

INDEPENDENT ASSURANCE REPORT

To the management of GlobalSign NV/SA ("GlobalSign"):

Scope

We have been engaged, in a reasonable assurance engagement, to report on GlobalSign management's assertion that for its Certification Authority (CA) operations at Belgium, Japan, Singapore, United Kingdom, throughout the period April 1, 2018 to March 31, 2019 for its CAs as enumerated in [Appendix B](#), GlobalSign has:

- ▶ Disclosed its SSL certificate lifecycle management business practices in the applicable versions of the Certificate Practice Statements and Certificate Policies, as stipulated in [Appendix A](#), including its commitment to provide SSL certificates in conformity with the CA/Browser Forum Guidelines on the GlobalSign's website, and provided such services in accordance with its disclosed practices
- ▶ Maintained effective controls to provide reasonable assurance that:
 - The integrity of keys and SSL certificates it manages is established and protected throughout their lifecycles; and
 - SSL subscriber information is properly authenticated (for the registration activities performed by GlobalSign)
- ▶ Maintained effective controls to provide reasonable assurance that:
 - Logical and physical access to CA systems and data is restricted to authorized individuals; and
 - 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
- ▶ Maintained effective controls to provide reasonable assurance that it met the Network and Certificate System Security Requirements as set forth by the CA/Browser Forum

in accordance with the [WebTrust Principles and Criteria for Certification Authorities - SSL Baseline with Network Security, Version 2.3.](#)

Certification authority's responsibilities

GlobalSign'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 - SSL Baseline with Network Security, Version 2.3.](#)

Our independence and quality control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies International Standard on Quality Control 1, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Auditor's responsibilities

Our responsibility is to express an opinion on management's assertion based on our procedures. We conducted our procedures in accordance with International Standard on Assurance Engagements 3000, Assurance Engagements Other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board. This standard requires that we plan and perform our procedures to obtain reasonable assurance about whether, in all material respects, management's assertion is fairly stated, and, accordingly, included:

1. Obtaining an understanding of GlobalSign's SSL certificate lifecycle management business practices, including its relevant controls over the issuance, renewal, and revocation of SSL certificates, and obtaining an understanding of GlobalSign's network and certificate system security to meet the requirements set forth by the CA/Browser Forum;
2. Selectively testing transactions executed in accordance with disclosed SSL certificate lifecycle management practices
3. Testing and evaluating the operating effectiveness of the controls; and
4. Performing such other procedures as we considered necessary in the circumstances.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

GlobalSign's management has disclosed to us the attached comments ([Appendix C](#)) that have been posted publicly in the online forums of the Bugzilla site, as well as the online forums of individual internet browsers that comprise the CA/Browser Forum. We have considered the nature of these comments in determining the nature, timing and extent of our procedures.

Relative effectiveness of controls

The relative effectiveness and significance of specific controls at GlobalSign 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. We have performed no procedures to evaluate the effectiveness of controls at individual subscriber and relying party locations.

Inherent limitations

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

Opinion

In our opinion, throughout the period April 1, 2018 to March 31, 2019, GlobalSign management's assertion, as referred to above, is fairly stated, in all material respects, in accordance with the [WebTrust Principles and Criteria for Certification Authorities - SSL Baseline with Network Security](#),

[Version 2.3.](#)

This report does not include any representation as to the quality of GlobalSign's services beyond those covered by the [WebTrust Principles and Criteria for Certification Authorities - SSL Baseline with Network Security, Version 2.3](#), nor the suitability of any of GlobalSign's services for any customer's intended purpose.

Use of the WebTrust seal

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

Ernst & Young Bedrijfsrevisoren cvba

Diegem, Belgium



Christel Weymeersch, Partner

June 28, 2019

Appendix A – Certification Practice Statements and Certificate Policies in Scope

Certification Practice Statement	Begin Effective Date	End Effective Date
Version 8.6	14-Dec-17	02-Apr-18
Version 8.7	03-Apr-18	14-Jun-18
Version 8.8	15-Jun-18	10-Oct-18
Version 8.9	11-Oct-18	11-Mar-19
Version 9	12-Mar-19	30-May-19

Certificate Policy	Begin Effective Date	End Effective Date
Version 5.6	14-Dec-17	02-Apr-18
Version 5.7	03-Apr-18	14-Jun-18
Version 5.8	15-Jun-18	10-Oct-18
Version 5.9	11-Oct-18	11-Mar-19
Version 6	12-Mar-19	30-May-19

Appendix B – In-Scope CAs

Root CAs	SHA256 Hash
C = BE O = GlobalSign nv-sa OU = Root CA CN = GlobalSign Root CA	EB:D4:10:40:E4:BB:3E:C7:42:C9:E3:81:D3:1E:F2:A4:1A:48: B6:68:5C:96:E7:CE:F3:C1:DF:6C:D4:33:1C:99
OU = GlobalSign Root CA - R3 O = GlobalSign CN = GlobalSign	CB:B5:22:D7:B7:F1:27:AD:6A:01:13:86:5B:DF:1C:D4:10:2E: 7D:07:59:AF:63:5A:7C:F4:72:0D:C9:63:C5:3B
OU = GlobalSign ECC Root CA - R5 O = GlobalSign CN = GlobalSign	17:9F:BC:14:8A:3D:D0:0F:D2:4E:A1:34:58:CC:43:BF:A7:F5: 9C:81:82:D7:83:A5:13:F6:EB:EC:10:0C:89:24
OU = GlobalSign Root CA - R6 O = GlobalSign CN = GlobalSign	2C:AB:EA:FE:37:D0:6C:A2:2A:BA:73:91:C0:03:3D:25:98:29: 52:C4:53:64:73:49:76:3A:3A:B5:AD:6C:CF:69
C = BE O = GlobalSign nv-sa OU = Root CA CN = GlobalSign Root CA - R7	E9:5B:31:25:40:5E:0D:46:04:2D:55:AC:62:15:45:07:C6:78:E B:C3:60:76:57:85:FB:20:4A:F3:49:BF:E8:80
C = BE O = GlobalSign nv-sa OU = Root CA CN = GlobalSign Root CA - R8	AE:48:51:FF:42:03:9B:AD:E0:58:27:91:51:D8:26:83:04:1D:25 :98:E2:40:68:3C:C5:6D:76:FB:8C:F5:3D:42
C = BE O = GlobalSign nv-sa CN = GlobalSign Root E46	CB:B9:C4:4D:84:B8:04:3E:10:50:EA:31:A6:9F:51:49:55:D7:B F:D2:E2:C6:B4:93:01:01:9A:D6:1D:9F:50:58
C = BE O = GlobalSign nv-sa CN = GlobalSign Root R46	4F:A3:12:6D:8D:3A:11:D1:C4:85:5A:4F:80:7C:BA:D6:CF:91: 9D:3A:5A:88:B0:3B:EA:2C:63:72:D9:3C:40:C9

Other CAs	SHA256 Hash
CN = AlphaSSL CA - G2 O = AlphaSSL	1D:CA:65:B8:6A:57:33:6B:A5:AF:B7:21:4A:36:F7:D6:ED:E6: 98:EB:4F:03:38:7C:B3:AD:6B:BD:3A:93:BA:B6
CN = AlphaSSL CA - SHA256 - G2 O = AlphaSSL	93:3E:4A:2D:8D:B1:FF:9F:F0:E5:08:EA:7F:16:37:E0:74:F6:6 0:FE:6F:36:5A:22:33:DF:C2:B5:2C:88:9D:98
CN = AlphaSSL CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	EE:79:36:43:19:94:74:ED:60:EF:DC:8C:CD:E4:D3:74:45:92:1 6:83:59:3A:A7:51:BB:F8:EE:49:1A:39:1E:97
CN = AlphaSSL CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	8C:24:10:F7:6B:14:9C:A0:62:B4:20:AB:61:1B:6B:F0:A0:6E:6 E:79:9A:29:58:7E:4D:4E:C1:6D:05:37:B7:EA
CN = AlphaSSL CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	5A:81:7E:AD:A4:AD:78:73:4E:BB:2C:F6:74:35:2D:97:F4:35:2 2:90:C4:0E:AF:10:E7:64:B1:EA:C0:75:B0:E6
CN = AlphaSSL CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	4C:01:3B:88:54:68:9C:B6:62:6C:C0:87:B4:D4:FC:CA:45:10:4 E:2D:73:BF:AD:F3:3A:69:79:ED:12:4B:78:37
CN = ATT Wi-Fi Services Root Certificate Authority G3 OU = ATT Wi-Fi Services O = ATT Services Inc ST = Texas C = US	12:F3:C6:42:3F:95:C7:FF:C9:A9:70:67:FD:2D:95:3E:70:60:9 A:44:29:9C:A7:D4:58:C5:73:C6:3A:59:2E:66

CN = ATT Wi-Fi Services Root Certificate Authority G3 OU = ATT Wi-Fi Services O = ATT Services Inc ST = Texas C = US	27:13:C7:A3:21:05:C5:E7:40:18:46:5D:14:D5:1A:95:9C:8A:EF:C2:11:5E:1C:00:7A:6A:6B:4C:88:31:3B:C6
CN = Beame.io CA 1 O = Beame.io Ltd L = Tel Aviv-Jaffa ST = Tel Aviv C = IL	43:26:39:13:B4:83:EB:6F:0B:02:05:40:F8:F7:BE:0A:1D:7C:9C:E7:65:2F:E0:FB:47:43:D7:21:33:93:55:1C
CN = Beame.io CA 2 O = Beame.io Ltd L = Tel Aviv-Jaffa ST = Tel Aviv C = IL	CF:6E:6B:82:C9:97:CB:5C:C1:A5:50:66:AF:5F:60:CA:AC:77:59:4E:B1:06:FB:4D:49:8B:C5:0E:CD:EB:8A:3A
CN = Cloudflare ECC DV CA O = Cloudflare\, Inc. L = San Francisco ST = CA C = US	0F:45:17:48:7F:D0:A8:BA:31:94:A6:12:24:50:A7:B3:2C:98:7F:FF:16:F2:D4:AF:54:E6:ED:B6:FE:D6:8E:08
CN = Cloudflare RSA DV CA O = Cloudflare\, Inc. L = San Francisco ST = CA C = US	D4:39:F8:8E:8F:2F:80:A3:06:F9:10:DC:DE:54:8D:71:BB:FD:99:A8:5F:C7:03:4E:FB:61:0E:37:49:55:09:32
CN = Crown Prince Court CA O = Crown Prince Court L = Abu Dhabi ST = Abu Dhabi C = AE	A0:13:3B:E5:B1:4E:02:31:0A:2D:4B:EA:B6:01:09:4F:11:94:EE:8B:D6:FD:29:DD:FE:7B:93:47:46:7C:2E:EC
CN = Crown Prince Court CA O = Crown Prince Court L = Abu Dhabi ST = Abu Dhabi C = AE	F1:64:AD:5E:4C:E9:EF:C0:A1:44:CA:90:2E:A2:ED:46:C4:64:D2:D5:08:CA:91:9A:23:09:5C:DF:30:D4:DC:68
CN = Crown Prince Court CA O = Crown Prince Court L = Abu Dhabi ST = Abu Dhabi C = AE	BF:5E:DF:BE:EB:85:99:9C:51:69:CB:F3:F4:DB:63:B6:79:AD:2E:1E:22:72:FC:37:95:F9:F9:92:1E:6D:04:87
CN = DPDHL TLS CT CA I3 O = Deutsche Post L = Bonn ST = Nordrhein-Westfalen C = DE	91:53:e4:42:0d:dc:7e:b4:e6:e8:64:aa:03:77:da:df:40:82:ec:d3:50:52:11:36:38:e0:5d:3c:29:6b:c0:06
CN = DPDHL TLS SHA 2 CA I3 O = Deutsche Post L = Bonn ST = Nordrhein-Westfalen C = DE	27:6F:32:C1:EB:6C:5F:85:5A:79:04:FD:03:64:B2:15:0E:87:99:7F:C8:D0:31:3D:EF:7E:53:AE:09:99:DC:1D
CN = DPDHL TLS SHA2 CA I3 O = Deutsche Post L = Bonn	5A:40:55:35:C1:12:A0:A8:1A:F0:D2:AC:CA:3C:3F:9B:C1:A6:77:58:6C:DB:C6:33:CB:4F:5F:77:8E:1A:35:50



Building a better
working world

ST = Nordrhein-Westfalen C = DE	
CN = DPDHL TLS SHA2 CA I3 O = Deutsche Post L = Bonn ST = Nordrhein-Westfalen C = DE	23:A7:47:04:D7:7A:03:CF:D3:FF:19:E6:2C:50:08:48:21:4E:6 C:60:FD:2A:AE:F7:DC:E7:A8:F9:EE:9F:92:32
CN = DPDHL TLS SHA2 CA I3 O = Deutsche Post L = Bonn ST = Nordrhein-Westfalen C = DE	BE:44:1E:EA:2B:79:50:00:C1:C1:33:AD:C3:2B:CE:6F:8D:3D: 20:1D:A7:13:F4:53:3A:E0:F6:A2:AC:96:28:8E
CN = DPDHL TLS SHA2 CA I3 O = Deutsche Post L = Bonn ST = Nordrhein-Westfalen C = DE	1C:94:2A:22:A0:16:A1:E5:55:9D:AE:77:EC:5C:E8:67:1F:98:A E:0B:A4:AC:2D:C2:59:41:8E:8E:1E:9F:94:AD
CN = DPDHL TLS SHA2 CA I3 O = Deutsche Post L = Bonn ST = Nordrhein-Westfalen C = DE	25:BA:CC:40:A5:39:2B:82:AA:DE:A0:49:03:90:5A:46:71:21:F 2:82:20:E6:F2:F7:E0:FE:98:2A:AF:C1:4F:A6
CN = GlobalSign CloudSSL CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	4B:73:34:E1:D8:99:98:22:BA:FA:8F:F6:88:81:25:38:9B:18:A4 :E5:AB:26:FF:A6:24:C7:F6:8F:DC:81:F0:CB
CN = GlobalSign CloudSSL CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	E1:55:EB:F9:63:34:E7:9A:E2:E2:87:D5:5C:FC:91:85:DE:24:9 3:5A:65:3F:13:C5:BA:05:AF:F8:18:77:1B:C6
CN = GlobalSign CloudSSL CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	C2:E4:23:6D:B1:B7:57:B5:1B:77:92:13:88:EF:A8:23:E6:A6:0 0:FD:4B:DA:30:B6:3A:B7:78:86:F2:56:18:B7
CN = GlobalSign CloudSSL CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	E0:C2:EB:D1:F6:BA:D4:FE:AA:E3:1A:31:07:E6:9A:BE:E9:02: DB:38:B9:DF:BE:33:F0:57:0B:DA:34:94:C2:0A
CN = GlobalSign Domain Validation CA - G2 O = GlobalSign nv-sa C = BE	E8:7E:A2:BE:D6:C6:20:3B:2C:55:B0:0F:E4:9D:28:76:FB:A6: 47:02:10:5A:EB:74:8B:86:5A:91:8B:5C:7D:27
CN = GlobalSign Domain Validation CA - G2 O = GlobalSign nv-sa C = BE	BA:0E:2B:6B:F2:C9:8E:D2:C3:B1:C1:C0:8A:1B:BD:CA:F9:27 :0A:C5:28:A3:19:43:01:DD:2A:0B:6B:67:B9:B3
CN = GlobalSign Domain Validation CA - G2 O = GlobalSign nv-sa C = BE	4E:15:3A:58:88:77:68:8F:1A:0C:10:3A:08:4C:2E:DB:3A:D1:D 8:C4:80:CF:03:D8:AB:6F:ED:47:D9:20:43:70
CN = GlobalSign Domain Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	37:D0:80:A5:E9:A5:26:66:3E:56:EE:20:DE:4B:D9:F7:95:2D:A C:C3:41:49:14:39:08:01:67:AD:5D:D1:8C:AC



Building a better
working world

CN = GlobalSign Domain Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	BF:DF:4C:F3:F1:43:AD:0D:B9:12:D8:AB:3A:7C:12:F6:17:B9:EA:60:CE:8B:1F:4E:44:F7:42:70:FB:21:B1:9B
CN = GlobalSign Domain Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	66:9E:77:27:A9:2B:E7:2D:97:18:E1:69:22:DC:1B:C1:49:2B:1A:F3:3F:A4:79:3E:68:D8:77:8F:19:A2:EB:E0
CN = GlobalSign Domain Validation CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	09:BC:1B:13:7C:03:12:39:EF:78:86:73:E9:4E:B1:7F:5F:3E:CA:B0:7D:3A:DB:FB:48:5E:75:AB:FA:AF:3B:9A
CN = GlobalSign EC Administration CA2 O = GlobalSign nv-sa C = BE	C8:83:B3:EC:C6:AC:0D:EE:75:CD:D5:85:E7:3A:20:92:87:BC:0C:9F:9D:79:D4:88:86:0F:63:E2:EA:8A:7D:2C
CN = GlobalSign ECC CloudSSL CA - SHA384 - G3 O = GlobalSign nv-sa C = BE	B0:CD:6A:E7:B9:E2:0E:C5:F8:30:FE:E0:1F:66:6D:5D:90:E6:E2:29:D0:6B:C4:6A:30:AC:CE:DF:EC:88:96:48
CN = GlobalSign ECC EV SSL CA 2018 O = GlobalSign nv-sa C = BE	8f:19:ff:e0:2f:c7:95:ed:70:76:5d:14:36:ad:df:77:2f:e0:f0:77:3d:a4:36:ed:bd:b4:2a:2e:30:e2:e8:28
CN = GlobalSign ECC EV SSL CA 2019 O = GlobalSign nv-sa C = BE	0d:31:76:c5:8f:32:1a:a3:4c:57:c8:df:7c:17:d1:f4:e7:6c:79:7e:c1:16:c9:f1:d6:97:74:8e:d1:fc:e7:d9
CN = GlobalSign ECC OV SSL CA 2018 O = GlobalSign nv-sa C = BE	87:c7:15:53:44:5e:b3:c3:3c:3e:07:10:71:1b:99:e9:c7:77:3f:04:d9:1a:c3:8a:9f:4c:08:2e:e2:41:01:ea
CN = GlobalSign ECC384 EV SSL CA - G3 O = GlobalSign nv-sa C = BE	15:54:91:87:49:03:14:F5:17:76:41:F0:BE:B3:26:34:AA:12:30:EB:2C:F2:C2:8A:D9:C7:39:14:FB:18:AB:A0
CN = GlobalSign ECC384 SSL CA - G3 O = GlobalSign nv-sa C = BE	DC:6C:44:AC:8A:3C:D5:C3:45:12:73:F4:43:15:26:B2:EF:66:60:62:EE:76:32:58:A9:28:F6:0B:D0:8E:39:FE
CN = GlobalSign Extended Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	24:F9:1C:07:05:A0:A5:33:86:41:B3:65:FB:0D:9D:97:09:B5:62:97:CF:F1:85:7E:73:C0:2C:16:36:D4:86:AA
CN = GlobalSign Extended Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	5B:B2:38:2D:20:E0:9A:E5:6B:4F:3A:51:57:83:8F:7B:AE:49:E4:2E:3C:E5:34:84:D6:6E:EB:2C:07:47:EF:4A
CN = GlobalSign Extended Validation CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	AE:D5:DD:9A:53:39:68:5D:FB:02:9F:6D:89:A1:43:35:A9:65:12:C3:CA:CC:52:B2:99:4A:F8:B6:B3:7F:A4:D2
CN = GlobalSign HV ECC DV SSL CA 2018 O = GlobalSign nv-sa C = BE	4b:0d:13:92:d3:91:57:35:32:07:a6:4c:cb:14:68:3d:de:9d:2c:ed:1f:b5:8b:16:e0:38:be:57:07:c2:78:13

CN = GlobalSign HV RSA DV SSL CA 2018 O = GlobalSign nv-sa C = BE	54:c3:7a:8e:85:3f:d1:d6:37:8d:37:8b:93:93:07:ec:32:1a:31:cc:1a:5a:89:e7:18:06:33:bc:13:f1:87:62
CN = GlobalSign Organization Validated CA - SHA256 - G4 O = GlobalSign nv-sa C = BE	1E:17:41:A1:2E:B8:DA:2B:D7:6E:A9:6C:04:F5:20:35:98:39:71:0F:62:0E:80:95:2F:48:DD:02:40:A1:2C:D8
CN = GlobalSign Organization Validated ECC CA - SHA256 - G4 O = GlobalSign nv-sa C = BE	65:EE:C0:CC:6C:97:0C:C1:CD:73:65:91:15:DC:8D:90:4E:6F:12:E6:DC:8F:D4:DD:A3:9D:54:CB:30:22:47:80
CN = GlobalSign Organization Validation CA - G2 O = GlobalSign nv-sa C = BE	A6:64:22:C4:E4:49:D4:65:CB:02:3A:7F:C7:63:3D:E8:ED:18:16:98:5C:A4:10:93:FC:96:B3:66:3E:D7:A4:3B
CN = GlobalSign Organization Validation CA - G2 O = GlobalSign nv-sa C = BE	A6:23:3E:CB:77:05:3F:72:93:7E:89:43:72:A6:01:ED:3A:BE:A9:0C:C3:B5:D8:95:12:72:0B:F3:FF:CB:DC:9D
CN = GlobalSign Organization Validation CA - G2 O = GlobalSign nv-sa C = BE	08:2B:24:30:47:BF:00:F5:84:40:1F:53:8B:50:4B:AE:9E:C0:60:E0:07:FF:F2:8B:15:9C:08:41:70:68:65:4E
CN = GlobalSign Organization Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	1C:97:37:E9:68:AD:9D:FF:8D:8D:7F:CF:99:6A:14:4B:B9:78:51:A1:90:11:A0:19:0C:94:3C:AE:8D:43:CF:E0
CN = GlobalSign Organization Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	74:EF:33:5E:5E:18:78:83:07:FB:9D:89:CB:70:4B:EC:11:2A:BD:23:48:7D:BF:F4:1C:4D:ED:50:70:F2:41:D9
CN = GlobalSign Organization Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	0B:33:92:12:D7:CF:F1:7A:2C:59:E3:56:69:B5:8E:77:35:01:33:75:0A:78:DA:94:04:77:0E:DD:47:0D:EF:76
CN = GlobalSign Organization Validation CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	69:9D:54:B7:48:2A:5D:32:93:31:EA:04:15:CC:2E:DC:D6:0F:DA:01:D1:9E:71:D0:54:19:6B:CE:06:77:73:5C
CN = GlobalSign R6 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	C5:B6:79:10:69:58:15:2F:83:FB:58:86:DD:C4:1F:07:85:19:3E:F6:7C:69:75:BE:3E:50:9F:17:F2:9B:7A:86
CN = GlobalSign R7 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	D3:02:FF:37:31:D2:8C:59:A0:2D:58:85:C5:BA:32:4B:DC:31:BB:D0:9A:31:CC:91:6C:F1:B7:4A:C2:77:C0:7B
CN = GlobalSign R8 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	EA:8C:20:1C:1F:8E:EF:58:06:7B:29:7E:6C:87:D2:62:2A:C3:94:65:27:92:4B:B6:DE:6A:3D:70:0B:E8:13:44
CN = GlobalSign Root CA OU = Root CA	6A:DD:36:8D:A3:54:58:A0:9E:DF:88:0D:05:70:E8:63:AD:C8:50:7D:49:40:6B:4D:97:E4:4E:53:BC:93:08:C9

O = GlobalSign nv-sa C = BE	
CN = GlobalSign RSA DV SSL CA 2018 O = GlobalSign nv-sa C = BE	9e:89:8e:d0:3f:a4:69:69:69:0d:ad:73:c7:29:66:75:04:5f:f9:b5:a0:10:0a:39:9b:eb:84:35:a9:8f:51:85
CN = GlobalSign RSA OV SSL CA 2018 O = GlobalSign nv-sa C = BE	b6:76:ff:a3:17:9e:88:12:09:3a:1b:5e:af:ee:87:6a:e7:a6:aa:f2:31:07:8d:ad:1b:fb:21:cd:28:93:76:4a
CN = GlobalSign O = GlobalSign OU = GlobalSign ECC Root CA - R5	3f:31:9b:2a:fe:d4:a0:f7:51:27:be:59:92:55:50:d0:42:8e:68:76:3a:09:e2:73:eb:6a:9f:f8:d1:8d:bb:5b
CN = GlobalSign O = GlobalSign OU = GlobalSign Root CA - R3	44:5e:ec:78:bc:61:21:50:44:a0:37:96:56:aa:2d:5d:b5:e4:2f:76:cb:70:b8:d1:4c:20:77:aa:94:3d:4e:bb
CN = GlobalSign O = GlobalSign OU = GlobalSign Root CA - R3	C9:4F:ED:DA:4E:86:08:90:85:80:BC:7F:87:B4:34:E0:3B:B2:62:E4:2F:64:C6:38:20:A8:F5:0F:B1:7C:1C:EC
CN = GlobalSign O = GlobalSign OU = GlobalSign Root CA - R6	dd:a8:da:73:61:87:d7:6f:4f:0e:d5:a5:f6:67:b5:4d:99:a9:8a:e0:60:91:d0:e3:a0:17:14:e9:22:16:95:ad
CN = GlobalSign OU = GlobalSign Root CA - R3 O = GlobalSign	25:10:E2:48:90:3F:01:B6:3F:93:98:17:9E:55:06:97:9F:0E:F5:07:E4:17:4B:65:7A:F6:F7:70:A4:17:EC:94
CN = GlobalSign OU = GlobalSign Root CA - R6 O = GlobalSign	75:BF:B5:22:CC:4B:58:DA:22:EE:48:85:17:C5:F2:EF:F9:25:76:D2:0F:59:5F:9A:CE:48:3A:03:6F:C1:BB:6B
CN = ICPEdu O = Rede Nacional de Ensino e Pesquisa - RNP OU = Gerencia de Servicos (GSer) L = Rio de Janeiro ST = Rio de Janeiro C = BR	EA:CB:A6:C9:65:98:B4:A4:1F:D5:3D:69:AB:9E:D9:FB:BB:13:81:15:4C:45:34:56:72:0C:17:4F:FE:57:6D:1D
CN = Liberty University External Issuing CA 01 O = Liberty University L = Lynchburg ST = VA C = US	CA:00:5A:A7:5E:33:59:4B:D1:DE:DC:58:4E:1E:74:E5:19:8E:BB:1D:E8:89:29:ED:4F:3E:2E:9F:FC:E3:87:3B
CN = Liberty University External Issuing CA 01 O = Liberty University L = Lynchburg ST = VA C = US	1F:91:21:2C:6B:FC:33:3C:6E:B5:2A:68:55:25:E1:E5:B9:E3:AC:1E:F7:A5:A8:66:49:F5:F9:5C:72:1D:88:98
CN = NSW-DEC-ISS-CA1 O = NSW Department of Education and Communities L = Sydney ST = NSW C = AU	C7:68:21:31:79:F8:07:1B:FA:B3:94:15:B3:C0:91:12:97:C2:34:6E:41:1E:20:0A:B6:79:12:94:8E:4C:99:D7
CN = Prodrive Technologies B.V. OV SSL Issuing CA O = Prodrive Technologies B.V.	39:8B:14:99:CE:00:A2:5F:61:CA:C3:D8:BE:E5:71:60:18:80:82:3E:F2:88:BE:97:72:A4:D1:33:98:42:25:95



Building a better
working world

OU = IT Services L = Son ST = Noord-Brabant C = NL	
CN = SHECA DV Secure Server CA ST = Shanghai L = Shanghai O = Shanghai Electronic Certificate Authority Center Co., Ltd. C = CN	39:3b:8b:15:ca:bc:38:86:fb:2e:41:64:95:d6:3c:8b:ad:d8:dc:af:87:55:20:76:c8:a0:a9:63:7c:24:de:47
CN = SHECA EV Secure Server CA ST = Shanghai L = Shanghai O = Shanghai Electronic Certificate Authority Center Co., Ltd. C = CN	14:7c:44:7f:ee:b8:62:02:b5:03:31:4f:ca:f0:03:6b:ea:ae:f4:37:c3:9b:56:b3:58:ec:44:6a:9d:20:38:7f
CN = SHECA OV Secure Server CA ST = Shanghai L = Shanghai O = Shanghai Electronic Certificate Authority Center Co., Ltd. C = CN	77:ea:c4:76:45:3c:b7:32:25:7f:f1:66:a5:eb:d1:65:6c:b1:f6:73:b6:8e:28:df:41:77:41:33:97:9f:a2:a4
CN = SignTrust Domain Verification CA - SHA256 - G2 O = SignTrust OU = SignTrust Domain Verification CA - SHA256 - G2	BE:CD:7B:1B:8C:68:07:A2:96:3B:3A:EE:9B:E6:0A:31:4E:BE:AF:3E:A4:C3:0A:F3:9B:7A:A6:C0:82:58:3C:E0
CN = Soluti CA - DV O = SOLUTI - SOLUCOES EM NEGOCIOS INTELIGENTES S/A L = Goi\C3\A2nia ST = Goi\C3\A1s C = BR	A7:4F:FF:F5:28:47:19:05:38:50:73:AD:F3:99:70:19:B2:6F:4F:AF:24:BC:E9:10:2A:27:2E:7A:44:84:E4:BC
CN = Soluti CA - EV O = SOLUTI - SOLUCOES EM NEGOCIOS INTELIGENTES S/A L = Goi\C3\A2nia ST = Goi\C3\A1s C = BR	BB:17:0B:39:78:4D:02:78:43:25:CE:A9:38:D9:23:14:C6:17:DD:E8:08:C8:67:E3:3E:2A:D1:61:D5:4B:3E:8A
CN = Soluti CA - OV O = SOLUTI - SOLUCOES EM NEGOCIOS INTELIGENTES S/A L = Goi\C3\A2nia ST = Goi\C3\A1s C = BR	E6:E9:29:C8:45:6C:01:4E:8D:A7:33:AC:E4:E9:81:45:52:27:2B:81:17:60:50:A1:3E:A4:5A:82:32:00:B1:4B
CN = Southern Company External Issuing CA 1 O = Southern Company Services\, Inc. L = Atlanta ST = GA C = US	FB:95:3C:4F:C0:04:58:46:D0:24:91:C8:EC:CF:38:7B:A3:43:47:C1:7A:BB:0E:A6:D5:9F:6D:E4:D2:F1:EA:04
CN = Statoil Qualified CA O = Statoil ASA - 923609016 C = NO,DC = statoil,DC = com	B6:BA:9C:02:A7:05:61:C3:99:4C:E0:94:AD:56:A7:87:EE:DD:1A:61:A7:D4:AC:0C:D1:1B:64:B2:4E:F2:AE:13



Building a better
working world

CN = Trusted Root CA G2 O = GlobalSign nv-sa OU = Trusted Root C = BE	6E:32:A3:5B:59:9E:90:87:BB:1A:B3:5C:E7:30:22:EC:2E:26:AF:34:BE:38:89:19:41:9C:95:70:0C:D8:E7:FB
CN = Trusted Root CA SHA256 G2 O = GlobalSign nv-sa OU = Trusted Root C = BE	01:FD:73:EF:5E:70:F5:26:FC:9C:11:F6:5F:E2:EE:6F:71:25:B3:69:39:49:22:7F:FD:8E:45:9E:58:3C:45:8A
CN = Valid Certificadora Digital AlphaSSL CA 2018 O = VALID CERTIFICADORA DIGITAL OU = VALID AlphaSSL L = S\C3\83O PAULO ST = S\C3\83O PAULO C = BR	38:51:35:ab:18:dd:19:0a:03:bc:c0:60:1a:ca:6f:83:ce:a3:66:64:27:91:eb:e0:a2:fd:b0:59:c2:f7:75:0a
CN = Valid Certificadora Digital SSL DV CA 2018 O = VALID CERTIFICADORA DIGITAL OU = VALID SSL DV L = S\C3\83O PAULO ST = S\C3\83O PAULO C = BR	62:b4:8f:51:e5:86:86:76:fd:79:b9:dd:9d:b9:8b:a9:28:49:4b:a7:34:40:3c:58:33:93:c4:2c:e0:0a:d4:48
CN = Valid Certificadora Digital SSL EV CA 2018 O = VALID CERTIFICADORA DIGITAL OU = VALID SSL EV L = S\C3\83O PAULO ST = S\C3\83O PAULO C = BR	27:fa:1b:e4:f4:b5:6a:14:2a:47:a5:6a:7e:94:b7:25:02:05:9b:40:22:e4:62:3e:74:8c:a1:ef:15:1c:f2:22
CN = Valid Certificadora Digital SSL OV CA 2018 O = VALID CERTIFICADORA DIGITAL OU = VALID SSL OV L = S\C3\83O PAULO ST = S\C3\83O PAULO C = BR	60:0e:97:60:1b:0b:bc:5f:05:6f:04:ee:f6:71:ef:58:0f:2a:85:83:c6:d2:d3:fa:d4:01:b9:d8:20:aa:88:36
CN = Virginia Tech Global Qualified Server CA O = Virginia Polytechnic Institute and State University OU = Global Qualified Server CA L = Blacksburg ST = Virginia C = US	D4:D0:31:41:EC:A4:19:0D:93:BC:EE:47:81:AF:6F:2F:DF:0F:65:34:A1:1B:ED:CC:F0:61:4F:4D:4B:17:57:53
CN = Virginia Tech Global Qualified Server CA O = Virginia Polytechnic Institute and State University OU = Global Qualified Server CA L = Blacksburg ST = Virginia C = US	B7:9E:63:78:23:6B:F5:B6:F0:C2:77:EC:C0:80:62:7E:F3:FE:28:71:28:1A:60:AC:42:7B:DB:6F:6A:E4:F7:94
CN = Virginia Tech Global Software Token User CA	2F:B0:45:57:96:0B:E5:32:A3:14:C9:BC:35:22:1F:BE:DF:75:96:C3:4C:BC:67:3E:12:33:9E:FD:BE:DD:EB:F7



Building a better
working world

O = Virginia Polytechnic Institute and State University OU = Global Software Token User CA L = Blacksburg ST = Virginia C = US	
---	--

Appendix C

#	Disclosure	Relevant WebTrust Criteria	Publicly Disclosed Link
1	GlobalSign disclosed that a customer (AT&T) running an on-premise (technically-constrained) CA that chains to a GlobalSign root, issued certificates with 63 bit serial numbers.	WebTrust Principles and Criteria for Certification Authorities – SSL Baseline with Network Security Version 2.3, Principle 2 (SSL Service Integrity)	Mozilla Dev Security Policy Link
2	GlobalSign disclosed that a customer (Virginia Tech) running an on-premise (technically-constrained) CA that chains to a GlobalSign root, issued certificates with 63 bit serial numbers.	WebTrust Principles and Criteria for Certification Authorities – SSL Baseline with Network Security Version 2.3, Principle 2 (SSL Service Integrity)	Mozilla Dev Security Policy Link
3	GlobalSign disclosed that a customer (AT&T) running an on-premise (technically-constrained) CA that chains to a GlobalSign root, issued certificates without AIA extension.	WebTrust Principles and Criteria for Certification Authorities – SSL Baseline with Network Security Version 2.3, Principle 2 (SSL Service Integrity)	Mozilla Dev Security Policy Link
4	GlobalSign disclosed that it issued certificates with Subject Public Key Info lacking the explicit NULL parameter.	WebTrust Principles and Criteria for Certification Authorities – SSL Baseline with Network Security Version 2.3, Principle 2 (SSL Service Integrity)	Mozilla Dev Security Policy Link

GlobalSign's Management's Assertion

GlobalSign NV/SA ("GlobalSign") operates the Certification Authority (CA) services known as the Root and Subordinate CAs as disclosed in [Appendix B](#) and provides SSL CA services.

The management of GlobalSign is responsible for establishing and maintaining effective controls over its SSL CA operations, including its network and certificate security system controls, its SSL CA business practices disclosure on its website, SSL key lifecycle management controls, and SSL certificate lifecycle management controls. These controls contain monitoring mechanisms, and actions are taken to correct deficiencies identified.

There are inherent limitations in any controls, including the possibility of human error, and the circumvention or overriding of controls. Accordingly, even effective controls can only provide reasonable assurance with respect to GlobalSign's Certification Authority operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

GlobalSign management has assessed its disclosures of its certificate practices and controls over its SSL CA services. Based on that assessment, in providing its SSL Certification Authority (CA) services at Belgium, Japan, Singapore, United Kingdom, throughout the period April 1, 2018 to March 31, 2019, GlobalSign has:

- Disclosed its SSL certificate lifecycle management business practices in the applicable versions of the Certificate Practice Statements and Certificate Policies, as stipulated in [Appendix A](#), including its commitment to provide SSL certificates in conformity with the CA/Browser Forum Guidelines, and provided such services in accordance with its disclosed practices.
- Maintained effective controls to provide reasonable assurance that:
 - The integrity of keys and SSL certificates it manages was established and protected throughout their lifecycles; and
 - SSL subscriber information was properly authenticated (for the registration activities performed by GlobalSign)
- Maintained effective controls to provide reasonable assurance that:
 - Logical and physical access to CA systems and data was restricted to authorized individuals; and
 - The continuity of key and certificate management operations was maintained; and
 - CA systems development, maintenance, and operations were properly authorized and performed to maintain CA systems integrity
- Maintained effective controls to provide reasonable assurance that it meets the Network and Certificate System Security Requirements as set forth by the CA/Browser Forum.

In accordance with the [WebTrust Principles and Criteria for Certification Authorities - SSL Baseline with Network Security, Version 2.3.](#)

GlobalSign
Leuven, Belgium



A handwritten signature in black ink, appearing to be 'Arvid Vermote', written in a cursive style.

Signed by: Arvid Vermote
Function: Chief Information Security Officer

June 28, 2019



GlobalSign
GMO INTERNET GROUP

Appendix A – Certification Practice Statements and Certificate Policies in Scope

Certification Practice Statement	Begin Effective Date	End Effective Date
Version 8.6	14-Dec-17	02-Apr-18
Version 8.7	03-Apr-18	14-Jun-18
Version 8.8	15-Jun-18	10-Oct-18
Version 8.9	11-Oct-18	11-Mar-19
Version 9	12-Mar-19	30-May-19

Certificate Policy	Begin Effective Date	End Effective Date
Version 5.6	14-Dec-17	02-Apr-18
Version 5.7	03-Apr-18	14-Jun-18
Version 5.8	15-Jun-18	10-Oct-18
Version 5.9	11-Oct-18	11-Mar-19
Version 6	12-Mar-19	30-May-19



Appendix B – In-Scope Cas

Root CAs	SHA256 Hash
C = BE O = GlobalSign nv-sa OU = Root CA CN = GlobalSign Root CA	EB:D4:10:40:E4:BB:3E:C7:42:C9:E3:81:D3:1E:F2:A4:1A:48:B6:68: 5C:96:E7:CE:F3:C1:DF:6C:D4:33:1C:99
OU = GlobalSign Root CA - R3 O = GlobalSign CN = GlobalSign	CB:B5:22:D7:B7:F1:27:AD:6A:01:13:86:5B:DF:1C:D4:10:2E:7D:07: 59:AF:63:5A:7C:F4:72:0D:C9:63:C5:3B
OU = GlobalSign ECC Root CA - R5 O = GlobalSign CN = GlobalSign	17:9F:BC:14:8A:3D:D0:0F:D2:4E:A1:34:58:CC:43:BF:A7:F5:9C:81: 82:D7:83:A5:13:F6:EB:EC:10:0C:89:24
OU = GlobalSign Root CA - R6 O = GlobalSign CN = GlobalSign	2C:AB:EA:FE:37:D0:6C:A2:2A:BA:73:91:C0:03:3D:25:98:29:52:C4: 53:64:73:49:76:3A:3A:B5:AD:6C:CF:69
C = BE O = GlobalSign nv-sa OU = Root CA CN = GlobalSign Root CA - R7	E9:5B:31:25:40:5E:0D:46:04:2D:55:AC:62:15:45:07:C6:78:EB:C3:6 0:76:57:85:FB:20:4A:F3:49:BF:E8:80
C = BE O = GlobalSign nv-sa OU = Root CA CN = GlobalSign Root CA - R8	AE:48:51:FF:42:03:9B:AD:E0:58:27:91:51:D8:26:83:04:1D:25:98:E 2:40:68:3C:C5:6D:76:FB:8C:F5:3D:42
C = BE O = GlobalSign nv-sa CN = GlobalSign Root E46	CB:B9:C4:4D:84:B8:04:3E:10:50:EA:31:A6:9F:51:49:55:D7:BF:D2: E2:C6:B4:93:01:01:9A:D6:1D:9F:50:58
C = BE O = GlobalSign nv-sa CN = GlobalSign Root R46	4F:A3:12:6D:8D:3A:11:D1:C4:85:5A:4F:80:7C:BA:D6:CF:91:9D:3A: 5A:88:B0:3B:EA:2C:63:72:D9:3C:40:C9

Other CAs	SHA256 Hash
CN = AlphaSSL CA - G2 O = AlphaSSL	1D:CA:65:B8:6A:57:33:6B:A5:AF:B7:21:4A:36:F7:D6:ED:E6:98:EB: 4F:03:38:7C:B3:AD:6B:BD:3A:93:BA:B6
CN = AlphaSSL CA - SHA256 - G2 O = AlphaSSL	93:3E:4A:2D:8D:B1:FF:9F:F0:E5:08:EA:7F:16:37:E0:74:F6:60:FE:6 F:36:5A:22:33:DF:C2:B5:2C:88:9D:98
CN = AlphaSSL CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	EE:79:36:43:19:94:74:ED:60:EF:DC:8C:CD:E4:D3:74:45:92:16:83: 59:3A:A7:51:BB:F8:EE:49:1A:39:1E:97
CN = AlphaSSL CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	8C:24:10:F7:6B:14:9C:A0:62:B4:20:AB:61:1B:6B:F0:A0:6E:6E:79:9 A:29:58:7E:4D:4E:C1:6D:05:37:B7:EA
CN = AlphaSSL CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	5A:81:7E:AD:A4:AD:78:73:4E:BB:2C:F6:74:35:2D:97:F4:35:22:90: C4:0E:AF:10:E7:64:B1:EA:C0:75:B0:E6



GlobalSign
GMO INTERNET GROUP

CN = AlphaSSL CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	4C:01:3B:88:54:68:9C:B6:62:6C:C0:87:B4:D4:FC:CA:45:10:4E:2D: 73:BF:AD:F3:3A:69:79:ED:12:4B:78:37
CN = ATT Wi-Fi Services Root Certificate Authority G3 OU = ATT Wi-Fi Services O = ATT Services Inc ST = Texas C = US	12:F3:C6:42:3F:95:C7:FF:C9:A9:70:67:FD:2D:95:3E:70:60:9A:44:2 9:9C:A7:D4:58:C5:73:C6:3A:59:2E:66
CN = ATT Wi-Fi Services Root Certificate Authority G3 OU = ATT Wi-Fi Services O = ATT Services Inc ST = Texas C = US	27:13:C7:A3:21:05:C5:E7:40:18:46:5D:14:D5:1A:95:9C:8A:EF:C2:1 1:5E:1C:00:7A:6A:6B:4C:88:31:3B:C6
CN = Beame.io CA 1 O = Beame.io Ltd L = Tel Aviv-Jaffa ST = Tel Aviv C = IL	43:26:39:13:B4:83:EB:6F:0B:02:05:40:F8:F7:BE:0A:1D:7C:9C:E7:6 5:2F:E0:FB:47:43:D7:21:33:93:55:1C
CN = Beame.io CA 2 O = Beame.io Ltd L = Tel Aviv-Jaffa ST = Tel Aviv C = IL	CF:6E:6B:82:C9:97:CB:5C:C1:A5:50:66:AF:5F:60:CA:AC:77:59:4E: B1:06:FB:4D:49:8B:C5:0E:CD:EB:8A:3A
CN = Cloudflare ECC DV CA O = Cloudflare, Inc. L = San Francisco ST = CA C = US	0F:45:17:48:7F:D0:A8:BA:31:94:A6:12:24:50:A7:B3:2C:98:7F:FF:1 6:F2:D4:AF:54:E6:ED:B6:FE:D6:8E:08
CN = Cloudflare RSA DV CA O = Cloudflare, Inc. L = San Francisco ST = CA C = US	D4:39:F8:8E:8F:2F:80:A3:06:F9:10:DC:DE:54:8D:71:BB:FD:99:A8: 5F:C7:03:4E:FB:61:0E:37:49:55:09:32
CN = Crown Prince Court CA O = Crown Prince Court L = Abu Dhabi ST = Abu Dhabi C = AE	A0:13:3B:E5:B1:4E:02:31:0A:2D:4B:EA:B6:01:09:4F:11:94:EE:8B: D6:FD:29:DD:FE:7B:93:47:46:7C:2E:EC
CN = Crown Prince Court CA O = Crown Prince Court L = Abu Dhabi ST = Abu Dhabi C = AE	F1:64:AD:5E:4C:E9:EF:C0:A1:44:CA:90:2E:A2:ED:46:C4:64:D2:D5 :08:CA:91:9A:23:09:5C:DF:30:D4:DC:68
CN = Crown Prince Court CA O = Crown Prince Court L = Abu Dhabi ST = Abu Dhabi C = AE	BF:5E:DF:BE:EB:85:99:9C:51:69:CB:F3:F4:DB:63:B6:79:AD:2E:1E :22:72:FC:37:95:F9:F9:92:1E:6D:04:87
CN = DPDHL TLS CT CA I3 O = Deutsche Post L = Bonn ST = Nordrhein-Westfalen C = DE	91:53:e4:42:0d:dc:7e:b4:e6:e8:64:aa:03:77:da:df:40:82:ec:d3:50:52 :11:36:38:e0:5d:3c:29:6b:c0:06



GlobalSign

GMO INTERNET GROUP

CN = DPDHL TLS SHA 2 CA I3 O = Deutsche Post L = Bonn ST = Nordrhein-Westfalen C = DE	27:6F:32:C1:EB:6C:5F:85:5A:79:04:FD:03:64:B2:15:0E:87:99:7F:C8:D0:31:3D:EF:7E:53:AE:09:99:DC:1D
CN = DPDHL TLS SHA2 CA I3 O = Deutsche Post L = Bonn ST = Nordrhein-Westfalen C = DE	5A:40:55:35:C1:12:A0:A8:1A:F0:D2:AC:CA:3C:3F:9B:C1:A6:77:58:6C:DB:C6:33:CB:4F:5F:77:8E:1A:35:50
CN = DPDHL TLS SHA2 CA I3 O = Deutsche Post L = Bonn ST = Nordrhein-Westfalen C = DE	23:A7:47:04:D7:7A:03:CF:D3:FF:19:E6:2C:50:08:48:21:4E:6C:60:FD:2A:AE:F7:DC:E7:A8:F9:EE:9F:92:32
CN = DPDHL TLS SHA2 CA I3 O = Deutsche Post L = Bonn ST = Nordrhein-Westfalen C = DE	BE:44:1E:EA:2B:79:50:00:C1:C1:33:AD:C3:2B:CE:6F:8D:3D:20:1D:A7:13:F4:53:3A:E0:F6:A2:AC:96:28:8E
CN = DPDHL TLS SHA2 CA I3 O = Deutsche Post L = Bonn ST = Nordrhein-Westfalen C = DE	1C:94:2A:22:A0:16:A1:E5:55:9D:AE:77:EC:5C:E8:67:1F:98:AE:0B:A4:AC:2D:C2:59:41:8E:8E:1E:9F:94:AD
CN = DPDHL TLS SHA2 CA I3 O = Deutsche Post L = Bonn ST = Nordrhein-Westfalen C = DE	25:BA:CC:40:A5:39:2B:82:AA:DE:A0:49:03:90:5A:46:71:21:F2:82:20:E6:F2:F7:E0:FE:98:2A:AF:C1:4F:A6
CN = GlobalSign CloudSSL CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	4B:73:34:E1:D8:99:98:22:BA:FA:8F:F6:88:81:25:38:9B:18:A4:E5:AB:26:FF:A6:24:C7:F6:8F:DC:81:F0:CB
CN = GlobalSign CloudSSL CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	E1:55:EB:F9:63:34:E7:9A:E2:E2:87:D5:5C:FC:91:85:DE:24:93:5A:65:3F:13:C5:BA:05:AF:F8:18:77:1B:C6
CN = GlobalSign CloudSSL CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	C2:E4:23:6D:B1:B7:57:B5:1B:77:92:13:88:EF:A8:23:E6:A6:00:FD:4B:DA:30:B6:3A:B7:78:86:F2:56:18:B7
CN = GlobalSign CloudSSL CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	E0:C2:EB:D1:F6:BA:D4:FE:AA:E3:1A:31:07:E6:9A:BE:E9:02:DB:38:B9:DF:BE:33:F0:57:0B:DA:34:94:C2:0A
CN = GlobalSign Domain Validation CA - G2 O = GlobalSign nv-sa C = BE	E8:7E:A2:BE:D6:C6:20:3B:2C:55:B0:0F:E4:9D:28:76:FB:A6:47:02:10:5A:EB:74:8B:86:5A:91:8B:5C:7D:27

GlobalSign NV/SA

Martelarenlaan 38 3010 Leuven Belgium

Main: +32 16 89 19 00 | Fax: +32 16 89 19 09

Web: www.globalsign.com | Email: sales@globalsign.com



CN = GlobalSign Domain Validation CA - G2 O = GlobalSign nv-sa C = BE	BA:0E:2B:6B:F2:C9:8E:D2:C3:B1:C1:C0:8A:1B:BD:CA:F9:27:0A:C5:28:A3:19:43:01:DD:2A:0B:6B:67:B9:B3
CN = GlobalSign Domain Validation CA - G2 O = GlobalSign nv-sa C = BE	4E:15:3A:58:88:77:68:8F:1A:0C:10:3A:08:4C:2E:DB:3A:D1:D8:C4:80:CF:03:D8:AB:6F:ED:47:D9:20:43:70
CN = GlobalSign Domain Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	37:D0:80:A5:E9:A5:26:66:3E:56:EE:20:DE:4B:D9:F7:95:2D:AC:C3:41:49:14:39:08:01:67:AD:5D:D1:8C:AC
CN = GlobalSign Domain Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	BF:DF:4C:F3:F1:43:AD:0D:B9:12:D8:AB:3A:7C:12:F6:17:B9:EA:60:CE:8B:1F:4E:44:F7:42:70:FB:21:B1:9B
CN = GlobalSign Domain Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	66:9E:77:27:A9:2B:E7:2D:97:18:E1:69:22:DC:1B:C1:49:2B:1A:F3:3F:A4:79:3E:68:D8:77:8F:19:A2:EB:E0
CN = GlobalSign Domain Validation CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	09:BC:1B:13:7C:03:12:39:EF:78:86:73:E9:4E:B1:7F:5F:3E:CA:B0:7D:3A:DB:FB:48:5E:75:AB:FA:AF:3B:9A
CN = GlobalSign EC Administration CA2 O = GlobalSign nv-sa C = BE	C8:83:B3:EC:C6:AC:0D:EE:75:CD:D5:85:E7:3A:20:92:87:BC:0C:9F:9D:79:D4:88:86:0F:63:E2:EA:8A:7D:2C
CN = GlobalSign ECC CloudSSL CA - SHA384 - G3 O = GlobalSign nv-sa C = BE	B0:CD:6A:E7:B9:E2:0E:C5:F8:30:FE:E0:1F:66:6D:5D:90:E6:E2:29:D0:6B:C4:6A:30:AC:CE:DF:EC:88:96:48
CN = GlobalSign ECC EV SSL CA 2018 O = GlobalSign nv-sa C = BE	8f:19:ff:e0:2f:c7:95:ed:70:76:5d:14:36:ad:df:77:2f:e0:f0:77:3d:a4:36:ed:bd:b4:2a:2e:30:e2:e8:28
CN = GlobalSign ECC EV SSL CA 2019 O = GlobalSign nv-sa C = BE	0d:31:76:c5:8f:32:1a:a3:4c:57:c8:df:7c:17:d1:f4:e7:6c:79:7e:c1:16:c9:f1:d6:97:74:8e:d1:fc:e7:d9
CN = GlobalSign ECC OV SSL CA 2018 O = GlobalSign nv-sa C = BE	87:c7:15:53:44:5e:b3:c3:3c:3e:07:10:71:1b:99:e9:c7:77:3f:04:d9:1a:c3:8a:9f:4c:08:2e:e2:41:01:ea
CN = GlobalSign ECC384 EV SSL CA - G3 O = GlobalSign nv-sa C = BE	15:54:91:87:49:03:14:F5:17:76:41:F0:BE:B3:26:34:AA:12:30:EB:2C:F2:C2:8A:D9:C7:39:14:FB:18:AB:A0
CN = GlobalSign ECC384 SSL CA - G3 O = GlobalSign nv-sa C = BE	DC:6C:44:AC:8A:3C:D5:C3:45:12:73:F4:43:15:26:B2:EF:66:60:62:EE:76:32:58:A9:28:F6:0B:D0:8E:39:FE
CN = GlobalSign Extended Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	24:F9:1C:07:05:A0:A5:33:86:41:B3:65:FB:0D:9D:97:09:B5:62:97:C F:F1:85:7E:73:C0:2C:16:36:D4:86:AA



GlobalSign

GMO INTERNET GROUP

CN = GlobalSign Extended Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	5B:B2:38:2D:20:E0:9A:E5:6B:4F:3A:51:57:83:8F:7B:AE:49:E4:2E:3C:E5:34:84:D6:6E:EB:2C:07:47:EF:4A
CN = GlobalSign Extended Validation CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	AE:D5:DD:9A:53:39:68:5D:FB:02:9F:6D:89:A1:43:35:A9:65:12:C3:CA:CC:52:B2:99:4A:F8:B6:B3:7F:A4:D2
CN = GlobalSign HV ECC DV SSL CA 2018 O = GlobalSign nv-sa C = BE	4b:0d:13:92:d3:91:57:35:32:07:a6:4c:cb:14:68:3d:de:9d:2c:ed:1f:b5:8b:16:e0:38:be:57:07:c2:78:13
CN = GlobalSign HV RSA DV SSL CA 2018 O = GlobalSign nv-sa C = BE	54:c3:7a:8e:85:3f:d1:d6:37:8d:37:8b:93:93:07:ec:32:1a:31:cc:1a:5a:89:e7:18:06:33:bc:13:f1:87:62
CN = GlobalSign Organization Validated CA - SHA256 - G4 O = GlobalSign nv-sa C = BE	1E:17:41:A1:2E:B8:DA:2B:D7:6E:A9:6C:04:F5:20:35:98:39:71:0F:62:0E:80:95:2F:48:DD:02:40:A1:2C:D8
CN = GlobalSign Organization Validated ECC CA - SHA256 - G4 O = GlobalSign nv-sa C = BE	65:EE:C0:CC:6C:97:0C:C1:CD:73:65:91:15:DC:8D:90:4E:6F:12:E6:DC:8F:D4:DD:A3:9D:54:CB:30:22:47:80
CN = GlobalSign Organization Validation CA - G2 O = GlobalSign nv-sa C = BE	A6:64:22:C4:E4:49:D4:65:CB:02:3A:7F:C7:63:3D:E8:ED:18:16:98:5C:A4:10:93:FC:96:B3:66:3E:D7:A4:3B
CN = GlobalSign Organization Validation CA - G2 O = GlobalSign nv-sa C = BE	A6:23:3E:CB:77:05:3F:72:93:7E:89:43:72:A6:01:ED:3A:BE:A9:0C:C3:B5:D8:95:12:72:0B:F3:FF:CB:DC:9D
CN = GlobalSign Organization Validation CA - G2 O = GlobalSign nv-sa C = BE	08:2B:24:30:47:BF:00:F5:84:40:1F:53:8B:50:4B:AE:9E:C0:60:E0:07:FF:F2:8B:15:9C:08:41:70:68:65:4E
CN = GlobalSign Organization Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	1C:97:37:E9:68:AD:9D:FF:8D:8D:7F:CF:99:6A:14:4B:B9:78:51:A1:90:11:A0:19:0C:94:3C:AE:8D:43:CF:E0
CN = GlobalSign Organization Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	74:EF:33:5E:5E:18:78:83:07:FB:9D:89:CB:70:4B:EC:11:2A:BD:23:48:7D:BF:F4:1C:4D:ED:50:70:F2:41:D9
CN = GlobalSign Organization Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	0B:33:92:12:D7:CF:F1:7A:2C:59:E3:56:69:B5:8E:77:35:01:33:75:0A:78:DA:94:04:77:0E:DD:47:0D:EF:76

GlobalSign NV/SA

Martelarenlaan 38 3010 Leuven Belgium

Main: +32 16 89 19 00 | Fax: +32 16 89 19 09

Web: www.globalsign.com | Email: sales@globalsign.com



GlobalSign
GMO INTERNET GROUP

CN = GlobalSign Organization Validation CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	69:9D:54:B7:48:2A:5D:32:93:31:EA:04:15:CC:2E:DC:D6:0F:DA:01: D1:9E:71:D0:54:19:6B:CE:06:77:73:5C
CN = GlobalSign R6 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	C5:B6:79:10:69:58:15:2F:83:FB:58:86:DD:C4:1F:07:85:19:3E:F6:7 C:69:75:BE:3E:50:9F:17:F2:9B:7A:86
CN = GlobalSign R7 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	D3:02:FF:37:31:D2:8C:59:A0:2D:58:85:C5:BA:32:4B:DC:31:BB:D0: 9A:31:CC:91:6C:F1:B7:4A:C2:77:C0:7B
CN = GlobalSign R8 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	EA:8C:20:1C:1F:8E:EF:58:06:7B:29:7E:6C:87:D2:62:2A:C3:94:65:2 7:92:4B:B6:DE:6A:3D:70:0B:E8:13:44
CN = GlobalSign Root CA OU = Root CA O = GlobalSign nv-sa C = BE	6A:DD:36:8D:A3:54:58:A0:9E:DF:88:0D:05:70:E8:63:AD:C8:50:7D: 49:40:6B:4D:97:E4:4E:53:BC:93:08:C9
CN = GlobalSign RSA DV SSL CA 2018 O = GlobalSign nv-sa C = BE	9e:89:8e:d0:3f:a4:69:69:69:0d:ad:73:c7:29:66:75:04:5f:f9:b5:a0:10: 0a:39:9b:eb:84:35:a9:8f:51:85
CN = GlobalSign RSA OV SSL CA 2018 O = GlobalSign nv-sa C = BE	b6:76:ff:a3:17:9e:88:12:09:3a:1b:5e:af:ee:87:6a:e7:a6:aa:f2:31:07:8 d:ad:1b:fb:21:cd:28:93:76:4a
CN = GlobalSign O = GlobalSign OU = GlobalSign ECC Root CA - R5	3f:31:9b:2a:fe:d4:a0:f7:51:27:be:59:92:55:50:d0:42:8e:68:76:3a:09: e2:73:eb:6a:9f:f8:d1:8d:bb:5b
CN = GlobalSign O = GlobalSign OU = GlobalSign Root CA - R3	44:5e:ec:78:bc:61:21:50:44:a0:37:96:56:aa:2d:5d:b5:e4:2f:76:cb:70 :b8:d1:4c:20:77:aa:94:3d:4e:bb
CN = GlobalSign O = GlobalSign OU = GlobalSign Root CA - R3	C9:4F:ED:DA:4E:86:08:90:85:80:BC:7F:87:B4:34:E0:3B:B2:62:E4: 2F:64:C6:38:20:A8:F5:0F:B1:7C:1C:EC
CN = GlobalSign O = GlobalSign OU = GlobalSign Root CA - R6	dd:a8:da:73:61:87:d7:6f:4f:0e:d5:a5:f6:67:b5:4d:99:a9:8a:e0:60:91: d0:e3:a0:17:14:e9:22:16:95:ad
CN = GlobalSign OU = GlobalSign Root CA - R3 O = GlobalSign	25:10:E2:48:90:3F:01:B6:3F:93:98:17:9E:55:06:97:9F:0E:F5:07:E4: 17:4B:65:7A:F6:F7:70:A4:17:EC:94
CN = GlobalSign OU = GlobalSign Root CA - R6 O = GlobalSign	75:BF:B5:22:CC:4B:58:DA:22:EE:48:85:17:C5:F2:EF:F9:25:76:D2: 0F:59:5F:9A:CE:48:3A:03:6F:C1:BB:6B
CN = ICPEdu O = Rede Nacional de Ensino e Pesquisa - RNP	EA:CB:A6:C9:65:98:B4:A4:1F:D5:3D:69:AB:9E:D9:FB:BB:13:81:15: 4C:45:34:56:72:0C:17:4F:FE:57:6D:1D

GlobalSign NV/SA

Martelarenlaan 38 3010 Leuven Belgium

Main: +32 16 89 19 00 | Fax: +32 16 89 19 09

Web: www.globalsign.com | Email: sales@globalsign.com



GlobalSign
GMO INTERNET GROUP

OU = Gerencia de Servicos (GSer) L = Rio de Janeiro ST = Rio de Janeiro C = BR	
CN = Liberty University External Issuing CA 01 O = Liberty University L = Lynchburg ST = VA C = US	CA:00:5A:A7:5E:33:59:4B:D1:DE:DC:58:4E:1E:74:E5:19:8E:BB:1D:E8:89:29:ED:4F:3E:2E:9F:FC:E3:87:3B
CN = Liberty University External Issuing CA 01 O = Liberty University L = Lynchburg ST = VA C = US	1F:91:21:2C:6B:FC:33:3C:6E:B5:2A:68:55:25:E1:E5:B9:E3:AC:1E:F7:A5:A8:66:49:F5:F9:5C:72:1D:88:98
CN = NSW-DEC-ISS-CA1 O = NSW Department of Education and Communities L = Sydney ST = NSW C = AU	C7:68:21:31:79:F8:07:1B:FA:B3:94:15:B3:C0:91:12:97:C2:34:6E:41:1E:20:0A:B6:79:12:94:8E:4C:99:D7
CN = Prodrive Technologies B.V. OV SSL Issuing CA O = Prodrive Technologies B.V. OU = IT Services L = Son ST = Noord-Brabant C = NL	39:8B:14:99:CE:00:A2:5F:61:CA:C3:D8:BE:E5:71:60:18:80:82:3E:F2:88:BE:97:72:A4:D1:33:98:42:25:95
CN = SHECA DV Secure Server CA ST = Shanghai L = Shanghai O = Shanghai Electronic Certificate Authority Center Co., Ltd. C = CN	39:3b:8b:15:ca:bc:38:86:fb:2e:41:64:95:d6:3c:8b:ad:d8:dc:af:87:55:20:76:c8:a0:a9:63:7c:24:de:47
CN = SHECA EV Secure Server CA ST = Shanghai L = Shanghai O = Shanghai Electronic Certificate Authority Center Co., Ltd. C = CN	14:7c:44:7f:ee:b8:62:02:b5:03:31:4f:ca:f0:03:6b:ea:ae:f4:37:c3:9b:56:b3:58:ec:44:6a:9d:20:38:7f
CN = SHECA OV Secure Server CA ST = Shanghai L = Shanghai O = Shanghai Electronic Certificate Authority Center Co., Ltd. C = CN	77:ea:c4:76:45:3c:b7:32:25:7f:f1:66:a5:eb:d1:65:6c:b1:f6:73:b6:8e:28:df:41:77:41:33:97:9f:a2:a4
CN = SignTrust Domain	BE:CD:7B:1B:8C:68:07:A2:96:3B:3A:EE:9B:E6:0A:31:4E:BE:AF:3E



Verification CA - SHA256 - G2 O = SignTrust OU = SignTrust Domain Verification CA - SHA256 - G2	:A4:C3:0A:F3:9B:7A:A6:C0:82:58:3C:E0
CN = Soluti CA - DV O = SOLUTI - SOLUCOES EM NEGOCIOS INTELIGENTES S/A L = Goi\C3\A2nia ST = Goi\C3\A1s C = BR	A7:4F:FF:F5:28:47:19:05:38:50:73:AD:F3:99:70:19:B2:6F:4F:AF:24:BC:E9:10:2A:27:2E:7A:44:84:E4:BC
CN = Soluti CA - EV O = SOLUTI - SOLUCOES EM NEGOCIOS INTELIGENTES S/A L = Goi\C3\A2nia ST = Goi\C3\A1s C = BR	BB:17:0B:39:78:4D:02:78:43:25:CE:A9:38:D9:23:14:C6:17:DD:E8:08:C8:67:E3:3E:2A:D1:61:D5:4B:3E:8A
CN = Soluti CA - OV O = SOLUTI - SOLUCOES EM NEGOCIOS INTELIGENTES S/A L = Goi\C3\A2nia ST = Goi\C3\A1s C = BR	E6:E9:29:C8:45:6C:01:4E:8D:A7:33:AC:E4:E9:81:45:52:27:2B:81:17:60:50:A1:3E:A4:5A:82:32:00:B1:4B
CN = Southern Company External Issuing CA 1 O = Southern Company Services, Inc. L = Atlanta ST = GA C = US	FB:95:3C:4F:C0:04:58:46:D0:24:91:C8:EC:CF:38:7B:A3:43:47:C1:7A:BB:0E:A6:D5:9F:6D:E4:D2:F1:EA:04
CN = Statoil Qualified CA O = Statoil ASA - 923609016 C = NO DC = statoil DC = com	B6:BA:9C:02:A7:05:61:C3:99:4C:E0:94:AD:56:A7:87:EE:DD:1A:61:A7:D4:AC:0C:D1:1B:64:B2:4E:F2:AE:13
CN = Trusted Root CA G2 O = GlobalSign nv-sa OU = Trusted Root C = BE	6E:32:A3:5B:59:9E:90:87:BB:1A:B3:5C:E7:30:22:EC:2E:26:AF:34:BE:38:89:19:41:9C:95:70:0C:D8:E7:FB
CN = Trusted Root CA SHA256 G2 O = GlobalSign nv-sa OU = Trusted Root C = BE	01:FD:73:EF:5E:70:F5:26:FC:9C:11:F6:5F:E2:EE:6F:71:25:B3:69:39:49:22:7F:FD:8E:45:9E:58:3C:45:8A
CN = Valid Certificadora Digital AlphaSSL CA 2018 O = VALID CERTIFICADORA DIGITAL OU = VALID AlphaSSL L = S\C3\83O PAULO ST = S\C3\83O PAULO C = BR	38:51:35:ab:18:dd:19:0a:03:bc:c0:60:1a:ca:6f:83:ce:a3:66:64:27:91:eb:e0:a2:fd:b0:59:c2:f7:75:0a



CN = Valid Certificadora Digital SSL DV CA 2018 O = VALID CERTIFICADORA DIGITAL OU = VALID SSL DV L = S\C3\83O PAULO ST = S\C3\83O PAULO C = BR	62:b4:8f:51:e5:86:86:76:fd:79:b9:dd:9d:b9:8b:a9:28:49:4b:a7:34:40: 3c:58:33:93:c4:2c:e0:0a:d4:48
CN = Valid Certificadora Digital SSL EV CA 2018 O = VALID CERTIFICADORA DIGITAL OU = VALID SSL EV L = S\C3\83O PAULO ST = S\C3\83O PAULO C = BR	27:fa:1b:e4:f4:b5:6a:14:2a:47:a5:6a:7e:94:b7:25:02:05:9b:40:22:e4: 62:3e:74:8c:a1:ef:15:1c:f2:22
CN = Valid Certificadora Digital SSL OV CA 2018 O = VALID CERTIFICADORA DIGITAL OU = VALID SSL OV L = S\C3\83O PAULO ST = S\C3\83O PAULO C = BR	60:0e:97:60:1b:0b:bc:5f:05:6f:04:ee:f6:71:ef:58:0f:2a:85:83:c6:d2:d 3:fa:d4:01:b9:d8:20:aa:88:36
CN = Virginia Tech Global Qualified Server CA O = Virginia Polytechnic Institute and State University OU = Global Qualified Server CA L = Blacksburg ST = Virginia C = US	D4:D0:31:41:EC:A4:19:0D:93:BC:EE:47:81:AF:6F:2F:DF:0F:65:34: A1:1B:ED:CC:F0:61:4F:4D:4B:17:57:53
CN = Virginia Tech Global Qualified Server CA O = Virginia Polytechnic Institute and State University OU = Global Qualified Server CA L = Blacksburg ST = Virginia C = US	B7:9E:63:78:23:6B:F5:B6:F0:C2:77:EC:C0:80:62:7E:F3:FE:28:71:2 8:1A:60:AC:42:7B:DB:6F:6A:E4:F7:94
CN = Virginia Tech Global Software Token User CA O = Virginia Polytechnic Institute and State University OU = Global Software Token User CA L = Blacksburg ST = Virginia C = US	2F:B0:45:57:96:0B:E5:32:A3:14:C9:BC:35:22:1F:BE:DF:75:96:C3:4 C:BC:67:3E:12:33:9E:FD:BE:DD:EB:F7