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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 its locations as detailed in Appendix C, throughout the period April 1, 2019 to March 31, 2020 for its CAs as enumerated in Appendix B, GlobalSign has:

- Disclosed its extended validation SSL ("EV 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 EV 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 EV SSL certificates it manages is established and protected throughout their life cycles; and
 - EV SSL subscriber information is properly collected, authenticated (for the registration activities performed by GlobalSign)

in accordance with the WebTrust Principles and Criteria for Certification Authorities - Extended Validation SSL, Version 1.6.2.

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 - Extended Validation SSL, Version 1.6.2.

Our independence and guality 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.

> Société coopérative à responsabilité limitée Coöperative vennootschap met beperkte aansprakelijkheid RPM Bruxelles – RPR Brussel – T.V.A. – B.T.W. BE 0446.334.711 – IBAN N° BE71 2100 9059 0069 agissant au nom d'une société/handelend in naam van een vennootschar



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 EV SSL certificate lifecycle management business practices, including its relevant controls over the issuance, renewal, and revocation of EV SSL certificates;
- 2. Selectively testing transactions executed in accordance with disclosed EV 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 (<u>Appendix D</u>) 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, 2019 to March 31, 2020, GlobalSign management's assertion, as referred to above, is fairly stated, in all material respects, in accordance with the <u>WebTrust Principles and Criteria for Certification Authorities - Extended Validation SSL, Version</u> 1.6.2.

This report does not include any representation as to the quality of GlobalSign's services beyond those covered by the <u>WebTrust Principles and Criteria for Certification Authorities - Extended</u> <u>Validation SSL, Version 1.6.2</u>, 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 Principles and Criteria for Certification Authorities – Extended Validation SSL 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.

EY Bedrijfsrevisoren BV

Diegem, Belgium

Christel Weymeersch, Partner*

June 29, 2020

* Acting on behalf of a BV



Appendix A – Certification Practice Statements and Certificate Policies in Scope

Certification Practice Statement	Begin Effective Date	End Effective Date
Version 9	12-Mar-19	30-May-19
Version 9.1	31-May-19	24-Sept-19
Version 9.2	25-Sept-19	30-Mar-20
Version 9.3	31-Mar-20	

Certificate Policy	Begin Effective Date	End Effective Date
Version 6	12-Mar-19	30-May-19
Version 6.1	31-May-19	24-Sept-19
Version 6.2	25-Sept-19	30-Mar-20
Version 6.3	31-Mar-20	



Appendix B – In-Scope CAs

Root CAs	SHA256 Hash
CN = GlobalSign Root E46 O = GlobalSign nv-sa C = BE	CBB9C44D84B8043E1050EA31A69F514955D7BFD2E2C6B49301019AD61D9F5058
CN = GlobalSign Root R46 O = GlobalSign nv-sa C = BE	4FA3126D8D3A11D1C4855A4F807CBAD6CF919D3A5A88B03BEA2C6372D93C40C9
CN = GlobalSign Client Authentication Root E45 O = GlobalSign nv-sa C = BE	8B0F0FAA2C00FE0532A8A54E7BC5FD139C1922C4F10F0B16E10FB8BE1A634964
CN = GlobalSign Client Authentication Root R45 O = GlobalSign nv-sa C = BE	165C7E810BD37C1D57CE9849ACCD500E5CB01EEA37DC550DB07E598AAD2474A8
CN = GlobalSign Code Signing Root E45 O = GlobalSign nv-sa C = BE	26C6C5FD4928FD57A8A4C5724FDD279745869C60C338E262FFE901C31BD1DB2B
CN = GlobalSign Code Signing Root R45 O = GlobalSign nv-sa C = BE	7B9D553E1C92CB6E8803E137F4F287D4363757F5D44B37D52F9FCA22FB97DF86
CN = GlobalSign Document Signing Root E45 O = GlobalSign nv-sa C = BE	F86973BDD0514735E10C1190D0345BF89C77E1C4ADBD3F65963B803FD3C9E1FF
CN = GlobalSign Document Signing Root R45 O = GlobalSign nv-sa, C = BE	38BE6C7EEB4547D82B9287F243AF32A9DEEB5DC5C9A87A0056F938D91B456A5A
CN = GlobalSign IoT Root E60 O = GlobalSign nv-sa C = BE	43ED443C1F0CD46C9914B4272C24DC42CF6FE62B4AAB37585878A26D882AE4CB
CN = GlobalSign IoT Root R60 O = GlobalSign nv-sa C = BE	36E80B78775DDA9D0BAC964AC29D5A5EC4F3684E0C74445E954A191C2939B8E0



CN = GlobalSign Secure Mail Root E45 O = GlobalSign nv-sa C = BE	5CBF6FB81FD417EA4128CD6F8172A3C9402094F74AB2ED3A06B4405D04F30B19
CN = GlobalSign Secure Mail Root R45 O = GlobalSign nv-sa C = BE	319AF0A7729E6F89269C131EA6A3A16FCD86389FDCAB3C47A4A675C161A3F974
CN = GlobalSign Timestamping Root R45 O = GlobalSign nv-sa C = BE	2BCBBFD66282C680491C8CD7735FDBBAB7A8079B127BEC60C535976834399AF7
CN = GlobalSign Root CA OU = Root CA O = GlobalSign nv-sa C = BE	EBD41040E4BB3EC742C9E381D31EF2A41A48B6685C96E7CEF3C1DF6CD4331C99
CN = GlobalSign O = GlobalSign OU = GlobalSign Root CA - R3	CBB522D7B7F127AD6A0113865BDF1CD4102E7D0759AF635A7CF4720DC963C53B
CN = GlobalSign O = GlobalSign OU = GlobalSign Root CA - R6	2CABEAFE37D06CA22ABA7391C0033D25982952C453647349763A3AB5AD6CCF69
CN = GlobalSign O = GlobalSign OU = GlobalSign ECC Root CA - R5	179FBC148A3DD00FD24EA13458CC43BFA7F59C8182D783A513F6EBEC100C8924
CN = GlobalSign Root CA - R7 OU = Root CA O = GlobalSign nv-sa C = BE	E95B3125405E0D46042D55AC62154507C678EBC360765785FB204AF349BFE880
CN = GlobalSign Root CA - R8 OU = Root CA O = GlobalSign nv-sa C = BE	AE4851FF42039BADE058279151D82683041D2598E240683CC56D76FB8CF53D42



Other CAs	SHA256 Hash
CN = SHECA EV Secure Server CA ST = Shanghai L = Shanghai O = Shanghai Electronic Certificate Authority Center Co. Ltd. C = CN	147C447FEEB86202B503314FCAF0036BEAAEF437C39B56B358EC446A9D20387F
CN = Soluti CA - EV O = SOLUTI - SOLUCOES EM NEGOCIOS INTELIGENTES S/A L = Goiânia ST = Goiás C = BR	BB170B39784D02784325CEA938D92314C617DDE808C867E33E2AD161D54B3E8A
$ \begin{array}{l} CN = Valid \; Certificadora \; Digital \; SSL \; EV \; CA \; 2018 \\ O = VALID \; CERTIFICADORA \; DIGITAL \\ OU = VALID \; SSL \; EV \\ L = SÃO \; PAULO \\ ST = SÃO \; PAULO \\ C = BR \\ \end{array} $	27FA1BE4F4B56A142A47A56A7E94B72502059B4022E4623E748CA1EF151CF222
CN = GlobalSign EC Administration CA2 O = GlobalSign nv-sa C = BE	C883B3ECC6AC0DEE75CDD585E73A209287BC0C9F9D79D488860F63E2EA8A7D2C
CN = GlobalSign O = GlobalSign OU = GlobalSign Root CA - R3	445EEC78BC61215044A0379656AA2D5DB5E42F76CB70B8D14C2077AA943D4EBB
CN = GlobalSign Root E46 O = GlobalSign nv-sa C = BE	33EF151EFB08D1C44FB85CC3F23EC6873014E9F881691BD4938B7F251580B694
CN = GlobalSign Root R46 O = GlobalSign nv-sa C = BE	A5E33C28E3013A71F5F760AE3B16595090043D2EC5209EC52903C4FBAD258DAD



CN = GlobalSign	
O = GlobalSign	F349954E8FB6D44011BCB789D97D9A2CB2032BD5F0B598D1FB8A099F5848D523
OU = GlobalSign ECC Root CA - R5	
CN = GlobalSign	
O = GlobalSign	C84E1378B974A991ACDCDD733421E3061E6FA21A0491C8902BAFDE3855E0063E
OU = GlobalSign Root CA - R6	
CN = GlobalSign Root E46	
O = GlobalSign nv-sa	1DF6054D6641404633641BB5FA3742FDA7D075E2514840AB61E00CCBBB7D341D
C = BE	
CN = GlobalSign Root R46	
O = GlobalSign nv-sa	A63C1398B5F8DD2D432FBE4C2C19142BEA6D5D0221FAE794718AE7597ACCA96D
C = BE	
CN = GlobalSign	
O = GlobalSign	3F319B2AFED4A0F75127BE59925550D0428E68763A09E273EB6A9FF8D18DBB5B
OU = GlobalSign ECC Root CA - R5	
CN = GlobalSign	
O = GlobalSign	DDA8DA736187D76F4F0ED5A5F667B54D99A98AE06091D0E3A01714E9221695AD
OU = GlobalSign Root CA - R6	
CN = GlobalSign Root E46	
O = GlobalSign nv-sa	0F1554C2FD591B0256A608E1C136A837E7A6E041561EE08A911B2AFDCD3C6C1B
C = BE	
CN = GlobalSign Root R46	
O = GlobalSign nv-sa	45CB1D874CB03BD5C5B6E079C8FC29E51521EE5628486301964A41F94BA59F88
C = BE	
CN = GlobalSign ECC EV SSL CA 2018	
O = GlobalSign nv-sa	8F19FFE02FC795ED70765D1436ADDF772FE0F0773DA436EDBDB42A2E30E2E828
C = BE	
CN = GlobalSign ECC EV SSL CA 2019	
O = GlobalSign nv-sa	0D3176C58F321AA34C57C8DF7C17D1F4E76C797EC116C9F1D697748ED1FCE7D9
C = BE	



CN = GlobalSign ECC384 EV SSL CA - G3 O = GlobalSign nv-sa C = BE	15549187490314F5177641F0BEB32634AA1230EB2CF2C28AD9C73914FB18ABA0
CN = GlobalSign Extended Validation CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	AED5DD9A5339685DFB029F6D89A14335A96512C3CACC52B2994AF8B6B37FA4D2
CN = GlobalSign R6 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	C5B679106958152F83FB5886DDC41F0785193EF67C6975BE3E509F17F29B7A86
CN = GlobalSign R6 RSA EV SSL CA 2019 O = GlobalSign nv-sa C = BE	57264B82A864DBA1C11EF3F80ABB94CAC3660662B0C22F571FF993B3FBCF76FB
CN = GlobalSign R6 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	C5B679106958152F83FB5886DDC41F0785193EF67C6975BE3E509F17F29B7A86
CN = GlobalSign R6 RSA EV SSL CA 2019 O = GlobalSign nv-sa C = BE	57264B82A864DBA1C11EF3F80ABB94CAC3660662B0C22F571FF993B3FBCF76FB
CN = GlobalSign R7 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	D302FF3731D28C59A02D5885C5BA324BDC31BBD09A31CC916CF1B74AC277C07B
CN = GlobalSign R8 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	EA8C201C1F8EEF58067B297E6C87D2622AC3946527924BB6DE6A3D700BE81344
CN = GlobalSign RSA EV QWAC CA 2019 O = GlobalSign nv-sa C = BE	EDC734C501501DC7A27448FA02C74931F8578BF297B173F34B841E82C6691926
CN = GlobalSign RSA EV SSL CA 2019 O = GlobalSign nv-sa C = BE	0D6E46784F3B694E9C7506786417BC6F87F9D2F73D19B5E8081612B21137B766



CN = GlobalSign Extended Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	5BB2382D20E09AE56B4F3A5157838F7BAE49E42E3CE53484D66EEB2C0747EF4A
CN = GlobalSign O = GlobalSign OU = GlobalSign Root CA - R3	C94FEDDA4E8608908580BC7F87B434E03BB262E42F64C63820A8F50FB17C1CEC
CN = GlobalSign Extended Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	24F91C0705A0A5338641B365FB0D9D9709B56297CFF1857E73C02C1636D486AA



Appendix C – Locations

Location Identifier	Country	State / Province
BE-01	Belgium	Vlaams-Brabant
CN-01	China	Shanghai
IN-01	India	Delhi
JP-01	Japan	Tokyo
JP-02	Japan	Yamaguchi
JP-03	Japan	Tokyo
JP-04	Japan	Tokyo
JP-05	Japan	Tokyo
PH-01	Philippines	National Capital Region
RU-01	Russia	Moscow
SG-01	Singapore	Central Singapore
SG-02	Singapore	Central Singapore
UK-01	United Kingdom	Kent
UK-02	United Kingdom	Greater London
UK-03	United Kingdom	Greater London
US-01	United States	New Hampshire



Appendix D - Publicly disclosed incidents

#	Disclosure	Publicly Disclosed Link
1	GlobalSign disclosed the misissuance of QWAC certificates.	Bugzilla Ticket Link
2	GlobalSign disclosed that there has been an issue with an	Bugzilla Ticket Link
	OCSP responder status.	
3	GlobalSign disclosed that some SSL certificates with US country	Bugzilla Ticket Link
	code and invalid State/Prov have been issued.	
4	GlobalSign disclosed that ICAs in CCADB, without EKU	Bugzilla Ticket Link
_	extension are listed in WTCA report but not in WTBR report.	
5	GlobalSign disclosed that OCSP responders found to respond	Bugzilla Ticket Link
	signed by the default CA when passed an invalid issuer in	
6	request. GlobalSign disclosed that there has been a wrong business	Bugzilla Ticket Link
0	category on 3 EV SSL certificates.	Dugzilla Ticket Lillk
7	GlobalSign disclosed that an OCSP Responder returned invalid	Bugzilla Ticket Link
'	values for some precertificates.	Dugzina Hoker Link
8	GlobalSign disclosed that a customer (AT&T) running an on-	Bugzilla Ticket Link
_	premise (technically-constrained) CA that chains to a GlobalSign	
	root, issued certificates without AIA extension.	
9	GlobalSign disclosed that it misissued 4 certificates with invalid	Bugzilla Ticket Link
	CN.	
10	GlobalSign disclosed that it issued certificates with Subject	Bugzilla Ticket Link
	Public Key Info lacking the explicit NULL parameter.	
11	GlobalSign disclosed that it performed an untimely revocation of	Bugzilla Ticket Link
	TLS certificate after submission of private key compromise.	
12	GlobalSign disclosed that it was not able to revoke 2	Bugzilla Ticket Link
	noncompliant QWACs within 5 days.	
13	GlobalSign disclosed that it was not able to revoke noncompliant	Bugzilla Ticket Link
	ICA within 7 days	



GlobalSign Management's Assertion

GlobalSign NV/SA ("GlobalSign") operates the Certification Authority (CA) services as disclosed in <u>Appendix B</u> and provides Extended Validation SSL ("EV SSL") CA services.

The management of GlobalSign is responsible for establishing and maintaining effective controls over its EV SSL CA operations, including its EV SSL CA business practices disclosure on its website, EV SSL key lifecycle management controls, EV SSL certificate lifecycle management control. 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 EV SSL CA services. Based on that assessment, in GlobalSign management's opinion, in providing its EV SSL Certification Authority (CA) operations at its locations as detailed in <u>Appendix C</u>, throughout the period April 1, 2019 to March 31, 2020, GlobalSign has:

- Disclosed its extended validation SSL ("EV SSL") certificate lifecycle management business practices in the applicable versions of the Certificate Practice Statement and Certificate Policy, as stipulated in <u>Appendix A</u>, including its commitment to provide EV 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 EV SSL certificates it manages was established and protected throughout their life cycles; and
 - EV SSL subscriber information was properly collected, authenticated (for the registration activities performed by GlobalSign)
- Disclosed the attached comments (<u>Appendix D</u>) 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.

In accordance with the <u>WebTrust Principles and Criteria for Certification Authorities -</u> Extended Validation SSL, Version 1.6.2.



GlobalSign Leuven, Belgium

Signed by: Arvid Vermote Function: Chief Information Security Officer

June 5, 2020



Appendix A – Certification Practice Statements and Certificate Policies in Scope

Certification Practice Statement	Begin Effective Date	End Effective Date
Version 9	12-Mar-19	30-May-19
Version 9.1	31-May-19	24-Sept-19
Version 9.2	25-Sept-19	30-Mar-20
Version 9.3	31-Mar-20	

Certificate Policy	Begin Effective Date	End Effective Date
Version 6	12-Mar-19	30-May-19
Version 6.1	31-May-19	24-Sept-19
Version 6.2	25-Sept-19	30-Mar-20
Version 6.3	31-Mar-20	



Appendix B – In-Scope CAs

Root CAs	SHA256 Hash
CN = GlobalSign Root E46 O = GlobalSign nv-sa C = BE	CBB9C44D84B8043E1050EA31A69F514955D7BFD2E2C6B49301019AD61D9F5058
CN = GlobalSign Root R46 O = GlobalSign nv-sa C = BE	4FA3126D8D3A11D1C4855A4F807CBAD6CF919D3A5A88B03BEA2C6372D93C40C9
CN = GlobalSign Client Authentication Root E45 O = GlobalSign nv-sa C = BE	8B0F0FAA2C00FE0532A8A54E7BC5FD139C1922C4F10F0B16E10FB8BE1A634964
CN = GlobalSign Client Authentication Root R45 O = GlobalSign nv-sa C = BE	165C7E810BD37C1D57CE9849ACCD500E5CB01EEA37DC550DB07E598AAD2474A8
CN = GlobalSign Code Signing Root E45 O = GlobalSign nv-sa C = BE	26C6C5FD4928FD57A8A4C5724FDD279745869C60C338E262FFE901C31BD1DB2B
CN = GlobalSign Code Signing Root R45 O = GlobalSign nv-sa C = BE	7B9D553E1C92CB6E8803E137F4F287D4363757F5D44B37D52F9FCA22FB97DF86
CN = GlobalSign Document Signing Root E45 O = GlobalSign nv-sa C = BE	F86973BDD0514735E10C1190D0345BF89C77E1C4ADBD3F65963B803FD3C9E1FF
CN = GlobalSign Document Signing Root R45 O = GlobalSign nv-sa, C = BE	38BE6C7EEB4547D82B9287F243AF32A9DEEB5DC5C9A87A0056F938D91B456A5A
CN = GlobalSign IoT Root E60 O = GlobalSign nv-sa C = BE	43ED443C1F0CD46C9914B4272C24DC42CF6FE62B4AAB37585878A26D882AE4CB
CN = GlobalSign IoT Root R60 O = GlobalSign nv-sa C = BE	36E80B78775DDA9D0BAC964AC29D5A5EC4F3684E0C74445E954A191C2939B8E0
CN = GlobalSign Secure Mail Root E45	5CBF6FB81FD417EA4128CD6F8172A3C9402094F74AB2ED3A06B4405D04F30B19

GlobalSign NV/SA

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O = GlobalSign nv-sa C = BE		
CN = GlobalSign Secure Mail Root R45		
O = GlobalSign nv-sa C = BE	319AF0A7729E6F89269C131EA6A3A16FCD86389FDCAB3C47A4A675C161A3F974	
CN = GlobalSign Timestamping Root R45		
O = GlobalSign nv-sa C = BE	2BCBBFD66282C680491C8CD7735FDBBAB7A8079B127BEC60C535976834399AF7	
CN = GlobalSign Root CA		
OU = Root CA O = GlobalSign nv-sa	EBD41040E4BB3EC742C9E381D31EF2A41A48B6685C96E7CEF3C1DF6CD4331C99	
C = BE		
CN = GlobalSign		
O = GlobalSign OU = GlobalSign Root CA - R3	CBB522D7B7F127AD6A0113865BDF1CD4102E7D0759AF635A7CF4720DC963C53B	
CN = GlobalSign		
O = GlobalSign	2CABEAFE37D06CA22ABA7391C0033D25982952C453647349763A3AB5AD6CCF69	
OU = GlobalSign Root CA - R6		
CN = GlobalSign O = GlobalSign	179FBC148A3DD00FD24EA13458CC43BFA7F59C8182D783A513F6EBEC100C8924	
OU = GlobalSign ECC Root CA - R5	179FBC146A3DD00FD24EA13436CC43BFA7F39C6162D763A313F0EBEC100C6924	
CN = GlobalSign Root CA - R7		
OU = Root CA	E95B3125405E0D46042D55AC62154507C678EBC360765785FB204AF349BFE880	
O = GlobalSign nv-sa C = BE		
CN = GlobalSign Root CA - R8		
OU = Root CA	AE4851FF42039BADE058279151D82683041D2598E240683CC56D76FB8CF53D42	
O = GlobalSign nv-sa		
C = BE		



Other CAs	SHA256 Hash	
CN = SHECA EV Secure Server CA		
ST = Shanghai		
L = Shanghai		
O = Shanghai Electronic Certificate Authority	147C447FEEB86202B503314FCAF0036BEAAEF437C39B56B358EC446A9D20387F	
Center Co.		
Ltd.		
C = CN		
CN = Soluti CA - EV		
O = SOLUTI - SOLUCOES EM NEGOCIOS		
INTELIGENTES S/A	BB170B39784D02784325CEA938D92314C617DDE808C867E33E2AD161D54B3E8A	
L = Goiânia	DD110D33104D021040200EA300D323140011DDE0000001E33E2AD101D34D3E0A	
ST = Goiás		
C = BR		
CN = Valid Certificadora Digital SSL EV CA 2018		
O = VALID CERTIFICADORA DIGITAL		
OU = VALID SSL EV	27FA1BE4F4B56A142A47A56A7E94B72502059B4022E4623E748CA1EF151CF222	
L = SÃO PAULO		
ST = SÃO PAULO		
C = BR		
CN = GlobalSign EC Administration CA2		
O = GlobalSign nv-sa	C883B3ECC6AC0DEE75CDD585E73A209287BC0C9F9D79D488860F63E2EA8A7D2C	
C = BE		
CN = GlobalSign		
O = GlobalSign	445EEC78BC61215044A0379656AA2D5DB5E42F76CB70B8D14C2077AA943D4EBB	
OU = GlobalSign Root CA - R3		
CN = GlobalSign Root E46		
O = GlobalSign nv-sa	33EF151EFB08D1C44FB85CC3F23EC6873014E9F881691BD4938B7F251580B694	
C = BE		
CN = GlobalSign Root R46		
O = GlobalSign nv-sa	A5E33C28E3013A71F5F760AE3B16595090043D2EC5209EC52903C4FBAD258DAD	
C = BE		
CN = GlobalSign		
O = GlobalSign	F349954E8FB6D44011BCB789D97D9A2CB2032BD5F0B598D1FB8A099F5848D523	
OU = GlobalSign ECC Root CA - R5		

GlobalSign NV/SA

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CN = GlobalSign O = GlobalSign OU = GlobalSign Root CA - R6	C84E1378B974A991ACDCDD733421E3061E6FA21A0491C8902BAFDE3855E0063E
CN = GlobalSign Root E46 O = GlobalSign nv-sa C = BE	1DF6054D6641404633641BB5FA3742FDA7D075E2514840AB61E00CCBBB7D341D
CN = GlobalSign Root R46 O = GlobalSign nv-sa C = BE	A63C1398B5F8DD2D432FBE4C2C19142BEA6D5D0221FAE794718AE7597ACCA96D
CN = GlobalSign O = GlobalSign OU = GlobalSign ECC Root CA - R5	3F319B2AFED4A0F75127BE59925550D0428E68763A09E273EB6A9FF8D18DBB5B
CN = GlobalSign O = GlobalSign OU = GlobalSign Root CA - R6	DDA8DA736187D76F4F0ED5A5F667B54D99A98AE06091D0E3A01714E9221695AD
CN = GlobalSign Root E46 O = GlobalSign nv-sa C = BE	0F1554C2FD591B0256A608E1C136A837E7A6E041561EE08A911B2AFDCD3C6C1B
CN = GlobalSign Root R46 O = GlobalSign nv-sa C = BE	45CB1D874CB03BD5C5B6E079C8FC29E51521EE5628486301964A41F94BA59F88
CN = GlobalSign ECC EV SSL CA 2018 O = GlobalSign nv-sa C = BE	8F19FFE02FC795ED70765D1436ADDF772FE0F0773DA436EDBDB42A2E30E2E828
CN = GlobalSign ECC EV SSL CA 2019 O = GlobalSign nv-sa C = BE	0D3176C58F321AA34C57C8DF7C17D1F4E76C797EC116C9F1D697748ED1FCE7D9
CN = GlobalSign ECC384 EV SSL CA - G3 O = GlobalSign nv-sa C = BE	15549187490314F5177641F0BEB32634AA1230EB2CF2C28AD9C73914FB18ABA0
CN = GlobalSign Extended Validation CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	AED5DD9A5339685DFB029F6D89A14335A96512C3CACC52B2994AF8B6B37FA4D2

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CN = GlobalSign R6 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	C5B679106958152F83FB5886DDC41F0785193EF67C6975BE3E509F17F29B7A86
CN = GlobalSign R6 RSA EV SSL CA 2019 O = GlobalSign nv-sa C = BE	57264B82A864DBA1C11EF3F80ABB94CAC3660662B0C22F571FF993B3FBCF76FB
CN = GlobalSign R6 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	C5B679106958152F83FB5886DDC41F0785193EF67C6975BE3E509F17F29B7A86
CN = GlobalSign R6 RSA EV SSL CA 2019 O = GlobalSign nv-sa C = BE	57264B82A864DBA1C11EF3F80ABB94CAC3660662B0C22F571FF993B3FBCF76FB
CN = GlobalSign R7 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	D302FF3731D28C59A02D5885C5BA324BDC31BBD09A31CC916CF1B74AC277C07B
CN = GlobalSign R8 Admin CA - SHA256 - G3 O = GlobalSign nv-sa C = BE	EA8C201C1F8EEF58067B297E6C87D2622AC3946527924BB6DE6A3D700BE81344
CN = GlobalSign RSA EV QWAC CA 2019 O = GlobalSign nv-sa C = BE	EDC734C501501DC7A27448FA02C74931F8578BF297B173F34B841E82C6691926
CN = GlobalSign RSA EV SSL CA 2019 O = GlobalSign nv-sa C = BE	0D6E46784F3B694E9C7506786417BC6F87F9D2F73D19B5E8081612B21137B766
CN = GlobalSign Extended Validation CA - SHA256 - G2 O = GlobalSign nv-sa C = BE	5BB2382D20E09AE56B4F3A5157838F7BAE49E42E3CE53484D66EEB2C0747EF4A
CN = GlobalSign O = GlobalSign OU = GlobalSign Root CA - R3	C94FEDDA4E8608908580BC7F87B434E03BB262E42F64C63820A8F50FB17C1CEC



CN = GlobalSign Extended Validation CA -	24F91C0705A0A5338641B365FB0D9D9709B56297CFF1857E73C02C1636D486AA
SHA256 - G2	
O = GlobalSign nv-sa	
C = BE	

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Appendix C – Locations

Location Identifier	Country	State / Province
BE-01	Belgium	Vlaams-Brabant
CN-01	China	Shanghai
IN-01	India	Delhi
JP-01	Japan	Tokyo
JP-02	Japan	Yamaguchi
JP-03	Japan	Tokyo
JP-04	Japan	Tokyo
JP-05	Japan	Tokyo
PH-01	Philippines	National Capital Region
RU-01	Russia	Moscow
SG-01	Singapore	Central Singapore
SG-02	Singapore	Central Singapore
UK-01	United Kingdom	Kent
UK-02	United Kingdom	Greater London
UK-03	United Kingdom	Greater London
US-01	United States	New Hampshire



Appendix D – Publicly disclosed incidents

#	Disclosure	Publicly Disclosed Link
1	GlobalSign disclosed the misissuance of QWAC certificates.	Bugzilla Ticket Link
2	GlobalSign disclosed that there has been an issue with an OCSP responder status.	Bugzilla Ticket Link
3	GlobalSign disclosed that some SSL certificates with US country code and invalid State/Prov have been issued.	Bugzilla Ticket Link
4	GlobalSign disclosed that ICAs in CCADB, without EKU extension are listed in WTCA report but not in WTBR report.	Bugzilla Ticket Link
5	GlobalSign disclosed that OCSP responders found to respond signed by the default CA when passed an invalid issuer in request.	Bugzilla Ticket Link
6	GlobalSign disclosed that there has been a wrong business category on 3 EV SSL certificates.	Bugzilla Ticket Link
7	GlobalSign disclosed that an OCSP Responder returned invalid values for some precertificates.	Bugzilla Ticket Link
8	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.	Bugzilla Ticket Link
9	GlobalSign disclosed that it misissued 4 certificates with invalid CN.	Bugzilla Ticket Link
10	GlobalSign disclosed that it issued certificates with Subject Public Key Info lacking the explicit NULL parameter.	Bugzilla Ticket Link
11	GlobalSign disclosed that it performed an untimely revocation of TLS certificate after submission of private key compromise.	Bugzilla Ticket Link
12	GlobalSign disclosed that it was not able to revoke 2 noncompliant QWACs within 5 days.	Bugzilla Ticket Link
13	GlobalSign disclosed that it was not able to revoke noncompliant ICA within 7 days	Bugzilla Ticket Link