

This is a list of all member certification authorities (CAs) and the root certificates distributed via the Windows Root Certificate Program. Root certificates are available to both Microsoft Windows and Windows Phone 8. Microsoft provides third-party contact information to help you find technical support. This contact information may change without notice. Microsoft does not guarantee the accuracy of this third-party contact information. [For more information please visit the Windows Root Certificate Program web site.](#)

Current CA Owner	Country / Region	CA Root Name	CA Root Size	Signature Hash	CA Root Expires	Thumbprint
<a href="#">Actalis S.p.A.</a>	Italy	Actalis Authentication CA G1	2048	SHA1	Saturday, June 25, 2022 7:06:00 AM	91 58 c5 ef 98 73 01 a8 90 3c fd ab 03 d7 2d a1 d8 89 09 c9
<a href="#">Actalis S.p.A.</a>	Italy	Actalis Authentication Root CA	4096	SHA256	Sunday, September 22, 2030 4:22:02 AM	f3 73 b3 87 06 5a 28 84 8a f2 f3 4a ce 19 2b dd c7 8e 9c ac
<a href="#">Agencia Catalana de Certificacio (CATCert)</a>	Spain	Agencia Catalana de Certificacio (NIF Q-0801176-I)	2048	SHA1	Tuesday, January 7, 2031 3:59:59 PM	28 90 3a 63 5b 52 80 fa e6 77 4c 0b 6d a7 d6 ba a6 4a f2 e8
<a href="#">Agencia Notarial de Certificación (ANCERT)</a>	Spain	ANCERT Corporaciones de Derecho Publico	2048	SHA1	Sunday, February 11, 2024 10:22:45 AM	0c fd 83 db ae 44 b9 a0 c8 f6 76 f3 b5 70 65 0b 94 b6 9d bf
<a href="#">Agencia Notarial de Certificación (ANCERT)</a>	Spain	ANCERT Certificados CGN	2048	SHA1	Sunday, February 11, 2024 10:27:12 AM	11 c5 b5 f7 55 52 b0 11 66 9c 2e 97 17 de 6d 9b ff 5f a8 10
<a href="#">Agencia Notarial de Certificación (ANCERT)</a>	Spain	Agencia Notarial de Certificacion S.L. Unipersonal - CIF B83395988	2048	SHA1	Wednesday, February 11, 2004 8:58:30 AM	c0 9a b0 c8 ad 71 14 71 4e d5 e2 1a 5a 27 6a dc d5 e7 ef cb
<a href="#">Agencia Notarial de Certificación (ANCERT)</a>	Spain	ANCERT Certificados CGN V2	4096	SHA256	Saturday, May 25, 2030 9:31:23 AM	7e b1 a0 42 9b e5 f4 28 ac 2b 93 97 1d 7c 84 48 a5 36 07 0c
<a href="#">Agencia Notarial de Certificación (ANCERT)</a>	Spain	ANCERT Certificados Notariales V2	4096	SHA256	Saturday, May 25, 2030 9:56:14 AM	6f 62 de b8 6c 85 58 5a e4 2e 47 8d b4 d7 6d b3 67 58 5a e6
<a href="#">AOL</a>	USA	America Online Root Certification Authority 2	4096	SHA1	Tuesday, September 29, 2037 7:08:00 AM	85 b5 ff 67 9b 0c 79 96 1f c8 6e 44 22 00 46 13 db 17 92 84
<a href="#">AOL</a>	USA	America Online Root Certification Authority 1	2048	SHA1	Thursday, November 19, 2037 1:43:00 PM	39 21 c1 15 c1 d5 0e ca 5c bc 5b c4 f0 7d 21 d8 05 0b 56 6a
<a href="#">AS Sertifitseerimiskeskus</a>	Estonia	EE Certification Centre Root CA	2048	SHA1	Tuesday, December 17, 2030 4:59:59 PM	c9 a8 b9 e7 55 80 5e 58 e3 53 77 a7 25 eb af c3 7b 27 cc d7
<a href="#">AS Sertifitseerimiskeskus</a>	Estonia	Juur-SK AS Sertifitseerimiskeskus	2048	SHA1	Friday, August 26, 2016 7:23:01 AM	40 9d 4b d9 17 b5 5c 27 b6 9b 64 cb 98 22 44 0d cd 09 b8 89
<a href="#">Atos</a>	Germany	Atos Trusted Root 2011	2048	SHA256	Tuesday, December 31, 2030 4:59:59 PM	2b b1 f5 3e 55 0c 1d c5 f1 d4 e6 b7 6a 46 4b 55 06 02 ac 21
<a href="#">A-Trust</a>	Austria	A-Trust-nQual-01	2048	SHA1	Sunday, November 30, 2014 4:00:00 PM	51 a4 4c 28 f3 13 e3 f9 bc 5e 7c 0a 1e 0e 0d d2 84 37 58 ae
<a href="#">A-Trust</a>	Austria	A-Trust-Qual-02	2048	SHA1	Tuesday, December 02, 2014 4:00:00 PM	67 9a 4f 81 fc 70 5d de c4 19 77 8d d2 eb d8 75 f4 c2 42 c6
<a href="#">A-Trust</a>	Austria	A-Trust-nQual-03	2048	SHA1	Monday, August 17, 2015 3:00:00 PM	d3 c0 63 f2 19 ed 07 3e 34 ad 5d 75 0b 32 76 29 ff d5 9a f2
<a href="#">A-Trust</a>	Austria	A-Trust-Qual-01	2048	SHA1	Sunday, November 30, 2014 4:00:00 PM	e6 19 d2 5b 38 0b 7b 13 fd a3 3e 8a 58 cd 82 d8 a8 8e 05 15
<a href="#">A-Trust</a>	Austria	A-Trust Qual-01	2048	SHA1	Sunday, February 06, 2005 4:00:00 PM	f8 25 57 8f 8f 54 84 df b4 0f 81 86 7c 39 2d 6c b0 01 2b 92
<a href="#">A-Trust</a>	Austria	A-Trust-Qual-03a	2048	SHA1	Tuesday, April 24, 2018 3:00:00 PM	42 ef dd e6 bf f3 5e d0 ba e6 ac dd 20 4c 50 ae 86 c4 f4 fa
<a href="#">Austrian Society for Data Protection (Arge Daten)</a>	Austria	Arge Daten Oesterreichische Gesellschaft fuer Datenschutz	1024	MD5	Thursday, February 12, 2009 4:30:30 AM	8e 10 32 e9 24 59 44 f8 47 91 98 3e c9 e8 29 bc 10 59 b4 d3
<a href="#">Austrian Society for Data Protection (Arge Daten)</a>	Austria	A-CERT Certification Service	2048	SHA1	Sunday, October 23, 2011 7:14:14 AM	29 64 b6 86 13 5b 5d fd dd 32 53 a8 9b bc 24 d7 4b 08 c6 4d
<a href="#">Austrian Society for Data Protection (Arge Daten)</a>	Austria	Austrian Society for Data Protection GLOBALTRUST Certification Service	4096	SHA1	Thursday, September 18, 2036 7:12:35 AM	34 2c d9 d3 06 2d a4 8c 34 69 65 29 7f 08 1e bc 2e f6 8f dc
<a href="#">Autoridad de Certificación (ANF AC)</a>	Spain	ANF AC	2048	SHA1	Tuesday, November 30, 2021 4:00:00 PM	ce a9 89 0d 85 d8 07 53 a6 26 28 6c da d7 8c b5 66 d7 0c f2
<a href="#">Autoridad de Certificacion Firmaprofesional</a>	Spain	Autoridad de Certificacion Firmaprofesional CIF A62634068	2048	SHA1	Thursday, October 24, 2013 3:00:00 PM	a9 62 8f 4b 98 a9 1b 48 35 ba d2 c1 46 32 86 bb 66 64 6a 8c
<a href="#">Autoridad de Certificacion Firmaprofesional</a>	Spain	Autoridad de Certificacion Firmaprofesional CIF A62634068	4096	SHA1	Tuesday, December 31, 2030 12:38:15 AM	ae c5 fb 3f c8 e1 bf c4 e5 4f 03 07 5a 9a e8 00 b7 f7 b6 fa
<a href="#">Buypass</a>	Norway	Buypass Class 2 CA 1	2048	SHA1	Thursday, October 13, 2016 3:25:09 AM	a0 a1 ab 90 c9 fc 84 7b 3b 12 61 e8 97 7d 5f d3 22 61 d3 cc
<a href="#">Buypass</a>	Norway	Buypass Class 3 CA 1	2048	SHA1	Saturday, May 9, 2015 7:13:03 AM	61 57 3a 11 df 0e d8 7e d5 92 65 22 ea d0 56 d7 44 b3 23 71
<a href="#">Buypass</a>	Norway	Buypass Class 2 Root CA	4096	SHA256	Friday, October 26, 2040 1:38:03 AM	49 0a 75 74 de 87 0a 47 fe 58 ee f6 c7 6b eb c6 0b 12 40 99
<a href="#">Buypass</a>	Norway	Buypass Class 3 Root CA	4096	SHA256	Friday, October 26, 2040 1:28:58 AM	da fa f7 fa 66 84 ec 06 8f 14 50 bd c7 c2 81 a5 bc a9 64 57
<a href="#">CA Disig a.s.</a>	Slovak Republic	CA Disig	2048	SHA1	Monday, March 21, 2016 5:39:34 PM	2a c8 d5 8b 57 ce bf 2f 49 af f2 fc 76 8f 51 14 62 90 7a 41
<a href="#">Camerfirma</a>	Spain	Chambersign Chambers of Commerce Root	2048	SHA1	Wednesday, September 30, 2037 9:13:44 AM	6e 3a 55 a4 19 0c 19 5c 93 84 3c c0 db 72 2e 31 30 61 f0 b1
<a href="#">Camerfirma</a>	Spain	Chambersign Global Root	2048	SHA1	Wednesday, September 30, 2037 9:14:18 AM	33 9b 6b 14 50 24 9b 55 7a 01 87 72 84 d9 e0 2f c3 d2 d8 e9

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<a href="#">Camerfirma</a>	Spain	Chambersign Public Notary Root	2048	SHA1	Wednesday, September 30, 2037 9:14:49 AM	ee 29 d6 ea 98 e6 32 c6 e5 27 e0 90 6f 02 80 68 8b df 44 dc
<a href="#">Camerfirma</a>	Spain	Chambers of Commerce Root - 2008	4096	SHA1	Saturday, July 31, 2038 5:29:50 AM	78 6a 74 ac 76 ab 14 7f 9c 6a 30 50 ba 9e a8 7e fe 9a ce 3c
<a href="#">Camerfirma</a>	Spain	Global Chambersign Root - 2008	4096	SHA1	Saturday, July 31, 2038 5:31:40 AM	4a bd ee ec 95 0d 35 9c 89 ae c7 52 a1 2c 5b 29 f6 d6 aa 0c
<a href="#">CertEurope France</a>	France	CertEurope Root CA 2	4096	SHA1	Friday, March 27, 2037 4:00:00 PM	fa 08 82 59 5f 9c a6 a1 1e cc be af 65 c7 64 c0 cc c3 11 d0
<a href="#">Certicámara S.A.</a>	Colombia	Certicámara S.A.	2048	SHA1	Monday, February 23, 2015 10:10:37 AM	4f 55 5c e2 0d cd 33 64 e0 dc 7c 41 ef dd 40 f5 03 56 c1 22
<a href="#">Certicámara S.A.</a>	Colombia	Certicámara S.A.	2048	SHA1	Monday, May 23, 2011 3:00:00 PM	8b 1a 11 06 b8 e2 6b 23 29 80 fd 65 2e 61 81 37 64 41 fd 11
<a href="#">Certicámara S.A.</a>	Colombia	AC Raíz Certicámara S.A.	4096	SHA1	Tuesday, April 02, 2030 1:42:02 PM	cb a1 c5 f8 b0 e3 5e b8 b9 45 12 d3 f9 34 a2 e9 06 10 d3 36
<a href="#">Certigna</a>	France	Certigna	2048	SHA1	Tuesday, June 29, 2027 8:13:05 AM	b1 2e 13 63 45 86 a4 6f 1a b2 60 68 37 58 2d c4 ac fd 94 97
<a href="#">Certigna</a>	France	Certigna	2048	SHA1	Tuesday, June 29, 2027 8:13:05 AM	b1 2e 13 63 45 86 a4 6f 1a b2 60 68 37 58 2d c4 ac fd 94 97
<a href="#">Certinomis</a>	France	Certinomis - Autorité Racine	4096	SHA1	Sunday, September 17, 2028 1:28:59 AM	2e 14 da ec 28 f0 fa 1e 8e 38 9a 4e ab eb 26 c0 0a d3 83 c3
<a href="#">Certipost s.a./n.v.</a>	Belgium	Certipost E-Trust Primary TOP Root CA	2048	SHA1	Saturday, July 26, 2025 3:00:00 AM	05 60 a2 c7 38 ff 98 d1 17 2a 94 fe 45 fb 8a 47 d6 65 37 1e
<a href="#">Certipost s.a./n.v.</a>	Belgium	Certipost E-Trust Primary Qualified CA	2048	SHA1	Sunday, July 26, 2020 3:00:00 AM	74 2c df 15 94 04 9c bf 17 a2 04 6c c6 39 bb 38 88 e0 2e 33
<a href="#">Certipost s.a./n.v.</a>	Belgium	Certipost E-Trust Primary Normalised CA	2048	SHA1	Sunday, July 26, 2020 3:00:00 AM	a5 9c 9b 10 ec 73 57 51 5a bb 66 0c 4d 94 f7 3b 9e 6e 92 72
<a href="#">CertiSign</a>	Brazil	Certisign Autoridade Certificadora AC1S	1024	MD5	Tuesday, June 26, 2018 5:00:00 PM	00 48 f8 d3 7b 15 3f 6e a2 79 8c 32 3e f4 f3 18 a5 62 4a 9e
<a href="#">CertiSign</a>	Brazil	Certisign - Autoridade Certificadora - AC2	1024	MD5	Tuesday, June 26, 2018 5:00:00 PM	4e fc ed 9c 6b dd 0c 98 5c a3 c7 d2 53 06 3c 5b e6 fc 62 0c
<a href="#">CertiSign</a>	Brazil	Certisign Autoridade Certificadora AC4	1024	MD5	Tuesday, June 26, 2018 5:00:00 PM	54 f9 c1 63 75 9f 19 04 51 21 a3 19 f6 4c 2d 05 55 b7 e0 73
<a href="#">CertiSign</a>	Brazil	Certisign Autoridade Certificadora AC3S	1024	MD5	Monday, July 09, 2018 1:56:32 PM	cf f8 10 fb 2c 4f fc 01 56 bf e1 e1 fa bc b4 18 c6 8d 31 c5
<a href="#">certSIGN</a>	Romania	certSIGN ROOT CA	2048	SHA1	7/4/2031	fa b7 ee 36 97 26 62 fb 2d b0 2a f6 bf 03 fd e8 7c 4b 2f 9b
<a href="#">Česká pošta (Czech Post, PostSignum)</a>	Czech Republic	PostSignum Root QCA 2	2048	SHA256	Sunday, January 19, 2025 1:04:31 AM	a0 f8 db 3f 0b f4 17 69 3b 28 2e b7 4a da 8d 6d f9 d4 48 a3
<a href="#">China Internet Network Information Center (CNNIC)</a>	China	CNNIC Root	2048	SHA1	4/15/2027	8b af 4c 9b 1d f0 2a 92 f7 da 12 8e b9 1b ac f4 98 60 4b 6f
<a href="#">China Internet Network Information Center (CNNIC)</a>	China	China Internet Network Information Center EV Certificates Root	2048	SHA1	Saturday, August 31, 2030 12:11:25 AM	4f 99 aa 93 fb 2b d1 37 26 a1 99 4a ce 7f f0 05 f2 93 5d 1e
<a href="#">Chunghwa Telecom Corporation</a>	Taiwan	ePKI Root Certification Authority	4096	SHA1	Tuesday, December 19, 2034 7:31:27 PM	67 65 0d f1 7e 8e 7e 5b 82 40 a4 f4 56 4b cf e2 3d 69 c6 f0
<a href="#">Cisco Systems</a>	USA	Cisco Root CA 2048	2048	SHA1	Monday, May 14, 2029 12:25:42 PM	de 99 0c ed 99 e0 43 f1 60 ed c3 93 7e 7c d5 bf 0e d9 e5 fa
<a href="#">Colegio de Registradores Mercantile (Spanish Property &amp; Commerce Registry)</a>	Spain	Spanish Property & Commerce Registry CA	2048	SHA1	Friday, April 27, 2012 2:39:50 AM	fa aa 27 b8 ca f5 fd f5 cd a9 8a c3 37 85 72 e0 4c e8 f2 e0
<a href="#">Colegio de Registradores Mercantile (Spanish Property &amp; Commerce Registry)</a>	Spain	Registadores de España - CA Raíz	4096	SHA1	Thursday, January 09, 2031 10:00:39 AM	21 11 65 ca 37 9f bb 5e d8 01 e3 1c 43 0a 62 aa c1 09 bc b4
<a href="#">Comodo</a>	USA	UTN - DATACorp SGC	2048	SHA1	Monday, June 24, 2019 12:06:30 PM	58 11 9f 0e 12 82 87 ea 50 fd d9 87 45 6f 4f 78 dc fa d6 d4
<a href="#">Comodo</a>	USA	UTN - USERFirst-Client Authentication and Email	2048	SHA1	Tuesday, July 09, 2019 10:36:58 AM	b1 72 b1 a5 6d 95 f9 1f e5 02 87 e1 4d 37 ea 6a 44 63 76 8a
<a href="#">Comodo</a>	USA	UTN-USERFirst-Object	2048	SHA1	Tuesday, July 09, 2019 11:40:36 AM	e1 2d fb 4b 41 d7 d9 c3 2b 30 51 4b ac 1d 81 d8 38 5e 2d 46
<a href="#">Comodo</a>	USA	Comodo AAA Certificate Services	2048	SHA1	Sunday, December 31, 2028 4:59:59 PM	d1 eb 23 a4 6d 17 d6 8f d9 25 64 c2 f1 f1 60 17 64 d8 e3 49
<a href="#">Comodo</a>	USA	COMODO ECC Certification Authority	ECDSA384	SHA384	Monday, January 18, 2038 3:59:59 PM	9f 74 4e 9f 2b 4d ba ec 0f 31 2c 50 b6 56 3b 8e 2d 93 c3 11
<a href="#">Comodo</a>	USA	AddTrust External CA Root	2048	SHA1	Saturday, May 30, 2020 3:48:38 AM	02 fa f3 e2 91 43 54 68 60 78 57 69 4d f5 e4 5b 68 85 18 68
<a href="#">Comodo</a>	USA	COMODO RSA Certification Authority	4096	SHA384	Monday, January 18, 2038 4:59:59 PM	af e5 d2 44 a8 d1 19 42 30 ff 47 9f e2 f8 97 bb cd 7a 8c b4
<a href="#">Comodo</a>	USA	USERTrust RSA Certification Authority	4096	SHA384	Monday, January 18, 2038 4:59:59 PM	2b 8f 1b 57 33 0d bb a2 d0 7a 6c 51 f7 0e e9 0d da b9 ad 8e

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<a href="#">Comodo</a>	USA	USERTrust ECC Certification Authority	ECDSA384	SHA384	Monday, January 18, 2038 4:59:59 PM	d1 cb ca 5d b2 d5 2a 7f 69 3b 67 4d e5 f0 5a 1d 0c 95 7d f0
<a href="#">Comodo</a>	USA	Comodo Certification Authority	2048	SHA1	Tuesday, December 31, 2030 4:59:59 PM	ee 86 93 87 ff fd 83 49 ab 5a d1 43 22 58 87 89 a4 57 b0 12
<a href="#">ComSign</a>	Israel	ComSign Advanced Security CA	4096	SHA1	Saturday, March 24, 2029 2:55:55 PM	80 bf 3d e9 a4 1d 76 8d 19 4b 29 3c 85 63 2c db c8 ea 8c f7
<a href="#">ComSign</a>	Israel	ComSign CA	2048	SHA1	Monday, March 19, 2029 8:02:18 AM	e1 a4 5b 14 1a 21 da 1a 79 f4 1a 42 a9 61 d6 69 cd 06 34 c1
<a href="#">ComSign</a>	Israel	ComSign Secured CA	2048	SHA1	Friday, March 16, 2029 8:04:56 AM	f9 cd 0e 2c da 76 24 c1 8f bd f0 f0 ab b6 45 b8 f7 fe d5 7a
<a href="#">ComSign</a>	Israel	ComSign Global Root CA	4096	SHA256	Wednesday, July 16, 2036 3:24:55 AM	ae 3b 31 bf 8f d8 91 07 9c f1 df 34 cb ce 6e 70 d3 7f b5 b0
<a href="#">DanID</a>	Denmark	TDC Internet Root CA	2048	SHA1	Monday, April 05, 2021 10:03:17 AM	21 fc bd 8e 7f 6c af 05 1b d1 b3 43 ec a8 e7 61 47 f2 0f 8a
<a href="#">DanID</a>	Denmark	TDC OCES CA	2048	SHA1	Wednesday, February 11, 2037 2:09:30 AM	87 81 c2 5a 96 bd c2 fb 4c 65 06 4f f9 39 0b 26 04 8a 0e 01
<a href="#">Datev</a>	Germany	CA DATEV BT 01	2048	SHA1	Monday, January 09, 2017 6:42:30 AM	da 8b 65 67 ef 3f 6e 1e a2 6a b1 4e a3 6c cb 57 28 04 18 46
<a href="#">Datev</a>	Germany	CA DATEV INT 01	2048	SHA2	Monday, January 09, 2017 6:42:30 AM	52 41 2b d6 7b 5a 6c 69 52 82 38 60 26 f0 b0 53 dd 40 0e fc
<a href="#">Datev</a>	Germany	CA DATEV STD 01	2048	SHA1	Monday, January 09, 2017 6:42:30 AM	15 03 32 a5 8d c5 91 fc 42 d4 c8 73 ff 9f 1f 0f 81 d5 97 c9
<a href="#">Datev</a>	Germany	CA DATEV BT 02	2048	SHA1	Friday, August 02, 2019 1:59:44 AM	39 41 0b c2 30 37 48 06 60 69 a7 2a 66 4d e4 c7 43 48 12 96
<a href="#">Datev</a>	Germany	CA DATEV INT 02	2048	SHA1	Friday, August 02, 2019 1:59:44 AM	93 f7 f4 8b 12 61 94 3f 6a 78 21 0c 52 e6 26 df bf bb e2 60
<a href="#">Datev</a>	Germany	CA DATEV STD 02	2048	SHA1	Friday, August 02, 2019 1:59:44 AM	ab 9d 58 c0 3f 54 b1 da e3 f7 c2 d4 c6 c1 ec 36 94 55 9c 37
<a href="#">DigiCert</a>	USA	DigiCert Assured ID Root CA	2048	SHA1	Sunday, November 09, 2031 5:00:00 PM	05 63 b8 63 0d 62 d7 5a bb c8 ab 1e 4b df b5 a8 99 b2 4d 43
<a href="#">DigiCert</a>	USA	DigiCert High Assurance EV Root CA	2048	SHA1	Sunday, November 09, 2031 5:00:00 PM	5f b7 ee 06 33 e2 59 db ad 0c 4c 9a e6 d3 8f 1a 61 c7 dc 25
<a href="#">DigiCert</a>	USA	DigiCert Global Root CA	2048	SHA1	Sunday, November 09, 2031 5:00:00 PM	a8 98 5d 3a 65 e5 c4 b2 d7 d6 6d 40 c6 dd 2f b1 9c 54 36
<a href="#">D-Trust GmbH</a>	Germany	D-TRUST Root Class 3 CA 2007	2048	SHA1	Sunday, May 15, 2022 10:20:47 PM	fd 1e d1 e2 02 1b 0b 9f 73 e8 eb 75 ce 23 43 6b bc c7 46 eb
<a href="#">D-Trust GmbH</a>	Germany	D-TRUST Root Class 2 CA 2007	2048	SHA1	Sunday, May 15, 2022 10:20:47 PM	4a 05 8f df d7 61 db 21 b0 c2 ee 48 57 9b e2 7f 42 a4 da 1c
<a href="#">D-Trust GmbH</a>	Germany	D-TRUST Qualified Root CA 1 2007:PN	2048	SHA1	Friday, June 08, 2012 4:47:46 AM	e3 d7 36 06 99 6c df ef 61 fa 04 c3 35 99 8e a9 61 04 26 4a
<a href="#">D-Trust GmbH</a>	Germany	D-TRUST Root Class 3 CA 2 2009	2048	SHA256	Monday, November 05, 2029 1:35:58 AM	58 e8 ab b0 36 15 33 fb 80 f7 9b 1b 6d 29 d3 ff 8d 5f 00 f0
<a href="#">D-Trust GmbH</a>	Germany	D-TRUST Root Class 3 CA 2 EV 2009	2048	SHA256	Monday, November 05, 2029 1:50:46 AM	96 c9 1b 0b 95 b4 10 98 42 fa d0 d8 22 79 fe 60 fa b9 16 83
<a href="#">E-Certchile</a>	Chile	E-CERT ROOT CA	4096	SHA1	Tuesday, September 05, 2028 11:39:41 AM	c1 82 11 32 8a 92 b3 b2 38 09 b9 b5 e2 74 0a 07 fb 12 eb 5e
<a href="#">Echoworx</a>	Canada	Echoworx Root CA2	2048	SHA1	Monday, October 07, 2030 3:49:13 AM	cb 65 82 64 ea 8c da 18 6e 17 52 fb 52 c3 97 36 7e a3 87 be
<a href="#">EDICOM</a>	Spain	ACEDICOM Root	4096	SHA1	Thursday, April 13, 2028 9:24:22 AM	e0 b4 32 2e b2 f6 a5 68 b6 54 53 84 48 18 4a 50 36 87 43 84
<a href="#">e-Guven Elektronik Bilgi Guvenligi A.S.</a>	Turkey	e-Guven Kok Elektronik Sertifika Hizmet Saglayicisi	2048	SHA1	Wednesday, January 04, 2017 4:32:48 AM	dd e1 d2 a9 01 80 2e 1d 87 5e 84 b3 80 7e 4b b1 fd 99 41 34
<a href="#">Entrust</a>	Canada	Entrust.net Client Certification Authority	2048	MD5	Friday, February 07, 2020 9:46:40 AM	cf 74 bf ff 9b 86 81 5b 08 33 54 40 36 3e 87 b6 b6 f0 bf 73
<a href="#">Entrust</a>	Canada	Entrust.net Secure Server Certification Authority	1024	SHA1	Saturday, May 25, 2019 9:39:40 AM	99 a6 9b e6 1a fe 88 6b 4d 2b 82 00 7c b8 54 fc 31 7e 15 39
<a href="#">Entrust</a>	Canada	Entrust.net Secure Server Certification Authority	1024	MD5	Tuesday, February 04, 2020 10:50:00 AM	89 39 57 6e 17 8d f7 05 78 0f cc 5e c8 4f 84 f6 25 3a 48 93
<a href="#">Entrust</a>	Canada	Entrust Root Certification Authority	2048	SHA1	Friday, November 27, 2026 1:53:42 PM	b3 1e b1 b7 40 e3 6c 84 02 da dc 37 d4 4d f5 d4 67 49 52 f9
<a href="#">Entrust</a>	Canada	Entrust.net Client Certification Authority	1024	MD5	Saturday, October 12, 2019 12:54:30 PM	da 79 c1 71 11 50 c2 34 39 aa 2b 0b 0c 62 fd 55 b2 f9 f5 80
<a href="#">Entrust</a>	Canada	Entrust Root Certification Authority - G2	2048	SHA256	Saturday, December 07, 2030 10:55:54 AM	8c f4 27 fd 79 0c 3a d1 66 06 8d e8 1e 57 ef bb 93 22 72 d4

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<a href="#">Entrust</a>	Canada	Entrust.net Certification Authority (2048)	2048	SHA1	Tuesday, July 24, 2029 6:15:12 AM	50 30 06 09 1d 97 d4 f5 ae 39 f7 cb e7 92 7d 7d 65 2d 34 31
<a href="#">e-tugra</a>	Turkey	EBG Elektronik Sertifika Hizmet Sağlayıcısı	4096	SHA1	Saturday, August 13, 2016 5:31:09 PM	8c 96 ba eb dd 2b 07 07 48 ee 30 32 66 a0 f3 98 6e 7c ae 58
<a href="#">GlobalSign</a>	UK	GlobalSign Root CA	2048	SHA1	Friday, January 28, 2028 5:00:00 AM	b1 bc 96 8b d4 f4 9d 62 2a a8 9a 81 f2 15 01 52 a4 1d 82 9c
<a href="#">GlobalSign</a>	UK	GlobalSign Root CA - R2	2048	SHA1	Wednesday, December 15, 2021 1:00:00 AM	75 e0 ab b6 13 85 12 27 1c 04 f8 5f dd de 38 e4 b7 24 2e fe
<a href="#">GlobalSign</a>	UK	GlobalSign SGC CA	2048	SHA1	Tuesday, January 28, 2014 12:00:00 AM	e5 21 5d 34 60 c2 c0 b2 9d ef e5 fb 66 5d aa 2c 0e 22 5c
<a href="#">GlobalSign</a>	USA	GlobalSign Root CA R3	2048	SHA256	Sunday, March 18, 2029 3:00:00 AM	d6 9b 56 11 48 f0 1c 77 c5 45 78 c1 09 26 df 5b 85 69 76 ad
<a href="#">GoDaddy</a>	USA	Go Daddy Class 2 Certification Authority	2048	SHA1	Thursday, June 29, 2034 10:06:20 AM	27 96 ba e6 3f 18 01 e2 77 26 1b a0 d7 77 70 02 8f 20 ee e4
<a href="#">GoDaddy</a>	USA	Starfield Class 2 Certification Authority	2048	SHA1	Thursday, June 29, 2034 10:39:16 AM	ad 7e 1c 28 b0 64 ef 8f 60 03 40 20 14 c3 d0 e3 37 0e b5 8a
<a href="#">GoDaddy</a>	USA	Starfield Services Root Certificate Authority	2048	SHA1	Monday, December 31, 2029 3:59:59 PM	5d 00 38 60 f0 02 ed 82 9d ea a4 18 68 f7 88 18 6d 62 12 7f
<a href="#">GoDaddy</a>	USA	ValiCert Class 2 Policy Validation Authority	1024	SHA1	Tuesday, June 25, 2019 5:19:54 PM	31 7a 2a d0 7f 2b 33 5e f5 a1 c3 4e 4b 57 e8 b7 d8 f1 fc a6
<a href="#">GoDaddy</a>	USA	Go Daddy Root Certificate Authority – G2	2048	SHA256	Thursday, December 31, 2037 4:59:59 PM	47 be ab c9 22 ea e8 0e 78 78 34 62 a7 9f 45 c2 54 fd e6 8b
<a href="#">GoDaddy</a>	USA	Starfield Root Certificate Authority – G2	2048	SHA256	Thursday, December 31, 2037 4:59:59 PM	b5 1c 06 7c ee 2b 0c 3d f8 55 ab 2d 92 f4 fe 39 d4 e7 0f 0e
<a href="#">GoDaddy</a>	USA	Starfield Services Root – G2	2048	SHA256	Thursday, December 31, 2037 4:59:59 PM	92 5a 8f 8d 2c 6d 04 e0 66 5f 59 6a ff 22 d8 63 e8 25 6f 3f
<a href="#">Government of Austria, Austria Telekom-Control Commission</a>	Austria	Telekom-Control-Kommission Top 1	2048	SHA1	Saturday, September 24, 2005 5:40:00 AM	e7 07 15 f6 f7 28 36 5b 51 90 e2 71 de e4 c6 5e be ea ca f3
<a href="#">Government of Brazil, Autoridade Certificadora Raiz Brasileira</a>	Brazil	Autoridade Certificadora Raiz Brasileira	2048	SHA1	Wednesday, November 30, 2011 4:59:00 PM	8e fd ca bc 93 e6 1e 92 5d 4d 1d ed 18 1a 43 20 a4 67 a1 39
<a href="#">Government of Brazil, Instituto Nacional de Tecnologia da Informação (ITI)</a>	Brazil	Autoridade Certificadora Raiz Brasileira v1	2048	SHA1	Thursday, July 29, 2021 11:17:10 AM	70 5d 2b 45 65 c7 04 7a 54 06 94 a7 9a f7 ab b8 42 bd c1 61
<a href="#">Government of Brazil, Instituto Nacional de Tecnologia da Informação (ITI)</a>	Brazil	Autoridade Certificadora Raiz Brasileira v2	4096	SHA512	Wednesday, June 21, 2023 12:04:57 PM	a9 82 2e 6c 69 33 c6 3c 14 8c 2d ca a4 4a 5c f1 aa d2 c4 2e
<a href="#">Government of Finland, Population Register Centre</a>	Finland	VRK Govt Root CA	2048	SHA1	Monday, December 18, 2023 6:51:08 AM	fa a7 d9 fb 31 b7 46 f2 00 a8 5e 65 79 76 13 d8 16 e0 63 b5
<a href="#">Government of France</a>	France	Secrétariat Général de la Défense Nationale	2048	SHA1	Saturday, October 17, 2020 7:29:22 AM	60 d6 89 74 b5 c2 65 9e 8a 0f c1 88 7c 88 d2 46 69 1b 18 2c
<a href="#">Government of France</a>	France	IGC/A AC racine Etat francais	4096	SHA256	Saturday, April 15, 2028 2:00:00 AM	1a c9 2f 09 ea 89 e2 8b 12 6d fa c5 1e 3a f7 ea 90 95 a3 ee
<a href="#">Government of Hong Kong (SAR), Hongkong Post</a>	Hong Kong (SAR)	Hongkong Post Root CA 1	2048	SHA1	Sunday, May 14, 2023 9:52:29 PM	d6 da a8 20 8d 09 d2 15 4d 24 b5 2f cb 34 6e b2 58 b2 8a 58
<a href="#">Government of Hong Kong (SAR), Hongkong Post</a>	Hong Kong (SAR)	Hongkong Post Root CA	2048	SHA1	Saturday, January 16, 2010 4:59:00 PM	e0 92 5e 18 c7 76 5e 22 da bd 94 27 52 9d a6 af 4e 06 64 28
<a href="#">Government of India, Ministry of Communications &amp; Information Technology, Controller of Certifying Authorities (CCA)</a>	India	CCA India 2007	2048	SHA1	Friday, July 03, 2015 11:02:48 PM	97 2d 6a ae 4a 7a 64 a5 9b d1 67 87 f2 7f 84 1c 0a 00 1f d0
<a href="#">Government of India, Ministry of Communications &amp; Information Technology, Controller of Certifying Authorities (CCA)</a>	India	CCA India 2011	2048	SHA256	Thursday, March 10, 2016 11:48:52 PM	be d5 25 d1 ac 63 a7 fc 6a 66 0b a7 a8 95 81 8d 5e 8d d5 64
<a href="#">Government of Japan, Ministry of Internal Affairs and Communications</a>	Japan	Japan Local Government PKI Application CA	2048	SHA1	Thursday, March 31, 2016 7:59:59 AM	96 83 38 f1 13 e3 6a 7b ab dd 08 f7 77 63 91 a6 87 36 58 2e
<a href="#">Government of Japan, Ministry of Internal Affairs and Communications</a>	Japan	Application CA, Japanese Government	2048	SHA1	Tuesday, December 12, 2017 8:00:00 AM	7f 8a b0 cf d0 51 87 6a 66 f3 36 0f 47 c8 8d 8c d3 35 fc 74
<a href="#">Government of Korea, Korea Information Security Agency (KISA)</a>	South Korea	KISA RootCA 3	2048	SHA1	Tuesday, November 18, 2014 11:39:51 PM	5f 4e 1f cf 31 b7 91 3b 85 0b 54 f6 e5 ff 50 1a 2b 6f c6 cf
<a href="#">Government of Korea, Korea Information Security Agency (KISA)</a>	South Korea	KISA RootCA 1	2048	SHA1	Sunday, August 24, 2025 1:05:46 AM	02 72 68 29 3e 5f 5d 17 aa a4 b3 c3 e6 36 1e 1f 92 57 5e aa
<a href="#">Government of Korea, Korea Information Security Agency (KISA)</a>	South Korea	CertRSA01	2048	SHA1	Wednesday, March 03, 2010 7:59:59 AM	f5 c2 7c f5 ff f3 02 9c cf 1a 1a 4b ec 7e e1 96 4c 77 d7 84
<a href="#">Government of Korea, Ministry of Public Administration And Security (MOPAS)</a>	South Korea	GPKIIRootCA	2048	SHA1	Tuesday, March 14, 2017 10:00:04 PM	20 cb 59 4f b4 ed d8 95 76 3f d5 25 4e 95 9a 66 74 c6 ee b2
<a href="#">Government of Korea, Ministry of Public Administration And Security (MOPAS)</a>	South Korea	Root CA	2048	SHA1	Tuesday, December 23, 2014 4:13:24 AM	b9 cd 0c f6 98 35 ea bf 3f 13 7f 20 49 e4 c9 24 87 84 77 db

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Current CA Owner	Country / Region	CA Root Name	CA Root Size	Signature Hash	CA Root Expires	Thumbprint
<a href="#">Government of Korea, Ministry of Public Administration And Security (MOPAS)</a>	South Korea	GPkIRootCA1	2048	SHA256	Saturday, August 02, 2031 11:52:30 PM	76 12 ed 9e 49 b3 65 b4 da d3 12 0c 01 e6 03 74 8d ae 8c
<a href="#">Government of Latvia, Latvian Post</a>	Latvia	VAS Latvijas Pasts SSI (RCA)	4096	SHA1	Friday, September 13, 2024 2:27:57 AM	08 64 18 e9 06 ce e8 9c 23 53 b6 e2 7f bd 9e 74 39 f7 63 16
<a href="#">Government of Latvia, Latvian State Radio &amp; Television Centre (LVRTC)</a>	Latvia	E-ME SSI (RCA)	4096	SHA1	Wednesday, May 19, 2027 1:48:15 AM	c9 32 1d e6 b5 a8 26 66 cf 69 71 a1 8a 56 f2 d3 a8 67 56 02
<a href="#">Government of Lithuania, Registru Centras</a>	Lithuania	VJ Registru Centras	4096	SHA1	Sunday, July 21, 2024 4:47:46 AM	97 1d 34 86 fc 1e 8e 63 15 f7 c6 f2 e1 29 67 c7 24 34 22 14
<a href="#">Government of Macao, Macao Post</a>	Macao SAR	Macao Post eSignTrust Root Certification Authority	2048	MD5	Tuesday, January 29, 2013 4:59:59 PM	89 c3 2e 6b 52 4e 4d 65 38 8b 9e ce dc 63 71 34 ed 41 93 a3
<a href="#">Government of Mexico, Autoridad Certificadora Raiz de la Secretaria de Economia</a>	Mexico	Secretaría de Economía Mexico	2048	SHA1	Wednesday, May 07, 2025 5:00:00 PM	34 d4 99 42 6f 9f c2 bb 27 b0 75 ba b6 82 aa e5 ef fc ba 74
<a href="#">Government of Portugal, Sistema de Certificação Electrónica do</a>	Portugal	ECRaizEstado	4096	SHA1	Sunday, June 23, 2030 6:41:27 AM	39 13 85 3e 45 c4 39 a2 da 71 8c df b6 f3 e0 33 e0 4f ee 71
<a href="#">Government of Serbia, PTT saobraćaja „Srbija“ (Serbian Post)</a>	Serbia	Posta CA Root	2048	SHA1	Friday, October 20, 2028 5:52:08 AM	d6 bf 79 94 f4 2b e5 fa 29 da 0b d7 58 7b 59 1f 47 a4 4f 22
<a href="#">Government of Slovenia, Posta Slovenije (POSTarCA)</a>	Slovenia	POSTarCA	2048	SHA1	Tuesday, February 07, 2023 4:06:58 AM	b1 ea c3 e5 b8 24 76 e9 d5 0b 1e c6 7d 2c c1 1e 12 e0 b4 91
<a href="#">Government of Slovenia, Slovenian General Certification Authority (SIGEN-CA)</a>	Slovenia	SIGEN-CA	2048	SHA1	Tuesday, June 29, 2021 1:57:46 PM	3e 42 a1 87 06 bd 0c 9c cf 59 47 50 d2 e4 d6 ab 00 48 fd c4
<a href="#">Government of Slovenia, Slovenian Governmental Certification Authority (SIGOV-CA)</a>	Slovenia	SIGOV-CA	2048	SHA1	Sunday, January 10, 2021 6:22:52 AM	7f b9 e2 c9 95 c9 7a 93 9f 9e 81 a0 7a ea 9b 4d 70 46 34 96
<a href="#">Government of South Africa, South African Post</a>	South Africa	SAPO Class 2 Root CA	2048	SHA1	Friday, September 13, 2030 5:00:00 PM	ed b3 cb 5f b4 19 a1 85 06 62 67 e5 79 15 54 e1 e2 8b 63 99
<a href="#">Government of South Africa, South African Post</a>	South Africa	SAPO Class 3 Root CA	4096	SHA1	Friday, September 13, 2030 5:00:00 PM	b1 b2 36 4f d4 d4 f5 2e 89 b2 d0 fa f3 3e 4d 62 bd 96 99 21
<a href="#">Government of South Africa, South African Post</a>	South Africa	SAPO Class 4 Root CA	4096	SHA1	Friday, September 13, 2030 5:00:00 PM	cc 7e a2 92 af 87 15 d7 4c a4 b4 15 f3 20 15 4b 24 f5 65 fd
<a href="#">Government of Spain (CAV), Izenpe S.A.</a>	Spain	Izenpe.com	2048	SHA1	Tuesday, January 30, 2018 4:00:00 PM	4a 3f 8d 6b dc 0e 1e cf cd 72 e3 77 de f2 d7 ff 92 c1 9b c7
<a href="#">Government of Spain (CAV), Izenpe S.A.</a>	Spain	Izenpe.com	4096	SHA1	Sunday, December 13, 2037 12:27:25 AM	30 77 9e 93 15 02 2e 94 85 6a 3f 8c f8 15 b0 82 f9 ae fd
<a href="#">Government of Spain, Autoritat de Certificació de la Comunitat Valenciana (ACCV)</a>	Spain	Root CA Generalitat Valenciana	2048	SHA1	Thursday, July 01, 2021 8:22:47 AM	a0 73 e5 c5 bd 43 61 0d 86 4c 21 13 0a 85 58 57 cc 9c ea 46
<a href="#">Government of Spain, Dirección General de la Policía – Ministerio del Interior – España</a>	Spain	DIRECCION GENERAL DE LA POLICIA	4096	SHA1	Friday, February 08, 2036 3:59:59 PM	b3 8f ec ec 0b 14 8a a6 8c d3 0f 01 ec 8c 84 8e 80 85 eb
<a href="#">Government of Spain, Fábrica Nacional de Moneda y Timbre (FNMT)</a>	Spain	Fabrica Nacional de Moneda y Timbre	1024	SHA1	Monday, March 18, 2019 8:26:19 AM	43 f9 b1 10 d5 ba fd 48 22 52 31 b0 d0 08 2b 37 2f ef 9a 54
<a href="#">Government of Spain, Fábrica Nacional de Moneda y Timbre (FNMT)</a>	Spain	AC RAZ FNMT-RCM	4096	SHA1	Monday, December 31, 2029 5:00:00 PM	b8 65 13 0b ed ca 38 d2 7f 69 92 94 20 77 0b ed 86 ef bc 10
<a href="#">Government of Spain, Ministerio de Trabajo e Inmigración (MTIN)</a>	Spain	AC1 RAZ MTIN	4096	SHA1	Sunday, November 03, 2019 9:17:45 AM	6a d2 3b 9d c4 8e 37 5f 85 9a d9 ca b5 85 32 5c 23 89 40 71
<a href="#">Government of Sweden (Försäkringskassan)</a>	Sweden	Swedish Government Root Authority v1	2048	SHA1	Sunday, April 14, 2030 5:43:19 AM	11 e1 9b bc 74 7b 1a ed 0d b8 33 c9 4c ac 6c 3f 85 bd eb db
<a href="#">Government of Sweden, Inera AB (SITHS-Secure IT within Health care Service)</a>	Sweden	SITHS CA v3	2048	SHA1	Friday, November 27, 2015 11:02:38 PM	16 d8 66 35 af 13 41 cd 34 79 94 45 eb 60 3e 27 37 02 96 5d
<a href="#">Government of Switzerland, Bundesamt für Informatik und Telekommunikation (BIT)</a>	Switzerland	AdminCA-CD-T01	2048	SHA1	Monday, January 25, 2016 5:36:19 AM	6b 81 44 6a 5c dd f4 74 a0 f8 00 ff be 69 fd 0d b6 28 75 16
<a href="#">Government of Switzerland, Bundesamt für Informatik und Telekommunikation (BIT)</a>	Switzerland	Admin-Root-CA	2048	SHA1	Wednesday, November 10, 2021 12:51:07 AM	25 3f 77 5b 0e 77 97 ab 64 5f 15 91 55 97 c3 9e 26 36 31 d1
<a href="#">Government of Switzerland, Bundesamt für Informatik und Telekommunikation (BIT)</a>	Switzerland	Swiss Government Root CA I	4096	SHA256	Thursday, February 15, 2035 1:59:59 AM	a1 58 51 87 15 65 86 ce f9 c4 54 e2 2a b1 5c 58 74 56 07 b4
<a href="#">Government of Switzerland, Bundesamt für Informatik und Telekommunikation (BIT)</a>	Switzerland	Swiss Government Root CA II	4096	SHA256	Friday, February 16, 2035 1:59:59 AM	c7 f7 cb e2 02 36 66 f9 86 02 5d 4a 3e 31 3f 29 eb 0c 5b 38
<a href="#">Government of Taiwan, Government Root Certification Authority (GRCA)</a>	Taiwan	TW Government Root Certification Authority	4096	SHA1	Sunday, December 05, 2032 6:23:33 AM	f4 8b 11 bf de ab be 94 54 20 71 e6 41 de 6b be 88 2b 40 b9
<a href="#">Government of The Netherlands, PKIoverheid</a>	The Netherlands	Staat der Nederlanden Root CA	2048	SHA1	Wednesday, December 16, 2015 2:15:38 AM	10 1d fa 3f d5 0b cb bb 9b b5 60 0c 19 55 a4 1a f4 73 3a 04
<a href="#">Government of The Netherlands, PKIoverheid</a>	The Netherlands	Staat der Nederlanden Root CA - G2	4096	SHA256	3/5/2020	59 af 82 79 91 86 c7 b4 75 07 cb cf 03 57 46 eb 04 dd b7 16
<a href="#">Government of the United States of America, Federal PKI</a>	USA	U.S. Government FBCA	2048	SHA1	Wednesday, October 06, 2010 11:53:56 AM	76 b7 60 96 dd 14 56 29 ac 75 85 d3 70 63 c1 bc 47 86 1c 8b
<a href="#">Government of the United States of America, Federal PKI</a>	USA	Common Policy	2048	SHA1	Friday, October 15, 2027 9:08:00 AM	cb 44 a0 97 85 7c 45 fa 18 7e d9 52 08 6c b9 84 1f 2d 51 b5

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<a href="#">Government of the United States of America, Federal PKI</a>	USA	Federal Common Policy CA	2048	SHA256	Sunday, December 01, 2030 8:45:27 AM	90 5f 94 2f d9 f2 8f 67 9b 37 81 80 fd 4f 84 63 47 f6 45 c1
<a href="#">Government of Tunisia, Agence National de Certification Electronique / National Digital Certification Agency (ANCE/NDCA)</a>	Tunisia	Agence Nationale de Certification Electronique	2048	MD5	Wednesday, August 12, 2037 2:58:14 AM	30 70 f8 83 3e 4a a6 80 3e 09 a6 4e ae 3f 7d 8a e1 fd 16 54
<a href="#">Government of Tunisia, Agence National de Certification Electronique / National Digital Certification Agency (ANCE/NDCA)</a>	Tunisia	Agence Nationale de Certification Electronique	2048	MD5	Wednesday, August 12, 2037 2:03:17 AM	d9 04 08 0a 49 29 c8 38 e9 f1 85 ec f7 a2 2d ef 99 34 24 07
<a href="#">Government of Turkey, Kamu Sertifikasyon Merkezi (Kamu SM)</a>	Turkey	Kamu Sertifikasyon Merkezi	2048	SHA1	Monday, August 21, 2017 3:37:07 AM	1b 4b 39 61 26 27 6b 64 91 a2 68 6d d7 02 43 21 2d 1f 1d 96
<a href="#">Government of Uruguay, Correo Uruguayo</a>	Uruguay	Correo Uruguayo - Root CA	4096	SHA1	Monday, December 30, 2030 7:59:59 PM	f9 dd 19 26 6b 20 43 f1 fe 4b 3d cb 01 90 af f1 1f 31 a6 9d
<a href="#">Government of Venezuela, Superintendencia de Servicios de Certificación Electrónica (SUSCERTE)</a>	Venezuela	Autoridad de Certificación Raíz de la República Bolivariana de Venezuela	4096	SHA1	Thursday, February 11, 2027 4:59:59 PM	dd 83 c5 19 d4 34 81 fa d4 c2 2c 03 d7 02 fe 9f 3b 22 f5 17
<a href="#">Government of Venezuela, Superintendencia de Servicios de Certificación Electrónica (SUSCERTE)</a>	Venezuela	Autoridad de Certificación Raíz de la República Bolivariana de Venezuela	4096	SHA384	Monday, December 23, 2030 3:59:59 PM	39 8e be 9c 0f 46 c0 79 c3 c7 af e0 7a 2f dd 9f ae 5f 8a 5c
<a href="#">Halcom D.D.</a>	Slovenia	Halcom CA FO	2048	SHA1	Friday, June 05, 2020 2:33:31 AM	04 09 56 5b 77 da 58 2e 64 95 ac 00 60 a7 23 54 e6 4b 01 92
<a href="#">Halcom D.D.</a>	Slovenia	Halcom CA PO 2	2048	SHA1	Thursday, February 07, 2019 10:33:31 AM	7f bb 6a cd 7e 0a b4 38 da af 6f d5 02 10 d0 07 c6 c0 82 9c
<a href="#">I.CA První certifikační autorita, a.s.</a>	Czech Republic	I.CA Czech Accredited Certification Services	2048	SHA1	Saturday, March 31, 2018 5:00:00 PM	64 90 2a d7 27 7a f3 e3 2c d8 cc 1d c7 9d e1 fd 7f 80 69 ea
<a href="#">I.CA První certifikační autorita, a.s.</a>	Czech Republic	I.CA Czech Certification Services	2048	SHA1	Saturday, March 31, 2018 5:00:00 PM	ab 16 dd 14 4e cd c0 fc 4b aa b6 2e cf 04 08 89 6f de 52 b7
<a href="#">I.CA První certifikační autorita, a.s.</a>	Czech Republic	I.CA - Standard Certification Authority	2048	SHA256	Saturday, August 31, 2019 5:00:00 PM	90 de ce 77 f8 c8 25 34 0e 62 eb d6 35 e1 be 20 cf 73 27 dd
<a href="#">I.CA První certifikační autorita, a.s.</a>	Czech Republic	I.CA - Qualified Certification Authority	2048	SHA256	Saturday, August 31, 2019 5:00:00 PM	d2 44 1a a8 c2 03 ae ca a9 6e 50 1f 12 4d 52 b6 8f e4 c3 75
<a href="#">IdenTrust</a>	USA	DST (ABA.ECOM) CA	2048	SHA1	Thursday, July 09, 2009 10:33:53 AM	7a 74 41 0f b0 cd 5c 97 2a 36 4b 71 bf 03 1d 88 a6 51 0e 9e
<a href="#">IdenTrust</a>	USA	DST RootCA X2	2048	SHA1	Thursday, November 27, 2008 3:46:16 PM	67 eb 33 7b 68 4c eb 0e c2 b0 76 0a b4 88 27 8c dd 95 97 dd
<a href="#">IdenTrust</a>	USA	Xcert EZ by DST	2048	SHA1	Saturday, July 11, 2009 9:14:18 AM	68 ed 18 b3 09 cd 52 91 c0 d3 35 7c 1d 11 41 bf 88 38 66 b1
<a href="#">IdenTrust</a>	USA	DST ACES CA X6	2048	SHA1	Monday, November 20, 2017 2:19:58 PM	40 54 da 6f 1c 3f 40 74 ac ed 0f ec cd db 79 d1 53 fb 90 1d
<a href="#">IdenTrust</a>	USA	DST (ANX Network) CA	1024	SHA1	Sunday, December 09, 2018 9:16:48 AM	76 39 c7 18 47 e1 51 b5 c7 ea 01 c7 58 fb f1 2a ba 29 8f 7a
<a href="#">IdenTrust</a>	USA	DSTCA E1	1024	SHA1	Monday, December 10, 2018 11:40:23 AM	81 96 8b 3a ef 1c dc 70 f5 fa 32 69 c2 92 a3 63 5b d1 23 d3
<a href="#">IdenTrust</a>	USA	DST (Baltimore EZ) CA	2048	SHA1	Friday, July 03, 2009 12:56:53 PM	a3 e3 1e 20 b2 e4 6a 32 85 20 47 2d 0c de 95 23 e7 26 0c 6d
<a href="#">IdenTrust</a>	USA	DSTCA E2	1024	SHA1	Sunday, December 09, 2018 12:47:26 PM	ab 48 f3 33 db 04 ab b9 c0 72 da 5b 0c c1 d0 57 f0 36 9b 46
<a href="#">IdenTrust</a>	USA	DST RootCA X1	2048	SHA1	Friday, November 28, 2008 11:18:55 AM	b7 2f ff 92 d2 ce 43 de 0a 8d 4c 54 8c 50 37 26 a8 1e 2b 93
<a href="#">IdenTrust</a>	USA	DST-Entrust GTI CA	1024	SHA1	Saturday, December 08, 2018 5:32:24 PM	bc 92 19 dd c9 8e 14 bf 1a 78 1f 6e 28 0b 04 c2 7f 90 27 12
<a href="#">IdenTrust</a>	USA	DST (National Retail Federation) RootCA	2048	SHA1	Monday, December 08, 2008 9:14:16 AM	cf de fe 10 2f da 05 bb e4 c7 8d 2e 44 23 58 90 05 b2 57 1d
<a href="#">IdenTrust</a>	USA	DST Root CA X3	2048	SHA1	Thursday, September 30, 2021 7:01:15 AM	da c9 02 4f 54 d8 f6 df 94 93 5f b1 73 26 38 ca 6a d7 7c 13
<a href="#">IdenTrust</a>	USA	DST (United Parcel Service) RootCA	2048	SHA1	Saturday, December 06, 2008 5:25:46 PM	ec 0c 37 16 ea 9e df ad c3 5d fb d5 56 08 e6 0a 05 d3 cb f3
<a href="#">Infonotary Plc</a>	Bulgaria	Infonotary CSP Root	4096	SHA1	Friday, March 06, 2026 9:33:05 AM	04 46 c8 bb 9a 69 83 c9 5c 8a 2e 54 64 68 7c 11 15 aa b7 4a
<a href="#">Internet Publishing Services s.l. (ipsCA)</a>	Spain	IPS SERVIDORES	1024	MD5	Tuesday, December 29, 2009 4:21:07 PM	24 ba 6d 6c 8a 5b 58 37 a4 8d b5 fa e9 19 ea 67 5c 94 d2 17
<a href="#">Internet Publishing Services s.l. (ipsCA)</a>	Spain	ipsCA Global CA Root	2048	SHA1	Tuesday, December 25, 2029 6:38:44 AM	3c 71 d7 0e 35 a5 da a8 b2 e3 81 2d c3 67 74 17 f5 99 0d f3
<a href="#">Internet Publishing Services s.l. (ipsCA)</a>	Spain	ipsCA Main CA Root	2048	SHA1	Tuesday, December 25, 2029 6:54:36 AM	cf e4 31 3d ba 05 b8 a7 c3 00 63 99 5a 9e b7 c2 47 ad 8f d5
<a href="#">Japan Certification Services, Inc. (JCSJ)</a>	Japan	Japan Certification Services, Inc. SecureSign RootCA2	2048	SHA1	Tuesday, September 15, 2020 7:59:59 AM	00 ea 52 2c 8a 9c 06 aa 3e cc e0 b4 fa 6c dc 21 d9 2e 80 99



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<a href="#">Japan Certification Services, Inc. (JCSI)</a>	Japan	SecureSign RootCA3	2048	SHA1	Tuesday, September 15, 2020 7:59:59 AM	8e b0 3f c3 cf 7b b2 92 86 62 68 b7 51 22 3d b5 10 34 05 cb
<a href="#">Japan Certification Services, Inc. (JCSI)</a>	Japan	SecureSign RootCA1	2048	SHA1	Tuesday, September 15, 2020 7:59:59 AM	ca bb 51 67 24 00 58 8e 64 19 f1 d4 08 78 d0 40 3a a2 02 64
<a href="#">Japan Certification Services, Inc. (JCSI)</a>	Japan	SecureSign RootCA11	2048	SHA1	Saturday, April 07, 2029 9:56:47 PM	3b c4 9f 48 f8 f3 73 a0 9c 1e bd f8 5b b1 c3 65 c7 d8 11 b3
<a href="#">KEYNECTIS</a>	France	CertPlus Class 1 Primary CA	2048	SHA1	Monday, July 06, 2020 4:59:59 PM	6a 17 45 70 a9 16 fb e8 44 53 ee d3 d0 70 a1 d8 da 44 28 29
<a href="#">KEYNECTIS</a>	France	CertPlus Class 3P Primary CA	2048	SHA1	Saturday, July 06, 2019 4:59:59 PM	21 6b 2a 29 e6 2a 00 ce 82 01 46 d8 24 41 a1 b9 25 11 b2 79
<a href="#">KEYNECTIS</a>	France	CertPlus Class 2 Primary CA	2048	SHA1	Saturday, July 06, 2019 4:59:59 PM	74 20 74 41 72 9c dd 92 ec 79 31 d8 23 10 8d c2 81 92 e2 bb
<a href="#">KEYNECTIS</a>	France	Class 3 Primary CA	2048	SHA1	Saturday, July 06, 2019 4:59:59 PM	d2 ed f8 8b 41 b6 fe 01 46 1d 6e 28 34 ec 7c 8f 6c 77 72 1e
<a href="#">KEYNECTIS</a>	France	CertPlus Class 3TS Primary CA	2048	SHA1	Saturday, July 06, 2019 4:59:59 PM	f4 40 95 c2 38 ac 73 fc 4f 77 bf 8f 9d f0 78 f0 91 bc 52
<a href="#">KEYNECTIS</a>	France	Keynectsis Root CA	2048	SHA256	Monday, May 25, 2020 5:00:00 PM	9c 61 5c 4d 4d 85 10 3a 53 26 c2 4d ba ea e4 a2 d5 cc 97
<a href="#">LuxTrust S.A.</a>	Luxembourg	LuxTrust Global Root CA	2048	SHA256	Wednesday, March 17, 2021 2:51:37 AM	c9 3c 34 ea 90 d9 13 0c 0f 03 00 4b 98 bd 8b 35 70 91 56 11
<a href="#">Microsec e-Szignó CA</a>	Hungary	Microsec e-Szignó Root CA	2048	SHA1	Thursday, April 06, 2017 5:28:44 AM	23 88 c9 d3 71 cc 9e 96 3d ff 7d 3c a7 ce fc d6 25 ec 19 0d
<a href="#">Microsec e-Szignó CA</a>	Hungary	Microsec e-Szignó Root CA 2009	2048	SHA256	Sunday, December 30, 2029 4:30:18 AM	89 df 74 fe 5c f4 0f 4a 80 f9 e3 37 7d 54 da 91 e1 01 31 8e
<a href="#">Microsoft Corporation</a>	USA	Microsoft Authenticode(tm) Root Authority	2048	MD5	Friday, December 31, 1999 4:59:59 PM	7f 88 cd 72 23 f3 c8 13 81 8c 99 46 14 a8 9c 99 fa 3b 52 47
<a href="#">Microsoft Corporation</a>	USA	Microsoft Root Authority	2048	MD5	Thursday, December 31, 2020 12:00:00 AM	a4 34 89 15 9a 52 0f 0d 93 d0 32 cc af 37 e7 fe 20 a8 b4 19
<a href="#">Microsoft Corporation</a>	USA	Microsoft Root Certificate Authority	4096	SHA1	Sunday, May 09, 2021 4:28:13 PM	cd 4d ee ae 60 00 ac 7f 40 c3 80 2c 17 1e 30 14 80 30 c0 72
<a href="#">Microsoft Corporation</a>	USA	Microsoft Time Stamping Service Root	1024	MD5	Thursday, December 30, 1999 4:59:59 PM	24 5c 97 df 75 14 e7 cf 2d f8 be 72 ae 95 7b 9e 04 74 1e 85
<a href="#">Microsoft Corporation</a>	USA	Microsoft Root Certificate Authority 2010	4096	SHA256	Saturday, June 23, 2035 3:04:01 PM	3b 1e fd 3a 66 ea 28 b1 66 97 39 47 03 a7 2c a3 40 a0 5b d5
<a href="#">Microsoft Corporation</a>	USA	Microsoft Root Certificate Authority 2011	4096	SHA256	Saturday, March 22, 2036 3:13:04 PM	8f 43 28 8a d2 72 f3 10 3b 6f b1 42 84 85 ea 30 14 c0 bc fe
<a href="#">Natixis</a>	France	CESAM	2048	SHA1	Wednesday, January 30, 2019 7:19:31 AM	67 24 89 80 de 77 5d 2c 9b 04 e4 03 07 94 0b ad b3 51 f3 95
<a href="#">NetLock Ltd.</a>	Hungary	NetLock Uzleti (Class B) Tanusitványkiado	1024	MD5	Wednesday, February 20, 2019 7:10:22 AM	87 9f 4b ee 05 df 98 58 3b e3 60 d6 33 e7 0d 3f fe 98 71 af
<a href="#">NetLock Ltd.</a>	Hungary	NetLock Minositett Kozjegyzoi (Class QA) Tanusitványkiad	2048	SHA1	Wednesday, December 14, 2022 6:47:11 PM	01 68 97 e1 a0 b8 f2 c3 b1 34 66 5c 20 a7 27 b7 a1 58 e2 8f
<a href="#">NetLock Ltd.</a>	Hungary	NetLock Kozjegyzoi (Class A) Tanusitványkiado	2048	MD5	Tuesday, February 19, 2019 4:14:47 PM	ac ed 5f 65 53 fd 25 ce 01 5f 1f 7a 48 3b 6a 74 9f 61 78 c6
<a href="#">NetLock Ltd.</a>	Hungary	NetLock Expressz (Class C) Tanusitványkiado	1024	MD5	Wednesday, February 20, 2019 7:08:11 AM	e3 92 51 2f 0a cf f5 05 df f6 de 06 71 75 37 e1 65 ea 57 4b
<a href="#">NetLock Ltd.</a>	Hungary	NetLock Arany (Class Gold) Főtanúsítvány	2048	SHA256	Wednesday, December 6, 2028 8:08:21 AM	06 08 3f 59 3f 15 a1 04 a0 69 a4 6b a9 03 d0 06 b7 97 09 91
<a href="#">NetLock Ltd.</a>	Hungary	NetLock Platina (Class Platinum) Főtanúsítvány	4096	SHA256	Wednesday, December 6, 2028 8:12:44 AM	ec 93 de 08 3c 93 d9 33 a9 86 b3 d5 cd e2 5a cb 2f ee cf 8e
<a href="#">Netrust Pte Ltd</a>	Singapore	Netrust CA1	2048	SHA1	Monday, March 29, 2021 7:57:45 PM	55 c8 6f 74 14 ac 8b dd 68 14 f4 d8 6a f1 5f 37 10 e1 04 d0
<a href="#">Network Solutions</a>	USA	UTN-USERSFirst-Hardware	2048	SHA1	Tuesday, July 09, 2019 11:19:22 AM	04 83 ed 33 99 ac 36 08 05 87 22 ed bc 5e 46 00 e3 be f9 d7
<a href="#">Network Solutions</a>	USA	Network Solutions Certificate Authority	2048	SHA1	Tuesday, December 31, 2030 4:59:59 PM	71 89 9a 67 bf 33 af 31 be fd c0 71 f8 77 33 b1 83 85 63 32
<a href="#">Nova Ljubljanska Banka d.d. (NLB)</a>	Slovenia	NLB Nova Ljubljanska Banka d.d. Ljubljana	2048	SHA1	Monday, May 15, 2023 4:22:45 AM	04 56 f2 3d 1e 9c 43 ae cb 0d 80 71 f1 c0 06 47 55 1a 05 f4 56
<a href="#">Personal ID Ltd.</a>	Israel	PersonalID Trustworthy RootCA 2011	4096	SHA256	Sunday, September 01, 2041 12:45:16 AM	43 94 ce 31 26 ff 1a 22 4c dd 4d ee b4 f4 ec 1d a3 68 ef 6a
<a href="#">Post.Trust</a>	Ireland	Post.Trust Root CA	2048	SHA1	Tuesday, July 05, 2022 1:12:33 AM	c4 67 4d dc 6c e2 96 7f f9 c9 2e 07 2e f8 e8 a7 fb d6 a1 31
<a href="#">Post.Trust</a>	Ireland	Post.Trust Root CA	2048	SHA1	Friday, August 20, 2010 6:56:21 AM	bc 7b 3c 6f ef 26 b9 f7 ab 10 d7 a1 f6 b6 7c 5e d2 a1 2d 3d

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Current CA Owner	Country / Region	CA Root Name	CA Root Size	Signature Hash	CA Root Expires	Thumbprint
<a href="#">QuoVadis</a>	Bermuda	QuoVadis Root CA 3	4096	SHA1	Monday, November 24, 2031 12:06:44 PM	1f 49 14 f7 d8 74 95 1d dd ae 02 c0 be fd 3a 2d 82 75 51 85
<a href="#">QuoVadis</a>	Bermuda	QuoVadis Root CA 2	4096	SHA1	Monday, November 24, 2031 11:23:33 AM	ca 3a fb cf 12 40 36 4b 44 b2 16 20 88 80 48 39 19 93 7c f7
<a href="#">QuoVadis</a>	Bermuda	QuoVadis Root Certification Authority	2048	SHA1	Wednesday, March 17, 2021 11:33:33 AM	de 3f 40 bd 50 93 d3 9b 6c 60 f6 da bc 07 62 01 00 89 76 c9
<a href="#">Red Abogacia</a>	Spain	Autoridad de Certificacion de la Abogacia	2048	SHA1	Thursday, June 13, 2030 3:00:00 PM	7f 8a 77 83 6b dc 6d 06 8f 8b 07 37 fc c5 72 54 13 06 8c a4
<a href="#">RSA Security</a>	USA	RSA Security 2048 V3	2048	SHA1	Sunday, February 22, 2026 1:39:23 PM	25 01 90 19 cf fb d9 99 1c b7 68 25 74 8d 94 5f 30 93 95 42
<a href="#">RSA Security</a>	USA	ValiCert Class 3 Policy Validation Authority	1024	SHA1	Tuesday, June 25, 2019 5:22:33 PM	69 bd 8c f4 9c d3 00 fb 59 2e 17 93 ca 55 6a f3 ec aa 35 fb
<a href="#">SECOM Trust Systems Co. Ltd.</a>	Japan	Security Communication EV RootCA1	2048	SHA1	Friday, June 05, 2037 7:12:32 PM	fe b8 c4 32 dc f9 76 9a ce ae 3d d8 90 8f fd 28 86 65 64 7d
<a href="#">SECOM Trust Systems Co. Ltd.</a>	Japan	Security Communication RootCA1	2048	SHA1	Friday, September 29, 2023 9:20:49 PM	36 b1 2b 49 f9 81 9e d7 4c 9e bc 38 0f c6 56 8f 5d ac b2 f7
<a href="#">SECOM Trust Systems Co. Ltd.</a>	Japan	ValiCert Class 1 Policy Validation Authority	1024	SHA1	Tuesday, June 25, 2019 3:23:48 PM	e5 df 74 3c b6 01 c4 9b 98 43 dc ab 8c e8 6a 81 10 9f e4 8e
<a href="#">SECOM Trust Systems Co. Ltd.</a>	Japan	Security Communication RootCA2	2048	SHA256	Monday, May 28, 2029 9:00:39 PM	5f 3b 8c f2 f8 10 b3 7d f8 b4 ce ec 19 19 c3 73 34 b9 c7 74
<a href="#">Serasa</a>	Brazil	Serasa Certificate Authority III	2048	SHA1	Thursday, November 21, 2024 6:24:14 AM	9e d1 80 28 fb 1e 8a 97 01 48 0a 78 90 a5 9a cd 73 df f8 71
<a href="#">Serasa</a>	Brazil	Serasa Certificate Authority II	2048	SHA1	Thursday, November 21, 2024 5:44:48 AM	31 e2 c5 2c e1 08 9b ef fd da db 26 dd 7c 78 2e bc 40 37 bd
<a href="#">Serasa</a>	Brazil	Serasa Certificate Authority I	2048	SHA1	Thursday, November 21, 2024 7:12:45 AM	a7 f8 39 0b a5 77 05 09 6f d3 69 a1 d4 2e 71 98 c6 d4 d9 d5
<a href="#">Shanghai Electronic Certification Authority Co. Ltd. (SHECA)</a>	China	UCA Global Root	4096	SHA1	Wednesday, December 30, 2037 4:00:00 PM	0b 97 2c 9e a6 e7 cc 58 d9 3b 20 bf 71 ec 41 2e 72 09 fa bf
<a href="#">Shanghai Electronic Certification Authority Co. Ltd. (SHECA)</a>	China	UCA Root	2048	SHA1	Sunday, December 30, 2029 4:00:00 PM	82 50 be d5 a2 14 43 3a 66 37 7c bc 10 ef 83 f6 69 da 3a 67
<a href="#">Skaitmeninio sertifikavimo centras (SSC)</a>	Lithuania	SSC Root CA C	4096	SHA1	Tuesday, December 22, 2026 5:11:30 AM	23 e8 33 23 3e 7d 0c c9 2b 7c 42 79 ac 19 c2 f4 74 d6 04 ca
<a href="#">Skaitmeninio sertifikavimo centras (SSC)</a>	Lithuania	SSC Root CA B	4096	SHA1	Friday, December 25, 2026 5:08:26 AM	3e 84 d3 bc c5 44 c0 f6 fa 19 43 5c 85 1f 3f 2f cb a8 e8 14
<a href="#">Skaitmeninio sertifikavimo centras (SSC)</a>	Lithuania	SSC Root CA A	4096	SHA1	Monday, December 28, 2026 5:05:04 AM	5a 5a 4d af 78 61 26 7c 4b 1f 1e 67 58 6b ae 6e d4 fe b9 3f
<a href="#">Start Commercial (StartCom) Ltd.</a>	Israel	StartCom Certification Authority	4096	SHA1	Wednesday, September 17, 2036 12:46:36 P	3e 2b f7 f2 03 1b 96 f3 8c e6 c4 d8 a8 5d 3e 2d 58 47 6a 0f
<a href="#">S-TRUST</a>	Germany	S-TRUST Authentication and Encryption Root CA 2005:PN	2048	SHA1	Friday, June 21, 2030 4:59:59 PM	be b5 a9 95 74 6b 9e df 73 8b 56 e6 df 43 7a 77 be 10 6b 81
<a href="#">Swisscom Solutions AG</a>	Switzerland	Swisscom Root CA 1	4096	SHA1	Monday, August 18, 2025 3:06:20 PM	5f 3a fc 0a 8b 64 f6 86 67 34 74 df 7e a9 a2 fe f9 fa 7a 51
<a href="#">Swisscom Solutions AG</a>	Switzerland	Swisscom Root CA 2	4096	SHA256	Wednesday, June 25, 2031 12:38:14 AM	77 47 4f c6 30 e4 0f 4c 67 34 8f ba b8 c6 95 4a 8a 41 ec
<a href="#">SwissSign AG</a>	Switzerland	SwissSign Silver CA - G2	4096	SHA1	Saturday, October 25, 2036 1:32:46 AM	9b aa e5 9f 56 ee 21 cb 43 5a be 25 93 df af f0 40 d1 1d cb
<a href="#">SwissSign AG</a>	Switzerland	SwissSign Platinum CA - G2	4096	SHA1	Saturday, October 25, 2036 1:36:00 AM	56 e0 fa c0 3b 8f 18 23 55 18 e5 d3 11 ca e8 c2 43 31 ab 66
<a href="#">SwissSign AG</a>	Switzerland	SwissSign Gold CA - G2	4096	SHA1	Saturday, October 25, 2036 1:30:35 AM	d8 c5 38 8a b7 30 1b 1b 6e d4 7a e6 45 25 3a 6f 9f 1a 27 61
<a href="#">SwissSign AG</a>	Switzerland	SwissSign Gold Root CA - G3	4096	SHA256	Tuesday, August 04, 2037 6:31:47 AM	0b 71 99 a1 c7 f3 ad df 7b a7 ea b8 eb 57 4a e8 0d 60 dd de
<a href="#">SwissSign AG</a>	Switzerland	SwissSign Platinum Root CA - G3	4096	SHA256	Tuesday, August 04, 2037 6:34:04 AM	a1 e7 c6 00 aa 41 70 e5 b7 4b c9 4f 9b 07 93 ed c2 61 b4 b9
<a href="#">SwissSign AG</a>	Switzerland	SwissSign Silver Root CA - G3	4096	SHA256	Tuesday, August 04, 2037 6:19:14 AM	8d 08 fc 43 c0 77 0c a8 4f 4d cc b2 d4 1a 5d 95 6d 78 6d c4
<a href="#">TAIWAN-CA INC.</a>	Taiwan	TWCA Root Certification Authority 1	2048	SHA1	Tuesday, December 31, 2030 8:59:59 AM	cf 9e 87 6d d3 eb fc 42 26 97 a3 b5 a3 7a a0 76 a9 06 23 48
<a href="#">TAIWAN-CA INC.</a>	Taiwan	TWCA Root Certification Authority 2	4096	SHA256	Tuesday, December 31, 2030 8:59:59 AM	df 64 6d cb 7b 0f d3 a9 6a ee 88 c6 4e 2d 67 67 11 ff 9d 5f
<a href="#">TeliaSonera</a>	Finland	Sonera Class2 CA	2048	SHA1	Tuesday, April 06, 2021 12:29:40 AM	37 f7 6d e6 07 7c 90 c5 b1 3e 93 1a b7 41 10 b4 f2 e4 9a 27
<a href="#">TeliaSonera</a>	Finland	Sonera Class1 CA	2048	SHA1	Tuesday, April 06, 2021 3:49:13 AM	07 47 22 01 99 ce 74 b9 7c b0 3d 79 b2 64 a2 c8 55 e9 33 ff



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Current CA Owner	Country / Region	CA Root Name	CA Root Size	Signature Hash	CA Root Expires	Thumbprint
<a href="#">TeliaSonera</a>	Finland	TeliaSonera Root CA v1	4096	SHA1	Monday, October 18, 2032 5:00:50 AM	43 13 bb 96 f1 d5 86 9b c1 4e 6a 92 fe cf f6 34 69 87 82 37
<a href="#">Trend Micro (was AffirmTrust)</a>	USA	AffirmTrust Commercial	2048	SHA256	Tuesday, December 31, 2030 7:06:06 AM	f9 b5 b6 32 45 5f 9c be ec 57 5f 80 dc e9 6e 2c c7 b2 78 b7
<a href="#">Trend Micro (was AffirmTrust)</a>	USA	AffirmTrust Networking	2048	SHA1	Tuesday, December 31, 2030 7:08:24 AM	29 36 21 02 8b 20 ed 02 f5 66 c5 32 d1 d6 ed 90 9f 45 00 2f
<a href="#">Trend Micro (was AffirmTrust)</a>	USA	AffirmTrust Premium	4096	SHA384	Monday, December 31, 2040 7:10:36 AM	d8 a6 33 2c e0 03 6f b1 85 f6 63 4f 7d 6a 06 65 26 32 28 27
<a href="#">Trend Micro (was AffirmTrust)</a>	USA	AffirmTrust Premium ECC	ECDSA384	SHA384	Monday, December 31, 2040 7:20:24 AM	b8 23 6b 00 2f 1d 16 86 53 01 55 6c 11 a4 37 ca eb ff c3 bb
<a href="#">TrustCenter (a company of Chosen Security)</a>	Germany	TC TrustCenter Universal CA I	2048	SHA1	Wednesday, December 31, 2025 3:59:59 PM	6b 2f 34 ad 89 58 be 62 fd b0 6b 5c ce bb 9d d9 4f 4e 39 f3
<a href="#">TrustCenter (a company of Chosen Security)</a>	Germany	TC TrustCenter Universal CA II	2048	SHA1	Tuesday, December 31, 2030 3:59:59 PM	8c c4 30 7b c6 07 55 e7 b2 2d d9 f7 fe a2 45 93 6c 7c f2 88
<a href="#">TrustCenter (a company of Chosen Security)</a>	Germany	TC TrustCenter Class 3 CA	1024	MD5	Saturday, January 01, 2011 4:59:59 AM	9f c7 96 e8 f8 52 4f 86 3a e1 49 6d 38 12 42 10 5f 1b 78 f5
<a href="#">TrustCenter (a company of Chosen Security)</a>	Germany	TC TrustCenter Class 1 CA	1024	MD5	Saturday, January 01, 2011 4:59:59 AM	72 0f c1 5d dc 27 d4 56 d0 98 fa bf 3c dd 78 d3 1e f5 a8 da
<a href="#">TrustCenter (a company of Chosen Security)</a>	Germany	TC TrustCenter Class 2 CA	1024	MD5	Saturday, January 01, 2011 4:59:59 AM	83 8e 30 f7 7f dd 14 aa 38 5e d1 45 00 9c 0e 22 36 49 4f aa
<a href="#">TrustCenter (a company of Chosen Security)</a>	Germany	TC TrustCenter Class 3 CA II	2048	SHA1	Wednesday, December 31, 2025 3:59:59 PM	80 25 ef f4 6e 70 c8 d4 72 24 65 84 fe 40 3b 8a 8d 6a db f5
<a href="#">TrustCenter (a company of Chosen Security)</a>	Germany	TC TrustCenter Class 4 CA II	2048	SHA1	Wednesday, December 31, 2025 3:59:59 PM	a6 9a 91 fd 05 7f 13 6a 42 63 0b b1 76 0d 2d 51 12 0c 16 50
<a href="#">TrustCenter (a company of Chosen Security)</a>	Germany	TC TrustCenter Time Stamping CA	1024	MD5	Saturday, January 01, 2011 4:59:59 AM	a3 99 f7 6f 0c bf 4c 9d a5 5e 4a c2 e4 89 60 98 4b 29 05 b6
<a href="#">TrustCenter (a company of Chosen Security)</a>	Germany	TC TrustCenter Class 2 CA II	2048	SHA1	Wednesday, December 31, 2025 3:59:59 PM	ae 50 83 ed 7c f4 5c bc 8f 61 c6 21 fe 68 5d 79 42 21 15 6e
<a href="#">TrustCenter (a company of Chosen Security)</a>	Germany	TC TrustCenter Class 4 CA	1024	MD5	Saturday, January 01, 2011 4:59:59 AM	d2 9f 6c 98 be fc 6d 98 65 21 54 3e e8 be 56 ce bc 28 8c f3
<a href="#">TrustCenter (a company of Chosen Security)</a>	Germany	TC TrustCenter Universal CA III	2048	SHA1	Monday, December 31, 2029 4:59:59 PM	96 56 cd 7b 57 96 98 95 d0 e1 41 46 68 06 fb b8 c6 11 06 87
<a href="#">Trustis Limited</a>	United Kingdom	Trustis FPS Root CA	2048	SHA1	Sunday, January 21, 2024 4:36:54 AM	3b c0 38 0b 33 c3 f6 a6 0c 86 15 22 93 d9 df ff f5 4b 81 c0 04
<a href="#">Trustis Limited</a>	United Kingdom	Trustis EVS Root CA	2048	SHA1	Saturday, January 09, 2027 4:56:00 AM	ed 8d c8 38 6c 48 86 ae ee 07 91 58 aa c3 bf e6 58 e3 94 b4
<a href="#">Trustwave</a>	USA	Secure Global CA	2048	SHA1	Monday, December 31, 2029 12:52:06 PM	3a 44 73 5a e5 81 90 1f 24 86 61 46 1e 3b 9c c4 5f f5 3a 1b
<a href="#">Trustwave</a>	USA	SecureTrust CA	2048	SHA1	Monday, December 31, 2029 12:40:55 PM	87 82 c6 c3 04 35 3b cf d2 96 92 d2 59 3e 7d 44 d9 34 ff 11
<a href="#">Trustwave</a>	USA	XRamp Global Certification Authority	2048	SHA1	Sunday, December 31, 2034 10:37:19 PM	b8 01 86 d1 eb 9c 86 a5 41 04 cf 30 54 f3 4c 52 b7 e5 58 c6
<a href="#">T-Systems (Deutsche Telekom)</a>	Germany	Deutsche Telekom Root CA 2	2048	SHA1	Tuesday, July 09, 2019 4:59:00 PM	85 a4 08 c0 9c 19 3e 5d 51 58 7d cd d6 13 30 fd 8c de 37 bf
<a href="#">T-Systems (Deutsche Telekom)</a>	Germany	T-TeleSec GlobalRoot Class 3	2048	SHA256	Saturday, October 01, 2033 4:59:59 PM	55 a6 72 3e cb f2 ec cd c3 23 74 70 19 9d 2a be 11 e3 81 d1
<a href="#">TurkTrust</a>	Turkey	TÜRKTRUST Bilgi İletişim ve Bilişim Güvenliği Hizmetleri A.Ş.	2048	SHA1	Sunday, March 22, 2015 3:27:17 AM	79 98 a3 08 e1 4d 65 85 e6 c2 1e 15 3a 71 9f ba 5a d3 4a d9
<a href="#">TurkTrust</a>	Turkey	TURKTRUST Elektronik İşlem Hizmetleri	2048	SHA1	Sunday, March 22, 2015 3:04:51 AM	75 02 51 b2 c6 32 53 6f 9d 91 72 79 54 3c 13 7c d7 21 c6 e0
<a href="#">TurkTrust</a>	Turkey	TURKTRUST Elektronik Sertifika Hizmet Sağlayıcısı	2048	SHA1	Wednesday, September 16, 2015 3:07:57 AM	b4 35 d4 e1 11 9d 1c 66 90 a7 49 eb b3 94 bd 63 7b a7 82 b7
<a href="#">TurkTrust</a>	Turkey	TURKTRUST Elektronik İşlem Hizmetleri	2048	SHA1	Wednesday, September 16, 2015 5:13:05 AM	c0 db 57 81 57 e9 ee 82 b5 91 7d fd d0 6d 82 ee 90 39 c4 e2
<a href="#">TurkTrust</a>	Turkey	TÜRKTRUST Elektronik Sertifika Hizmet Sağlayıcısı	2048	SHA1	Friday, December 22, 2017 10:37:19 AM	f1 7f 6f b6 31 cd 99 e3 a3 c8 7f fe 1c f1 81 10 88 d9 60 33
<a href="#">Unizeto CERTUM</a>	Poland	Certum CA	2048	SHA1	Friday, June 11, 2027 3:46:39 AM	62 52 dc 40 f7 11 43 a2 2f de 9e f7 34 8e 06 42 51 b1 81 18
<a href="#">Unizeto CERTUM</a>	Poland	Certum Trusted Network CA	2048	SHA1	Monday, December 31, 2029 5:07:37 AM	07 e0 32 e0 20 b7 2c 3f 19 2f 06 28 a2 59 3a 19 a7 0f 06 9e
<a href="#">Unizeto CERTUM</a>	Poland	Certum Trusted Network CA	2048	SHA1	Monday, December 31, 2029 5:07:37 AM	07 e0 32 e0 20 b7 2c 3f 19 2f 06 28 a2 59 3a 19 a7 0f 06 9e
<a href="#">VeriSign</a>	USA	Equifax Secure Certificate Authority	1024	SHA1	Wednesday, August 22, 2018 9:41:51 AM	d2 32 09 ad 23 d3 14 23 21 74 e4 0d 7f 9d 62 13 97 86 63 3a

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<a href="#">VeriSign</a>	USA	Equifax Secure eBusiness CA-1	1024	MD5	Saturday, June 20, 2020 9:00:00 PM	da 40 18 8b 91 89 a3 ed ee ae da 97 fe 2f 9d f5 b7 d1 8a 41
<a href="#">VeriSign</a>	USA	Primary Utility Root CA	2048	MD5	Wednesday, May 23, 2012 4:59:59 PM	6a 6f 2a 8b 6e 26 15 08 8d f5 9c d2 4c 40 24 18 ae 42 a3 f1
<a href="#">VeriSign</a>	USA	eSign Imperito Primary Root CA	2048	MD5	Wednesday, May 23, 2012 4:59:59 PM	70 30 aa bf 84 32 a8 00 66 6c cc ca 2a 88 7e 42 b7 55 3e 2b
<a href="#">VeriSign</a>	USA	eSign Australia: Gatekeeper Root CA	2048	MD5	Friday, May 23, 2014 4:59:59 PM	c7 30 26 e3 25 fe 21 91 6b 55 c4 b5 3a 56 b1 3d ca f3 d6 25
<a href="#">VeriSign</a>	USA	Equifax Secure Global eBusiness CA-1	1024	MD5	Saturday, June 20, 2020 9:00:00 PM	7e 78 4a 10 1c 82 65 cc 2d e1 f1 6d 47 b4 40 ca d9 0a 19 45
<a href="#">VeriSign</a>	USA	Equifax Secure eBusiness CA-2	1024	SHA1	Sunday, June 23, 2019 5:14:45 AM	39 4f f6 85 0b 06 be 52 e5 18 56 cc 10 e1 80 e8 82 b3 85 cc
<a href="#">VeriSign</a>	USA	GeoTrust Primary Certification Authority	2048	SHA1	Wednesday, July 16, 2036 4:59:59 PM	32 3c 11 8e 1b f7 b8 b6 52 54 e2 10 0d b6 02 90 37 f0 96
<a href="#">VeriSign</a>	USA	GeoTrust Universal CA 2	4096	SHA1	Saturday, March 03, 2029 10:00:00 PM	37 9a 19 7b 41 85 45 35 0c a6 03 69 f3 3c 2e af 47 4f 20 79
<a href="#">VeriSign</a>	USA	GeoTrust Global CA 2	2048	SHA1	Sunday, March 03, 2019 10:00:00 PM	a9 e9 78 08 14 37 58 88 f2 05 19 b0 6d 2b 0d 2b 60 16 90 7d
<a href="#">VeriSign</a>	USA	GeoTrust Global CA	2048	SHA1	Friday, May 20, 2022 9:00:00 PM	de 28 f4 a4 ff e5 b9 2f a3 c5 03 d1 a3 49 a7 f9 96 2a 82 12
<a href="#">VeriSign</a>	USA	GeoTrust Universal CA	4096	SHA1	Saturday, March 03, 2029 10:00:00 PM	e6 21 f3 35 43 79 05 9a 4b 68 30 9d 8a 2f 74 22 15 87 ec 79
<a href="#">VeriSign</a>	USA	Thawte Server CA	1024	MD5	Thursday, December 31, 2020 4:59:59 PM	23 e5 94 94 51 95 f2 41 48 03 b4 d5 64 d2 a3 a3 f5 d8 8b 8c
<a href="#">VeriSign</a>	USA	Thawte Personal Basic CA	1024	MD5	Thursday, December 31, 2020 4:59:59 PM	40 e7 8c 1d 52 3d 1c d9 95 4f ac 1a 1a b3 bd 3c ba a1 5b fc
<a href="#">VeriSign</a>	USA	Thawte Primary Root CA	2048	SHA1	Wednesday, July 16, 2036 4:59:59 PM	91 c6 d6 ee 3e 8a c8 63 84 e5 48 c2 99 29 5c 75 6c 81 7b 81
<a href="#">VeriSign</a>	USA	Thawte Premium Server CA	1024	MD5	Thursday, December 31, 2020 4:59:59 PM	62 7f 8d 78 27 65 63 99 d2 7d 7f 90 44 c9 fe b3 f3 3e fa 9a
<a href="#">VeriSign</a>	USA	Thawte Personal Freemail CA	1024	MD5	Thursday, December 31, 2020 4:59:59 PM	20 99 00 b6 3d 95 57 28 14 0c d1 36 22 d8 c6 87 a4 eb 00 85
<a href="#">VeriSign</a>	USA	Thawte Personal Premium CA	1024	MD5	Thursday, December 31, 2020 4:59:59 PM	36 86 35 63 fd 51 28 c7 be a6 f0 05 cf e9 b4 36 68 08 6c ce
<a href="#">VeriSign</a>	USA	Thawte Timestamping CA	1024	MD5	Thursday, December 31, 2020 4:59:59 PM	be 36 a4 56 2f b2 ee 05 db b3 d3 23 23 ad f4 45 08 4e d6 56
<a href="#">VeriSign</a>	USA	UTN-USERSFirst-Network Applications	2048	SHA1	Tuesday, July 09, 2019 11:57:49 AM	5d 98 9c db 15 96 11 36 51 65 64 1b 56 0f db ea 2a c2 3e f1
<a href="#">VeriSign</a>	USA	Secure Server Certification Authority	1000	MD2	Thursday, January 07, 2010 4:59:59 PM	44 63 c5 31 d7 cc c1 00 67 94 61 2b b6 56 d3 bf 82 57 84 6f
<a href="#">VeriSign</a>	USA	CA	1024	SHA1	Tuesday, August 01, 2028 4:59:59 PM	0b 77 be bb cb 7a a2 47 05 de cc 0f bd 6a 02 fc 7a bd 9b 52
<a href="#">VeriSign</a>	USA	VeriSign Trust Network (G2)	1024	SHA1	Friday, May 18, 2018 4:59:59 PM	3f 85 f2 bb 4a 62 b0 b5 8b e1 61 4a bb 0d 46 31 b4 be f8 ba
<a href="#">VeriSign</a>	USA	VeriSign Class 3 Public Primary Certification Authority - G5	2048	SHA1	Wednesday, July 16, 2036 4:59:59 PM	4e b6 d5 78 49 9b 1c cf 5f 58 1e ad 56 be 3d 9b 67 44 a5 e5
<a href="#">VeriSign</a>	USA	Class 3 Public Primary Certification Authority	1024	MD2	Wednesday, January 07, 2004 4:59:59 PM	4f 65 56 63 36 db 65 98 58 1d 58 4a 59 6c 87 93 4d 5f 2a b4
<a href="#">VeriSign</a>	USA	VeriSign Time Stamping Service Root	1024	MD5	Wednesday, January 07, 2004 4:59:59 PM	18 f7 c1 fc c3 09 02 03 fd 5b aa 2f 86 1a 75 49 76 c8 dd 25
<a href="#">VeriSign</a>	USA	VeriSign Commercial Software Publishers CA	1024	MD2	Wednesday, January 07, 2004 4:59:59 PM	24 a4 0a 1f 57 36 43 a6 7f 0a 4b 07 49 f6 a2 2b f2 8a bb 6b
<a href="#">VeriSign</a>	USA	VeriSign Class 2 Public Primary Certification Authority - G3	2048	SHA1	Wednesday, July 16, 2036 4:59:59 PM	61 ef 43 d7 7f ca d4 61 51 bc 98 e0 c3 59 12 af 9f eb 63 11
<a href="#">VeriSign</a>	USA	Class 1 Public Primary Certification Authority	1024	MD2	Tuesday, January 07, 2020 4:59:59 PM	78 e9 dd 06 50 62 4d b9 cb 36 b5 07 67 f2 09 b8 43 be 15 b3
<a href="#">VeriSign</a>	USA	Class 1 Public Primary Certification Authority	1024	MD2	Tuesday, August 01, 2028 4:59:59 PM	90 ae a2 69 85 ff 14 80 4c 43 49 52 ec e9 60 84 77 af 55 6f
<a href="#">VeriSign</a>	USA	Class 3 Public Primary Certification Authority - G2	1024	SHA1	Friday, May 18, 2018 4:59:59 PM	97 e2 e9 96 36 a5 47 55 4f 83 8f ba 38 b8 2e 74 f8 9a 83 0a
<a href="#">VeriSign</a>	USA	VeriSign Class 3 Public Primary Certification Authority - G3	2048	SHA1	Wednesday, July 16, 2036 4:59:59 PM	13 2d 0d 45 53 4b 69 97 cd b2 d5 c3 39 e2 55 76 60 9b 5c c6
<a href="#">VeriSign</a>	USA	Class 1 Public Primary Certification Authority - G2	1024	SHA1	Tuesday, August 01, 2028 4:59:59 PM	27 3e e1 24 57 fd c4 f9 0c 55 e8 2b 56 16 7f 62 f5 32 e5 47
<a href="#">VeriSign</a>	USA	VeriSign Commercial Software Publishers CA	1024	MD2	Friday, December 31, 1999 2:35:58 AM	68 8b 6e b8 07 e8 ed a5 c7 b1 7c 43 93 d0 79 5f 0f ae 15 5f

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Current CA Owner	Country / Region	CA Root Name	CA Root Size	Signature Hash	CA Root Expires	Thumbprint
<a href="#">VeriSign</a>	USA	Class 3 Public Primary Certification Authority	1024	MD2	Tuesday, August 01, 2028 4:59:59 PM	74 2c 31 92 e6 07 e4 24 eb 45 49 54 2b e1 bb c5 3e 61 74 e2
<a href="#">VeriSign</a>	USA	Class 2 Public Primary Certification Authority	1024	MD2	Tuesday, August 01, 2028 4:59:59 PM	67 82 aa e0 ed ee e2 1a 58 39 d3 c0 cd 14 68 0a 4f 60 14 2a
<a href="#">VeriSign</a>	USA	Class 3 Public Primary Certification Authority - G2	1024	SHA1	Tuesday, August 01, 2028 4:59:59 PM	85 37 1c a6 e5 50 14 3d ce 28 03 47 1b de 3a 09 e8 f8 77 0f
<a href="#">VeriSign</a>	USA	VeriSign Individual Software Publishers CA	1024	MD2	Wednesday, January 07, 2004 4:59:59 PM	96 97 4c d6 b6 63 a7 18 45 26 b1 d6 48 ad 81 5c f5 1e 80 1a
<a href="#">VeriSign</a>	USA	VeriSign Class 1 Public Primary Certification Authority - G3	2048	SHA1	Wednesday, July 16, 2036 4:59:59 PM	20 42 85 dc f7 eb 76 41 95 57 8e 13 6b d4 b7 d1 e9 8e 46 a5
<a href="#">VeriSign</a>	USA	Class 1 Public Primary Certification Authority - G2	1024	SHA1	Friday, May 18, 2018 4:59:59 PM	04 98 11 05 6a fe 9f d0 f5 be 01 68 5a ce e6 a5 d1 c4 45 4c
<a href="#">VeriSign</a>	USA	Class 2 Public Primary Certification Authority	1024	MD2	Wednesday, January 07, 2004 4:59:59 PM	a5 ec 73 d4 8c 34 fc be f1 00 5a eb 85 84 35 24 bb fa b7 27
<a href="#">VeriSign</a>	USA	Class 2 Public Primary Certification Authority - G2	1024	SHA1	Tuesday, August 01, 2028 4:59:59 PM	b3 ea c4 47 76 c9 c8 1c ea f2 9d 95 b6 cc a0 08 1b 67 ec 9d
<a href="#">VeriSign</a>	USA	VeriSign Individual Software Publishers CA	1024	MD2	Friday, December 31, 1999 2:37:48 AM	b1 9d d0 96 dc d4 e3 e0 fd 67 68 85 50 5a 67 2c 43 8d 4e 9c
<a href="#">VeriSign</a>	USA	VeriSign Class 4 Public Primary Certification Authority - G3	2048	SHA1	Wednesday, July 16, 2036 4:59:59 PM	c8 ec 8c 87 92 69 cb 4b ab 39 e9 8d 7e 57 67 f3 14 95 73 9d
<a href="#">VeriSign</a>	USA	Class 2 Public Primary Certification Authority - G2	1024	SHA1	Friday, May 18, 2018 4:59:59 PM	cf f3 60 f5 24 cb 20 f1 fe ad 89 00 6f 7f 58 6a 28 5b 2d 5b
<a href="#">VeriSign</a>	USA	VeriSign Universal Root Certification Authority	2048	SHA256	Tuesday, December 01, 2037 4:59:59 PM	36 79 ca 35 66 87 72 30 4d 30 a5 fb 87 3b 0f a7 7b 07 d0 54
<a href="#">VeriSign</a>	USA	thawte Primary Root CA - G3	2048	SHA256	Tuesday, December 01, 2037 4:59:59 PM	f1 8b 53 8d 1b e9 03 b6 a6 f0 56 43 5b 17 15 89 ca f3 6b f2
<a href="#">VeriSign</a>	USA	GeoTrust Primary Certification Authority - G3	2048	SHA256	Tuesday, December 01, 2037 4:59:59 PM	03 9e ed b8 0b e7 a0 3c 69 53 89 3b 20 d2 d9 32 3a 4c 2a fd
<a href="#">VeriSign</a>	USA	VeriSign Class 3 Public Primary Certification Authority - G4	ECDSA384	SHA384	Monday, January 18, 2038 4:59:59 PM	22 d5 d8 df 8f 02 31 d1 8d f7 9d b7 cf 8a 2d 64 c9 3f 6c 3a
<a href="#">VeriSign</a>	USA	thawte Primary Root CA - G2	ECDSA384	SHA384	Monday, January 18, 2038 4:59:59 PM	aa db bc 22 23 8f c4 01 a1 27 bb 38 dd f4 1d db 08 9e f0 12
<a href="#">VeriSign</a>	USA	GeoTrust Primary Certification Authority - G2	ECDSA384	ECDSA	Monday, January 18, 2038 4:59:59 PM	8d 17 84 d5 37 f3 03 7d ec 70 fe 57 8b 51 9a 99 e6 10 d7 b0
<a href="#">VeriSign</a>	USA	VeriSign Class 1 Public Primary Certification Authority (PCA1 G1 SHA1)	1024	SHA1	Wednesday, August 02, 2028 4:59:59 PM	ce 6a 64 a3 09 e4 2f bb d9 85 1c 45 3e 64 09 ea e8 7d 60 f1
<a href="#">VeriSign</a>	USA	VeriSign Class 3 Public Primary Certification Authority (PCA3 G1 SHA1)	1024	SHA1	Wednesday, August 02, 2028 4:59:59 PM	a1 db 63 93 91 6f 17 e4 18 55 09 40 04 15 c7 02 40 b0 ae 6b
<a href="#">VeriSign</a>	USA	Thawte Server CA (SHA1)	1024	SHA1	Friday, January 01, 2021 4:59:59 PM	9f ad 91 a6 ce 6a ce c5 00 47 c4 4e c9 d4 a5 0d 92 d8 49 79
<a href="#">VeriSign</a>	USA	Thawte Premium Server CA (SHA1)	1024	SHA1	Friday, January 01, 2021 4:59:59 PM	e0 ab 05 94 20 72 54 93 05 60 62 02 36 70 f7 cd 2e fc 66 66
<a href="#">Verizon Business</a>	USA	Baltimore CyberTrust Root	2048	SHA1	Monday, May 12, 2025 4:59:00 PM	d4 de 20 d0 5e 66 fc 53 fe 1a 50 88 2c 78 db 28 52 ca e4 74
<a href="#">Verizon Business</a>	USA	SecureNet CA Class B	2048	MD5	Friday, October 16, 2009 2:59:00 AM	7a c5 ff f8 dc bc 55 83 17 68 77 07 3b f7 51 73 5e 9b d3 58
<a href="#">Verizon Business</a>	USA	Cybertrust Global Root	2048	SHA1	Wednesday, December 15, 2021 1:00:00 AM	5f 43 e5 b1 bf f8 78 8c ac 1c c7 ca 4a 9a c6 22 2b cc 34 c6
<a href="#">Verizon Business</a>	USA	GTE CyberTrust Root	1024	MD5	Thursday, February 23, 2006 4:59:00 PM	90 de de 9e 4c 4e 9f 6f d8 86 17 57 9d d3 91 bc 65 ae 89 64
<a href="#">Verizon Business</a>	USA	GTE CyberTrust Global Root	1024	MD5	Monday, August 13, 2018 4:59:00 PM	97 81 79 50 d8 1c 96 70 cc 34 d8 09 cf 79 44 31 36 7e f4 74
<a href="#">Verizon Business</a>	USA	GTE CyberTrust Root	1024	MD5	Saturday, April 03, 2004 4:59:00 PM	db ac 3c 7a a4 25 4d a1 aa 5c aa d6 84 68 cb 88 ee dd ee a8
<a href="#">Verizon Business</a>	USA	Verizon Global Root CA	2048	SHA256	Sunday, July 30, 2034 7:27:04 AM	91 21 98 ee f2 3d ca c4 09 39 31 2f ee 97 dd 56 0b ae 49 b1
<a href="#">Visa</a>	USA	Visa eCommerce Root	2048	SHA1	Thursday, June 23, 2022 5:16:12 PM	70 17 9b 86 8c 00 a4 fa 60 91 52 22 3f 9f 3e 32 bd e0 05 62
<a href="#">Visa</a>	USA	Visa Information Delivery Root CA	2048	SHA1	Sunday, June 29, 2025 10:42:42 AM	5a 4d 0e 8b 5f dc fd f6 4e 72 99 a3 6c 06 d0 b2 22 ca 78 e4
<a href="#">Wells Fargo Bank N.A.</a>	USA	Wells Fargo Root Certificate Authority	2048	SHA1	Thursday, January 14, 2021 9:41:28 AM	93 e6 ab 22 03 03 b5 23 28 dc da 56 9e ba e4 d1 d1 cc fb 65
<a href="#">Wells Fargo Bank N.A.</a>	USA	WellsSecure Public Root CA	2048	SHA1	Tuesday, December 13, 2022 4:07:54 PM	e7 b4 f6 9d 61 ec 90 69 db 7e 90 a7 40 1a 3c f4 7d 4f e8 ee

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Current CA Owner	Country / Region	CA Root Name	CA Root Size	Signature Hash	CA Root Expires	Thumbprint
<a href="#">WiSeKey</a>	Switzerland	OISTE WiSeKey Global Root GA CA	2048	SHA1	Friday, December 11, 2037 9:09:51 AM	59 22 a1 e1 5a ea 16 35 21 f8 98 39 6a 46 46 b0 44 1b 0f a9