RSA CA	B2BB26D271DC82BB647354B6F718D0ABF1B4D67411A0EDAFF1AA959BE5DED37E	11/2/2017	11/2/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte Class 3 RSA CA G1	8FC1C1763F6317AB09061C5A78D4E9D67001EFE0A79FE40573B048C06EB21658	11/2/2017	11/2/2027



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=NL, O=Trust Provider B.V., OU=Domain Validated SSL, CN=Trust Provider B.V. RSA CA G1	126505E929334CC3C73EE826E5A4E1C4ADB90C710805759F6CB69FFACB76A276	11/2/2017	11/2/2027
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia RSA CA G8	48C4A1C5395E2B499D2E3EBE26EEFA91D11CF35DD5FA14937EEE5E807A2FF487	11/2/2017	11/2/2027
/C=US, O=Wells Fargo & Company, OU=Organization Validated TLS, CN=Wells Fargo Public Trust CA	D8D7627D0F5D0AD09155B2C9347307925EF3E7F6364F231969C0D2E4C71962F0	11/2/2017	11/2/2027
/C=US, O=Wells Fargo & Company, OU=Organization Validated TLS, CN=Wells Fargo Public Trust Certification Authority 01 G2	CF7CFA4F9DBCCBCA6D20EFDEBEAD4E173B34E76BDA1EB1E619F44E06E95FC208	11/15/2017	11/15/2027
/C=US, O=Aetna Inc, CN=Aetna Inc. Secure EV CA2	1DDFDDF883E3945B2CB24FA5B83788379C5AB058422AB979DF66C77473988687	12/8/2017	12/8/2027
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia TLS ECC CA	68D0B2E8C85BF009B4DB39AC8B5E2FA8E1FD9FD1E5028704EA9288C7E472AAEB	12/8/2017	12/8/2027
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia TLS RSA CA	79F1F5AB697DEBF195F5B7DA65F95399682EDAEB80115B9D42A6AE5E2FA98802	12/8/2017	12/8/2027
/C=US, O=DigiCert, Inc, OU=www.digicert.com, CN=thawte Primary Issuing CA G3	F6CF5D6FF850D14DB082CC9CF7C056BC60E36B1E54F1CCA3E24BDF393948978D	12/8/2017	12/8/2027
/C=US, O=DigiCert, Inc, OU=www.digicert.com, CN=thawte Primary Issuing CA	9A9FC39029ABE132D674D032D199CB8431AAC878DABCE6E9E1AECB81EC99F4CC	12/8/2017	12/8/2027
/C=US, O=DigiCert, Inc, OU=www.digicert.com, CN=GeoTrust Primary Issuing CA	F7A84E24E8E0D89154874721C5B641F48A1EF0FF3B198F53BE021DB53F097BD0	12/8/2017	12/8/2027
/C=US, O=DigiCert, Inc, OU=www.digicert.com, CN=DigiCert Universal Issuing CA	622A42A28CAD83D962771D9D09BD307877D4AB513B4FE0CF2E5851E79FFA6FE	12/8/2017	12/8/2027
/C=US, O=DigiCert, Inc, OU=www.digicert.com, CN=DigiCert Transition Issuing CA G3	25B66390DD425867EC0DE58A6B198F5985BE58A43A4605E1A0B8C6F35B92D7EE	12/8/2017	12/8/2027
, O=CertiSur S.A., OU=Symantec Trust Network, CN=CertiSur Class 2 CA - G3	041E70B7DDDD0F2F90F285C4C71E0E20533312A10773794A21B5791EC8755958	8/18/2015	8/17/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CL, O=CertiNet S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=CertiNet S.A. Firma Electronica Avanzada - G2/emailAddress=certinet@certinet.cl	163DDECF86B4708A77705D106FD630C30331B1070C4BD9A36374AC0A68A83DD7	8/18/2015	9/15/2024
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Dealer CA	76790AE708EFBB366BA192A68D50810AE53E82A497CFF3911F888A21E04FE2D7	4/5/2012	4/4/2022
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS EDC CA	4F5C36419568CB1E7084FB82DACDD1015ADB1D57B5C3E3F17F77CA092977432	6/19/2012	6/18/2022
/C=BR, O=Certisign Certificadora Digital S.A., OU=Symantec Trust Network, CN=Certisign Class 2 CA - G3	011B074C1D1D22A927406597AB4E5114F5C045612EC98CC429A1A93E1986E6F6	9/22/2015	9/21/2025
/C=BR, O=Certisign Certificadora Digital S.A., OU=Symantec Trust Network, CN=Certisign Class 2 CA - G3	8E7EA258F74372F88E0B182FA60B7F83ECFBBB6F1FFE6145BF24F74416CD02CC	9/22/2015	9/21/2025
/C=CA, O=Canadian Imperial Bank of Commerce, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=CIBC Trusted CA G2	4BB800C7CC2F02A34FFD99ED7577361551CBC24C6352B814C657FE504F3F09FB	6/16/2015	6/15/2020
/C=US, O=City of New York, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=City of New York Office of the Actuary - G2	A3E2E9FDC693C7536CD3A9ABC8E09705C113DD391635C6239BBFF21DA258C96F	6/11/2015	6/10/2025
/C=GB, O=Clifford Chance LLP, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Clifford Chance LLP CA - G2	D0EFB840228EB4DAAAB3970AAE0E6487415412B3159351CF01738EAE486E5B5F	8/27/2015	8/26/2020
/C=US, O=Spirit AeroSystems, Inc., OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Spirit AeroSystems CA - G2	DCD9AAD1D33AA733017584C91C4E4DD05198CBA0B071CE5FEDAFAB6163FF6B11	2/23/2010	2/22/2020
/C=US, O=SRI International, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=SRI International CA - G2	8F11E6AE162CD9472CAB0B6C023A56D8A442BD5981DD0CDBBCD5D501923223B7	11/15/2012	11/14/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Test EDC CA - G2	26661F230442332E5F8F109C05A3FAA3EA339C29D22B07B8D1A048C693FA1F0C	9/3/2015	9/2/2025
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Test NF CA	D9E9093FBD728E05240FDB4D0DF46B7BEB9AB7E9554D30CB49D4681D6344C75F	6/19/2012	6/18/2022
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Test NF CA - G2	597D5A286729E73A324E5665CEE4B97FDD5A9FD14EBA4B903319A16CFC946680	9/3/2015	9/2/2025
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Test OTL CA	FD9A6C86AE90E3F7D5511EF968357B0D0D74FEC0C71C037CC9B29F3F2940F9F9	4/5/2012	4/4/2022
/C=SE, O=Tetra Pak International SA, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Tetra Laval Group CA - G2	456A6B18FA9B1D6864AD02A1B3E6D737F664427FE326C1CF6D658083F52CC5F1	8/27/2010	8/26/2020
/C=US, O=Texas Department of Transportation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Texas Department of Transportation CA G2	7A72D9097A8D547EF7F94223E186EBB4467B7C3425DF73E68BF0E10CF364D420	11/18/2014	11/17/2019
/C=US, O=HP Inc, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Collaboration Certification Authority	B864FF6DE0CB1BEAF6AA5C68DB8769C91F18E1721E22AC3ECDD91C0889D77078	6/11/2015	6/10/2025
/C=MU, O=The Mauritius Commercial Bank Limited, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=The Mauritius Commercial Bank Limited CA	0A646FDC704F494A67739A7E99FD74955BB0AF1ABA622CEFE000B39557C5FC81	9/30/2014	9/29/2024
/C=US, O=Thomson Reuters Holdings Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Thomson Reuters - LEDO CA	F5DF7A85240E93C602EE9C6F77C2B126C7A37CED8F34DD714B82C47F31F3544D	12/20/2016	12/19/2026



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Thomson Reuters Special Services LLC, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Thomson Reuters Special Services CA	D9A0EBD95D3C903FA75DC1EA19F1963760CF7939183A66033460F91DE1D37372	3/5/2015	3/4/2020
/C=NL, O=KPN Telecom B.V., OU=VeriSign Trust Network, CN=KPN Telecom B.V. CA - G2	04832F085D97CBA843F46D650FD6F5A7E1458462706EBAF9E0B9E9FEFC052350	12/3/2008	12/2/2023
/C=DE, O=LfA Foerderbank Bayern, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=LfA Foerderbank Bayern - G2	315AC96789B49D48A1C420F32F9A4A73F4871AF75A4CA53CF41CE3FB3E2E76FC	6/16/2015	6/15/2025
/C=US, O=State Street Bank and Trust Company, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=State Street Bank and Trust - Global Markets CA	2C68D776FFD51155D98957A66043F896E2BC69CB1943570389350057A2C70616	7/10/2015	7/9/2025
/C=US, O=Moog, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Moog, Inc. M2 CA	01C235311274307F4457E079E1E11CCB0AB5B2A9F9919B269A5D304821F93FB8	7/19/2012	7/18/2022
/C=MY, O=MSC Trustgate.com Sdn., OU=Symantec Trust Network, CN=MSC Trustgate.com Class 2 CA - G2	5AF4C5B2DE3AD0860264F63C736DE4B90897D795A48223624BEBE8419FD22CF0	9/29/2011	9/28/2021
/C=MY, O=MSC Trustgate.com Sdn., OU=Symantec Trust Network, CN=MSC Trustgate.com Class 2 CA - G2	EACB06CBB7B251C6BF464DB4B670DCCDC9254C9AF3938C110CEE74D00EA0A263	9/29/2011	9/28/2021
/C=GR, O=ADACOM S.A., OU=Symantec Trust Network, CN=ADACOM Class 2 CA - G4	4BFADB4EB30D4DE92BC23823E950E4C48E86D729A11BC76F18790E38F34A0550	12/9/2014	12/8/2024
/C=ZA, O=Absa Bank Limited, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Absa Bank Limited Public CA	02302C4CF831335C9DD145DF91A8C1C703008FD234215D0E187895092BD81AD4	6/8/2017	6/7/2027
/C=SE, O=Tetra Pak International SA, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Tetra Laval Group CA - G2	AFC58CD8D641AFB589D6317BD6D0A16A6992E045E4B4855777C6A9C3F63125D3	8/27/2010	8/26/2020
/C=IT, O=Trust Italia S.p.A., OU=Symantec Trust Network, CN=Trust Italia Class 2 CA - G3	5040F179448145C3E9629D27343D3401DFF907C0D0807DA4AFDBB926D66A8C09	10/27/2015	10/26/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS EDC CA - G2	BC8EB15B0FEE05D953758E1D2C29A9E7D1E1B5AFD5659AB95E981F6F75BD1D71	9/3/2015	9/2/2025
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS NF CA	8DE6CA4D03ADF19A56B3CDD6DCA843C51189D0A2BB60D84B9AD01EBC741F5F22	6/19/2012	6/18/2022
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS NF CA - G2	22261C8F0BCD85571AF2F801C47712E6C16DCAE3C7DFC4CD2451D9C538B349D1	9/3/2015	9/2/2025
/C=US, O=Computer Sciences Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=AGC Public CA	5E71C746D45EBCFD6D2DCE4A2DABCCD9335E3AD8D63B349989341911ECD70E88	11/11/2014	11/10/2024
/C=MY, O=MSC Trustgate.com Sdn., OU=Symantec Trust Network, CN=MSC Trustgate.com Class 2 CA - G2	69D455F481C2BB240476BDFC04F25D17AF7FADE203EEC6B31910A9AA4D0A86D7	9/29/2011	9/28/2021
/C=CH, O=OFAC Societe Cooperative, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=OFAC VPN CA	E67E5B407C8B01698049F45F3A6F7721A68FE125C1275989460AC14C10E61BAC	9/6/2011	9/5/2021
/C=US, O=Oracle Corporation, OU=VeriSign Trust Network, CN=Oracle Root CA	C40469CF7C6561AF3288E2FFDD439AC4F0C9CEA933597C07D0D510FC820282AD	2/8/2011	2/7/2021
/C=GB, O=ARM Ltd, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Partner Services CA - G2	0DB17C39CBE7EFB951E6BAE1253EA647F6A632512581B7E21CD51C5AFE01E470	2/12/2015	2/11/2020
/C=ID, O=PT Astra Daihatsu Motor, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=PT Astra Daihatsu Motor CA	C0F393D5027D52A5643A2E38D4F79B1D958D40FB6CDF1AC2571CE61004BDED26	5/31/2016	5/30/2021
/C=ID, O=PT Astra Daihatsu Motor, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=PT Astra Daihatsu Motor CA	9FF4EC074FE370818B15ABA1BBDCB0A4DBE3F8420A993A7B5176BCC7FB4E4EAD	5/31/2016	5/30/2026



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=DK, O=APMM A/S, OU=VeriSign Trust Network, CN=APMM Certificate Authority	0CB82687CD03AD535A4276924064799A49E43D39A897CC86216C4FD52347B937	9/22/2011	9/21/2021
/C=DK, O=APMM A/S, OU=VeriSign Trust Network, CN=APMM Certificate Authority	DC6E4F6022E9FCC946BC7D36EEC384666B644C087196399E5A2DA96FF1159045	9/22/2011	9/21/2021
/C=US, O=SCF Arizona, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=SCF Arizona CA	BE3A962B7AF931D7ADFAF7452FE85270020EF853A5DD334AED80D29E892F0391	11/11/2010	11/10/2020
/C=US, O=The ServiceMaster Company, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=ServiceMaster CA	2E26D155C1B812404C41E7360CF1D93D4664AE267274F64B8114BBE7981E83B2	8/2/2011	8/1/2021
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS OTL CA	C7367403CF6D5C13D9690187926EF896CE6E74135080C9AFD8C8B1532467AE50	4/5/2012	4/4/2022
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Test Dealer CA	4325F2A8870CB6A9BF08664D697323F62546C40907F885D6A6407071B4A9B540	4/5/2012	4/4/2022
/C=CA, O=SAAQ, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=SGSI CA G2	C77E2D10AD55D5CBB1BA364355C2B6778AF0724A77152B3B411965581B4E3C6F	5/14/2015	5/13/2020
/C=AU, O=BHP Billiton Group Operations Pty Ltd, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=BHP Billiton Group Operations Pty Ltd Secure Email CA	0A9DBB4BE5DDB8EEF54EE13B36EB97DD8BEBFD7B0AFA8B9C9A215EB724A4E88D	8/18/2011	8/17/2021
/C=AU, O=BHP Billiton Group Operations Pty Ltd, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=BHP Billiton Group Operations Pty Ltd Secure Email CA	67C0A4826293FCFC61E57FB496443C84F035496E2120FC80C551AD3C3775E368	8/18/2011	8/17/2021



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=AU, O=BHP Billiton Operations Pty Ltd, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=BHPB Secure Email for External Parties CA	2EA4E7E0AC42B3BC3DA2D9A7887209BC8CC7958CEE1B52D25B4BE30D6E95AEA8	10/6/2011	10/5/2021
/C=US, O=Blue Cross and Blue Shield of Florida, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Blue Cross and Blue Shield of Florida CA G3	BBCA83E909A956AA38BA04EA5FC6A6A13F99495DA1E23981BE5BEDE03970450A	5/3/2016	5/2/2026
/C=US, O=Blue Cross Blue Shield of Florida, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Blue Cross Blue Shield of Florida CA G2	2B6B476D7B6F01188226DC5A735AB94427B7000D31FFFD9678E9E704A8BF4BB2	3/1/2011	2/28/2021
/C=US, O=Blue Cross Blue Shield of Florida, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Blue Cross Blue Shield of Florida CA G2	F85A6F15474371B4CACB753CC09C3BED7139E9C35B21E95771C227297FF025E2	3/1/2011	2/28/2021
/C=US, O=Blue Cross and Blue Shield of Florida, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Blue Cross Blue Shield of Florida CA G3	30C955BBF62B0E73573DDD9564A51235ED40B3B5BBDD5E9B5561D64F96AD65D6	5/5/2016	5/4/2026
/C=US, O=International Business Machines Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=IBM Certification Authority G3	CB16C58F10AFFDA46A0FC05BF49F0B707C579EC52E3527EEBA0448F9B8C16E99	11/10/2016	11/9/2026
/C=US, O=Symantec Corporation, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 Shared Intermediate Certificate Authority	CB387E392A90E8B1A382BE8EDB9E7B2943E9002F73A563F18B06142218F1118C	3/3/2011	3/2/2021



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 Shared Intermediate Certificate Authority - G2	68E63395029061641385B8AFF77F6D66F2D1FD87A821630D27EC3645C9FE235D	4/23/2015	4/22/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 Shared Intermediate Certificate Authority	0FE7E3781F9603BBED69B2145842FA8782F552BD35F3D438D69578794014E91E	6/7/2011	6/6/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 Shared Intermediate Certificate Authority	5265BCA0D31C47DB16C359C5DA88B4C310FA0D4AB1A86FF7E2D5BFA1546C5559	6/7/2011	6/6/2021
/C=US, O=Administrative Office of the U.S. Courts, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=AO USC ROOT CA	70FC4F59FA70CBB6A24B2B6444E0D09733B1C4A9F28A6B206C110579055E1FD2	3/5/2011	3/4/2021
/C=FI, O=Nokia Solutions and Networks, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Nokia Solutions and Networks CA	0B5F13974CEB577E1CC39DFFADF616FCF0C17ECA6747201AEBA6AF3BC20CE4F4	10/10/2013	10/9/2023
/C=CH, O=OFAC Societe Cooperative, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=OFAC VPN CA	F7720B968EE05292842A5AA13F4DB9A02F67DADC7340CDC28A17BEB1AA5A7322	9/6/2011	9/5/2021
/C=US, O=CDC, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=CDC Secure Data Network CA G2	70A0FE0EDCB4898E5BB09DF8FC6B8978E02A287EDB10175870E81E1491340C5C	11/30/2010	11/29/2020
/C=MK, O=KIBS AD Skopje, OU=VeriSign Trust Network, CN=KIBS Verba CA	DC6D1DAF475DD116449FDF69FE8DE710698854292A1767DC73364644A5B345AE	2/23/2010	2/22/2025
/C=MK, O=KIBS AD Skopje, OU=Symantec Trust Network, CN=KibsTrust Certification Authority	FE56D842A2A2B903E050971480E7DEA2CD85E427F367150BC449C640C3B0245B	10/13/2015	10/12/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=MK, O=KIBS AD Skopje, OU=Symantec Trust Network, CN=KibsTrust Certification Authority	7736BC50A3B06348AD5DC3149D2BB53EA1C766381061DAF4A18EE99C48DDD03B	10/13/2015	10/12/2025
/C=DK, O=A.P. Moller - Maersk A/S, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=A.P. Moller - Maersk Certification Authority	CDC453969304BEE6A58D9BABC0AAC4C4CE2156A1C172A2585E546079144E4E58	5/3/2011	5/2/2021
/C=DK, O=A.P. Moller - Maersk A/S, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=A.P. Moller - Maersk Certification Authority	8AA77BB7ADA3B50AFF1DDD9012C5D73B0D9F8722BEDFCEE0B1DC0ACCB0DD1E0E	5/3/2011	5/2/2021
/C=GR, O=ADACOM S.A., OU=Symantec Trust Network, CN=ADACOM Class 2 CA - G4	EC28782BFDB997875946D078C3A9C6481D34D5F775D29F0F8CB80010C9331398	12/9/2014	12/8/2024
/C=NL, O=KPN Corporate Market B.V., OU=Symantec Trust Network, CN=KPN Corporate Market Class 2 CA	1AED19D0E4F63058B17FFE2A552975F03FCBDE8367B287171E575868BE14F938	3/16/2012	3/15/2022
/C=US, O=Federal Retirement Thrift Investment Board, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Thrift Savings Plan CA - G2	6FE969B0E32956CDA827A4084F9330C9559BB910291B9A4107C3C470774411D1	6/11/2013	6/10/2023
/C=IT, O=Trust Italia S.p.A., OU=Symantec Trust Network, CN=Trust Italia Class 2 CA - G3	3372E8E80644340E8BA0BACCB2AE757747A6CAB8977947AA14EC8838F2F01D34	10/27/2015	10/26/2025
/C=US, O=Identive Group, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=idOnDemand CA G2	B812A3156BBB9F0AABF8F36BE72A95388936272070C4860DBDD4955F0D59B486	9/5/2013	9/4/2023
/C=US, O=Identive Group, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=idOnDemand SHA-2 CA G2	36CAB8A86139B82476AE824EE4939A92088E6F16C2BD270EE349BF9D5A9E3384	9/5/2013	9/4/2023
/C=US, O=Invesco Ltd, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Invesco Extranet CA	DDEB32691328D2D9D85591053D653975EBEB9E5BDC83DE9A04DFEED08CDE500D	5/19/2010	5/18/2020



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Invesco Ltd, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Invesco Global Cash Management CA	2CDD110A38D21C06E305396F85A1BE3AAE1D8D8F1B81D1E0D74FE845431C1D99	5/19/2010	5/18/2020
/C=SG, O=National University of Singapore, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=National University of Singapore CA	C7AF67FF082E57B203C0E9501C62BDBBC10339CB8BD89E4F91E8827DF826E7DD	9/9/2010	9/8/2020
/C=SG, O=National University of Singapore, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=National University of Singapore CA - G2	438BA9C85C9A8C5506ACD1146ADA068B777A32FA2C78A6D4AB57241174881AB2	9/18/2014	9/17/2024
/C=US, O=National Geospatial-Intelligence Agency, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=NGA CA G2	0BA8FF64F0D4975401EFB89283FA19C86FCB70B4FAC922F16F3CCB7AA71F7365	4/23/2015	4/22/2020
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Persona Not Validated, CN=Symantec Class 1 Individual Subscriber CA - G4	CF47B370761E9CA40096CBDB0C34B61429957E410780339A0D005D73E371204E	9/1/2011	8/31/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Persona Not Validated, CN=Symantec Class 1 Individual Subscriber CA - G5	42A5FBCA2D6AA262FF62333AB78699CE1E4BF1CF5F49F806FD324CBE5BB62CF4	10/1/2015	9/30/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 1 Individual Subscriber CA - G6	51E7542B47AD3849D1C363E6D539DA703DC12CD16CE985FE6D792C5DCDF453CB	10/27/2016	10/26/2026
/C=JP, O=VeriSign Japan K.K., OU=Symantec Trust Network, CN=VeriSign Japan Class 1 CA - G5	9CEBC030750F1A1BAD06C998558AE209DFCCA68A80D38C161A85DC5AF68DD48	7/24/2012	7/23/2022
/C=CH, O=World Intellectual Property Organization, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 1 Managed PKI Individual Subscriber CA, CN=WIPO CA - G2	FA073D67B4229BD063FEC770E272EF256C196D4B1D720059818826ED02AC7811	9/28/2010	9/27/2020



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CH, O=World Intellectual Property Organization, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 1 Managed PKI Individual Subscriber CA, CN=WIPO CA - G2	5C1115A78C98B9B40A232DE8CCA58CDE880DD73835D40EA15F4E3FA6B4E2B286	9/28/2010	9/27/2020
/C=AR, O=Banco Itau Argentina S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Banco Itau Argentina - G2	C951DAECBDC59763C6681825DBED0780C3E8921E1E76E9AAD3146F1B0C18F9B9	1/19/2016	1/18/2021
/C=AR, O=Banco Santander Rio S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Banco Santander Rio - Empleados G2	4100F6070323E58BB5159290C24D3005601F875687665B48EC4DF65E3F1A8AC2	11/19/2015	11/18/2020
/C=AR, O=Banco Santander Rio S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Banco Santander Rio - G2	C7B68879237403950E17F2BE6204834843211E04D3A885632568A77636E5BF3D	8/18/2015	8/17/2020
/C=AR, O=Bolsa de Cereales, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Bolsa de Cereales - G2	54E37620BF05CEAFBB2286EB251F69434C84677B8122299AF2E07750341268E2	8/18/2015	7/25/2022
/C=AR, O=CertiSur S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante CertiSur	C856F854F6FC94EC4D496E6CDAE6C66AA2D8CAFDBF87C928B9898E327B962A3F	4/28/2016	4/27/2021
/C=US, O=Agilent Technologies, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Agilent Public CA G2	6BE4732E5C0FBFB61A4F8B2EED0A1C47AB7FCFA559FD5EF3D5250D20E74503A83	4/23/2013	4/22/2023
/C=US, O=Fannie Mae, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Fannie Mae Shared Online CA	D39495B310669DC6BFF57D547C53E3FF9E7B452BB609272C981F514CCA0B146F	12/20/2016	12/19/2026



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=General Electric Company, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=GE SMIME Issuing CA 2.1	6BE39EC9E02D54008A7A716DD35A3D2F0A1FD8F8F34DAE235446150C6F48BC7E	7/16/2015	7/15/2025
/C=US, O=General Electric Company, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=GE SMIME Issuing CA 2.1	2D53B8177062E4C7CEA79EEBF62BFA52A5B18BC9B89483597E5714E4E9B52315	7/16/2015	7/15/2025
/C=NL, O=KPN B.V., OU=Symantec Trust Network, CN=KPN Class 2 CA	23729AAD519FB732411BAA541EEA75A64713EF761AFBA1C2C3CF825D29D35909	2/11/2016	2/10/2026
/C=NL, O=KPN Corporate Market B.V., OU=Symantec Trust Network, CN=KPN Corporate Market Class 2 Certification Authority	7782F8635019E02E5B71B274F5778AF4717EBEB162BDC54BD5234774B22969BD	3/16/2012	3/15/2027
/C=MY, O=MSC Trustgate.com Sdn. Bhd., OU=Symantec Trust Network, CN=MSC Trustgate.com Class 2 CA-G3	885BCCECD14002A069F57E861F6919C175E791C2CA605B494DD7960684B3A093	4/4/2017	4/3/2027
/C=MY, O=MSC Trustgate.com Sdn. Bhd., OU=Symantec Trust Network, CN=MSC Trustgate.com Class 2 CA-G3	6A0392DD4B5BAAF82054607FCD6F51C73E726AF444E2400382D75C4FD20C2B3F	4/4/2017	4/3/2027
/C=AU, O=NBN Co Limited, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=NBN Co Limited Public Issuing CA - G2	758F496C9928A3C67E0D50D03D2E2CAAFF733D427E57AB5FEE7D5AC4153C4071	2/10/2015	2/9/2025
/C=ZA, O=Nedbank Limited, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Nedbank Limited Public CA	267D014C81E6D02ED5898306B64D7B5EA91BAF9DB3183CF3BC64C25D2B35CAE6	9/10/2015	9/9/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 2 Signing RSA Intermediate CA	66F7B0147C09F9DA79E63800A96F649DA7E59757F876F08126D07E8FB8542488	1/22/2015	1/21/2030
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Japan Class 2 CA	AB62A0A1DE53BA06E771438E5D0526D3D8B0235330C65AA4BF80D855908E2DC4	4/15/2014	4/14/2024
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Japan Class 2 CA	8C82B76FCA9CED6A0C6A7B3141CCB585EC941921EC0B33D956CB29071851C7D9	4/15/2014	4/14/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Japan Class 2 Managed PKI Individual Subscriber CA	0B525D378D857FF1807CFD331BE1592142291E98094C6ADCF942B58400500BA	12/18/2014	12/17/2019
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Japan Class 2 Managed PKI Individual Subscriber CA	D44A188BF66A9B681C3125DA7F1D1C05011F265552CED99A10F9F67FAE4EB12D	12/18/2014	12/17/2019
/C=US, O=Veritas Technologies LLC, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Veritas Technologies LLC Class 2 Employee CA	1AB7DCA7F8B28027F2B71FBBA8CB87162FE112C47AC4D09638C8EA01915A177D	9/10/2015	9/9/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 2 Individual Signing RSA CA	8B9218D93DB5377CFE7D5923E7016D379D446F0019C47B9B4EA737AEDF86A558	1/22/2015	1/20/2030
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 2 Individual Signing RSA CA	4E74475D2C33E1DD4732306B79712B5EE6997C2DBDF596CC8BD1362163DAA4F4	1/22/2015	1/20/2035
/C=JP, O=Astellas Pharma Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Astellas Global SMIME CA - G2	B2ED9A6D9B6C48DD1494EE0CD4802179F6208C7F75894DE2607E16573BE464AE	4/15/2014	10/22/2022
/C=JP, O=Japan Exchange Group, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Corporate CA - G3	75DF381EC1FDBD3F5F662A3CFCF2F7A35C5F58CFB26AF977D9B8ABB82DCEE208	7/2/2015	7/1/2020
/C=JP, O=DAIICHI SANKYO COMPANY, LIMITED, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=DAIICHI SANKYO COMPANY Public CA - G2	68361FD0131D79AC91C9939F3E5479CA32E2BE419A7CF519E026F992234509EE	4/15/2014	8/27/2022
/C=JP, O=The Financial Futures Association of Japan, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=FFAJ Public CA - G2	FE27C2688969B46B83A585AAF53E009AD0D75B4DF64EAB9C085B8F3EBC8EF252	2/16/2016	2/15/2021
, O=NTT DOCOMO, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.co.jp/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=NTT DOCOMO Group CA - G2	A75939F270BA6F23ECEEE83C70A3755EB46449FE2707FF01D626FB745158F9413	4/15/2014	8/15/2021



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=JP, O=Symantec Japan, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Class2 Individual Certificate Service CA	9268449725E5DE18F8A76548BBEC1F8C845B17387590E1855BFFCA5B02CF6C28	1/22/2015	4/13/2024
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 1 Individual Subscriber CA - G7	9B502B941AF5713ACCBAB4F77008F7A1A3C4A71E3BABDB07006AE6729EC5D954	10/27/2016	10/26/2026
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Japan Class 1 CA	D6A3574E4C2AA2D15397D5A9BEFCF8380910CC0148BAB86A0B9FF40E2659BCE8	4/15/2014	4/14/2024
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Japan Class 1 CA	5077797A1815E48287385898618908BD7ED182D03725F03B02F13BFFD6652F6A	4/15/2014	4/14/2024
/C=JP, O=VeriSign Japan K.K., OU=Symantec Trust Network, CN=VeriSign Japan Class 1 CA - G5	02E9E323CD6F98374079523514C3783AC1003AB80ABCBA0EE2258C418EAC44CC	7/24/2012	7/23/2022
/C=JP, O=VeriSign Japan K.K., OU=Symantec Trust Network, CN=VeriSign Japan Class 1 CA - G5	41AA85FB17777092F6F704ED1C17BF138A643E43BA8B26044A67D06333C0066C	7/24/2012	7/23/2022
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 2 Signing ECC Intermediate CA	FD02510CEC145E5266860482DD4C328609C1A788AF3FCB10A09678DE30F46B95	1/22/2015	1/21/2030
/C=AU, O=Attorney Generals Department, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Attorney Generals Department Public CA	CEF711147D8B0A1DC5200B8383BED23C1D294F2F89EBFE179D2501EA5E24AB8A	7/21/2015	7/20/2025
/C=JP, O=Bank Of Japan, OU=Symantec Trust Network, OU=Class 1 Managed PKI Individual Subscriber CA, CN=Gaitame CA - G3	58F0778CB9969B09B24BDC96A03091B0AA98BAFF9C23F82B78B061035D85A65F	9/6/2012	7/22/2022
/C=JP, O=Bank Of Japan, OU=Symantec Trust Network, OU=Class 1 Managed PKI Individual Subscriber CA, CN=Gaitame CA - G3	D20118563ACC4AB2D1DF217E3974D00877F71D2B74959F43FED33C45EBF5FB31	9/6/2012	7/22/2022
CN=Sun Microsystems Inc Root CA; OU=VeriSign Trust Network; O=Sun Microsystems Inc	356A86A3A0B9FFC707EEF818CEC7FD9C148FA4A92C137B1BE9557CFD2BD0B8B5	6/2/2005	6/1/2020
/C=US, O=Adobe Systems Incorporated, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Enterprise Services CA - G2	EA78912AE2E15549DDA02D74CC05A18DADC218DD05C13F045B26433D23732F33	10/16/2012	10/15/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CL, O=E-Sign S.A., OU=Symantec Trust Network, CN=E-Sign C2 Firma Electronica Avanzada Consumer Individual CA G2/emailAddress=e-sign@e-sign.cl	BE4D872225F013B6E17595AA29F3C0B9F85C403E6C9B483550B069E4A2F47BFE	11/15/2012	11/14/2022
/C=DE, O=Heuer und Partner - Rechtsanwalt\C3\A4lte mbB, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Feddersen Heuer Public CA	A402AA0AE53F484A07BF4E35B55D1274127650AD6145E243B719330B92B2A10A	1/5/2016	1/4/2026
/C=AU, O=Fuji Xerox Businessforce Pty. Limited, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Fuji Xerox Businessforce CA - G2	92587CDC27A5C019B413AA94D21944AC8562E8DAA8C78AEA17C623D1B77714DE	6/4/2015	6/3/2025
/C=US, O=United Launch Alliance, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=ULA CA - G2	4A84F84E880F3D96C3BFBA2AED67B0EE300FBEE0A4A90D736EF738A089FD6B17	4/25/2017	4/24/2027
/C=US, O=University of Houston, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=University of Houston CA - G2	69FF03E05230DFD61E4D6F6DD6662808C65A85CBE8FEA5E43FBF387128E8B4F4	6/18/2015	6/17/2025
/C=US, O=University of Houston, OU=Symantec Trust Network, CN=University of Houston Intermediate CA	8AD8E95B7B83F0BC772BEB75FFE0C51F65C77B63B0821ADC13CDC5AC9C27267	2/7/2012	2/6/2022
/C=US, O=United Services Automobile Association, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=USAA Digital ID CA	B96663787F915266F4A0F4B63A28124C8F0D8E41A68CEF6A7E05A7F550E9DA4E	11/4/2009	11/3/2019
/C=US, O=United Services Automobile Association, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=USAA Digital ID CA	8EFECFB4D59F1A7E46751F1A3E5539CB99DB3DF1B68C8BC2F200EDC303816877D	11/4/2009	11/3/2019



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Westinghouse Electric Company LLC, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Westinghouse Access Programs CA	66E31B54C25AC738B01C6B1E08EA74EA5A9BD19DCD25851F207FD08FB95EC6A3	8/19/2010	8/18/2020
/C=US, O=ARINC Incorporated, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=ARINC Public CA - G2	8A8D4CA774F54964578B371ABD8B055937E8B7A0CDB659A3150EB6488930E661	12/2/2010	12/1/2020
/C=AU, O=ASCIANO EXECUTIVE SERVICES PTY LTD, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Asciano CA	5FC7C6E19AF873E0941D7C6AB344D3E6E4F73DD67693FADFA2DA9C6438AC1A1A	11/3/2015	11/2/2025
/C=US, O=ATT Services Inc, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=ATT Services Inc Email Certificates CA - G2	AE7A31EB7007A6F64237387343C083D11950F1D6D546EDDAD8B5AA3DAC30B70C	3/3/2016	3/2/2026
/C=US, O=Avaya, Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, OU=Avaya IT, CN=Avaya Client Services Users CA	7F56D7819A1A39B416669EAC8B65153C81C816F0162D70FBCD6077CBD1B98554	4/9/2015	4/8/2020
/C=CL, O=E-Sign S.A., OU=Symantec Trust Network, CN=E-Sign C2 Firma Electronica Avanzada Consumer Individual CA G2/emailAddress=e-sign@e-sign.cl	52A5E31287A0F89159F7BB4BD3A6A270DEE583A77261F6D00DD92D8C9424E800	11/15/2012	11/14/2022
/C=CL, O=E-Sign S.A., OU=VeriSign Trust Network, CN=E-Sign S.A. Class 2 CA - G2	F1980F99B8260267F4B7295CEAF9289AEC528999768B587A2C4B049AD1625B7D	12/21/2009	12/20/2019
/C=CL, O=E-Sign S.A., OU=VeriSign Trust Network, CN=E-Sign S.A. Class 2 CA - G2	967F3B9A49DF88BA8A0F2BB42F28B05CE27D4999E31451EA36A876934F6F6815	12/21/2009	12/20/2019
/C=CL, O=E-Sign S.A., OU=Symantec Trust Network, CN=E-Sign SC Class 2 Consumer Individual Subscriber CA - G2/emailAddress=e-sign@e-sign.cl	C34A5709122DC9EAF3021B979D4843FBB41C5B24326BECE84D2F686675A1B6EC	11/15/2012	11/14/2022
/C=CL, O=E-Sign S.A., OU=Symantec Trust Network, CN=E-Sign SC Class 2 Consumer Individual Subscriber CA - G2/emailAddress=e-sign@e-sign.cl	72F0E3B1B8CD1A86BDF7D022DA4131C302293CAE820B28A597BC84D041B8971D	11/15/2012	11/14/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=SunGard Brokerage and Securities Services LLC, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=SunGard Public CA G2	CC0F030F8302FFE2BCF5C784A3FD12D72422B8D65732A6DA0518B4CA4DEF3E83	3/5/2015	3/4/2020
/C=AU, O=Sydney Trains, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Sydney Trains CA	BD80A335B5EBB7279960E0B5802257C256062895F33D3DCBC0B7CB7199DFA75F	11/24/2015	11/23/2025
/C=US, O=Bartlett Regional Hospital, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Bartlett Regional Hospital UA PKI CA	A604BB5F3A785AF64ABE2831D70AE0A69BC9754BB33ABEA3C1EDA94036068BAF	11/4/2009	11/3/2019
/C=US, O=Bartlett Regional Hospital, OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Bartlett Regional Hospital UA PKI CA	4E1952C94E6D3DFE05871A4571C1812CE04CEC404988ACB9F4EC435994B4BF44	11/4/2009	11/3/2019
/C=US, O=QTC Management Inc, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=QTC Management Inc CA - G2	765A29596F5F74EEA3BDAC0670E7DF42BFDB708765AD4F892FEEF714C214E7AE	4/26/2016	4/25/2021
/C=DE, O=RWE Dea AG, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=RWE Dea AG CA	7FC6CAB96C16C850F457DCBBFB893539EA2664395F2409693789F41BFD64714E	12/11/2014	12/10/2024
/C=US, O=Bridgewater Associates, LP., OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Bridgewater Associates CA	D8E79EBED997B764E6D0DF624F2DBB4EFF2A1B6049C6F1A1A1E88263C43DB221	10/12/2010	10/11/2020
/C=US, O=Brown Brothers Harriman & Co., OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Brown Brothers Harriman & Co. CA - G2	CFBF988B04B41842824B287999092EB3AB6CD8DFCEB49BD3D5D48345A5B4818B	2/8/2011	2/7/2021



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Brown Brothers Harriman & Co., OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Brown Brothers Harriman & Co. CA - G2	7082427CD46834AEF6655ABADD898DE01F9E1A988E753401EF81A0A37410AB78	2/8/2011	2/7/2021
/C=US, O=Yaana Technologies, LLC, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Yaana	7C73C0E9D52BC63E713110DA4705C7CECCB4D49F1F5FED0B6D1A707E63A4E31C	1/6/2015	1/5/2025
/C=KR, O=KECA, Inc., OU=Symantec Trust Network, CN=CrossCert Class 2 CA - G3	25A0B8C9773E4460E19971EF781BE81BDB7704ED5E486B267866A3AB6C2C0D44	6/4/2015	6/3/2025
/C=NO, O=Telenor Norge AS, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Telenor Norge AS Test EDC CA	889957D00561EF99867402A901359C772029AD43CCBE46B82BF2E7193D385411	6/19/2012	6/18/2022
/C=US, O=Spirit AeroSystems, Inc., OU=VeriSign Trust Network, OU=Terms of use at https:// www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Spirit AeroSystems CA - G2	4D765D117CB1B1BB26A63682ADB51326AE5006E788F90FF822F1FDA96BCEA2C7	2/23/2010	2/22/2020
/C=US, O=Brown Brothers Harriman & Co., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Brown Brothers Harriman G3 CA	B3FAEBD9495096D2C5B26CE20D7DE785DF83CEA63BF9BC6605BC08B89996224	6/10/2014	6/9/2024
/C=GB, O=British Telecommunications plc, OU=VeriSign Trust Network, CN=BT Class 2 CA - G2	A0BD4E39E6FE415F8B1ABA4773C3EA60905ED61F8EA27875CC03E9A94D441CB6	6/13/2008	6/12/2023
/C=GB, O=British Telecommunications plc, OU=Symantec Trust Network, CN=BT Class 2 CA - G3	4FD95AFC505C1CCB5ADA4BA00B049456FC8F7BFB73AD0C1A9B61F2F8E8EE4279	12/16/2014	12/15/2024
/C=PE, O=Cosapi Data S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Cosapi Data Public CA - G2	AFCD78EBA95C0801A2FEBAE6F695D469AF346215C5A3E554F161D23C4BB40F91	5/12/2016	5/11/2026
/C=US, O=General Electric Company, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=GE Enterprise SMIME CA 2.1	5C854634778E6DDC076ABAA36E5B8F4F45140578BD3A45AF09B7F23C34F032AD	6/16/2015	6/15/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CA, O=Goldcorp Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Goldcorp Class 2 Certificate Authority	B97867E65B805D78153D5349389C7E54695A45DDB2A4A015CAD8069C63FCF669	9/15/2011	12/31/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 Employee CA - G3	2F320624CC3EBC01796080BEDEB5B2ED916F02A0AE5F537EDC4766BC455659DD	1/6/2015	1/5/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 MPKI Individual Subscriber CA - G3	A67582B9277224D9801027217156D283136B29FD2F33031781F604EB807970D7	11/15/2016	11/14/2026
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Symantec Class 2 MPKI Individual Subscriber CA - G3	E79BACE9FF58B8EE6D3BD94AE8ADB13DF42DFD86B3701BFF8EDFF5C4E84BAE91	11/15/2016	11/14/2026
/C=US, O=SRI International, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=SRI International CA - G2	5B6A31D14ED98E8CF23A115BC45E87B8ECD82A937A29DBE0EFBA3C8133494B74	11/15/2012	11/14/2022
/C=US, O=eGlobalCustody, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=eGlobalCustody G3 CA	2DE8DD6BE750435D703D60CF87D203AF12D1E0F2960691888F47546EED9087D6	6/10/2014	6/9/2024
/C=SE, O=Volvo Car Corporation AB, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Volvo Car Corporation CA	00712AC5314A938E0D6188AE8D4C3566AE6C6AE9EB006FBAA5DE4239AF4427A5	3/29/2011	3/28/2021
/C=US, O=Voya Financial, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Voya Public Issuing CA1	63B7404D57FE17FD7E32DAC98D934EC98AB69F64D0338987193657A64364BE60	3/4/2016	3/3/2026
/C=CL, O=E-Sign S.A., OU=VeriSign Trust Network, OU=Terms of use at https://www.e-sign.cl/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Admin - AR Estado de Chile CA	5635665EB67A4164CAA9E452C2F48423CBEFE06507559EBAA369A05158597F1A	12/21/2009	12/19/2019



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CL, O=E-Sign S.A., OU=VeriSign Trust Network, OU=Terms of use at https://www.e-sign.cl/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Admin - AR Estado de Chile CA	7B4FCFEAC70BD4AFBFA2D83035DCF63EDA128FC099B3DCAFCF76A66B0B68EC6E	12/21/2009	12/19/2019
/C=CL, O=E-Sign S.A., OU=VeriSign Trust Network, OU=Terms of use at https://www.e-sign.cl/rpa (c)09, OU=Class 2 Managed PKI Individual Subscriber CA, CN=AR Estado de Chile CA/emailAddress=e-sign@e-sign.cl	7B82A65F1A003D333C48E566A97D73923C186762C07AE976AB456EEDEF284B0B	12/21/2009	12/19/2019
/C=CA, O=GREEN SHIELD CANADA, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=Class 2 Managed PKI Individual Subscriber CA, CN=GREEN SHIELD CANADA CA	6A7146319034A1F380E6B32A8FAC0069EB1D332477F4EAD33762F8A614A552F2	12/2/2010	12/1/2020
/C=US, O=Hewlett Packard Enterprise Company, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Hewlett Packard Enterprise Collaboration CA	2EAA4251B3FFDD3AE904833A08B7FE1E7717C17082455C07F6F6DA902CBAC5D0	3/17/2015	3/16/2025
/C=US, O=Honeywell International Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Honeywell International CA G2	19550DF2A43B367AFA194C34F3C3CBF8678E346691F895F429871EEADA53F7F8	6/7/2012	6/6/2022
/C=GR, O=ALPHA BANK, OU=Symantec Trust Network, CN=ALPHA BANK CA - G2	D4F4E97198211E5D9E80284EE4DFA1CEBF4DFCABFDD3265FCF3D642512D4FCC7	7/12/2016	12/7/2024
/C=CL, O=E-Sign S.A., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=E-Sign Firma Electronica Avanzada para Estado de Chile CA/emailAddress=e-sign@e-sign.cl	5DEDD29F82C4BB95F2EE6CB7247E7E6C5DDF6F8A342C40A98EF14F7DE077A5CF	5/1/2012	12/19/2019
/C=US, O=Honeywell International Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Honeywell International Co-branded CA	7C932E8709835BEC74AAB6F02E958DF70995B3FED5FE4C375D66B1228555D8ED	12/5/2012	12/4/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Honeywell International Inc., OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Honeywell International Co-branded QA CA	87C0BAE275BF11F25AE3290B3E810D97E8297F276C576CDAA9AEB5FAEFC4CD22	2/14/2013	2/13/2023
/C=US, O=Oracle Corporation, OU=VeriSign Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=IPsec CA	8CDCB62473FE6AEA3FA7CE065BFB092D45233563C33AB16CD9985B7A0A14A07E	2/8/2011	2/7/2021
/C=US, O=Oracle Corporation, OU=VeriSign Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Object Signing CA	FD70A50412710BB79FB42BD39785DC4780ED732A158296251A6DAFBC0602698	8/11/2011	2/6/2021
/C=DK, O=Maersk Line A/S, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Maersk Line Certification Authority	0059C30A64B18C372D316EB373C4D687091ED202C4499AB8C1D5D3D0F12F1689	9/22/2011	9/21/2021
/C=BE, O=Safmarine, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Safmarine Certification Authority	4C3F6F5576A934FC5976583CC4C3039B00A8F91011B6104DF1D7EE48C282F94B	9/22/2011	9/21/2021
/C=JP, O=Symantec Japan, Inc., OU=Symantec Trust Network, OU=Class 1 Managed PKI Individual Subscriber CA, CN=Application Service CA	2B3188332031E548FE424A7A3ABB47701FA089D9D0EEAE35585CA72974BDA69C	4/28/2015	4/27/2022
/C=JP, O=KYOCERA COMMUNICATION SYSTEMS Co.,Ltd., OU=Symantec Trust Network, OU=Class 1 Managed PKI Individual Subscriber CA, CN=DATACENTER CA - G2	EA70CA9465E25593BAB909A9DBF8F095C0B20BFBB54F1D185D464CCC8A431F4B	4/15/2014	6/6/2022
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 2 Individual Signing ECC CA	109AEA4F367823989B6C3638A56933ADC682EEBB2F655A16E6363263B4A729DB	1/22/2015	1/20/2030
/C=NL, O=KPN B.V., OU=Symantec Trust Network, CN=KPN Class 2 CA	CABB66C975781962D732B9312EF3908CA3ED6F5CBB76D6322E5EA2B47836F4D3	2/11/2016	2/10/2026
/C=GB, O=VocaLink, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=IT Security G3	D9B3BAC62CDA54446DBAD249D9A19EBB8DEA89A0AC1AD27DE99CD34E77376419	2/17/2015	2/16/2020



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=SecurityMetrics, OU=www.securitymetrics.com, CN=SecurityMetrics DigiCert EV CA	6B2328E7FFF598B2ADF90B7F3EA42B45FA606D78E2B117B7D60E99E828CF7565	10/30/2012	10/30/2022
/C=US, O=SecurityMetrics, OU=www.securitymetrics.com, CN=SecurityMetrics DigiCert CA	F32DEAF22CE724661F53D5287311AFF2541EB38ECAFA9DD877B94023E3A11B1F	10/30/2012	10/30/2022
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Extended Validation CA	1A8D790AF9B2B34D7DD6AF61B5AA4CF1380B86095CBAC2BCAB35BD566D0180C3	4/27/2018	4/27/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro Extended Validation CA	3883E6DE4917A46B594ECC2D2AC6A95D43E7EAA8E089A91F9BC104FF16DF8DE6	4/27/2018	4/27/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro Extended Validation ECC CA	C3804DE51E8C17052220AE1CAD3D383E54D5B7DC28843C42F0DBD9913C1E8658	4/27/2018	4/27/2028
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia ECC EV TLS Pro CA	2DAAC6FDFAC16C548C53FF1198254D7E937761D22A1E7CC5C1A9462E971461F5	4/27/2018	4/27/2028
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia EV TLS Pro CA	4AFFE4FEF39464D1788C660AF591D5E601B261C4811DF0A3DD9D61CAFE8E5ED8	4/27/2018	4/27/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro CA	BA6A0C1170E1C7323860749B5E7B0ED365975D8FC90740B15D70F843A2394942	4/27/2018	4/27/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro ECC CA	A206644F57AFD10B94169498858981C16D633858CE0C88B57CF14FA2A92AACFD	4/27/2018	4/27/2028
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia ECC OV TLS Pro CA	F1CACA6AB2350A7668C13E41960908681DAFCC7E368DCB8D47FEFCF9631390481	4/27/2018	4/27/2028
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia OV TLS Pro CA	33E8A4ED48930760CE1AD7A2D44F079B22F660052753976109E6FC74752552BD	4/27/2018	4/27/2028
/C=CN, O=TrustAsia Technologies, Inc., OU=www.trustasia.com, CN=TrustAsia Secure Email CA	047217772051D292238F3355F5C5435E9B84364CCD143FC49F9C31CD605439F0	4/27/2018	4/27/2028
/C=CN, O=TrustAsia Technologies, Inc., OU=www.trustasia.com, CN=TrustAsia Secure Enterprise Email CA	3D774B65EE95FD6EFD1C8732B57E607C9BEE423C36E46F6E1CC8CA1F0AE62E23	4/27/2018	4/27/2028



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CH, O=World Intellectual Property Organization, OU=DigiCert Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=WIPO CA - G3	641658371E97E16332C051D9AFD1321F770C2012033D63360A6A96739DC9C357	5/3/2018	5/2/2023
/C=US, O=APX Inc, OU=Symantec Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=APX Public CA	8B1C10711C007BE2ABF9BF6C79CE5EBD5F8EAC36D5037228237AEFB236BF2A91	4/4/2014	4/3/2024
/C=GB, O=British Telecommunications plc, OU=Symantec Trust Network, CN=BT Class 2 CA - G3	AA257A6CE4A1EB7F6A508B5037D81DE2782C8D8AEA0127DE1E31150218BEDA75	12/16/2014	12/15/2024
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site CA	B26EB310F8FAF0EF5B0D0B71AA65EC050FA3ADE29134FB438AB6440288FA6E67	5/17/2018	5/17/2030
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Extended Validation CG CA	38FDF62507CEDEE16B1455E96BD23D5C6F6C5654D68C7E3B27238D2C73744A86	9/24/2018	12/14/2021
/C=US, O=Wi-Fi Alliance, CN=WFA Hotspot 2.0 Intermediate CA	AE0D0BA5AC3EEB823F5CA77331A99D7FDB2EC231D7CE47B7C208E3830E08A891	12/9/2013	12/9/2023
/C=US, O=Wi-Fi Alliance, CN=WFA Hotspot 2.0 Intermediate CA	FEA342D00D1A355CF51569EF7E0F617ABB0F22D6D1E73DAA11DCB4D407975543	11/25/2013	11/25/2023
/C=US, O=Abbott Laboratories Inc., CN=Abbott Laboratories Secure Code Signing CA	5F1A82C09CBAE239D4E3F0704C970755547E53E3CF290F9479FE7E98665FEF0F	6/7/2016	6/7/2026
/C=IT, O=Postecom S.p.A., OU=Servizi di Certificazione, CN=Postecom CS5	61A01EA7E8D8016CCEF92FF13E3DBE082E0779C4CB64BF6F0C316258D6210F5C	4/26/2016	4/26/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Assured ID Timestamping CA	CA8D0F4736454AECBEC5DEEC80998C9EBF41D06C728F3C76CCA24151BC62D463	1/7/2016	1/7/2031
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Assured ID Code Signing CA	51044706BD237B91B89B781337E6D62656C69F0FCFFBE8E43741367948127862	10/22/2013	10/22/2028
/C=US, O=.NET Foundation, CN=.NET Foundation Projects Code Signing CA	024F162B1D09F6A0868C38B4C8B4257C1EEA6C5A31589416D520CF1624917EB3	4/27/2018	4/27/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust Code Signing CA - G2	8D7C499D7FE9EEEC05D9EB42F03EFE402807919803E8E6CD6C1F2BF5EF6A7D8F	7/18/2018	7/18/2028



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA1 Assured ID Code Signing CA - G1	82AD46ECDE882413106B1C83EF65DC02DB0C65B3870F6F744B62283DF6FA1D56	7/18/2018	7/18/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Assured ID Code Signing CA - G3	9CDFD82596D1BAC9E44D3E491E2C07D8DCC920419915FD6F361CF70A1E433B10	7/18/2018	7/18/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust Code Signing CA	78A95ED82180A1C33A9F34EDB75E6774FD4BB73AA2C7C4121453DDB627DB1BAF	7/18/2018	7/18/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID Code Signing CA-1	E57208CBFD286CE9718267E44491CB5B435C95BB09DC9720F5B64B25AC7974CD	2/10/2011	2/10/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Assured ID Code Signing CA - G2	2A9D0D018BB49FDEA14D6C16E9BA0A942F2833B9AADFFBAD1306E301B495CFB7	7/18/2018	7/18/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance Code Signing CA-1	BEAF46D0FF62645F56BE11830DDEFC663379619F337E85713491C83AE179481D	2/10/2011	2/10/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert EV Code Signing CA (SHA2) G2	EDCD88B6BD77FC8A2680E2ECB8FFBAC45898DFA0FDE983425E0F1BEB058C04B6	7/18/2018	7/18/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert EV Code Signing CA (SHA2) G3	2B0A972DC0DAE218E9477396D3D82DEB82DE118867DD19E1D2FFFD958CBB6DA9	7/18/2018	7/18/2028
/C=JP, O=DigiCert Japan G.K., OU=www.digicert.co.jp, CN=DigiCert Secure Site Japan CA	AD14A68BEC949E84F6063419D63465D137C2ADD3E3A85E00E9E3EE82E5B4018F	11/20/2018	11/20/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Secure Site Korea CA	6555D661D37F2494A23C2D5F83479E78051B6DE76A147B506D6BEA2882B4D066	11/20/2018	11/20/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte Partner CA	635AF6889F49060FE0E7BABC0F23314FB118F3B18243DD17F47D8647A69684B1	11/20/2018	11/20/2028
/C=US, O=Riverbed Technology, Inc., CN=Riverbed Certificate Issuer	BB39497035ED9583D286CDE70FB644EB95806598092B1E8D8F11BC035D7A476A	11/20/2018	11/20/2028
/C=US, O=Riverbed Technology, Inc., CN=RVBD Certificate Issuer	72563CC98ADA2C5D2126542ACC908154AEB1F9D6F7E83A55C09744C7D7ADDDBA	11/20/2018	11/20/2028



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert TLS ICA GeoTrust Global	516D856D0353BA69FFEB9C1EBA035D780844857006ECE99C051EC19C10C36CD5	1/22/2019	5/20/2022
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Secure Site ECC CA-1	99935E20424535EC016F337B2BE68F1349DE66CCE4CA5AB367F8F3738215B833	2/15/2019	2/15/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Secure Site Korea ECC CA	EF9138993654DF92D2FB5860E28DE8818A9F49DB56ECB689A67A7FC2D5881DD2	3/25/2019	3/25/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Secure Site Korea EV CA	C022D5CEAA275F2A6268FA79AC35653B3A730DEFA41F9CD8817D6D159BD33097	3/25/2019	3/25/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Secure Site Korea EV ECC CA	B0505BF2947F0807ABAE2D42C19343EAF08D1DDE3F8745B0589A57362792E470	3/25/2019	3/25/2029
/C=US, O=Hewlett Packard Enterprise Company, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Hewlett Packard Enterprise Collaboration CA G21	B6E4C8D9D575A61404DE568E27BD6F3048D7B0F803065E2F6526260BDCA3D211	4/1/2019	4/1/2029
/C=US, O=Hewlett Packard Enterprise Company, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Hewlett Packard Enterprise Collaboration CA G22	AB480D8F7D720A161C9671843EADAAAAABC5447EFD9EF8F3470874D927CCB861	4/1/2019	4/1/2029
CN=DigiCert SHA1 Code Signing ICA VRSN PCA3-G1; OU=www.digicert.com; O=DigiCert, Inc.; C=US	F6A54A76C4A0B529ADC8D457B503A7B3ADF8B0EAAE8EE72D0FEFD2372E8199B	5/9/2019	8/1/2028
/C=DE, O=Henkel AG & Co. KGaA, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Henkel Secure E-mail CA	7D89BA7764CFF6FE2EE9AD44838D56C5D57F3DD736F96068DE9B0A1710FB3D47	5/29/2019	5/29/2024
/C=US, O=DigiCert, Inc., CN=DigiCert PKI Platform C2 Shared SMIME Individual Subscriber CA	55F3A359F0A26D72FF244C2EE396FD51BC2400EA250C91EFC355E2F8103C9939	6/4/2019	6/4/2029
/C=US, O=DigiCert, Inc., CN=DigiCert PKI Platform Class 3 Shared SMIME Organization CA	7F755DC2B9EE99EB02D71CB1805059AAABB5EB3E855DCA8C09A1D0DE258D767	5/29/2019	5/29/2029
/C=US, O=DigiCert Inc, OU=DigiCert Organizational E-Mail Certificate, CN=DigiCert SHA2 Assured ID CA - G1	87BBAD4C915D56D2E74F044D7220B957D4A853D9A1818B52F3625417DB655E3A	5/17/2019	5/17/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert CN RSA EV CA G1	B131905CC7221270613B529AC9E786AA230ABFE154A0ACBE452BC350BD1EFE4B	6/20/2019	6/20/2029



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Extended Validation CA G2	B6EB4F8AD197073FE5203F8FCEBFD5C509CDE9CA3AA65EC59D203831424192D4	6/20/2019	6/20/2029
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia ECC EV TLS Pro CA G2	C0DD060FF8CE556F35683D564E0E66B2907178808693F83F3AA642326BF6D0C8	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro Extended Validation ECC CA G2	70DC86F9F7750B74B1DEC8CD352EC25837C36E640F7148E08464EF5901E5A589	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust EV CN RSA G1	C87CE03AFFB5DE6319C219971F2ED2D8F6F5389E2D53B22DD2C562A5C9827FC0	6/20/2019	6/20/2029
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia EV TLS Pro CA G2	0D51B6CDCF34A9F22144787F3FD920DC8800FB60490BFC8D289A1953E0FBDA4D	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte CN RSA EV CA G1	ADA188F830C313F6046488EC341F1ED4AF793C6DC28C58600445DFBEB4163746	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro Extended Validation CA G2	40D69920EA05456FA0117DE608B8A8013790B542097E343EC1CBCE2DFB9713B0	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert CN RSA CA G1	03CE9BC71B91FDB7CB3C5235CAE0701CB486BBD628D4AADE5841FC5F0AA37A46	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site CA G2	F614AE2B101484F15F66F4DDA56EE6EB422728F179D94399EDE19AC1D85A8BD3	6/20/2019	6/20/2029
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia OV TLS Pro CA G2	DBDFA91ACC4DB8AD83FCC7978E35D62F6E32E55108273C8EC998E3133580D664	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro CA G2	02FED3BA2E6A7843A318A981BC847061FD282D9E8847FFA9F54D785B6B81D6F3	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Thawte CN RSA CA G1	7867AAE905EB8D55635FFEBBF8CF05A63B9B390665DE2367AC1073E92913728	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=GeoTrust CN RSA CA G1	23DDF08B22373D86158EB9C99FDB5366B19804560531372DD20DCE3FB766F56C	6/20/2019	6/20/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Secure Site Pro ECC CA G2	DA3BE2B6A6D9715C1295A42BE526E0001D10E5D7540F06E7631B34E644934848	6/20/2019	6/20/2029



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia ECC OV TLS Pro CA G2	70357B9E56D3FB3C6C009C38C7181454C462908DFBCE6D54D60DFE1E506E14FD	6/20/2019	6/20/2029
/C=US, O=Alcon Vision, LLC, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Alcon Public Online CA	4F8137882B6D7B7F1ABBCFDEED0082F0E5CDEC870BA3923EF84D08DDE42E43749	7/2/2019	7/2/2029
/C=US, O=Solenis LLC, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Solenis Public Online CA	0F3284B306AC422986C8F560EA46226FD8425519A6F61AA9C55AB508274B82D2	7/2/2019	7/2/2029
/C=SA, O=Saudi Telecom Company, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Saudi Telecom Company Email CA	E33076FFB5267DF419F72DE06C46E2C6CA44FF4383B5316CF7D6E628E98D9BFD	7/2/2019	7/2/2029
/C=ZA, O=Nedbank Limited, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Nedbank Limited Public CA	4946337D3954305F36770EE8317F67CFE9F3943576828BF55C1538476B4A20D8	7/2/2019	5/12/2025
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Encryption Everywhere ECC DV TLS CA	1E4FC34D26E0793D559E322FE111F1E19A9D2E34BC25D3C427B032A48D2C5B6A	7/23/2019	7/23/2029
/C=US, O=Netflix, Inc., CN=Netflix Public SHA2 RSA CA 1	227AC6E5AEBB0A356D4C87317CC8CD683D1C4C67129CEE2AA394AD38C0725C93	8/1/2019	7/31/2029
/C=ZA, O=Absa Group Limited, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Absa Group Limited Public CA	8FB88641F4E231CE81436375138A5B36D2A06A3CC2A49E5B1F4699981BE1E451	8/5/2019	8/5/2029
/C=IL, O=ITsMine LTD, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=ITsMine Document Signing CA	965BD258388DDDD4EA7BAAFB7754DF49F896CF02E15BE0925DE33B0038E9925F	8/5/2019	8/5/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Global Client CA G2	A449DBAB6D4C035FAAFD9D045891FE98ABD73D286268A8A83F854145551692E3	9/23/2019	9/23/2034
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Global Client CA G3	BA361260FF1D46031686305E082DE836D4A320466E0DE9E013F00CDEDDDD62317	9/23/2019	9/23/2034
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID Client CA G2	9E12D6E13DD53A890A2B3A37423AE5E457731A7B34A153992F1EF1F5489A45E	9/23/2019	9/23/2034
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID Client CA G3	14FAFCA84BDB8B0EC32719272BE730FE18D6FC29301C5CF789400596EC429AFE	9/23/2019	9/23/2034



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=FedEx Corporation, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=FedEx Public Online CA	AA942E512B4287D5BEEC85A1C5A81C2DDD136B3CC7065B6830F0685110530412	9/23/2019	9/23/2029
/C=US, O=Symantec Corporation, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Symantec Class 2 Employee CA - G4	1D082DDEDED16D4E4E49163893D9244978EBC54228F4B811278B55AB299C4C48E	9/23/2019	9/23/2029
/C=US, O=International Business Machines Corporation, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=IBM Certification Authority G4	60F53E603B0EFA71C6CC34B6E87C1145F70DC942C89F71763D90FE18E7AC589E	9/23/2019	9/23/2029
/C=DE, O=Duerr IT Service GmbH, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Duerr Group Global IT CA	B48CF36ABB49825C3B7C407866958C24085C938C60C7C1A48A18D00859CA348C	9/23/2019	9/23/2024
/C=US, O=Common Securitization Solutions LLC, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=CSS Public Issuing CA	00BFE5177DA40E040506A04417FB4B8064816B5D875852A07FC3A36700091080	10/31/2019	10/31/2029
/C=SA, O=Saudi Enaya Cooperative Insurance Company, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Saudi Enaya Public Issuing CA	8F76367A7ADAE4642258E6586A2A9642A00F3ECBB1EB725F18B5E7AD3D95AED9	10/31/2019	10/31/2024
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert Extended Validation CA-3 G3	DA7E5778F62F87655B8FD24A89E651E57329DC9C0765A71158CE56443CA44E95	11/12/2019	11/12/2029
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert Global CA-3 G2	9B2DD4FBEE941F6510F716C04969B36428892765461701EF47D41B3289475D50	11/12/2019	11/12/2029
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert SHA2 Extended Validation Server CA-3	085A0714524DF7AE9919A6F597884439E12A533E61552D29D6A18C35096FC548	11/12/2019	11/12/2029
/C=DE, O=OSRAM Continental GmbH, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=OSRAM Continental Secure Email CA	D87A91DAC26D64E3659507119E80B11BE37ADA87A8D6C01E4E175DDB32B1A0D3	11/26/2019	11/26/2029
/C=US, O=Avaya Inc, OU=Avaya IT, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=Avaya Client Services Users CA 2	1FFA0D1F55CE4A0507E8C38E8B557B88CBDD690D903D996B1F7850D81D6A4A93	11/26/2019	11/26/2029
/C=GB, O=Kainos Software Ltd, OU=Class 2 DigiCert PKI Platform Individual Subscriber CA, CN=KAINOS-PUBLIC-TRUST	802E0B133D61441A0A6AF799DC5E4B260972990D6DCB87DC0ACFC585D9082610	11/26/2019	11/26/2029



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Cloudflare, Inc., CN=Cloudflare Inc RSA CA-2	AEC863898F284D6CD4C6A3F6C3E6523480A359C33DAF66FAD3381849B8BB018B	1/27/2020	12/31/2024
/C=US, O=Cloudflare, Inc., CN=Cloudflare Inc ECC CA-3	3ABBE63DAF756C5016B6B85F52015FD8E8ACBE277C5087B127A60563A841ED8A	1/27/2020	12/31/2024
/C=US, O=SRI International, CN=SRI International CA - G3	A6D9A37927349DE7464C8DA63F601CE55C214BEFD7B324679E64E1B30F75CEFF	1/27/2020	1/27/2030
/C=US, O=Adobe Inc, CN=Adobe Public Issuing CA	7B6BA0B173658101250395D547643037A68216155270BC9BA46B358C3B77E90E	2/5/2020	2/5/2030
/C=SE, O=Volvo Car Corporation AB, CN=Volvo Car Corporation CA	B1D29BE013CF27982AAAB694785A3E9F5A169A682F8B8D38677694670C428288	2/5/2020	2/5/2030
/C=US, O=Netflix, Inc., CN=Netflix Public SHA2 RSA CA 2	BD3A6BA80EBBC83A75D62F779F5D6CCD9ABB7AB6A8DFA471B496E81CD6610314	2/14/2020	2/13/2030
/C=US, O=CrowdStrike, Inc., CN=CrowdStrike Global EV CA	8CD728F9C3391BA4360A10C66CA484C807651D6207F10633669ED8881FE91BF5	2/21/2020	11/9/2031
/C=NL, O=Trust Provider B.V., CN=Trust Provider B.V. TLS RSA EV CA G2	B23A29C312A7A80B0FE6B4E71B909CAE92AD649E88766E56C9EE8E1D7C013945	2/21/2020	2/21/2030
/C=NL, O=Trust Provider B.V., CN=Trust Provider B.V. TLS ECC EV CA G1	9C35E8907B549A26002942A7918E32E144503FE342261B07D82BB0D49D73D912	2/21/2020	2/21/2030
/C=US, O=DigiCert Inc, CN=DigiCert Basic RSA CN CA G2	CB57B3FF2040CB269497625BC90FA9D7B4ED4938C6F60F42F69AFDF508AC2993	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert Basic ECC CN CA G2	97C4B44316055F26A52A1F664CE385800A964A8552C99D2BCAFD618E6D8074A0	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=GeoTrust RSA CN CA G2	E3C24279DD6A337F881B1BC692E878F4A31AFE95851F208F94800B0C24D88C38	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=GeoTrust ECC CN CA G2	7CAEEC680E6497FC5109073F83816E798F27F8968A2663C1C95711B548192E35	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert Trust Service CA	75AC8E41D9A7CC758D3998FE030F638CFD28855823DA4E9B56954CFBDE054EB6	3/4/2020	3/4/2030



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, CN=DigiCert Trust Service ECC CA	F269AC00B410003F72DC628AFB3D950279630C7C5D0C82148A0FD24DF4DA4301	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert Basic EV RSA CN CA G2	B41A4864F0D4EC4EA632D01B3E7F232775E55E22B3BFD8642EE1292280D0E47A	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert Basic EV ECC CN CA G2	D619F3257B98756D28811D3CEE9ADAD8BCAE1B4367BBB0C73F6B5E558FBA4563	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert High Assurance Trust Service EV CA	72D0F7CBF4529B80C34A7CBB438BD1D0E1FC26E80E59C8D4FD7314FCDDF0E994	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert High Assurance Trust Service ECC EV CA	E9529B428FB67390BC6455D79BA2434E816C54FE4F359930CB709DB256FDDF94	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=GeoTrust EV ECC CN CA G2	FC01B58FC78B9C59211784C2E25BF1D012A1E23F337218847A62EB4145EE4AB6	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=GeoTrust EV RSA CN CA G2	8937E90E1495C9A78EFB18182D43FDC73FCD292AB6347A12B9077DE878530E62	3/4/2020	3/4/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site CN CA G3	6AF5C4EAC180289B94A77A5D231E3865FFE934F3E6A24BF487EB4E2BFD809A4B	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site ECC CN CA G3	00C0CBA95CBFE1E270814275F32B505D6E5916C2B6DA67FAF4DD309EE6E86CBE	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site Pro CN CA G3	A66C97AE59DF9EA015E73C744EE5520745F101A395C497D19E1F168D39AFCD0	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site Pro ECC CN CA G3	985140919342239C89086B22DFCAA4508590B11A3DE0A423E25EBC3DDAF8910D	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=Thawte RSA CN CA G2	95141A355A5A2AA3E011221CAB9FE73810FDB5D88135864F03E4D852BD0BBEDB	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=Thawte ECC CN CA G2	58E89F4F70410DA00B41473CFA413FA073ED2729F3ED77BE29A7F4705377147	3/13/2020	3/13/2030
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia OV TLS Pro CA G3	D0E8A51ACAAB9AF82767E2EF16543C2CC635551B5DE0DAE25D6AAC71E7862870	3/13/2020	3/13/2030



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia ECC OV TLS Pro CA G3	756AAB900E3F5C762734B6461FC32A9DD341EA1D4A04283409233C39787A867E	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site EV CN CA G3	139AC36BD85398BBB4588687C20DC36827D03A5F42AADF87F02BECC4BE9BFC2	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site EV ECC CN CA G3	A4B2B47545559F5FFFB7CDDA7A1220E62FB74D1B7A9A4D4DACB2B2A839CE7456	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site Pro EV CN CA G3	B75AEE9836FEFBC446F288A2970B84FC60AAF9EFBD2CB9F82F7581790DE4B8DC	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Secure Site Pro EV ECC CN CA G3	BC91379A21E7BDE11B455BF1D51186331682805A4A353A8EE258F7A03706C664	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=Thawte EV RSA CN CA G2	69919D820EDF582ADBCF8E092A9284D901772EE2B419EA9DE1F5872C791FC6FA	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=Thawte EV ECC CN CA G2	EA1F3BFB4D3296B467D4B582559D6518D676D5AFC7D1C24BE80252F79191046F	3/13/2020	3/13/2030
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia EV TLS Pro CA G3	9DB0A20C305541E15E818A880D06579876A9C901B8EECD968482C58D9BA7F0A7	3/13/2020	3/13/2030
/C=CN, O=TrustAsia Technologies, Inc., CN=TrustAsia ECC EV TLS Pro CA G3	8D83D69FA615AA2683B13D7894482C542B0BCF18BB92D30F015FB42471AFBB66	3/13/2020	3/13/2030
/C=JP, O=Mitsubishi Electric Information Network Corporation, CN=Enterprise Premium Public CA	6D7B31B61ADB78EBC6A766296886209EA8E74F4600DAE47B78DA3F08BE79F4E5	3/13/2020	3/13/2030
/C=US, O=DigiCert Inc, CN=DigiCert Assured ID TLS CA G2	77CD51784A693D9482E7EA694E4053BCFD9DF65580FBCE14B2A7527C081803E1	3/25/2020	3/25/2030
/C=NO, O=Telenor Norge AS, CN=Telenor Norge B2B2 CA	DDA4BE3F78C6D742B100146C26011B41752AEBB810C04588C3AF81F0D3451118	3/25/2020	3/25/2030
/C=US, O=Thomson Reuters Special Services LLC, CN=Thomson Reuters Special Services CA - G2	B84D709820A8FEB41CE1872E237260B446F99BD3CC158F7738D9146B13FAE64E	3/25/2020	3/25/2030
/C=JP, O=ZIPAIR Tokyo, K.K., CN=ZIPAIR-Public-CA	7E882B1CC5439B7FB95A05943C5A8F40DAE75AADBB6B624C55EDD94624EFA0E3	3/25/2020	3/25/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=NO, O=Telenor Norge AS, CN=Telenor Norge AS EDC CA G2	56D58B26F45BF3878AF4397016A96AF486E9895F66C5F3B73175120B3B4E4A48	4/29/2020	4/29/2030
/C=NO, O=Telenor Norge AS, CN=Telenor Norge AS NF CA G2	5752C5FBDC03543F0CEC6CD294CD965D8D32C4EAA993D550F24491ECF9B73836	4/29/2020	4/29/2030
/C=NO, O=Telenor Norge AS, CN=Telenor Norge AS Dealer G2 CA	9C33CB6A76596752A0C7E51C72D480CE7876C772794EBEE5841FA07035E6E8E0	4/29/2020	4/29/2030
/C=CH, O=STMicroelectronics International N.V., CN=STMicroelectronics Public User CA1	CE15B88ECA32A371D0B51B3B04759055D6A8FF0C3D1A0D60488DF356DC050E55	4/29/2020	4/29/2030
/C=NO, O=Telenor Norge AS, CN=Telenor Norge AS OTL CA G2	70340886D08FE1B093158F11A4CC2B2AD45A67F402632A040E9067C6E447E4FE	4/29/2020	4/29/2030
/C=JP, O=Mitsubishi Electric Information Network Corporation, CN=Enterprise Premium Public CA	4A45559AD89684BB439FCD2CC4C5EC0F92EE0692CD6B9763957DE31A2F467CCA	4/29/2020	4/29/2030
/C=US, O=DigiCert Inc, CN=DigiCert High Assurance CA-3b	4E30F8004C18D3D798EC5A7734346B5A5EBE8D54423CE98257FC57735A6F738D	5/28/2020	11/9/2031
/C=US, O=DigiCert Inc, CN=GeoTrust ECC CN CA G3	52DDE89FDD6F610473F9314C7A8B1AC442F8AA833AA5D773006FDA758C9FF1EC	6/9/2020	6/9/2030
/C=JP, O=Mitsubishi Electric Information Network Corporation, CN=Enterprise Premium Public CA	DF025DCE2A36411BE5EB6590C161EFD2652EC2B3F70D5C651F90D023C46F3A00	6/9/2020	6/9/2030
/C=AU, O=NBN Co Limited, CN=NBN CO Limited Public Issuing CA - G3	4708DD6D092D7FB5958F5B43501F6173FB9669EDB05AFD4BBCCDD2D5068D8D0	6/9/2020	6/9/2030
/C=US, O=DigiCert Inc, CN=GeoTrust RSA CN CA G3	8A023C08E4A1AACC925B34C5C7965A8D0527565AEA130ABB915E508CD33AFB45	6/9/2020	6/9/2030
/C=US, O=DigiCert Inc, CN=DigiCert Trust Service CA G1	64616B62820D458F7C71E3449ECCF3F3E4735B76879860C1C660DF23438607EA	6/9/2020	6/9/2030
/C=US, O=DigiCert Inc, CN=DigiCert Trust Service ECC CA G2	B5FECC2F696C850323FC7A85C65B50A4C5E1BFBF823E266AB0A46F013B2C0EB2	6/12/2020	6/12/2030
/C=US, O=DigiCert Inc, CN=DigiCert Trust Service ECC CA G1	017CBB9C3BF9F115E6DB26E47C90EAF6A7FAEE4F7D348AE2808E1C7A8CCB107	6/9/2020	6/9/2030



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=DE, O=Legacy Technologies GmbH, CN=Legacy Technologies Intermediate	1032C6001ED664A0CD343B138BCB6860E2111011C3D5F06540F5BE41147812A5	7/2/2020	7/2/2030
/C=US, O=DigiCert Inc, CN=DigiCert EV RSA CA G2	9588EF74199E45ACEFCCFCOC47010E9F2A37A1DD44C61A4E1C6B334DA5AF614	7/2/2020	7/2/2030
/C=US, O=DigiCert Inc, CN=GeoTrust EV RSA CA G2	2D140F20B8A96E2B4D2F1CC5ACA5E5A1E7DC56A7491E510906960F38D2D21AEF	7/2/2020	7/2/2030
/C=US, O=DigiCert Inc, CN=Thawte EV RSA CA G2	3286691412F30ECE5C065FD62F4392A4762D1E77815338359DF390299FBD61EF	7/2/2020	7/2/2030
/C=US, O=VMware, Inc., CN=VMware Issuing SM	2996B56FE08307B04F8963B83F4AFAC25F47C34B33C25DB399F3A850D158C9F1	7/2/2020	7/2/2030
/C=US, O=DigiCert Inc, CN=GeoTrust TLS DV RSA Mixed SHA256 2020 CA-1	8C43C5E340EC640F93EA774AC5353CCA9042F764FF837F870D8B64763C458A41	7/16/2020	5/31/2023
/C=US, O=DigiCert Inc, CN=GeoTrust TLS DV RSA Mixed SHA256 2021 CA-1	1D80CD18A794F1F4850EDC33C6048F02E85386A47F3CE836974A8E452A60D7F2	1/1/2021	9/30/2022
/C=US, O=DigiCert Inc, CN=RapidSSL TLS DV RSA Mixed SHA256 2020 CA-1	E6FA484A858940D101978555454AA466531AB6C4ABC4AD2B000626AAAC0D04F9	7/16/2020	5/31/2023
/C=US, O=DigiCert Inc, CN=RapidSSL TLS DV RSA Mixed SHA256 2021 CA-1	6060EAB180122EB14F22EDE465B4A9A70E29E70FB182EBF01D5B1333F2E73242	1/1/2021	9/30/2022
/C=SA, O=Saudi Basic Industries Corporation (SABIC), CN=Saudi Basic Industries Corporation Issuing CA	3AB4DE79829AF704A1DD79B13892BBAE44B2770F88AE833450F5B1D33802F0C4	7/16/2020	7/16/2030
/C=SG, O=National University of Singapore, CN=National University of Singapore CA - G3	7C29A15B74F9171BE581630394B83791120EABCBA8B9387538BDF50F9D96EAFE	7/16/2020	7/16/2030
/C=US, O=DigiCert Inc, CN=DigiCert Assured ID TLS EV RSA Mixed SHA256 2020 CA-2	0AFA0F7BBFB8EEB76F451139138F8806CC56A6285AAD7CC11957F4BD09AE48C1	7/18/2020	5/31/2023
/C=US, O=thawte, Inc., CN=thawte Extended Validation SHA256 SSL CA	7920B8E18D2FC12D81C2FAB90A63B1B52AB329CE7CD1CB7CA094CDF9D600F492	4/9/2013	4/8/2023
/C=US, O=Thawte, Inc., CN=Thawte SSL CA	0855414AF5F5FD7E264F8B002A39CCED67E5952E89B61B680CC847BAA34944DE	2/8/2010	2/7/2020



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=GeoTrust Inc., CN=GeoTrust Extended Validation SHA256 SSL CA	BC9E223CC42275CC034190DF2D0179B55B732D5AC531137A7B522DCFE04A0592	4/9/2013	4/8/2023
/C=US, O=GeoTrust Inc., CN=GeoTrust Extended Validation SSL CA - G2	C7B57A02F937AE0BE3E21027030592C9D47A70D7013EB3AA94DBC3B7B5AB0662	8/23/2012	8/22/2022
/C=US, O=DigiCert Inc, CN=DigiCert Global CA G3	F7541CF69D1DE1AC953ABC1FAD6F7807A34EDFE9E12C11E66A195930C23AD6C6	8/1/2013	8/1/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Extended Validation Server CA	403E062A2653059113285BAF80A0D4AE422C848C9F78FAD01FC94BC5B87FEF1A	10/22/2013	10/22/2028
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Secure Server CA - G3	64903546A58058D1E6F1BEAD1134EDE66A6831D231F0DF8D4E28535D7A300496	2/8/2010	2/7/2020
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit SSL CA	ADEBF83FD3D3F9546BB77FAAB516DD9337CCF91E1198F74337769EC68E6E826E	12/20/2012	12/19/2022
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Secure Server CA - G3	31DC82EA8915E27D03BBD0433658A3C24C6D3ACFF48C4FAAC02FE87E94C99A3B	2/8/2010	2/7/2020
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID CA-1	425E72C87FF22855D9908B71AB4C64B0D2F248287097690C62FE733F631DE38F	11/10/2006	11/10/2021
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID Code Signing CA-1	3C8B0D5C2ADF2F7090A9B8FF452A4141833DEAA05B5F44E9513DB94BFDF1D6BD	2/11/2011	2/10/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Document Signing CA	B9C3073AAD74B368832F5497958E279B1D2777CAF8841713B28AB10A4BAA0810	11/5/2013	11/5/2028
/C=US, O=Cerner Corporation, OU=Cerner Resonance, CN=Cerner Corporation Resonance Intermediate CA	64284AA5F8DC8697D43D9737CF4E266625414E449C019667714537FF7EDE31B7	11/11/2015	11/11/2021
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 Assured ID CA	A542BCA09C5E4579C619774AE59082BCE0F86D261C5A7A5A0F6217C10279EA7C	11/5/2013	11/5/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Secure Auth CA	24E9F20AC167BB8F09DE8A1E9968CC53F0B5F3A4948F51B8647B40B186C75EBE	4/23/2014	4/23/2029



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Fresenius Kabi AG, OU=Fresenius Kabi USA, CN=Data Management Intermediate Certificate Authority	54837EF7B5AC4AA23606A15EF30DE46E9BB7E23E60F6ED4F2612092B94EDC68F	8/25/2015	8/25/2025
/C=US/ST=CA/L=Mountain View, O=Google, Inc., CN=Google CA1	438F473EBFC8884EF5D3E0D52D264CDBE56CA382D9EBFC689D77489409F55A6E	8/25/2015	8/25/2025
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA Code Signing CA 3	B7C6EBDC2A1B65EF1836DC00250C44E15703121052C1AB6B9D0385A058153AE3	11/18/2014	11/18/2024
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA Code Signing CA 3 G3	794C63DB244BA73FB286F15DAB8D0CA5425508381E98844954E63823BB5D7F74	12/9/2014	12/9/2024
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA Personal CA 3	DD4E0C17900F3FC2A5B7B773AE40218AD73216B5CE5D285EBFFCE8830D0F034A	11/18/2014	11/18/2024
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA Personal CA 3 G3	C123F5AFACC9F9096809850355E5BF78CA9377348111B5167A964DDEDCC044DE9	12/9/2014	12/9/2024
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3	BEB8EFE9B1A73C841B375A90E5FFF8048848E3A2AF66F6C4DD7B938D6FE8C5D8	11/18/2014	11/18/2024
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3 G3	C9D6913F3FEDDEFF184C9EE1D7E17C5AEC90886EED5CC3D6E98105831C8C0E0B	12/9/2014	12/9/2024
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA eScience Personal CA 3	FDA947208BFA3203A6C57B8714A647B7009E5168E88951345450B1D2D3F91A7D	11/18/2014	11/18/2024
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA eScience SSL CA 3	E1BE6BBBB70F5A241E736FC44C6A2160BF6CE19B95EDD67BF7BE896E83778745	11/18/2014	11/18/2024
/C=US, O=Sonavation, Inc., OU=sonavation.com, CN=Sonavation IoT CA	4C56CA7A3C10EB58765E0FFCF8035C57C9F3BDB014862F676756CF789193F10E	5/19/2015	5/19/2025
/C=US, O=DigiCert Grid, OU=www.digicert.com, CN=DigiCert Grid Trust CA G2	28CBB4E0D9C4EE6D04AC8F14717605AE3A4BD8CBF8D081B27AF6EDB2F3D76A32	1/8/2014	1/8/2029
/C=US, O=DigiCert Grid, OU=www.digicert.com, CN=DigiCert Grid Trust CA	1E0A3AB993157717281D42ABF801EB64DEED500E4168CA706D6A71D8103C73A2	12/7/2011	12/7/2026



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Plex, Inc., CN=Plex Devices High Assurance CA	48A7C9C5A36734FC9E204D63CE6BBBCD9E21C1978604760CD8D30D6F4C67B67C	1/14/2015	1/14/2025
/C=US/ST=Minnesota/L=Minneapolis, O=Optum, CN=Optum Public Trust CA 1	253E3C9732DF8874C3D54DA522C1711142C98C2CEA7664635152A89A03EE9364	4/28/2015	4/28/2025
/C=US, O=NCC Group, CN=NCC Group Secure Server CA G4	B7DFDC27E5FF9F35EFEC9F4BC532C35F727789B69C90A0489B40247299D97038	7/30/2014	7/30/2029
/C=US, O=DigiCert Inc, CN=DigiCert Global CA G2	8FAC576439C9FD3EF153B51F9EDD0D381B5DF7B87559CEBECA04297DD44A639B	8/1/2013	8/1/2028
/C=US, O=DigiCert Inc, CN=DigiCert Assured ID CA G2	93C381CB07B353A920C2A7BED6BEBF195C68279DD0527D37F20BDD0D99C330FA	8/1/2013	8/1/2028
/C=US, O=DigiCert Inc, CN=DigiCert Assured ID CA G3	634FDF26C99A76A2918D9EFC4CAB9C6FCB344EF642A79C89192BCDA0ED52F4C	8/1/2013	8/1/2028
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert EV Code Signing CA	376377FD1FAF4B8A5B1472647A70B941039A62D74CFE99447E48616F8D63A978	4/18/2012	4/18/2027
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance CA-3	21EB37AB4CF6EF8965EC1766409CA76B8B2E03F2D1A388DF734208E86DEEE679	4/2/2008	4/3/2022
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance Code Signing CA-1	007D2C8B15786232BAC0EAA31F60AAE06DC572921BAD0D46C77107D8C2DCA4B3	2/11/2011	2/10/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance EV CA-1	541AF019961760EF19E8FB4134E6D43085B5E5E087F30197DC42B2097E10487E	11/9/2007	11/10/2021
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 High Assurance Code Signing CA	C51B83A0DE49A201A5FBE947032C04702F8CA7C2D02ADF28B73D42C8ACD1C362	10/22/2013	10/22/2028
/C=US, O=NCC Group, CN=NCC Group Secure Server CA G2	6075DA5CECD15D6584C5560322D5C09FC2199E52DEA7921D91040AA75248672E	7/30/2014	7/30/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA2 High Assurance Server CA	19400BE5B7A31FB733917700789D2F0A2471C0C9D506C0E504C06C16D7CB17C0	10/22/2013	10/22/2028
/C=US, O=Aetna Inc, CN=Aetna Inc. Secure EV CA	0A163600631BD66267FB7AEAD25C538B2B7D72AD6416A2BBD285F654BB642F6D	12/9/2014	12/9/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Plex, Inc., CN=Plex Devices High Assurance CA2	50D3D71FC0CD7E36ADAE32221FEFBE8CC29B2676BA326C09B8FA1B24DBE75514	5/19/2015	5/19/2025
/C=NL/ST=Noord-Holland/L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3	BE6A0D9E1D115F2293F6ABF11B3EC8E882E24426EEEB09AAA503597993E77A25	11/18/2014	11/18/2024
/C=US, O=DigiCert Inc, CN=DigiCert ECC Secure Server CA	458446BA75D932E914F23C2B57B7D192EDDBC2181D958E1181AD5251747A1EE8	3/8/2013	3/8/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Global CA-1	3C750409882486D64151F4CBB5BD61432A4A7BF42F48A85198D245A64AEA2117	11/10/2006	11/10/2021
/C=US, O=DigiCert Inc, CN=DigiCert Secure Server CA	94D4ECE2ED9A5457B969A13B260489E9A5FE4790A041F27A3EB4126C84418EF9	3/8/2013	3/8/2023
/C=US, O=DigiCert Inc, CN=DigiCert Cloud Services CA-1	2F6889961A7CA7067E8BA103C2CF9B9A924F8CA293F11178E23A1978D2F133D3	8/4/2015	8/4/2030
/C=US, O=NCC Group, CN=NCC Group Secure Server CA G3	963056B0D941D9DBE27AC778053D85E43CC79F476AD34CFDD799C27E381840EB	7/30/2014	7/30/2029
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert EV Code Signing CA (SHA2)	C7460B0EDDA1B44C8E2164B234EBECC3962A6A37A936B74A6E7D46682938F084	4/18/2012	4/18/2027
/C=US, O=DigiCert Inc, CN=DigiCert Trusted Server CA G4	6E8D952FDBABAD8DE3D61E094393739B5A47371A52BDCB2A3C2F8C43622F640F	8/1/2013	8/1/2028
/C=US, O=DigiCert Inc, CN=DigiCert SHA2 Secure Server CA	154C433C491929C5EF68E838E323664A00E6A0D822CCC958FB4DAB03E49A08F	3/8/2013	3/8/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance Intermediate CA (SHA2)	47511629F2BC3B7CF84EFEC9F32798A43AF6252E550B6CAE76A38558712E37D8	12/7/2011	12/7/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID Intermediate CA (SHA2)	C2B4BBEF4A1A643F334ED0850F928876D2AE3AE3642B986014D68C673C04D081	12/7/2011	12/7/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Baltimore EV CA	D46931E0182DD655EA0C16E6DD99F8E61AFFE401F734C6CA8EA0056A968EAF81	10/14/2015	5/10/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Extended Validation Intermediate CA (SHA2)	802C2AD1D215E57CDC9010EA437ACE399B657194FBD40E3BB5E00B080E6496DF	12/7/2011	12/7/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Baltimore CA-1 G2	BF1CB0E213D8D3C70BAE89429FC16DE2C74F755963D1B9B488BD0260DBC91B9C	10/14/2015	5/10/2025
/C=US/ST=CA/L=San Francisco, O=CloudFlare, Inc., CN=CloudFlare Inc ECC CA-2	6172D7A1996CBEF71A0182DD44B99E9C035742A9EBD0311AA73AA4733344C5A6	10/14/2015	10/9/2020
/C=US/ST=CA/L=San Francisco, O=CloudFlare, Inc., CN=CloudFlare Inc RSA CA-1	328C5991D8383E27D0EBE910BF66C0AF3D748A85D3011A52D88F1D8C8635647F	10/14/2015	10/14/2020
/C=US, O=Harris Corp, OU=Florida HIE, CN=Florida HIE Exchange CA G2	AB8EE98A4B2B97E5905ECE80A64304C143AB38D9508FF7286F68235E0DB68A27	11/11/2015	11/11/2020
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Extended Validation CA G3	7C0912E5DE8478BB86E8EA46BA5AE65DC3870BCEFCBC2F46795EEECF648CFBE7	11/11/2015	11/11/2030
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated Trust CA	E5BBDDCAD572EC9D2DD96E0E5EBF049A9181F070F1E33CC1635AD8EC487D2177	11/18/2011	11/18/2023
/C=US, O=Orion Health Inc., OU=Orion Health Direct Secure Messaging, CN=Orion Health Direct Secure Messaging CA	A4106DA85F7B34A6D3DE37884D1528916B84F046FFB7D4AAC521117B0C6995F3	10/21/2013	10/23/2023
/C=US, O=North Carolina Health Information Exchange, OU=Orion Health Direct Secure Messaging, CN=North Carolina Health Information Exchange CA	C4A842434ADB52809526B6D1E869A265F535B69BB16454A301667CC942678D58	3/5/2014	3/5/2024
/C=US, O=Alaska eHealth Network, Inc., OU=Orion Health Direct Secure Messaging, CN=Alaska eHealth Network CA	437859303D0183862A96F6ABF8B03F2A69D4CBD317217666015E1ABA3C84AA11	10/22/2013	10/22/2023
/C=US, O=Greenville Health System, OU=Orion Health Direct Secure Messaging, CN=Greenville Health System CA	06433FCA9F753980B526236DD72846EC1B20770BFCC7D3188DD67BC0ECFB7782	3/5/2014	3/5/2024
/C=US, O=Huntsville Hospital System, OU=Orion Health Direct Secure Messaging, CN=Huntsville Hospital System CA	20E3E88747A8D88E11A527521032DC8CAE92BC33B45C93EEE04F624A70DC920A	3/5/2014	3/5/2024
/C=US, O=Inland Empire EHR Resource Center, OU=Inland Empire Health Information Exchange, CN=Inland Empire Health Information Exchange	1E72D83ED9499CBA686968452BE591C48816EC9181391A5D03C1F4D3BA1658DC	1/8/2014	1/8/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Louisiana Health Care Quality Forum, OU=Orion Health Direct Secure Messaging, CN=Louisiana Health Care Quality Forum CA	3E4F09D65438B5CF7E456288C08FE9F47ED4E3ED669279C81AEFAB0BAFB86A09	10/22/2013	10/22/2023
/C=US, O=Mary Washington Healthcare, OU=Orion Health Direct Secure Messaging, CN=Mary Washington Healthcare CA	1180C33AE1F23228923F6AE698C9C10DC729E0D811FC8B2EC02726E2DC26E2E4	3/5/2014	3/5/2024
/C=US, O=Mississippi Division of Medicaid, OU=Orion Health Direct Secure Messaging, CN=Mississippi Division of Medicaid CA	1757291A3D7D0BB5B9B9CF8802F1B2AE173E56B0935970FC86B63A27499DB5E2	1/8/2014	1/8/2024
/C=US, O=New Hampshire Health Information Organization Corporation, OU=Orion Health Direct Secure Messaging, CN=New Hampshire Health Information Organization CA	37E9A271EB4725C93CDAF183562C7D7D9EA8FC139F8374FFE418D77D32428FE0	10/22/2013	10/22/2023
/C=US, O=North Dakota Information Technology Department, OU=Orion Health Direct Secure Messaging, CN=North Dakota Information Technology Department CA	6ECF658CCEA8B29BE60C85904F4ADD7CCB7950CF58C97BBF60D57CEA49A2703D	1/10/2014	1/10/2024
/C=US, O=Orion Health Inc., OU=Orion Health Direct Secure Messaging, CN=Orion Health Direct Secure Messaging Public HISP CA	D34138ED1458AE7DE4EDEA36ED3992E4F46E6EC9CF1E633E538DE9FF0F38F8E5	10/22/2013	10/22/2023
/C=US, O=Rush Health, OU=Orion Health Direct Secure Messaging, CN=Rush Health CA	DB12B1D3F8CC52FFF4874F0A8B85E9FB6A2050861B1B1C61481A743AC0D33D5A	4/23/2014	4/23/2024
/C=US, O=Western Connecticut Health Network, OU=Orion Health Direct Secure Messaging, CN=Western Connecticut Health Network CA	415322F3970C8CD0F54311E0F93C5F5C37BA3059FDB10F5240AC20934717F840	3/5/2014	3/5/2024
/C=US, O=Axesson Inc., OU=www.axesson.com, CN=Axesson Direct CA	BF4655F16AA338D7C7FF2BDC949A524BD4797B8B3C8341C608C9F65CB1CB8177	1/8/2014	1/8/2024
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Accredited Direct Med CA	0E78434EC8AD6613562C8390D8B3306FC6087E0593C7D5AC2FAF9AD263879745	8/6/2013	8/6/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Direct Non-Provider CA	1AEDDADDC1ED748543EAF5960DF96AD51E21A3164F30A0640CB0732365D39062	2/11/2014	2/11/2024
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated Healthcare CA	54C3F501042CDCC09AE8143CB192BD5E5724C9C88A6AB395A94A1A7AFC26CE7C	2/11/2014	2/11/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Provisional Direct Med CA	C61029C8EEE3CE08755D562BB50C5F75E0EF849214970B13BD99185367D1D119	6/3/2014	6/3/2024
/C=US, O=Medicity Inc., OU=www.medicity.com, CN=Medicity Direct CA	231BA402E28B3495F3BE0CAD87078D9B8FBD86041116AF9B8047E7B1CFFA82D0	2/13/2014	2/13/2024
/C=US, O=Michiana Health Information Network, OU=www.mhin.com, CN=MHIN Direct CA	EAEFEB08D568E7F6CF6D892CAB6A22E14F20C6F10E3A418CFB42B12309333367	1/8/2014	1/8/2024
/C=US, O=Oregon Health Authority, CN=Oregon Health Authority Direct CA	86FFEA40F36FA6913278710FEABA9B206F3288DA3FD1C652BC5B5895A2B1A877	3/5/2014	3/5/2024
/C=US, O=Indian Health Service, OU=directihs.net, CN=Indian Health Service-RPMS DIRECT Messaging CA	C07E9037CB81012D3046613285C14B63A0284964A4F5A821FC3B18ECDEBA0A66	4/4/2014	4/4/2024
/C=US, O=RelayHealth, CN=RelayHealth Direct CA	77537682E9A0B2C5BD5E62BC1CB35ECEB38FCBEBF7D2DC326F7E420F0DDBEDB3	4/4/2014	4/4/2024
/C=US, O=Adobe Systems Incorporated, OU=Adobe Systems Incorporated, DMBU, CN=Adobe Analytics - DigiCert CA	D5C009312F845C5EC8506EAD560D62447BFF4A60A9C25210511217AD6DE76AED	4/18/2013	4/18/2021
/C=US, O=Anne Arundel Medical Center, OU=AAMC Direct Messaging, CN=AAMC Direct Intermediate CA	BB1C01E884DD0919AB94D5AF5575CD6FEB71E560B2B58735A78B150A10D54BF3	5/28/2015	5/28/2025
/C=US, O=Quest Diagnostics Care360, OU=Care360 Direct Messaging, CN=Care360 Direct Intermediate CA	2D602B1F166D6316DAFD46B4B1EDD6DCFC54D2AF8A944BE358858FD504AAA16B	8/25/2015	8/25/2025
/C=US, O=iShare Medical, CN=iShare Medical Direct Intermediate CA	4C0A5888C34AA01B745F4EBA268696B2CCB3F4AA31C8EDCB3AFE8FA84CB74CC1	1/14/2015	1/14/2025
/C=US, O=Corepoint Health, CN=Corepoint Direct Intermediate CA	CD2640957CF88610470CEFD409D85D9BE05962F7D6C2999C4F431ABCCC34118C	1/14/2015	1/14/2025
/C=US, O=MRO Corporation, OU=MRO HIE Solutions, CN=MRO Direct Intermediate CA	E25DE970AA8B685CDF55417897F65DE64C63A55D61EE9E4B830261DCFBFFFB4	10/21/2014	10/21/2024
/C=US, O=MedicaSoft LLC, OU=MedicaSoft Direct Messaging, CN=MedicaSoft Direct Intermediate CA	51A6E2ED4104AAE8E089FBABFE26A38D656F5B085563532FEE9598286BB021	4/28/2015	4/28/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Mirth, OU=NextGen Share, CN=Mirth Direct Intermediate CA	CC9FAAD83C3350943D4E45FA416C4F8BC564F7AA94CF4B2D2BCE74209D0464C9	9/26/2014	9/26/2024
/C=US, O=MobileMD Health Services, OU=MobileMD, CN=MobileMD Direct Intermediate CA	33CF1F5C9396D7EE9E8283B2E76F400E50450575EB15AD02C956C1C5575B184D	10/21/2014	10/21/2024
/C=US, O=Cerner Corporation, OU=Cerner Direct, CN=Cerner Corporation Direct Intermediate CA	09DE7FA739EE47C06291845F2E0E8A9E1C7CC2900AD354CF167316E02386BD9B	9/26/2014	9/26/2024
/C=US, O=Rochester RHIO, OU=Rochester RHIO HISP, CN=Rochester RHIO Intermediate CA	43202B9E870659921F9DA26EDA9E47BF6990DB031A0BC0B23AFA1E7968ED3E99	10/21/2014	10/21/2024
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Governmental Direct CA	5F665CBACC1E37171EA83EA85C570F9861CAF77BAC8886ABC4BB19B3698C094A	9/25/2015	9/25/2025
/C=US, O=Inpriva Inc, CN=Inpriva Direct Federated CA	5AE4F777426BBC5AA85986CA48D319270C5536210DC8EA1A28D502F6B3595138	11/18/2011	11/18/2021
/C=US, O=INTEGRIS, OU=INTEGRIS DIRECT Messaging HISP, CN=INTEGRIS Direct Intermediate CA	97D276C5FDF2DC94539ABB9E17BC3995730CD51739EAE95B0F67B39E99905F11	11/18/2014	11/18/2024
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID L3 CA	85760F77DB0FD0D93C21EE0364B8EAB09B82CF49B7849831038209B5B1081363	1/7/2014	1/7/2023
/C=US, O=Allina Health System, OU=Information Services, CN=Allina Health Connect HIE Intermediate CA	826C6AA610EF190BE2D7C03E22D032405B289804E3319E233C4C37FFBF305F1A	12/8/2015	12/8/2025
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Baltimore CA-2 G2	F9690880819F06CDCC0B2F224B207F2AF6003FB57339B8679A160FA95208D62D	12/8/2015	5/10/2025
/C=US, O=Compugroup Medical, Inc, OU=IT, CN=CompuGroup Medical Certificate Authority	B604026A3590392ABEFB6B18E8176453656115D2A0060F713E191A9FD076532A	12/8/2015	12/8/2025
/C=US, O=Optioncare, OU=Orion Health Direct Secure Messaging, CN=Optioncare CA	89CFBC8FBFF7FE026B6CF2EA688419BDE8BBC1FB451329C865D6C6CBCF6BD097	3/1/2016	3/1/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance EV CA-1	4C4943B9EAA14EA2A69B8A7E4D8DA89081EEA11C87E8229B9B74F68A7AD33B79	11/10/2006	11/10/2021



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Assured ID CA-1	B8F44E4B1F8697DF54BB3D0F1E67596CE2FE9DABA85AF4E6F2A2E74396F8C56D	11/10/2006	11/10/2021
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance CA-3	57D8D5B832616B7823466A0C372770D16A5DCF246581F0F58373E51C7E1E5316	4/3/2007	4/3/2022
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance CA-3	DCB400ACC249FB8483415FC2650BC90488CA96643118CB0E4F4424B21C3AA5A4	10/12/2011	4/3/2022
/C=IT, O=Postecom S.p.A., OU=Servizi di Certificazione, CN=Postecom CS4	C1685683F3C8590E88580197F219CAB99E5482A1568635F596D09867B2F405BD	4/26/2016	4/26/2023
/C=JP, O=NTT DOCOMO, INC., OU=GeoRoot Certification Authority, CN=DKHS Device CA	123465EEC4092F8CF7ABFE92B8C701AC09EA79A498F1D3F6A02C1714F39A8423	8/12/2009	5/19/2022
/C=US, O=GeoTrust Inc., CN=RapidSSL SHA256 CA - G4	5B87E222F20346FA3628816ED6CE71FAABA0857FB8BCBA73776EA1FA56CD0057	6/30/2015	6/29/2025
/C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL CA - G3	51CF0FFFC3253FC013AF786F95B190109F8C87F34DFD1CEC44C45888789F5355	6/11/2014	5/20/2022
/C=JP, O=NTT DOCOMO, INC., OU=GeoRoot Certification Authority, CN=DKHS Device CA - G2	56CBB0FFC414E88822A50E9F42D46820381D8C2AAEEF56E0566817ED30F27A27	2/10/2015	5/19/2022
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL - G5	8C88BA510529B64263CCB21A73D82BA5725A55C1446F2547BCE301FCDC4314DB	12/17/2015	12/16/2025
/C=US, O=GeoTrust, Inc., CN=RapidSSL CA	6D5BC979461C7264E1710010CD7D4EA3EC57FA11215F04FFA516AE61959AB2B2	2/19/2010	2/18/2020
/C=US, O=GeoTrust Inc., CN=RapidSSL CA - G2	0DCDC07ECABBBFE38A4606BA663987CDB3BD9817FC67D1DD0CF094AC8CA2787D	6/5/2013	5/20/2022
/C=US, O=GeoTrust, Inc., OU=For Internal Use Only, CN=RapidSSL Enterprise CA	87AA71AF032E36BD69DAF4014FCAD8F2733AA00DEAB959335AE3866E4B6D3A1D	3/8/2011	3/5/2021
/C=US, O=GeoTrust Inc., CN=RapidSSL SHA256 CA	E6683E88315CD1CB403C0CEA490F7C4B4C82C91CD485037489AADBAA90839F61	12/11/2013	5/20/2022
/C=US, O=GeoTrust Inc., CN=GeoTrust EV SSL CA - G5	5B2AE8ABF5E7E563BBC34C97A22554E82393D7AC09C1765E504AE08C157B5AC	9/9/2014	9/8/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=GeoTrust Inc., CN=RapidSSL SHA256 CA - G2	92EF2F5B553570607DC29C8010E7ABC16283FE355F955A248254290A260A9EBB	6/10/2014	6/9/2024
/C=US, O=GeoTrust, Inc., OU=Domain Validated SSL, CN=Secure Site Starter DV SSL CA - G3	2FCC009AAFDB28E9256430410A6FA6E76AF09301B1044FEAAACAB00215AA39E1	12/1/2015	5/20/2022
/C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL CA	C27FD4B85E96D3777C68AB7DF6AA4E626BF3FF8C72B1CE81D1EB78BABEB1A074	2/26/2010	2/25/2020
/C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL CA - G2	DEDB31CBCEC5F99D38E86ECC4D76945DF40F2E547C94E4B0124094875AF6A558	6/4/2013	5/20/2022
/C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL CA - G4	8BC1B9D7DEFCCA1CCD09BACDA88F27762092F1ED4A34AE5E4602BB9CC915C506	8/29/2014	5/20/2022
/C=US, O=GeoTrust Inc., CN=RapidSSL SHA256 CA - G3	BC3F03A436240EDBA5F83714F6F77E34B37F9B1F0C08C1E558D981E279E8209	8/29/2014	5/20/2022
/C=US, O=GeoTrust, Inc., OU=Domain Validated SSL, CN=Secure Site Starter DV SSL CA - G2	64853613C2436399603D0D560B52F04BB8F81A81746E42389883A4F59A4564D5	12/1/2015	11/30/2025
/C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL SHA256 CA - G2	3FDF788A5A65E6A29D8C1550D8244906A3B8A7B7D3DA9BDEDD748E4183A763C9	6/30/2015	6/29/2025
/C=US, O=GeoTrust, Inc., CN=GeoTrust ECC EV SSL CA	C131499FD86B213DB5DEFAAFD53111C28A2DDAF4BA465C8265A72D6CF739B668	1/7/2016	1/6/2026
/C=US, O=GeoTrust Inc., CN=GeoTrust EV SSL CA - G4	95B09D02122FA8AE6235780F6EA6503E767AC021A0874FE831CE803A50EA8FD7	10/31/2013	10/30/2023
/C=US, O=GeoTrust Inc., OU=Domain Validated SSL, CN=GeoTrust DV SSL SHA256 CA	784ACA1063BE4700B3A62F45C2F93B7EEF8BF230FB869610E864FC4B3A23D09F	6/10/2014	6/9/2024
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL	2E7E65BB1A013DAF0BDF6938502E43E38217FE00D76CA2F99F7AA9E298F48534	8/6/2013	5/20/2022
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL - G2	78DC9CA5F4C2913F3FB74AC52DFFFC2300DA5A772FC2B84C53A2E74437EDD20	9/8/2014	5/20/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL - G3	4FD73419046F90868826D581536931D22E54943EBCD059CB7621394D749343C5	6/30/2015	6/29/2025
/C=DE, O=STRATO AG, OU=Domain Validated SSL, CN=STRATO SSL - G4	BC3F0ADC5FF86A4B374DC691F8FE273B1B87DC73E43824F5FE7F36C3E0008311	12/17/2015	5/20/2022
/C=US, O=GeoTrust Inc., CN=GeoTrust SSL CA - G2	90AF11E577C72C940B40EC2F3D50507310091EE6196C9C16B228882264A4D808	8/27/2012	5/20/2022
/C=US, O=GeoTrust Inc., CN=GeoTrust SSL CA - G4	211DDF5059229B3577760D623D5148DB92F2D0526EA5303E7EEA0300D9FAFF3F	9/8/2014	5/20/2022
/C=NL, O=Intermediate Certificate, OU=Domain Validated SSL, CN=Intermediate Certificate DV SSL CA	8C2745352289E994B3EA349445B1CF6418E51740E1614F8B5667DAD2990AAEFB	6/1/2012	5/21/2022
/C=NL, O=Intermediate Certificate, OU=Domain Validated SSL, CN=Intermediate Certificate DV SSL CA - G2	D876A081FB3827BA22A4087DF675126FF8A96AAB90364BC61F62CE8E9507AA93	9/8/2014	5/20/2022
/C=US, O=GeoTrust, Inc., OU=Domain Validated SSL, CN=GeoTrust Secure Site Starter DV SSL CA - G1	62FB9B6CD2633B92D91DB264CE678A9B19C575414AB10AD46D157F07BBA26EFF	9/1/2015	8/31/2025
/C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL CA - G2	7D89AE918B25AFDF91036EEE5C15E58C600F42266866A8DE01C71DBC635CA1C0	2/16/2016	5/20/2022
/C=CH, O=Hostpoint AG, OU=Domain Validated SSL, CN=Hostpoint DV SSL CA - G2	ABD6D053FDBE356D075050181586B0B9C2B8C03298ABCE64CE25C40401DF3B22	1/19/2016	5/20/2022
/C=US, O=GeoTrust Inc., CN=GeoTrust SHA256 SSL CA	D9E0C64AB27A64D79CCCF42A34EC75A251A7E543353C19E984A70EB2F546CDFF	5/23/2013	5/22/2023
/C=US, O=GeoTrust, Inc., CN=GeoTrust SSL CA	D4C4C99819F3A5F2C6261C9444C62A8B263B39BC6ACCE35CDCABE272D5037FB2	2/19/2010	2/18/2020
/C=DE, O=CertCenter AG, OU=Domain Validated SSL, CN=AlwaysOnSSL CA - G1	EF4478EB094C48FB9FEACA09736270499CA52EB04E3F8EE4C1B2EDC9960398FD	2/16/2016	2/15/2026
/C=NL, O=Intermediate Certificate, OU=Domain Validated SSL, CN=Intermediate Certificate DV SSL CA - G3	E86BC16CC6491E5F4B9976313842B3D02C99EA263AEB1DC223D898FA87C84845	6/30/2015	6/29/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Oracle Corporation, OU=VeriSign Trust Network, OU=Class 3 MPKI Secure Server CA, CN=Oracle SSL CA	C76F70980598C66A8E327E17B495A2276265C4B9A3575EFA1D550502A823D591	10/12/2010	10/11/2020
/C=US, O=GeoTrust Inc., CN=GeoTrust SSL CA - G3	074541ECDF88ED992ED5ADE3ECDDEF27A26BA1B44480A195C0A8DADAE2521D8E	11/5/2013	5/20/2022
/C=US, O=GeoTrust, Inc., CN=GeoTrust True Credentials CA 3	5D74ED61D0B311E981BBCF0F419A35FA9FA1EC70FF1AEB742D73BCFEBA06CFFF	8/22/2012	5/21/2022
/C=US, O=GeoTrust Inc., OU=GeoTrust Authentication Services, CN=GeoTrust True Identity CA 2	FF1D35ED464063D6031C71E414262CC2310E8C547AB7F7CF2955C9E0349E533F	1/28/2011	1/25/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server SHA256 SSL CA	E0898AD662474B9F753C79BEA878031C9A5D634A49EDD6310B960AB023C02C0E	4/9/2013	4/8/2023
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Shared Public Organization CA - SHA1	A829444AD2FB48079A595FBBD88C4E658EE2089A5E129B89AAACCE851198FFD7	7/11/2013	7/10/2023
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Shared Public Organization CA - SHA256	2F72019CB45B07AB05CB1BB8ECC3076D7072660B57A29E42EBE2AA57B83BC60B	7/11/2013	7/10/2023
/C=CH, O=Hostpoint AG, OU=Domain Validated SSL, CN=Hostpoint DV SSL CA - G1	9F4E3C42FADFEDA3CF88C05CC4B4AF0C0AF306415C30D3D1EEBEDEBF7D177A982	1/19/2016	1/18/2026
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Admin Intermediate Certificate Authority	6D0BD6E1AC0EC398EE8537906D98F378FC7AB49C1E296AF233374FA5A271DB34	6/7/2011	6/6/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit EV CA - G2	663636C03FD0B5B171F2B04407C3DF767B349C8A990D87CE485898166E2B5120	5/12/2015	5/11/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit Extended Validation CA	5AD4183B54F0E2762DA8D910E1E7E9F2AB2F1BC4CE6A638F0DBBF337EB4A139F	12/20/2012	12/19/2022
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 384 bit Extended Validation CA	77FE876A1C476349F5EB9AE9BF53F7814A0AE411562667C58B7ED27869C54091	12/20/2012	12/19/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Oracle Corporation, OU=VeriSign Trust Network, OU=Class 3 MPKI Secure Server CA, CN=Oracle SSL CA	7F6889FFE8B02045E2CAC99A2F2EE4F4C2EED24934B6521872D34BF812671C4B	10/12/2010	10/11/2020
/C=US, O=Oracle Corporation, OU=Symantec Trust Network, CN=Oracle SSL CA - G2	E4AF2FAE41187D58F209B01B1D8753C2DCCB3F601CE86273E37E8738C2A5CCB5	1/6/2015	1/5/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit SSL CA - G2	2E2861289B5CCCEDECAE4C31BF262E0FB0C29B6C1530573442731CA65D821E901	5/12/2015	5/11/2025
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Extended Validation SGC CA - T1	6EDAD2261AA3D53BE0D6FF5FA71C34A34B253B0C637B35BF3E966540F78B631B	5/13/2010	5/12/2020
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit SSL CA - G2	3B6D701331A8CB809443E42A732BAD675F225B15CC439ACF26A09587C885ECFD	5/12/2015	5/11/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 EV SSL CA - G3	9E6BC5F9ECC52460E8EDC02C644D1BE1CB9F2316F41DAF3B616A0B2058294B31	10/31/2013	10/30/2023
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 EV SSL SGC CA - G2	B2745D0A9B71D948F34E921AF59F342ADF6E407D88BC51D38AC52B583A0EBD15	10/31/2013	10/30/2023
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Extended Validation SHA256 SSL CA	1F9B31F820929EBFA03117EC2B77BA6B0FB6ECC9E027682A559378DA311C54EF	4/9/2013	4/8/2023
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Managed PKI Administrator CA - G4	5D81D0AA3476F48A5A675D6D3E6AB766BDC8AA167A1A94D79DF91B4251082FA4	1/6/2015	1/5/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 384 bit SSL CA	14214583E5F49CE2DB88B93CFE3F7D81B678C86AFBCA9240BAA4B9E4CE90BF2C	12/20/2012	12/19/2022
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 EV SSL CA - G2	6C66B76E68D6C79FAFE5C94E9B7D0CF753C715CC85387E11323B7935F861C187	10/31/2013	10/30/2023
/C=US, O=Symantec Corporation, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, CN=Symantec Class 3 Organizational CA - G2	05BDD9A7C6706D39D6DB1A580AAFF67D4673027B6CF01FD15367D8ED84A890F0	3/16/2011	3/15/2021



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Insattningsgaranti Service CA, CN=Symantec Class 3 Organizational CA - G3	CF6F24FFE48F8408A75CFADF2B65F8A4E4172F3B7C24C41B5B7481D24018197C	6/21/2011	6/20/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Registration Authority Intermediate CA	83C935F34C50B7665409404AFE5DFA07ADCB5C7B52B2BEF0AC6E993C00545D76	6/7/2011	6/6/2021
/C=US, O=Symantec Corporation, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, CN=Symantec Class 3 Organizational CA - G2	DDE4BEBF262C9D8DF5CB54FE4F5995191EAF58ADCB92FE5AED3128AC0D1916C7	3/16/2011	3/15/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server CA - G4	EAE72EB454BF6C3977EBD289E970B2F5282949190093D0D26F98D0F0D6A9CF17	10/31/2013	10/30/2023
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server CA - G4	564DBC6A76550FD2D4F4BAC6448A1157B33CBD8E0B3FD76D72107540964A85B5	10/31/2013	10/30/2023
/C=US, O=Thawte, Inc., CN=Thawte SGC CA - G2	0CEBF97D1FABC64753799F7A9A508C7C5F2B58B928FB1B3CDC6C4109C0CF2E99	7/29/2010	7/28/2020
/C=US, O=thawte, Inc., CN=thawte SSL CA - G2	B7A8AF2A4A43F0A86B15604DE6461209C9CD76894D8B0748BC99D9A797013BB0	10/31/2013	10/30/2023
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Extended Validation CA - T1	D80564433ED35C850E2AD589B7713A4DAC01A09292869BDBB80E42E23F9336EA	5/13/2010	5/12/2020
/C=US, O=Thawte, Inc., CN=Thawte Code Signing CA - G2	AF840CA2B9DFB776BF81AA94C401BC440C52E5C590C43607A13D6680D83E3349	2/8/2010	2/7/2020
/C=US, O=Thawte, Inc., OU=Domain Validated SSL, CN=Thawte DV SSL CA	D2573831FA5376B1C7DC0DBB0EF58813E9070618FA5A21E13F5E9F2B65E0A320	2/18/2010	2/17/2020
/C=US, O=thawte, Inc., OU=Domain Validated SSL, CN=thawte DV SSL CA - G2	9F2511A23E70D95FB62798508A676CC38964100936A6E6D3CAE77154C0290F02	6/10/2014	6/9/2024
/C=US, O=thawte, Inc., OU=Domain Validated SSL, CN=thawte DV SSL SHA256 CA	537C5C8072363E147C84D21D0D2248B6B99A9A8A43311659835EC33926DA2860	6/10/2014	6/9/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=thawte, Inc., CN=thawte ECC EV SSL CA	EAD62F42BB369DD43CF6131AC2D8D72E4F9FEE85E69D45DAAFFE326AAC2A46F1	1/7/2016	1/6/2026
/C=US, O=thawte, Inc., CN=thawte EV SSL CA - G2	37F6BD9BEE0C74F608DD474B56A72F8183077DFC2662AF79BFE3D4FABCF0B1C4	10/31/2013	10/30/2023
/C=US, O=thawte, Inc., CN=thawte EV SSL CA - G3	1A99019F9D412A64454749EDAA8E7DC46673D644DF3CE15CC655735EA0DF86FE	10/31/2013	10/30/2023
/C=NL, O=Trust Provider B.V., OU=Domain Validated SSL, CN=Trust Provider B.V. DV SSL CA - G1	D6EA1061C28B3DB96FF5BAA140AB5714E6B0B4F5D71ABCCD242A49B9B9F4DC27	1/21/2016	1/20/2026
/C=NL, O=Trust Provider B.V., OU=Domain Validated SSL, CN=Trust Provider B.V. DV SSL CA - G2	81051C355EC9F5A89FBA91D1A5BD3F0501EACD80EF93B218003D95CF251A7670	1/21/2016	5/20/2022
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 International Server CA - T1	F74DA4D9A687C5046499AEFC9FA867DE91A1A3941A09F24CF94603B7AB78108A	5/13/2010	5/12/2020
/C=US, O=thawte, Inc., CN=thawte SHA256 SSL CA	3F3AF9C9CC2C7599EF8F6DD7CA516CFC1797D7D12002254F3BFD0D4D0FE9DE86	5/23/2013	5/22/2023
/C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA	8FDA7A8813546F9A7CB065CD32D3650D5B56A2B7F942B9499AEB42A86A3E9D56	4/11/2011	4/8/2021
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 International Server CA - G3	6E21876CF16347201F637A178CB42B171D52379AF7E5F5B6F6755B3EE9BB2ED4	2/8/2010	2/7/2020
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Secure Server CA - G3	5B9F350C2A76BE64BB3C2C6E2A414AEDDD0EF0A26D7C97FA7AF57D520C60B2E9	2/8/2010	2/7/2020
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Secure Server CA - T1	2C31A92DB8889132E04AD5F43DAF6D421B854510C61E41C787CB5E10E0962DC7	5/13/2010	5/12/2020
/C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA - G2	6FF6F63F6A0D3D63446CDAA523D26273B126C02F922E05D73C4748EB89B86393	9/8/2014	5/20/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA - G3	80D9EDB45B7F592CD30254E55BC316BBF44E47DFC0C004A383281C03F345BA39	6/30/2015	6/29/2025
/C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA - G4	ED67937083B0739F302396F974AFB41BFBA648473967780B2C59B88AC4121AD4	12/17/2015	5/20/2022
/C=US, O=Volusion, Inc., OU=Domain Validated SSL, CN=Volusion, Inc. DV SSL CA - G5	9FE306E663E459644644F60A7153A221436FB9701A0EBD9124EEF8159D15CB43	12/17/2015	12/16/2025
/C=US, O=Wells Fargo, OU=Symantec Trust Network, CN=Wells Fargo Certificate Authority WS1	C21087416BBF983B9FFE40F5D56EE0FFD94EB1E666B04A532ADE482EC201D67C	8/25/2015	8/24/2025
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia Technologies, Inc. DV SSL CA - G2	C18949E3659FF7DF22B30EC4DA6B4341AF8BEE00E4177A7F86FF59BC46B6BA40	4/5/2016	5/20/2022
/C=CN, O=TrustAsia Technologies, Inc., OU=Domain Validated SSL, CN=TrustAsia Technologies, Inc. DV SSL CA - G1	3997C721893B3926D3938A311CA07A261B2AE22E01DC587F181DFF15B98B4EA6	4/5/2016	4/4/2026
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Domain Validated SSL, CN=Symantec Basic DV SSL CA - G1	526E30DED6BF9D5CE216F50C832402B48AB70D55AEDA918A1873A5883EBDB1B5	6/7/2016	6/6/2026
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Domain Validated SSL, CN=Symantec Basic DV SSL CA - G2	DF583E3A1ED35E57D95104817AD823C055FB9071CD400435B5FC74E692081DB	6/7/2016	6/6/2026
/C=US/ST=SC, O=SCHIEEx, OU=SCHIEEx Direct Messaging, CN=SCHIEEx Direct CA	443C8158264710C0B768A8170E59BF1FAE4079D2BC39939A79FA839174ED81AE	6/7/2016	6/7/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID L1 CA	CAB016C5EA32061BD065FE13A55A40FA61058B27B34A7F8D175F7101EE063E3B	10/30/2012	10/30/2022
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID L2 CA	91FDEB52D4265120B843B195D1B6CDB5CE61251865A45A3E920E610FDDA660D3	1/7/2014	1/7/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID L4 CA	EFB2A3F37273D3589047919825EA5337E9B938A8C178B61C18C2B4270B9665AC	10/30/2012	10/30/2022
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID US L3 CA	EB84FC0B403D9B689297A5D83EA186838E3B777BC618EFDA162A75B7FEA666C1	1/8/2014	1/8/2023



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID US L4 CA	6797436214EFEE67CDE7D70358D4D8B00DFBF78D5C87C62B4A7E790D73DD7BD9	4/18/2013	4/18/2023
/C=US, O=Aetna Inc, CN=Aetna Inc. Secure CA2	5D28761CBF304EAFCD127B34D614FE179AC7744F1552AF1C31298425AD05A275	12/9/2014	12/9/2024
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance CA-3	COA4A1AC05E03096A3B2AB8A38502B39E2614E11397BEE73D0A66B8ACEF7A283	4/3/2008	4/3/2022
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance EV CA-1	8FC1469B8005BFEBDBF67F514E795FE1F17EA239A2A6934857F2428ADCE6D24F	11/10/2007	11/10/2021
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert High Assurance EV CA-2	1188F831C949A62E9CD4F60E36F72544F0AF924DE07F9DA992E26E44C996EEEE0	3/23/2007	3/23/2022
/C=US, O=The Koble Group, LLC, OU=Orion Health Direct Secure Messaging, CN=The Koble Group CA	A576C29481F5A2ACB1DF47500629A60F96F6ACA324E878FFDCFABD85E5649AEF	6/21/2016	6/21/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert ECC Extended Validation Server CA	FDC8986CFAC4F35F1ACD517E0F61B879882AE076E2BA80B77BD3F0FE5CEF8862	6/21/2016	6/21/2031
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit EV CA - G3	4B2CBA18EFBCE6C3C4A80AAABC952337000CD9346B768D062412A2DED846EDC9	1/7/2016	1/6/2026
/C=CN, O=TrustAsia Technologies, Inc., OU=Symantec Trust Network, OU=Domain Validated SSL, CN=TrustAsia DV SSL CA - G6	B90E17AB4B8778B10F9F28CBAA7664DE2EE3D66E1AFC574D168EDD24A10339FF	8/11/2016	8/10/2026
/C=CN, O=TrustAsia Technologies, Inc., OU=Symantec Trust Network, OU=Domain Validated SSL, CN=TrustAsia DV SSL CA - G5	B41AB845CAB4DB9CB1FE6505765F36A0868ADC5DF419B38979FB6A4FE4131F70	8/11/2016	8/10/2026
/C=US, O=California Integrated Data Exchange, Inc., OU=Orion Health Direct Secure Messaging, CN=Cal INDEX CA	A5226F33474B53392665298B48F4E6129824E98BD4D38DF4E31EBBCF14FA33CD	7/12/2016	7/12/2026
/C=US, O=Abbott Laboratories Inc., CN=Abbott Laboratories Secure Server CA	6C69E201656440EB98CD0875764A1ED19015ED8C4427601ACA9C68AFA8973959	7/12/2016	7/12/2026
/C=US, O=Cisco Systems, Inc., CN=Cisco Meraki CA	199EE58009555DAE2CDA0626931C64391D6A88CCCB1F9F0B2EE80B667F581C06	7/12/2016	7/12/2026



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Abbott Laboratories Inc., CN=Abbott Laboratories Secure Authentication CA	DB99A4F284CCF10B26DE7B7A5D651725B857CBC871EBB33028D67B55510EFC9D9	8/23/2016	8/23/2026
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 EV SSL CA - G4	31862233620E789330CC893E8B5E66705331B8B88B0ED30A44574D9E0A71C4F1	1/7/2016	1/6/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert SHA-2 RADIUS CA	524CF7331C4EE353EEB1ECD74E1F801A0F1F08DFA0322092F42205AFC3A17675	9/20/2016	9/20/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=Cybertrust Japan Issuing CA-1	87942388D29A46C06FE1E56AAB791594D0FB2E8EABF124048F130EEA9BEDD3FD	9/1/2016	9/1/2026
/C=JP, O=Cybertrust Japan Co., Ltd., CN=Cybertrust Japan Extended Validation Server CA	0E10BDDDEE7512DBD79EBF0B4F48FEED7C83C2BD3DD81765565F4FF110B7BFA42	12/7/2016	12/7/2031
/C=JP, O=Cybertrust Japan Co., Ltd., CN=Cybertrust Japan Secure Server CA	33D57359831F87754E6E755D6B5B56E7E71297DDDFEA1D6397086604280F6FFC	12/7/2016	12/7/2031
/C=CN, O=TrustAsia Technologies, Inc., OU=Symantec Trust Network, OU=Domain Validated SSL, CN=TrustAsia ECC DV SSL CA - G7	AD806A9357B87D1EB1DD85A5A3C092D0204BA447FF4B3714E3F1034F4D3DE8A0	12/13/2016	12/12/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert EV Server CA G4	710024B37BD9F0E1537C18A4C20F9A31C4B485D1248C643F20B4C00F3716BA85	1/17/2017	1/17/2032
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Secure Server CA - G4	59F8CB7D7E9E13CB778FF62198EBE05551B515A58BBBA2EF19C33C760C823916	10/31/2013	10/30/2023
/C=US, O=GeoTrust Inc., CN=GeoTrust EV SSL CA - G7	546CAFF9060EEF30F4F3E02255FBF5131E657C1710C9A650020133A818BEC1C8	5/1/2017	4/29/2027
/C=US, O=GeoTrust Inc., CN=GeoTrust EV SSL CA - G6	419B0C9AD6B872A8B1BB87341AF63EE92E69B27B996662E733032F1288108DFB	5/1/2017	4/29/2027
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 ECC 256 bit SSL CA - G2	74EB307A78AC7E8570CC1BAE1C51102A6053C96F3332D703285A743BCBD35D9E	5/12/2015	5/11/2025
/C=US, O=Symantec Corporation, CN=Symantec Time Stamping Services CA - G2	83C1EA9E9EFCA283B840E167F9EA79C4E32ACD33834F59D138FCDAB9D8806B20	10/18/2012	5/20/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Symantec Corporation, CN=Symantec SAS EV Code Signing CA	E865F583A928CCB6A7286B94E7920EE1F4998C030B438689E9583BCCD6AC5261	1/12/2016	1/11/2026
/C=US, O=thawte, Inc., CN=thawte SHA256 Code Signing CA	C4D18E0A58E4EFFD17ED77C840B613EF15F551076EA92C2B77F6609A6C2557C7	12/10/2013	12/9/2023
/C=US, O=thawte, Inc., CN=thawte SHA256 Code Signing CA - G2	F76F0D8AD330ACFD4C5BD05A58A1CF155DE00BE2C98F4E7899BE24E80A2ABCBF	7/22/2014	7/21/2024
/C=US, O=thawte, Inc., CN=thawte EV Code Signing CA	F376F6E5BF660F6BEDB768DCD1303EADD4A96F2ED7A97717E878FAE6BB5959FA	3/1/2016	2/28/2026
CN=VeriSign Class 3 - TEST ONLY - SGC CA; OU=FOR TEST PURPOSES ONLY, VeriSign Trust Network, Terms of use at https://www.verisign.com/rpa (c)07; O=VeriSign, Inc.; C=US	4B87C6E567D2C156EDB9352357BD8B16E97B1BBBAA5B3073D7F82D505EA0FE3D	1/1/2020	2/28/2020
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Registration Authority Intermediate CA	5B690E1CD2BC0016E4DB2AABAB503745E41F86B2448F2EC06D29F24999DEBCA2	6/7/2011	6/6/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Organizational CA - G4	E3710F0C667E589DE8E4AEA37E701AFAF3FBB6275762E6FEA3FD6629544279D6	5/6/2014	5/5/2024
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 International Server CA - G3	330260A69C0887F1B9A498302AECFDA17DE89A819C7E57E28C40A53080BE10E8	2/8/2010	2/7/2020
/C=US, O=Symantec Corporation, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, CN=Symantec Class 3 Organizational CA - G2	F5068C4293A26A0E420D02AE4BEF27008377E3E7ECD8E5CF194428162E3C40F4	3/16/2011	3/15/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Admin Intermediate Certificate Authority	062A76E5196E4C6220ACA7D32AA419761101374C11866C3627D5F8A055ECE2CE	6/7/2011	6/6/2021
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Organizational CA - G4	6F6B2D4A309A156C61977FBCCF7D2AC9F59623FFCCEAC3E4EE5A83A18D895275	5/6/2014	5/5/2024
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Organizational CA - G4	FD33AEFD33A161FAC0190E41DF9DD50C3339E883C03F49C4A2AB2B8956EF54D4	5/6/2014	5/5/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Extended Validation Code Signing CA - G2	F726C8891336B1B97CBC86F596F1267FC180152122573E76D5145A7C64E2CFF7	3/4/2014	3/3/2024
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Code Signing 2010 CA	D0F90BBF6EE8629E4A31CFDBAA2202E324AF2F5F456967DD83CA5B3684C34297	2/8/2010	2/7/2020
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 SHA256 Code Signing CA	582DC1D97A790EF04FE2567B1EC88C26B03BF6E99937CAE6A0B50397AD20BBF8	12/10/2013	12/9/2023
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Code Signing 2010 CA	F45C03B5683E3EA8F0ABC5F14E749FBBF632766596D9074B000D68B76226F7A3	2/8/2010	2/7/2020
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Code Signing 2010 CA	0CFC19DB681B014BFE3F23CB3A78B67208B4E3D8D7B6A7B1807F7CD6ECB2A54E	2/8/2010	2/7/2020
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, OU=Insattningsgaranti Service SHA256 CA, CN=Symantec Class 3 Organizational CA - G5	5CCA1F2FF39A4A8924A3606036D8AADE2E23C024EFCAFF3DC2C66759FEF776FB	10/7/2014	10/6/2024
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Extended Validation Code Signing CA	169DAF83C0870AB8927C99D3FC0774DDF34FBA28B02B881DCD0B633B6D71B2BA	6/7/2012	6/6/2022
/C=NZ, O=IBM New Zealand Limited, OU=Symantec Trust Network, CN=IBM New Zealand Limited Public CA	A6AE7959A195749CA887386FA04482BD169DC1157E312D301B0D5C333FAF2B02	2/3/2015	2/2/2025
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 Extended Validation Code Signing CA - G3	C267DC115D57DD0226279B346DF1953DD2C07A85CB48A0D899FD5724F5AF681F	5/12/2016	5/11/2026
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec SHA256 TimeStamping CA	F3516DDCC8AFC808788BD8B0E840BDA2B5E23C6244252CA3000BB6C87170402A	1/12/2016	1/11/2031
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 SHA256 Code Signing CA - G2	2042E38FC57388F1DB3222C7AB5BE11C6EDB7E454BF45487AE44FF2D6A2B7645	7/22/2014	7/21/2024



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Catholic Health Initiatives, OU=Orion Health Direct Secure Messaging, CN=Catholic Health Initiatives CA	151A3591B765D02C359EEC9C56ED8DDAD0C54E756A497D02BF979FA8DD5D95BB	8/19/2014	8/19/2024
/C=US, O=High Mark HIE, LLC, OU=Orion Health Direct Secure Messaging, CN=Highmark Tapestry HIE CA	1B68286DEFCE036512A5DAC76C8ABD067D33A07D4E0DEF7707089C980075E192	8/19/2014	8/19/2024
/C=US, O=Jax Health Records - SV HIE, OU=Orion Health Direct Secure Messaging, CN=Jax HR Saint Vincents HIE CA	3D2928A2988227CE4EBC319AA34E6552E9D98839D5CE2114E79F8F5EC2BF9DE0	2/16/2015	2/16/2025
/C=US, O=Keystone Health Information Exchange (KeyHIE), OU=Orion Health Direct Secure Messaging, CN=KeystoneHIE KeyHIE CA	D1C2009D472835AFBA94CC8ACB06DD0C727138AE1E73834394D27B0C06CF1265	8/19/2014	8/19/2024
/C=US, O=Massachusetts Health Information Highway (Mass HIway), OU=Orion Health Direct Secure Messaging, CN=Mass HIway CA	23BA3A97C580DF2C316624D7FA5F7663580261CB2048142C73A3E86B113EB26D	9/25/2015	9/25/2025
/C=US, O=New Mexico Health Information Collaborative, OU=Orion Health Direct Secure Messaging, CN=New Mexico Health Information Collaborative CA	10BEDDC480AA27563480B1BCAAB6C25B52995EA836E9A2ACE83F8F59206E2496	9/26/2014	9/26/2024
/C=US, O=Oklahoma State Department of Health, OU=Orion Health Direct Secure Messaging, CN=Oklahoma State Department of Health CA	77ABE65DF4BE94E5EC222FC905E1233F8C77D6B3AE2933346A0C2FC3B2F1F560	2/16/2015	2/16/2025
/C=US, O=Sutter Health, a California nonprofit public benefit corporation, OU=Orion Health Direct Secure Messaging, CN=Sutter Health CA	603D69822381A0BFC274BBED67009BC7DF133CB902FA242CF58BF727D23D5495	10/21/2014	10/21/2024
CN=KPN Class 2 CA G2; O=KPN B.V.; C=NL	2B75F77E2DFB69B4484E0EC2DFB62BFC4068289609B9CDF59038943C7871B39B	7/16/2020	6/6/2031
CN=DigiCert QV EV TLS ICA G1; O=DigiCert, Inc.; C=US	6A7B2AA3414039A663D5D8BBAB8256A3979A84C332BF5E1EE8F6D0E0ADA84668	3/16/2020	3/14/2030
CN=DigiCert QV TLS ICA G1; O=DigiCert, Inc.; C=US	93E33AF7DA3030530D090C9C55762CADE7EAE943F834349D1057A90EB67F306B	3/16/2020	3/14/2030
/C=KR, O=KECA, Inc., OU=Symantec Trust Network, CN=CrossCert Class 2 CA - G3	3B7555AE65312A21B141F610288E5F533C68AB0DB5FB9580F37EB2218D0C2798	6/4/2015	6/3/2025
/C=US, O=Symantec Corporation, CN=Symantec SAS Code Signing CA	279A055E2C41A9105DFDFD26343229D0D38125872455C43344DDEBCAE5A0BF736	3/6/2014	5/20/2022



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=Symantec Corporation, CN=Symantec SHA1 SAS Code Signing CA	F82CF9003A28693F430C7E939581097BA097C93AEE510A105D7822324F364C9A	10/8/2015	5/20/2022
/C=US, O=Symantec Corporation, CN=Symantec Time Stamping Services CA - G2	0625FEE1A80D7B897A9712249C2F55FF391D6661DBD8B87F9BE6F252D88CED95	12/21/2012	12/30/2020
/C=US, O=Symantec Corporation, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, CN=Symantec Class 3 Admin Intermediate Certificate Authority	F71B3E31B6CE7D735E781DB156CDD77F993A3B7A14195058D9A6D15C0A97C3B3	3/3/2011	3/2/2021
/C=US, O=Symantec Corporation, OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)11, CN=Symantec Class 3 Registration Authority Intermediate CA	CFA1F19379D9F0A3FC8D44064966B69712760AE47591D8651B7633175469A8A7	3/3/2011	3/2/2021
/C=US, O=VeriSign, Inc., OU=VeriSign Trust Network, OU=Terms of use at https://www.verisign.com/rpa (c)10, CN=VeriSign Class 3 Code Signing 2010 CA	193A2A64C82C920CBC2A3A2D032AA1F8E5F7F3483058710F0B6A0FBBEB697B69	2/8/2010	2/7/2020
/C=AR, O=Bolsa de Comercio de Rosario, OU=DigiCert Trust Network, OU=Class 2 Managed PKI Individual Subscriber CA, CN=Autoridad Certificante Bolsa de Comercio de Rosario - G3	0A0C200DF9CF5459ADF0DD42DC2EEE10B1318C5B1C5245167269511F65B1AE65	1/18/2018	1/17/2023
/C=US, O=Comcast Corporation, CN=Comcast Trusted User CA	5764D931D3FB3819BB5CD19DD09E075A3320114F079292494A4F64E92634808F	1/17/2017	1/17/2027
/C=US, O=Comcast Corporation, CN=Comcast Trusted User RSA CA	9B8DD7F84D5AD52AADDEA5729A6DA865FF28EE944A8379FC274103B9B5F094D9	1/31/2017	1/31/2027
/C=US, O=Imprivata, OU=www.imprivata.com, CN=Imprivata Secure ID CA-1	B49B1B7209D1A83F6CDBBA743AD720ACC24440FB9002F9DDB3C6F2F5CE337A47	10/25/2016	10/25/2026
/C=US, O=National Geospatial-Intelligence Agency, CN=NGA CA G3	357985D17EF02893AB63FE0EE4C464B8AD3A4B05EF72B27AE73D7258C8996FB8	2/5/2020	2/5/2025
/C=US, O=SAIC, OU=PKI, CN=SAIC Public Email CA 2018 01	B4739E90912D31F2829F69D60F62C5954DC98EEF9A7EF3477447692C4A440D65	2/9/2018	2/9/2028



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID CA-1	D86702A71F553FAEC066CE25EA5B6682470539E28C6A300F6A410A720A2C7CF2	1/15/2013	1/15/2023
/C=US, O=DigiCert, Inc., CN=DigiCert Class 3 SSP Intermediate CA - G4	59FFA4D4929E0BD48AA35B02CCAC2E13A8D147B9D146BFBFD00FDE736264D00E	5/14/2020	5/14/2023
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated Trust CA	81CCD4FEA59F241D1AE7720CB3C07010D8DCB02BE0C584FB8EA920921DA6A654	11/18/2011	11/18/2023
/C=US, O=DigiCert, Inc., OU=www.digicert.com, CN=DigiCert Direct Secure ID CA-1	F4DC08264086D51D0A4CFA5ED05C337120AF9899206395418B4CE9BBC507564A	10/25/2016	10/25/2026
/C=US, O=Anthem, Inc., CN=Anthem Direct CA	F9ECB6EC9845F124392FE8C1B6BE0D18CB667834ADCF44DF8DFB316323673454	3/22/2017	3/22/2027
/C=US, O=GSI Health, OU=GSI Direct Messaging, CN=GSI Health Direct CA	812D54BEDF8EC9C7082EFD4B9FE5E44E420FEFDA282EB03D33DA77DEC5C0B5A5	10/25/2016	10/25/2026
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID L3 CA	9EB1E7AB3D9559088B9926A6569CFB645FBDC72A758815B1B1C78A0159FB6863	12/16/2019	2/28/2022
/C=US, O=Symantec Corporation, OU=Symantec Trust Network, CN=Symantec Class 3 SSP Intermediate CA - G3	C0F74D740D4D3EB02F97D954540C83FE0C5384FAD44ED04EDB2868E7BE3195B6	12/18/2019	10/25/2020
/C=US, O=DigiCert Inc, OU=www.digicert.com, CN=DigiCert Federated ID L3 CA	504AEDFBB9D65D11926B1352295737F31F687246E5A2D49634667795DA47958A	2/28/2019	2/28/2022
/C=DE, O=Deutscher Sparkassen Verlag GmbH, OU=VeriSign Trust Network, CN=S-TRUST Class 2 CA - G2	7F0158C34ED46B2048B9FC42167330FBF914E57C612BA120812D6F739B0F06EC	4/8/2010	4/7/2020
/C=DE, O=Deutscher Sparkassen Verlag GmbH, OU=VeriSign Trust Network, CN=S-TRUST Class 1 CA - G1	A3030DFA5983940D6A7AF6FBBA00DAA9A5B9B2EC80498091FEC212E84EF8A064	3/31/2011	3/30/2021
/C=DE, O=Deutscher Sparkassen Verlag GmbH, OU=Symantec Trust Network, CN=S-TRUST Class 2 CA - G6	E5C0DD7B7F5CE0BC0A6BFAB6FB3322518CFF30C1D7ACC88A160C060132186CBBE	10/17/2013	10/16/2023
/C=DE, O=Deutscher Sparkassen Verlag GmbH, OU=Symantec Trust Network, CN=S-TRUST Class 2 CA - G6	F4E8C138E42C8F63375AF668909213336C5C9ED72AA81C3B641D1F68AA9AB83A	10/17/2013	10/16/2023



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=DE, O=Deutscher Sparkassen Verlag GmbH, OU=Symantec Trust Network, CN=S-TRUST Class 2 CA - G3	8565A2A0D4410B84D253F5A13AF7A097A64B1EC71F7007CD271136B532FE1113	7/15/2014	7/14/2024
/C=DE, O=Deutscher Sparkassen Verlag GmbH, OU=Symantec Trust Network, CN=S-TRUST Class 2 CA - G3	3AE18264FA23039D26EE2EBDF243A20F1B656BFF330CA44C23DDDD31C960ED7D	7/15/2014	7/14/2024
/C=US, O=GeoTrust Inc, OU=GeoTrust TimeStamping CA, CN=GeoTrust TimeStamping CA I	D36027A85FE1EDCBA4F1BA92C3C8B37864E862D2B4A02B8FF643F582609F6A08	3/7/2006	3/7/2021
/C=US, O=GeoTrust Inc, OU=GeoTrust TimeStamping CA, CN=GeoTrust TimeStamping CA I	321DF681FB13682259A572BE65FDDB8E6C9A2CB21F945683D3B704517BC192E4	3/7/2006	3/7/2021
/C=US, O=Google Trust Services, CN=GTS CA 1D3	92C0FB93FB7CA0A1A33C193F1B1CD1CABD2E40DEBA40278A0BB103F75B8640C7	5/29/2018	5/28/2021
, CN=BT Class 2 DigiCert PKI Platform CA, O=British Telecommunications plc/C=GB	843782303040BFB33576766E1700696DE0FC14887BE293D7265EB59ECE4ED9CC	8/6/2019	6/6/2031
/C=US, O=Amazon, OU=Server CA 1B, CN=Amazon	4A1FF6BBF481170D3B773CEC1F3A84DE3B5096575CDBF8B08432209318CA0FBD	10/21/2015	10/21/2040
/C=US, O=Amazon, OU=Server CA 3B, CN=Amazon	ECC295B6DDCD084BA7179FB53BDD1D422CB6C0A8D94F154D4A5B17780B7279ED	7/16/2018	7/16/2028
/C=US, O=Amazon, OU=Server CA 1B, CN=Amazon	F55F9FFCB83C73453261601C7E044DB15A0F034B93C05830F28635EF889CF670	10/22/2015	10/19/2025
/C=US, O=DigiCert Inc, CN=DigiCert SHA2 Secure Server CA	C1AD7778796D20BCA65C889A2655021156528BB62FF5FA43E1B8E5A83E3D2EAA	9/23/2020	9/22/2030
/C=US, O=DigiCert Inc, CN=DigiCert TLS Hybrid ECC SHA384 2020 CA1	D79A2D5E03295C0E9FEAE36D021EBD5209700AB1A9E817A43F30FA3C66F78D21	9/23/2020	9/22/2030
/C=US, O=Cisco Systems, Inc., CN=Cisco Meraki CA2	CDBCBEF16E37237702FACC4B55D3AB92A17CFA17835E13377AA4D2BA0FD47A02	9/24/2020	7/12/2026
/C=US, O=Plex, Inc., CN=Plex Devices High Assurance CA3	FB6060848440AA4594FE8109741EFAB40C56732B26C67C36D6DC945BB2FE13CF	9/24/2020	5/19/2025



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=DigiCert Inc, CN=DigiCert TLS RSA SHA256 2020 CA1	25768713D3B459F9382D2A594F85F34709FD2A8930731542A4146FFB246BEC69	9/24/2020	9/23/2030
/C=US, O=DigiCert Inc, CN=DigiCert Global G2 TLS RSA SHA256 2020 CA1	1F8EB9E9A8E066CC5B3833E06B3129764B622639D5B163F600E1C79120BF3EED	9/24/2020	9/23/2030
/C=US, O=Aetna Inc, CN=Aetna Inc. Secure CA2	DDCBB4F3051D6E601310EB0E46B5BB99C5E8B99F7A539E367A987DEA030E318E	9/24/2020	12/9/2024
/C=US, O=Aetna Inc, CN=Aetna Inc. Secure EV CA	A1448A015E1399C5A891812F0E88C6D847B221D21F9326A6626BA43A0EB612D9	9/24/2020	12/9/2024
/C=US, O=Bloomberg LP, CN=Bloomberg TLS CA	440B37416F2DE852CA386150D611EC0AF31DD58D8A27F882815A7EA3EE6848EE	9/24/2020	9/23/2030
/C=US, O=DigiCert Inc, CN=DigiCert Trusted G4 TLS RSA SHA384 2020 CA1	4F35C6B9C100905FF25BB01C0A20EBE335BCEE249CE9FFA1E11E062ED66FCD1	9/24/2020	9/23/2030
/C=US, O=DigiCert Inc, CN=DigiCert Global G3 TLS ECC SHA384 2020 CA1	338EDB04FB8BEAF07A10749E7F4E538DE0715DAFB6478D58063FB7C8BDB0C30D	9/24/2020	9/23/2030
/C=US, O=DigiCert Inc, CN=DigiCert Baltimore TLS RSA SHA256 2020 CA1	38F73647F1ECAEEC0FC5AFE68AC30E0C26171E9F232F4530729412408FD53626	9/24/2020	5/11/2025
/C=US, O=DigiCert Inc, CN=DigiCert Baltimore SMIME RSA SHA256 2020 CA1	D1E87FFD17F95602571D08ADBDA469A04B14258996EC09776CD953582AF0B87E	9/24/2020	5/11/2025
/C=AU, O=Fuji Xerox Businessforce Pty. Limited, CN=Fuji Xerox Businessforce CA - G2	A12A8446C0E1E5CF4079642B31A0675ECFD1D09FAD2E4884591F380026D9EAEF	9/25/2020	9/24/2030
/C=US, O=Brown Brothers Harriman & Co., CN=Brown Brothers Harriman Public Issuer CA	FB586897D15FF353CFE83F9B214D234310A191E0CC63C0808E40E981754DD5A6	9/25/2020	9/24/2030
/C=US, O=eGlobalCustody, CN=eGlobalCustody Public Issuer CA	1E1E62AE4F4721617A2CA0E3F7CA6D843AE7530151B9D8C19B5D07D4BDB33324	9/25/2020	9/24/2030
/C=DE, O=Daiichi Sankyo Europe GmbH, CN=Daiichi Sankyo Europe GmbH Issuing CA	A34B4B3BA3B93302804740CFF3F01A9C0FD9CFEE5A193C997B87C5BE43A9E94	9/25/2020	9/24/2030
/C=US, O=Common Securitization Solutions LLC, CN=CSS Public Issuing CA G2	D040BEF3C50B536E2E8DA2AD7721A772C76B718FF10165D5AA88674C233E3766	9/25/2020	9/24/2030



Subordinate CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
/C=US, O=General Electric Company, CN=GE SMIME Issuing CA 3	BDE2A6CEC1A1C04C2E423C1457949F180ED086E021BBF090556BE3CE6AD1863F	9/25/2020	9/24/2030
/C=DE, O=OSRAM Continental GmbH, CN=OSRAM Continental Secure Email CA - G2	B5D61B50ACB993A27EF05D4324A04A671CEE7502E62BA5E9122CC2100BFDF6CF	9/25/2020	9/24/2030
/C=US, O=Fannie Mae, CN=Fannie Mae Shared Online CA G2	28F7CD588FC5B0DF460DD4C678F9DC51077A0E89D38DCCBA09BC1AEEE9D698C1	9/25/2020	9/24/2030
/C=US, O=Honeywell International Inc., CN=Honeywell International Co-branded CA - G2	B78DFC942032C042CD45490E3B32433CA167067B330B52CB1453EA3AD5819080	9/25/2020	9/24/2030
/C=US, O=DigiCert Inc, CN=DigiCert Cloud Services CA-1	5F88694615E4C61686E106B84C3338C6720C535F60D36F61282ED15E1977DD44	9/25/2020	9/24/2030
/C=US, O=Michigan Health Information Shared Services, CN=MIDIGATE CA	4290A2532669E53D6B9A86AAB0AF8B604AC34897442E1836F15D84FCDEDE5A5B	11/6/2017	1/13/2023
/C=US, O=Trinity Health, CN=Trinity Health Direct CA	FA46B1274813237715FD1F4AE72E0112BAD095250E98DCDA416E71E49E0FF7E6	8/24/2017	1/13/2023