

MSC Trustgate.com Certificate Practice Statement

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MSC Trustgate.com Certificate Practice Statement

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Revision History

No.	Date	Changes	Version
1	29 March 2019	This version replaces the MSC Trustgate.com CPS version 4.3.2 30 January 2019. It includes OID of MSC Trustgate.com CA.	4.3.3
2	23 August 2019	To amend Class 1 require Applicant to demonstrate control of his/her email address or mobile number. To amend the certificate validity period of DV, OV, and AATL to 825 days in Section 6.3.2	4.3.4
3	14 January 2021	This version adapts the 4.3.4 MSC Trustgate.com CPS and changes the format according to include all RFC 3647 and update with the latest CAB Forum document (version 1.7.3 October 2020)	5.0
4	4 April 2022	This version: <ul style="list-style-type: none"> • Included validation for Onion Domain Certificate in section 3.2.2.4 • Included the period of certificate status checking in CRL • Included OCSP responses period for Code Signing and Timestamp Certificate • Inserted Repository MUST NOT include entries that indicate certificate suspended in section 4.9.13 • Changed the Re-Verification Required for Document Signing Certificate to At Least every six years. • Updated the Certificate Extension Section 7.1.2 according to CAB Forum document • Added the CA issuing Timestamp Certificate and Timestamp Certificate extension in section 7.1.2 • Inserted section 7.1.3.2, 7.1.3.2.1 and 7.1.3.2.2 to be standardized with CAB Forum document • Added the Entries in the dNSName do not contain underscore characters in section 7.1.4 • Inserted Reserved Certificate Policy Identifiers • Inserted section 7.1.6.1, 7.1.6.2, 7.1.6.3 and 7.1.6.4 to be standardized with CAB Forum document 	5.1

Table of Contents

1	INTRODUCTION.....	1
1.1	Overview.....	1
1.2	Document name and identification.....	2
1.2.1	Root Certificate.....	3
1.2.2	Intermediate Certificate.....	4
1.3	PKI participants.....	7
1.3.1	Certification authorities.....	7
1.3.2	Registration authorities.....	7
1.3.3	Subscribers.....	7
1.3.4	Relying parties.....	7
1.3.5	Other participants.....	8
1.4	Certificate usage.....	8
1.4.1	Appropriate certificate usage.....	8
1.4.2	Prohibited certificate uses.....	10
1.5	Policy administration.....	10
1.5.1	Organization administering the document.....	10
1.5.2	Contact person.....	10
1.5.3	Person determining CPS suitability for the policy.....	11
1.5.4	CPS approval procedures.....	11
1.6	Definitions and acronyms.....	11
1.6.1	Definitions.....	11
1.6.2	Acronyms.....	13
1.6.3	References.....	13
2	PUBLICATION AND REPOSITORY RESPONSIBILITIES.....	14
2.1	Repositories.....	14
2.2	Publication of certification information.....	14
2.3	Time or frequency of publication.....	14
2.4	Access controls on repositories.....	14
3	IDENTIFICATION AND AUTHENTICATION.....	15
3.1	Naming.....	15
3.1.1	Types of names.....	15
3.1.2	Need for names to be meaningful.....	17
3.1.3	Anonymity or pseudonymity of subscribers.....	17
3.1.4	Rules for interpreting various name forms.....	17
3.1.5	Uniqueness of names.....	17
3.1.6	Recognition, authentication, and role of trademarks.....	18
3.2	Initial identity validation.....	18
3.2.1	Method to prove possession of private key.....	18
3.2.2	Authentication of organization and domain Identity.....	18
3.2.3	Authentication of individual identity.....	22
3.2.4	Non-verified subscriber information.....	24
3.2.5	Validation of authority.....	24
3.2.6	Criteria for interoperation.....	24
3.3	Identification and authentication for re-key requests.....	25
3.3.1	Identification and authentication for routine re-key.....	25
3.3.2	Identification and authentication for re-key after revocation.....	25
3.4	Identification and authentication for revocation request.....	25
4	CERTIFICATE LIFE-CYCLE OPERATIONAL REQUIREMENTS.....	27
4.1	Certificate Application.....	27
4.1.1	Who can submit a certificate application.....	27

4.1.2	Enrolment process and responsibilities	27
4.1.3	RA Certificates	27
4.2	Certificate application processing	27
4.2.1	Performing identification and authentication functions	27
4.2.2	Approval or rejection of certificate applications	28
4.2.3	Time to process certificate applications	28
4.3	Certificate issuance	29
4.3.1	CA actions during certificate issuance.....	29
4.3.2	Notification to subscriber by the CA of issuance of certificate	29
4.4	Certificate acceptance	29
4.4.1	Conduct constituting certificate acceptance.....	29
4.4.2	Publication of the certificate by the CA.....	29
4.4.3	Notification of certificate issuance by the CA to other entities	29
4.5	Key pair and certificate usage	29
4.5.1	Subscriber private key and certificate usage	29
4.5.2	Relying party public key and certificate usage	30
4.6	Certificate renewal	30
4.6.1	Circumstance for certificate renewal	30
4.6.2	Who may request renewal	30
4.6.3	Processing certificate renewal requests	30
4.6.4	Notification of new certificate issuance to subscriber	31
4.6.5	Conduct constituting acceptance of a renewal certificate.....	31
4.6.6	Publication of the renewal certificate by the CA.....	31
4.6.7	Notification of certificate issuance by the CA to other entities	31
4.7	Certificate re-key	31
4.7.1	Circumstance for certificate re-key.....	31
4.7.2	Who may request certification of a new public key.....	32
4.7.3	Processing certificate re-keying requests	32
4.7.4	Notification of new certificate issuance to subscriber	32
4.7.5	Conduct constituting acceptance of a re-keyed certificate	32
4.7.6	Publication of the re-keyed certificate by the CA	32
4.7.7	Notification of certificate issuance by the CA to other entities	32
4.8	Certificate modification	32
4.8.1	Circumstance for certificate modification	32
4.8.2	Who may request certificate modification.....	32
4.8.3	Processing certificate modification requests	32
4.8.4	Notification of new certificate issuance to subscriber	32
4.8.5	Conduct constituting acceptance of modified certificate	32
4.8.6	Publication of the modified certificate by the CA	33
4.8.7	Notification of certificate issuance by the CA to other entities	33
4.9	Certificate revocation and suspension.....	33
4.9.1	Circumstances for revocation	33
4.9.2	Who can request revocation	35
4.9.3	Procedure for revocation request.....	35
4.9.4	Revocation request grace period	35
4.9.5	Time within which CA must process the revocation request	35
4.9.6	Revocation checking requirement for relying parties	36
4.9.7	CRL issuance frequency	36
4.9.8	Maximum latency for CRLs	36
4.9.9	On-line revocation/status checking availability	36
4.9.10	On-line revocation checking requirements	37
4.9.11	Other forms of revocation advertisements available.....	37
4.9.12	Special requirements re key compromise	37
4.9.13	Circumstances for suspension	37
4.9.14	Who can request suspension.....	37

4.9.15	Procedure for suspension request.....	38
4.9.16	Limits on suspension period.....	38
4.10	Certificate status services.....	38
4.10.1	Operational characteristics	38
4.10.2	Service availability	38
4.10.3	Operational features	38
4.11	End of subscription.....	38
4.12	Key escrow and recovery	38
4.12.1	Key escrow and recovery policy and practices	38
4.12.2	Session key encapsulation and recovery policy and practices	39
5	FACILITY, MANAGEMENT, AND OPERATIONAL CONTROLS.....	40
5.1	Physical controls	40
5.1.1	Site location and construction	40
5.1.2	Physical access	40
5.1.3	Power and air conditioning	41
5.1.4	Water exposures.....	41
5.1.5	Fire prevention and protection.....	41
5.1.6	Media storage.....	41
5.1.7	Waste disposal	41
5.1.8	Off-site backup.....	41
5.2	Procedural controls	41
5.2.1	Trusted roles.....	41
5.2.2	Number of persons required per task	42
5.2.3	Identification and authentication for each role	42
5.2.4	Roles requiring separation of duties	43
5.3	Personnel controls.....	43
5.3.1	Qualifications, experience, and clearance requirements.....	43
5.3.2	Background check procedures	43
5.3.3	Training requirements.....	44
5.3.4	Retraining frequency and requirements	45
5.3.5	Job rotation frequency and sequence	45
5.3.6	Sanctions for unauthorized actions	45
5.3.7	Independent contractor requirements.....	45
5.3.8	Documentation supplied to personnel.....	45
5.4	Audit logging procedures	45
5.4.1	Types of events recorded	45
5.4.2	Frequency of processing log.....	46
5.4.3	Retention period for audit log.....	46
5.4.4	Protection of audit log	47
5.4.5	Audit log backup procedures.....	47
5.4.6	Audit collection system (internal vs. external)	47
5.4.7	Notification to event-causing subject.....	47
5.4.8	Vulnerability assessments	47
5.5	Records archival.....	47
5.5.1	Types of records archived	47
5.5.2	Retention period for archive.....	48
5.5.3	Protection of archive.....	48
5.5.4	Archive backup procedures	48
5.5.5	Requirements for time-stamping of records	49
5.5.6	Archive collection system (internal or external)	49
5.5.7	Procedures to obtain and verify archive information.....	49
5.6	Key changeover	49
5.7	Compromise and disaster recovery.....	49
5.7.1	Incident and compromise handling procedures	49

5.7.2	Computing resources, software, and/or data are corrupted	50
5.7.3	Entity private key compromise procedures	50
5.7.4	Business continuity capabilities after a disaster	50
5.8	CA or RA termination	51
6	TECHNICAL SECURITY CONTROLS	52
6.1	Key pair generation and installation	52
6.1.1	Key pair generation	52
6.1.2	Private key delivery to subscriber.....	52
6.1.3	Public key delivery to certificate issuer	53
6.1.4	CA public key delivery to relying parties	53
6.1.5	Key sizes	53
6.1.6	Public key parameters generation and quality checking.....	54
6.1.7	Key usage purposes (as per X.509 v3 key usage field)	54
6.2	Private Key Protection and Cryptographic Module Engineering Controls	55
6.2.1	Cryptographic module standards and controls.....	55
6.2.2	Private key (n out of m) multi-person control.....	55
6.2.3	Private key escrow	55
6.2.4	Private key backup.....	55
6.2.5	Private key archival.....	55
6.2.6	Private key transfer into or from a cryptographic module	56
6.2.7	Private key storage on cryptographic module.....	56
6.2.8	Method of activating private key.....	56
6.2.9	Method of deactivating private key	56
6.2.10	Method of destroying private key	56
6.2.11	Cryptographic Module Rating	56
6.3	Other aspects of key pair management.....	57
6.3.1	Public key archival	57
6.3.2	Certificate operational periods and key pair usage periods	57
6.4	Activation data	57
6.4.1	Activation data generation and installation	57
6.4.2	Activation data protection.....	57
6.4.3	Other aspects of activation data.....	58
6.5	Computer security controls.....	58
6.5.1	Specific computer security technical requirements.....	58
6.5.2	Computer security rating	58
6.6	Life cycle technical controls.....	59
6.6.1	System development controls.....	59
6.6.2	Security management controls.....	59
6.6.3	Life cycle security controls	59
6.7	Network security controls.....	59
6.8	Timestamping.....	60
7	CERTIFICATE, CRL, AND OCSP PROFILES.....	61
7.1	Certificate profile	62
7.1.1	Version number(s)	62
7.1.2	Certificate extensions	62
7.1.3	Algorithm object identifiers	66
7.1.4	Name forms	68
7.1.5	Name constraints	68
7.1.6	Certificate policy object identifier	68
7.1.7	Usage of Policy Constraints extension.....	69
7.1.8	Policy qualifiers syntax and semantics.....	69
7.1.9	Processing semantics for the critical Certificate Policies extension	70
7.2	CRL profile.....	70

7.2.1	Version number(s)	70
7.2.2	CRL and CRL entry extensions	70
7.3	OCSP profile	71
7.3.1	Version number(s)	71
7.3.2	OCSP extensions	71
8	COMPLIANCE AUDIT AND OTHER ASSESSMENTS	72
8.1	Frequency or circumstances of assessment	72
8.2	Identity/qualifications of assessor	72
8.3	Assessor's relationship to assessed entity	72
8.4	Topics covered by assessment	72
8.5	Actions taken as a result of deficiency	72
8.6	Communication of results	72
8.7	Self-Audits	73
9	OTHER BUSINESS AND LEGAL MATTERS	75
9.1	Fees	75
9.1.1	Certificate issuance or renewal fees	75
9.1.2	Certificate access fees	75
9.1.3	Revocation or status information access fees	75
9.1.4	Fees for other services	75
9.1.5	Refund policy	75
9.2	Financial responsibility	75
9.2.1	Insurance coverage	75
9.2.2	Other assets	75
9.2.3	Insurance or warranty coverage for end-entities	76
9.3	Confidentiality of business information	76
9.3.1	Scope of confidential information	76
9.3.2	Information not within the scope of confidential information	76
9.3.3	Responsibility to protect confidential information	76
9.4	Privacy of personal information	76
9.4.1	Privacy plan	76
9.4.2	Information treated as private	76
9.4.3	Information not deemed private	76
9.4.4	Responsibility to protect private information	76
9.4.5	Notice and consent to use private information	76
9.4.6	Disclosure pursuant to judicial or administrative process	77
9.4.7	Other information disclosure circumstances	77
9.5	Intellectual property rights	77
9.6	Representations and warranties	77
9.6.1	CA representations and warranties	77
9.6.2	RA Representations and Warranties	77
9.6.3	Subscriber representations and warranties	78
9.6.4	Relying party representations and warranties	78
9.6.5	Representations and warranties of other participants	78
9.7	Disclaimers of warranties	78
9.8	Limitations of liability	78
9.9	Indemnities	79
9.9.1	Indemnification by MSC Trustgate.com	79
9.9.2	Indemnification by Subscribers	79
9.9.3	Indemnification by Relying Parties	79
9.10	Term and termination	80
9.10.1	Term	80

9.10.2	Termination	80
9.10.3	Effect of termination and survival.....	80
9.11	Individual notices and communications with participants.....	80
9.12	Amendments	81
9.12.1	Procedure for amendment	81
9.12.2	Notification mechanism and period	81
9.12.3	Circumstances under which OID must be changed.....	81
9.13	Dispute resolution provisions.....	81
9.14	Governing law.....	81
9.15	Compliance with applicable law	82
9.16	Miscellaneous provisions.....	82
9.16.1	Entire agreement.....	82
9.16.2	Assignment.....	82
9.16.3	Severability	82
9.16.4	Enforcement (attorneys' fees and waiver of rights).....	82
9.16.5	Force Majeure.....	82
9.17	Other provisions.....	82

1 INTRODUCTION

1.1 Overview

This Certificate Practice Statement (CPS) defines the procedural and operational requirements that MSC Trustgate.com requires that its entities to adhere when issuing and managing digitally signed objects (digital Certificates and time-stamp tokens) within MSC Trustgate.com’s PKI, excluding participants in MSC Trustgate.com’s Public PKI services, which is cross-certified or publicly trusted. Specific requirements regarding those Certificates are set forth in the individual agreements with the appropriate MSC Trustgate.com customer and the MSC Trustgate.com Private PKI CPS available in the MSC Trustgate.com repository.

MSC Trustgate.com’s Certificate and time-stamp authority policies are controlled by the MSC Trustgate.com Policy Management Authority (PMA) that determines how this CPS applies to Certificate Authorities (CAs), Registration Authorities (RAs), Processing Centers, Affiliates, Subscribers, Relying Parties, and other PKI entities that interoperate with or within the MSC Trustgate.com PKI. For ease of reference herein, all CAs and parties issuing Certificates in accordance with this CPS (including MSC Trustgate.com) are hereafter referred to as "Issuer CAs".

This document specifies the policies of MSC Trustgate.com applies to meet the current versions of the following policies, guidelines, and requirements: -

Name of Law / Policy / Guideline / Requirement Standard	Location of Source Document
Malaysia Digital Signature Act 1997	https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/Act-562.pdf
Malaysia Digital Signature Regulation 1998	https://www.mcmc.gov.my/en/legal/acts/digital-signature-act-1997-reprint-2002/digital-signature-regulations-1998
WebTrust for CA Principle and Criteria	https://www.cpacanada.ca/en/business-and-accounting-resources/audit-and-assurance/overview-of-webtrust-services/principles-and-criteria

And for Publicly Trusted Certificate, it upholds to the current and later versions of the requirements of the following schemes:

Name of Law / Policy / Guideline / Requirement Standard	Location of Source Document
Adobe Approved Trust List Members (AATL)	https://helpx.adobe.com/acrobat/kb/approved-trust-list2.html
Certification Authority / Browser Forum (“CAB Forum”) Baseline Requirements for the Issuance and Management of Publicly-Trusted Certificates (“Baseline Requirements”)	https://cabforum.org/baseline-requirements-document/

Name of Law / Policy / Guideline / Requirement Standard	Location of Source Document
CAB Forum Network and Certificate System Security Requirements	https://cabforum.org/network-security-requirements/

Regarding to SSL/TLS Server Certificates, if any inconsistency exists between this CPS and the requirements and guidelines above, then the CAB Forum requirements and guidelines above take precedence. Time-stamping policies are in accordance with IETF RFC 3161.

This CPS is part of several documents that governs MSC Trustgate.com PKI. The other important documents include registration authority agreements, practice statements, subscriber agreements, relying party agreements, customer agreements, and privacy policies. MSC Trustgate.com may publish additional certificate policies or certification practice statements as necessary to describe another products and services offered. These supplemental policies and statements are made available to the applicable users or relying parties.

Depending on the class and type of certificates, Digital Certificates may be used by Subscribers to secure websites, digitally sign documents and/or e-mails. The person who ultimately receives a signed document or communication, or accesses to a secured website is referred to as a relying party, i.e., those individuals are relying on the certificate and have to make a decision on whether to trust it. A Relying Party must rely on the certificate in terms of the relevant Relying Party Agreement included in the Certificate.

These participants and other parties are described in more detail in Section 1.3 of this CPS.

Pursuant to the IETF PKIX RFC 3647 CPS framework, this CPS is divided into nine parts that covers the security controls and practices and procedures for certificate or time-stamping services within the MSC Trustgate.com PKI. To preserve the outline specified by RFC 3647, section headings that do not apply have the statement "No stipulation".

1.2 Document name and identification

MSC Trustgate.com Certificates contain object identifier values corresponding to the applicable MSC Trustgate.com Class of Certificate. The OID for MSC Trustgate.com is an iso (1) identified-organization (3) dod (6) internet (1) private (4) enterprise (1) MSC Trustgate.com (49530). MSC Trustgate.com issues certificates and time-stamp tokens containing the following OIDs arcs:

Digitally Signed Object	Object Identifier (OID)
Client Certificate	
Class 1 Client Certificates	1.3.6.1.4.1.49530.1.1.1
Class 2 Client Certificates (Generic)	1.3.6.1.4.1.49530.1.1.2
Class 2 Client Certificates (Government)	1.3.6.1.4.1.49530.1.1.2.1
Class 2 Client Certificates (Enterprise)	1.3.6.1.4.1.49530.1.1.2.2
Class 3 Client Certificates	1.3.6.1.4.1.49530.1.1.3
Code Signing Certificates	
Code Signing Certificates	1.3.6.1.4.1.49530.1.2.1

Digitally Signed Object	Object Identifier (OID)
Time Stamping Certificates	
Time Stamping Certificates (Generic)	1.3.6.1.4.1.49530.1.3.1
SSL Certificate	
Domain Validation SSL Certificates	1.3.6.1.4.1.49530.1.4.1
Organisation Validation SSL Certificates	1.3.6.1.4.1.49530.1.5.1
Extended Validation SSL Certificates	1.3.6.1.4.1.49530.1.6.1
Extended Validation Code Signing Certificates	1.3.6.1.4.1.49530.1.6.2
Intranet Validation SSL Certificates	1.3.6.1.4.1.49530.1.7.1

1.2.1 Root Certificate

CERT #	Subject	SHA256 Fingerprint
1	CN = Trustgate Class 1 Root Certificate Authority O = MSC Trustgate.com Sdn. Bhd. C = MY	B0FE225E8C0D51FD4AD509C3FD03B34625C0453FD513 35436B6B1136AED8805D
2	CN = Trustgate Class 2 Root Certificate Authority O = MSC Trustgate.com Sdn. Bhd. C = MY	E2026B5646F49F9671D4318E09094A23CE34C94B5410 F19B39D490A761CA65D1
3	CN = Trustgate Class 3 Root Certificate Authority O = MSC Trustgate.com Sdn. Bhd. C = MY	A62C9790F2D112238FE24C352422EAB29C34C3EE5698 EE575CDF170188883DE9
4	CN = Trustgate RSA Certification Authority OU = Malaysia Licensed CA No LPBP-2/2010 (1) O = MSC Trustgate.com Sdn. Bhd. C = MY	DC7ACA56E0921E3C54E7DA854A13CDE917B3EEC386B8 E9D59201F812E4E9B40C
5	CN = Trustgate Time Stamping Authority CA (ECC) OU = Malaysia Licensed CA No LPBP-2/2010 (1) O = MSC Trustgate.com Sdn. Bhd. C = MY	FC794E7830873926C16824CBAC867F8EAC7CF28EFC9F F4A465B77E6FD42610B7
6	CN = Trustgate Time Stamping Authority CA OU = Malaysia Licensed CA No LPBP-2/2010 (1) O = MSC Trustgate.com Sdn. Bhd. C = MY	CF74F634C21A6AA376FD264E31EAB031845FFD048D20 F9C41AC73C8ED5BC4737
7	CN = MyTrust Class 1 ECC Root CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	9819A77417A5DF8880C1E52D5F4D72C6E5924460CE56 8C2DE5AD6199986A8D6E
8	CN = MyTrust Class 2 ECC Root CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	97351977E28FD6602FE1ADAE58E8994212CB02D995F8 66D2F5DC41D9E946B855
9	CN = MyTrust Class 3 ECC Root CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	BFAEC1F8E11BD4840A91472E80040F568970FD48B28F 09AF018383AF9B0F9D1F
10	CN = MyTrust Class 1 RSA Root CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	B9476C3FE5B6385FACE73E8B5265E56F30FFC39E77C9 519537C361DC96405787
11	CN = MyTrust Class 2 RSA Root CA	A788D9F9EBE7648CFED6D8B071382A30780D9719A802 731F066F59B32124A8B3

CERT #	Subject	SHA256 Fingerprint
	OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	
12	CN = MyTrust Class 3 RSA Root CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	045D810BEE88DF24246081793999E41766272F652837 D5B9B909E57BCBCD149
13	CN = MyTrust Digital ID Root CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	D21BECEBF35470585672E8F5721697F71C7CC4D731C4 A0FCCDB1A18FCB5691FA

1.2.2 Intermediate Certificate

CERT #	Subject	SHA256 Fingerprint
1	CN = MSC Trustgate.com Individual ID (Mobile) Basic CA OU = Malaysia Licensed CA No LPBP-2/2010(1) O = MSC Trustgate.com Sdn. Bhd. C = MY	D784BA8EA0364AFF850BF55BA490D1526B3F58304807 F9D8F1E09CF8D3051560
2	CN = MSC Trustgate.com Class 2 MPKI CA O = MSC Trustgate.com Sdn. Bhd. C = MY	CC6ADC88D783574EA3E4F5114FF3AE4DB5B147093424 2C62471B124A419C2F94
3	CN = MSC Trustgate.com Corporate ID (Mobile) CA OU = Malaysia Licensed CA No LPBP-2/2010(1) O = MSC Trustgate.com Sdn. Bhd. C = MY	5210171AF8C5C721B32F2BEEFBDE0331F9876067908F 3FD0D589E002F99CF532
4	CN = MSC Trustgate.com Corporate ID (Token) CA OU = Malaysia Licensed CA No LPBP-2/2010(1) O = MSC Trustgate.com Sdn. Bhd. C = MY	A61D795B0EF27E96848585C2187C9476645528697ABE 50BA3692F03663F08748
5	CN = MSC Trustgate.com Individual ID (Mobile) CA OU = Malaysia Licensed CA No LPBP-2/2010(1) O = MSC Trustgate.com Sdn. Bhd. C = MY	351B29A7F1354F7FA0F39ED5559A9417A55E19220733 2FF0BDBC6DA0D4E62D34
6	CN = MSC Trustgate.com Professional ID (Mobile) CA OU = Malaysia Licensed CA No LPBP-2/2010(1) O = MSC Trustgate.com Sdn. Bhd. C = MY	5243B6A6B861C827B314BBFDE35AE7DF5EBB3F8EF196 D35DB2B9CF5EBECBCA04
7	CN = MSC Trustgate.com Professional ID (Token) CA OU = Malaysia Licensed CA No LPBP-2/2010(1) O = MSC Trustgate.com Sdn. Bhd. C = MY	ACB79E7E11B201324313A9AF76A6D09564CEF2ED8DEC 6BE6D65FAC1F5F21FA4B
8	CN = Trustgate Class 2 Consumer CA O = MSC Trustgate.com Sdn. Bhd. C = MY	A184B64A106866F751273518382431D23AE042AA6E85 52D87540BF8D86FBB51A
9	CN = Trustgate Class 2 MyKey Subscriber CA O = MSC Trustgate.com Sdn. Bhd. C = MY	15D5F8A7B9E73D2B2152F3E2EB44AA06BABD629480F6 B4656346ED788448A65D
10	CN = Bank Negara Malaysia Class 2 CA-G3 O = MSC Trustgate.com Sdn. Bhd. C = MY	A4166F2E0125B553E84CBA1B7D240369AB2A5AB1846C 0EF14E2332CEBD39E180
11	CN = MAMPU Class 2 CA OU = Authenticated by MSC Trustgate.com Sdn. Bhd. O = Unit Pemodenan Tadbiran dan Perancangan Pengurusan Malaysia C = MY	71C08196ECD864554528C749C9E7C9F4F29E11C68969 AE8187E1F6E0BC06D8AE
12	CN = MAMPU Class 2 CA OU = Authenticated by MSC Trustgate.com Sdn. Bhd. O = Unit Pemodenan Tadbiran dan Perancangan Pengurusan Malaysia C = MY	4620E1CD3D0B931441BB25BDB8A7791699F830BB579E 6E79A72044E39A5D9E30

CERT #	Subject	SHA256 Fingerprint
13	CN = INTECH-KLIS CA OU = Remote Signing System O = IDAMAN NURANI TECHNOLOGIES SDN. BHD C = MY,	D0D6BA9EA1822C1C57F96F39BEE2A47A431889B7FD4C3BA25FB2200DC1873EBF
14	CN = NCSA O = Majlis Keselamatan Negara C = MY	EC7F4D7E05B60ED09392B0A0081C0B4A2FB165D8CEB6ED20CC44A533DEC539CB
15	CN = RHB-BOARDPAC CA OU = Remote Signing System O = RHB Bank Berhad C = MY	6ACF840E5AD0A768BC84DBD5C4932B65EA9AED0B84069E67FCCD42EFD2EEFABB
16	CN = ABMB-MFA CA OU = Remote Signing System O = Alliance Bank Malaysia Berhad C = MY	B20DA3E95B0554721E74931BE482B42D9458829E776858B43B7F217C81D418EE
17	CN = eCourt ID CA O = Mahkamah Persekutuan Malaysia C = MY	45730651D6DE393CD12595E5F16351AF1297F44847443B01BF4B6C02720E49C1
18	CN = eCourt ID CA O = Mahkamah Persekutuan Malaysia C = MY	CC37D4FEC512879D95BE7F2DBEFED1ABD25A60CA20297CA70FB12C45CC34F353
19	CN = Trustgate Time Stamping Services CA (ECC) O = MSC Trustgate.com Sdn. Bhd. C = MY	67AC1B817817B9C626D6D3E8487A1C7FEC8AA27336D50148580F88BB67FFB7FF
20	CN = Trustgate Time Stamping Services CA O = MSC Trustgate.com Sdn. Bhd. C = MY	091538A9476A4F6A6956F31B133992536881C28323D19B57E2C5D91EB4770B22
21	CN = MyTrust Class 1 ECC Individual CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	4A32CB42C34E023600D0D88CE618263F0BDAA8BC4E27DCC1993A7ADC3193EFB0
22	CN = MyTrust Class 2 ECC Individual CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	F040B8C96223510A3190E0E85233159986BD26187D11C909D65AB8E0D298AA22
23	CN = MyTrust Class 2 ECC Enterprise CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	475DCD9714F9341629FC499241217144BD659DAE00B83860FC2D5A9C1E2AC7F7
24	CN = Bursa Anywhere CA OU = Remote Signing System O = Bursa Malaysia Berhad C = MY	2D01696CC852C4CE5317778A9FA16BBEA14CDEE10F5FBA91A3B37D8FF52768E5
25	CN = GPKI CA ECC OU = MAMPU, O = MSC Trustgate.com Sdn. Bhd C = MY	567EF5A4C14641BC6B46452540F187B5686407DF4BDD51E5A3B1C79E678F97B8
26	CN = MyTrust Class 3 ECC Enterprise CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	8EA69844C4A6BDA29FC13FD65A2371E9E689C22C1BF6585432406B527F86730F
27	CN = MyTrust Class 1 RSA Individual CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	9C4CD1AB5BAE1D2D786E56BF9825257AAAD18519C44016170043B94AF61D61CE
28	CN = MyTrust Class 2 RSA Individual CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	F65BFC5FB0D51560AB5B46D52A602B276FDA94E341693799CEB669C76F54DE95

CERT #	Subject	SHA256 Fingerprint
29	CN = MyTrust Class 2 RSA Enterprise CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	1B1EE0498319BF0A223D4917A41A454D4EA08F44C5C8 BD26F65121256377CB6A
30	CN = MyTrust Class 3 RSA Enterprise CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	ADEABEB6A51091CAD7DBCE54EC0C6B4DFADC3ACF16F1 8311CADCF510E8037366
31	CN = MyTrust RSA Code Signing CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	4F49F31B1E2B4BD4D37659E0F18D438C7CD41DBB970C 6B3373B5608C61BBFB44
32	CN = MyTrust RSA SSL CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	B524ABDA93244786185FB291B358A6CAD1012E2F251A D0E0486546993AF416B6
33	CN = MyTrust RSA EV Code Signing CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	70EC99FF806982D8364746CB78106EEBC3FC615FF109 A70C4DFC477D44054CAD
34	CN = MyTrust RSA EV SSL CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	740D432D12D66D95438305BAC9F054B706524998CEEC 2C5E63E409CEBEDD54B6
35	CN = MyTrust Digital ID Class 1 CA OU = MyTrust Gateway, O = MSC Trustgate.com Sdn. Bhd, C = MY	7096769E0A335DADCFB6DEA0DDCEE47CB1FA3B87093 26BACA41514B649CAC8C
36	CN = MyTrust Digital ID Class 2 CA OU = MyTrust Gateway, O = MSC Trustgate.com Sdn. Bhd, C = MY	D42F0C30DD9896F8E0EDED01FC4494F317B7DC7E6530 590EDDB4D84228050C99
37	CN = MyTrust Digital ID Class 3 CA OU = MyTrust Gateway, O = MSC Trustgate.com Sdn. Bhd, C = MY	94B349BC4BE13041EA9A47315CE22E0EA327873FADA2 58EDC99B91F56F0F8439

1.3 PKI participants

1.3.1 Certification authorities

MSC Trustgate.com is a Certification Authorities (CA) that issue digital certificates using its own PKI. As the operator of several CAs, MSC Trustgate.com performs its functions associated with Public Key operations, including receiving certificate requests, issuing, revoking, and renewing a digital Certificate, and maintaining, issuing, and publishing CRLs and OCSP responses. General information about MSC Trustgate.com's products and services are available at <https://www.msctrustgate.com>.

Certificates issued under MSC Trustgate.com, Issuer CAs crossed sign with MSC Trustgate.com owned Public Root Certificate, MSC Trustgate.com maintains and has physical control of its Private Key associated with these CA Certificates.

1.3.2 Registration authorities

A Registration Authority is an entity that performs identification and authentication of certificate applicants for end-user certificates, initiates, or passes along revocation requests for certificates for end-user certificates and approves applications for renewal or re-keying certificates on behalf of MSC Trustgate.com CA. MSC Trustgate.com may act as an RA for certificates it issues.

Third parties, who enter into a contractual agreement relationship with MSC Trustgate.com (RA agreement), may operate as RAs and authorize the issuance of certificates by MSC Trustgate.com CA. Third party RAs must abide by all the requirements of the, the MSC Trustgate.com CPS and the terms of their enterprise services agreement with MSC Trustgate.com. RAs may, however, implement more restrictive practices based on their internal requirements.

1.3.3 Subscribers

Subscribers under the MSC Trustgate.com PKI includes all end users (including entities) of certificates issued by a MSC Trustgate.com PKI CA. A subscriber is the entity named as the end-user Subscriber of a certificate. End-user Subscribers may be individuals, organizations or, infrastructure components such as firewalls, routers, trusted servers, or other devices used to secure communications within an Organization.

In some cases, certificates are issued directly to individuals or entities for their own use. However, there are other situations where the party requiring a certificate is different from the subject to whom the credential applies. For example, an organization may require certificates for its employees to allow them to represent the organization in electronic transactions/business. In such situations the entity subscribing for the issuance of certificates (i.e., paying for them, either through subscription to a specific service, or as the issuer itself) is different from the entity which is the subject of the certificate (generally, the holder of the credential). Two different terms are used in this CPS to distinguish between these two roles: "Subscriber", is the entity which contracts with MSC Trustgate.com for the issuance of credentials and; "Subject", is the person to whom the credential is bound. The Subscriber bears ultimate responsibility for the usage of the credential, but the Subject is the individual that is authenticated when the credential is presented.

When 'Subject' is used, it is to indicate a distinction from the Subscriber. When "Subscriber" being used it may mean just the Subscriber as a distinct entity but may also use the term to embrace the two. The context of its use in this CPS will invoke the correct understanding.

1.3.4 Relying parties

Relying Parties are entities that act in reliance on a Certificate and/or digital signature issued by MSC Trustgate.com. Relying parties must check the appropriate CRL or OCSP response prior to relying on information featured in a Certificate. The location of the CRL distribution point is detailed within the Certificate. A Relying party may or may not also be a Subscriber within the MSC Trustgate.com PKI.

1.3.5 Other participants

No Stipulation

1.4 Certificate usage

A digital Certificate (or Certificate) is formatted data that cryptographically binds an identified subscriber with a Public Key. A digital Certificate that allows an entity taking part in an electronic transaction to prove its identity to other participants in such transaction. Digital Certificates are used in commercial environments as a digital equivalent of an identification card.

1.4.1 Appropriate certificate usage

Certificates issued by MSC Trustgate.com may be used for public domain transactions such as authentication, encryption, access control, and digital signature purposes. The usage of these Certificates is restricted by the key usage and extended key usage fields found within the Certificate. However, the sensitivity of the information processed or protected by a Certificate varies greatly, and each Relying Party must evaluate the application environment and associated risks before deciding on whether to use a Certificate issued under this CPS.

This CPS covers several different types of end entity Certificates/tokens with varying levels of assurance. The following table provides a brief description of the appropriate uses of each. The descriptions are for guidance only and are not binding.

Certificates	Appropriate Use
Domain Validation SSL/TLS Server Certificates	Authentication of a remote Domain Name and webservice and encryption of the communication channel. (Low Assurance Level)
Organization Validation SSL/TLS Server Certificates	Authentication of a remote Domain Name and associated organizational context and webservice and encryption of the communication channel. (Medium Assurance Level)
Extended Validation SSL/TLS Server Certificates	Authentication of a remote Domain Name and associated organizational context and webservice and encryption of the communication channel. (High Assurance Level)
MyTrustID (Basic)	Client Certificates are used by individual to digitally sign and encrypt electronic messages such as using an S/MIME compliant application. The primary purpose of a Client Certificate is to provide message integrity (using digital signatures) and privacy (using encryption). (Low Assurance Level)
MyTrustID (Enhance)	Client Certificates are used by individual to authenticate, digitally sign, and encrypt electronic transactions, messages, and electronic documents. The primary purpose of a Client Certificate is to provide authentication, message integrity and non-repudiation (using digital signatures) and privacy (using encryption). (Medium Assurance Level)

Certificates	Appropriate Use
MyTrustID(Premium)	Client Certificates are used by individual to authenticate, digitally sign, and encrypt electronic transactions, messages, and electronic documents. The primary purpose of a Client Certificate is to provide authentication, message integrity and non-repudiation (using digital signatures) and privacy (using encryption). Using crypto token as a medium. (Medium Assurance Level)
Document Signing Certificate (Individual)	Document Signing Certificates are used by individuals to digitally sign documents such as Adobe and Microsoft Word. Document Signing Certificates help to provide authentication and document integrity. This certificate is a member of Adobe Approved Trust List (AATL). (High Assurance Level)
Document Signing Certificate (Organization)	Document Signing Certificates are used by organizations to digitally sign documents such as Adobe and Microsoft Word. Document Signing Certificates help to provide authentication and document integrity. This certificate is a member of Adobe Approved Trust List (AATL). (High Assurance Level)
Device Certificates	Device authentication Certificates can be used for specific electronic authentication transactions that support the identification of websites and other online resources, such as software objects. (Medium Assurance Level)
Code Signing Certificates	Code Signing Certificates are used by content and software developers and publishers to digitally sign executables and other content. (Medium Assurance Level)
Time Stamping Certificates	Time Stamp Authority Certificates are used to identify the existence of data at that point in time. (High Assurance Level)

Assurance Levels: Subscribers should choose an appropriate level of assurance in their identity that they wish to present to Relying Parties.

- Low Assurance (Class 1):** Certificates are not suitable for identity verification as no authenticated identity information is included within the certificate. These Certificates do not support non-repudiation/content Commitment.
- Medium Assurance (Class 2):** Certificates are individual and organizational Certificates that are suitable for securing moderately risky inter and, intra-organizational, and commercial transactions.
- High assurance (Class 3):** Certificates are individual and organizational Certificates that provide a high level of assurance of the identity of the Subject as compared to Class 1 and 2.

All Certificate types, except for timestamping and code signing Certificates, can be used to ensure the confidentiality of communications effected by means of Certificates. Confidentiality may apply to business and personal communications as well as personal data protection and privacy.

1.4.2 Prohibited certificate uses

Certificates do not guarantee that the Subject is trustworthy, honest, reputable in its business dealings, safe to do business with, or compliant with any laws. A Certificate only establishes that the information in the Certificate was verified in accordance with this CPS when the Certificate issued.

Certificates shall be used only to the extent the use is consistent with applicable law, and in particular shall be used only to the extent permitted by applicable export or import laws.

CA Certificates subject to the Mozilla Root Store Policy will not be used for any functions except CA functions. In addition, end-user Subscriber Certificates cannot be used as CA Certificates.

MSC Trustgate.com periodically rekey Intermediate CAs. Third party applications or platforms that have an Intermediate CA embedded as a root certificate may not operate as designed after the Intermediate CA has been rekeyed. MSC Trustgate.com therefore does not warrant the use of Intermediate CAs as root certificates and recommends that Intermediate CAs not be embedded into applications and/or platforms as root certificates. MSC Trustgate.com recommends the use of MSC Trustgate Roots as root certificates.

1.5 Policy administration

1.5.1 Organization administering the document

MSC Trustgate.com Policy Management Authority.
Suite 2-9, Level 2, CBD Perdana
Jalan Perdana, 63000 Cyberjaya,
Selangor Darul Ehsan, Malaysia.
Tel: +603 8318 1800
Fax: +603 8319 1800
Email: legal@msctrustgate.com

1.5.2 Contact person

Attn: Security Officer
MSC Trustgate.com Policy Management Authority.
Suite 2-9, Level 2, CBD Perdana
Jalan Perdana, 63000 Cyberjaya,
Selangor Darul Ehsan, Malaysia.
Tel: +603 8318 1800
Fax: +603 8319 1800
Email: security@msctrustgate.com

Revocation Reporting Contact Person

Attn: MPKI Support
MSC Trustgate.com MPKI Support
Suite 2-9, Level 2, CBD Perdana
Jalan Perdana, 63000 Cyberjaya,
Selangor Darul Ehsan, Malaysia.
Tel: +603 8318 1800
Fax: +603 8319 1800
Email: revoke@msctrustgate.com

1.5.3 Person determining CPS suitability for the policy

The organization identified in Section 1.5.2 is responsible for determining whether this CPS and other documents in the nature of certification practice statements that supplement or are subordinate to this CPS are suitable under the CP/CPS.

1.5.4 CPS approval procedures

The PMA approves the CPS and any amendments. Amendments are made after the PMA has reviewed the amendments' consistency with the CPS, by either updating the entire CPS or by publishing an addendum. The PMA determines whether an amendment to this CPS is consistent with the CP, requires notice, or an OID change. See also Section 9.10 and Section 9.12 below.

Amended versions or updates is publicly available at MSC Trustgate.com Repository located at: <https://www.msctrustgate.com/repository.htm>. Updates supersede any designated or conflicting provisions of the referenced to the previous version of the CPS.

1.6 Definitions and acronyms

1.6.1 Definitions

“Adobe Approve Trusted List” A document signing certificate authority trust store created by the Adobe Root CA policy authority implemented from Adobe PDF Reader version 9.0.

“Applicant” means an entity applying for a Certificate.

“Application Software Vendor” means a software developer whose software displays or uses MSC Trustgate.com Certificates and distributes MSC Trustgate.com root Certificates.

“CAB Forum” is defined in section 1.1.

“Certificate” means an electronic document that uses a digital signature to bind a Public Key and an identity.

“Key Pair” means a Private Key and associated Public Key.

“OCSP Responder” means an online software application operated under the authority of MSC Trustgate.com and connected to its repository for processing certificate status requests.

“Policy Management Authority” means the group established to oversee the creation and update of Certificate Policies, review Certification Practice Statements, review the results of CA audits for policy compliance, evaluate non-domain policies for acceptance within the domain, and generally oversee and manage the PKI certificate policies. For MSC Trustgate.com, the PMA is consisted of Senior Management (CEO, CFO, CTO), Compliance Team, CA Operation Manager and Key Manager.

“Private Key” means the key of a Key Pair that is kept secret by the holder of the Key Pair, and that is used to create digital signatures and/or to decrypt electronic records or files that were encrypted with the corresponding Public Key.

“Public Key” means the key of a Key Pair that may be publicly disclosed by the holder of the corresponding Private Key and that is used by a Relying Party to verify digital signatures created with the holder's corresponding Private Key and/or to encrypt messages so that they can be decrypted only with the holder's corresponding Private Key.

“Qualified Certificate” means a Certificate that meets the requirements of EU law and is provided by an Issuer CA meeting the requirements of EU law.

“Relying Party” means an entity that relies upon either the information contained within a Certificate or a time-stamp token.

“Relying Party Agreement” means an agreement which must be read and accepted by the Relying Party prior to validating, relying on or using a Certificate or accessing or using MSC Trustgate.com Repository. The Relying Party Agreement is available for reference through a MSC Trustgate.com online repository.

“**Subscriber**” means either the entity identified as the subject in the Certificate or the entity that is receiving MSC Trustgate.com time-stamping services.

“**Subscriber’s Agreement**” means an agreement that governs the issuance and use of a Certificate that the Applicant must read and accept before receiving a Certificate.

“**Trusted Agent**”

“**WebTrust**” means the current version of CPA Canada’s WebTrust Program for Certification Authorities.

1.6.2 Acronyms

AATL	Adobe Approve Trusted List
BR	Baseline Requirement
CA	Certification Authority
CAA	Certificate Authority Authorization
CAB	”CA/Browser” as in “CAB Forum”
CP	Certificate Policy
CPS	Certification Practices Statement
CRL	Certificate Revocation List
CSR	Certificate Signing Request
DBA	Doing Business As (also known as “Trading As”)
ETSI	European Telecommunications Standards Institute
EU	European Union
FIPS	(US Government) Federal Information Processing Standard
HSM	Hardware Security Module
HTTP	Hypertext Transfer Protocol
IANA	Internet Assigned Numbers Authority
ICANN	Internet Corporation for Assigned Names and Numbers
IGTF	International Grid Trust Federation
ISSO	Information System Security Officer
IETF	Internet Engineering Task Force
ITU	International Telecommunication Union
IV	Individual Validated
LEI	Legal Entity Identifier
MICS	Member-Integrated Credential Service (IGTF)
NIST	National Institute of Standards and Technology
OCSP	Online Certificate Status Protocol
OID	Object Identifier
PIN	Personal Identification Number (e.g. a secret access code)
PKI	Public Key Infrastructure
PKIX	IETF Working Group on Public Key Infrastructure
PMA	Policy Management Authority
RA	Registration Authority
RFC	Request for Comments (at IETF.org)
RPS	Registration Practice Statement
S/MIME	Secure MIME (Multipurpose Internet Mail Extensions)
SHA	Secure Hashing Algorithm
SSL	Secure Socket Layer
TSA	Time Stamping Authority
TST	Time-Stamp Token
UTC	Coordinated Universal Time
X.509	The ITU-T standard for Certificates and their corresponding authentication framework

1.6.3 References

If not listed in section 1.1:

CA/Browser Forum Baseline Requirements Certificate Policy for the Issuance and Management of Publicly-Trusted Certificates (“Baseline Requirements”)

Mozilla Root Store Policy v.2.7.1

Adobe Approved Trusted List v.2.0

2 PUBLICATION AND REPOSITORY RESPONSIBILITIES

2.1 Repositories

MSC Trustgate.com makes its CA Certificates, revocation data for issued digital Certificates, CPS, Relying Party Agreements, and standard Subscriber Agreements available in public repositories. MSC Trustgate.com develops, implements, enforces, and annually updates this CPS to meet the compliance standards of the documents listed in Sections 1.1 and 1.6.3. These updates also describe how the latest version of the Baseline Requirements are implemented. As Baseline Requirements are updated, MSC Trustgate.com reviews the changes to determine their impact on these practices. Each section impacted by the Baseline Requirements will be updated and provided to the PMA for approval and implementation.

MSC Trustgate.com's legal repository for most services is located at <https://www.msctrustgate.com/repository.htm>

MSC Trustgate.com's CA Certificates and its CRLs and OCSP responses are regularly accessible online with systems described in Section 5 to minimize downtime.

2.2 Publication of certification information

The MSC Trustgate.com certificate services and the repository are accessible through several means of communication:

1. On the web: <https://www.msctrustgate.com> (and via URIs included in the certificates themselves)
2. By email to mpki-support@msctrustgate.com
3. By mail addressed to: MSC Trustgate.com Sdn Bhd, Suite 2-9, Block 4801, CBD Perdana, 63000 Cyberjaya, Selangor, Malaysia
4. By telephone: +603-8318 1800
5. By fax: +603-8319 1800

2.3 Time or frequency of publication

CA Certificates are published in a repository as soon as possible after issuance. CRLs for end-user Certificates are issued at least once per day. CRLs for CA Certificates are issued at least annually, and also within eighteen (18) hours if a CA Certificate is revoked. Under special circumstances, MSC Trustgate.com may publish new CRLs prior to the scheduled issuance of the next CRL. (See Section 4.9 for additional details.)

If a Certificate listed in a CRL expires, it may be removed from later issued CRLs after the Certificate's expiration.

New or modified versions of the CP, this CPS, Subscriber Agreements, or Relying Party Warranties are typically published within seven days after their approval.

2.4 Access controls on repositories

Read-only access to the repository is unrestricted. Logical and physical controls prevent unauthorized write access to repositories.

3 IDENTIFICATION AND AUTHENTICATION

MSC Trustgate.com shall maintain documented practices and procedures to authenticate the identity and/or other attributes of an Applicant prior to inclusion of those attributes in a Certificate.

3.1 Naming

3.1.1 Types of names

For TLS,S/Mime and Certificate are issued with non-null subject Distinguished Name (DN) that complies with ITU X.500 standards except that MSC Trustgate.com may issue a Class 1 Certificate with a null subject DN if it include at least one alternative name form that is marked critical. When DNs are used, common names must respect namespace uniqueness requirements and must not be misleading. This does not preclude the use of pseudonymous Certificates, except where stated otherwise under Section 3.1.3.

MSC Trustgate.com CA Certificates contain X.500 Distinguished Names in the Issuer and Subject fields. MSC Trustgate.com CA Distinguished Names consist of the components specified in Table 3 below.

Attribute	Value
Country (C) =	“MY” or not used.
Organization (O) =	MSC Trustgate.com Sdn. Bhd. or <organization name> ¹
Organizational Unit (OU) =	<p>MSC Trustgate.com CA Certificates may contain multiple OU attributes. Such attributes may contain one or more of the following:</p> <ul style="list-style-type: none"> • CA Name • MSC Trustgate.com PKI Platform • A statement referencing the applicable Relying Party Agreement governing terms of use of the Certificate • A copyright notices. • Text to describe the type of Certificate.
State or Province (S) =	Not used.
Locality (L) =	Not used.
Common Name (CN) =	This attribute includes the CA Name (if the CA Name is not specified in an OU attribute) or is not used.

Table 3 - Distinguished Name Attributes in CA Certificates

¹ For a CA dedicated to a customer organization, the (o=) component shall be the legal name of the organization

End-user Subscriber Certificates contain an X.500 distinguished name in the Subject name field and consist of the components specified in Table4 below.

Attribute	Value
Country (C) =	“MY” or not used
Organization (O) =	<p>The Organization attribute is used as follows:</p> <p>“MSC Trustgate.com Sdn. Bhd.” for MSC Trustgate.com OCSP Responder and optionally for individual Certificates that do not have an organization affiliation.</p> <p>Subscriber organizational name for individual Certificates that have an organization affiliation.</p>
Organizational Unit (OU) =	<p>MSC Trustgate.com end-user Subscriber Certificates may contain multiple OU attributes. Such attributes may contain one or more of the following:</p> <p>Subscriber organizational unit (for organizational Certificates and individual Certificates that have an organization affiliation)</p> <p>A statement referencing the applicable Relying Party Agreement governing terms of use of the Certificate</p> <p>A copyright notices</p> <p>“Member, MSC Trustgate.com PKI Platform”</p> <p>“Persona Not Validated” for Class 1 Individual Certificates</p> <p>Text to describe the type of Certificate.</p>
State or Province (S) =	Indicates the Subscriber’s State or Province (State is not a required field in certificates issued to individuals).
Locality (L) =	Indicates the Subscriber’s Locality (Locality is not a required field in certificates issued to individuals).
Common Name (CN) =	<p>This attribute includes:</p> <p>The OCSP Responder Name (for OCSP Responder Certificates)</p> <p>Organization name (for organizational Certificates)</p> <p>Person’s name (for individual Certificates issued to individuals).</p>
E-Mail Address (E) =	E-mail address for Class 1 individual Certificates and generally for MPKI Subscriber Certificates
SERIALNUMBER =	National Identity Number (If the certificate is required to be verified against national identity document)

Table 4 - Distinguished Name Attributes in End User Subscriber Certificates

The Common Name (CN=) component of the Subject distinguished name of end-user Subscriber Certificates is authenticated in the case of Class 2-3 Certificates.

1. The authenticated common name value included in the Subject distinguished names of organizational Certificates is the legal name of the organization or unit within the organization.
2. The common name value included in the Subject distinguished name of individual Certificates represents the individuals generally accepted personal name.

3.1.2 Need for names to be meaningful

MSC Trustgate.com uses distinguished names that identify both the entity (i.e., person, organization, device, or object) that is the subject of the Certificate and the entity that is the issuer of the Certificate. MSC Trustgate.com only allows directory information trees that accurately reflect organization structures.

3.1.3 Anonymity or pseudonymity of subscribers

The identity of Class 1 individual Subscribers is not authenticated. Class 1 subscribers may use pseudonyms. Unless when required by law or requested by a State or Government authority to protect the identity of certain end user subscribers (e.g., minors, or sensitive government employee information), Class 2 and 3 Subscribers are not permitted to use pseudonyms (names other than a Subscriber's true personal or organizational name). Each request for anonymity in a certificate will be evaluated on its merits by the PMA and, if allowed the certificate will indicate that identity has been authenticated but is protected.

3.1.4 Rules for interpreting various name forms

Distinguished names in Certificates are interpreted using X.500 standards and ASN.1 syntax.

3.1.5 Uniqueness of names

The uniqueness of each subject name in a Certificate is enforced as follows:

Certificate	Uniqueness Requirement
MyTrustID (Basic)	A unique email address only. (Low Assurance)
MyTrustID (Enhance)	A unique email address and the name of an individual along with the name of the Country which issued the passport or equivalent credential the individual provides to prove their identity to MSC Trustgate.com.
MyTrustID (Premium)	A unique email address and the name of an individual along with the name of the Country which issued the passport or equivalent credential the individual provides to prove their identity to MSC Trustgate.com.
Document Signing Certificate (Individual)	Organization name and optionally state and locality the Organization is registered at and either the name of an individual or Department and optionally Organization Unit affiliated with the Organization.
Document Signing Certificate (Organization)	Organization name and optionally state and locality the Organization is registered at and either the name of an individual or Department and optionally Organization Unit affiliated with the Organization.

Certificate	Uniqueness Requirement
DV	Unique domain name
OV	Unique domain name Org name Org number
EV	Unique domain name Org name Org number

3.1.6 Recognition, authentication, and role of trademarks

MSC Trustgate.com shall not approve any Certificate Application that infringes upon the Intellectual Property Rights of others. MSC Trustgate.com CA, however, does not verify whether a Certificate Applicant has Intellectual Property Rights in the name appearing in a Certificate Application or arbitrate, mediate, or otherwise resolve any dispute concerning the ownership of any domain name, trade name, trademark, or service mark.

MSC Trustgate.com CA reserves the right to reject any applications and to revoke any Certificate that is involved in a dispute.

3.2 Initial identity validation

MSC Trustgate.com may use any legal means of communication or investigation necessary to identify a legal entity or individual. MSC Trustgate.com may refuse to issue a Certificate in its sole discretion.

3.2.1 Method to prove possession of private key

The certificate applicant must demonstrate that he/she rightfully holds the private key corresponding to the public key to be listed in the Certificate. The method to prove possession of a private key shall be PKCS #10 format, another cryptographically equivalent demonstration, or MSC Trustgate.com approved method. This requirement does not apply where a key pair is generated by MSC Trustgate.com on behalf of an Applicant.

3.2.2 Authentication of organization and domain Identity

3.2.2.1 Identity

If the Subject Identity Information is to include the name or address of an organization, the MSC Trustgate.com verify the identity and address of the organization and that the address is the Applicant's address of existence or operation. The MSC Trustgate.com verify the identity and address of the Applicant using documentation provided by, or through communication with, at least one of the following:

1. A government agency in the jurisdiction of the Applicant's legal creation, existence, or recognition;
2. A third party database that is periodically updated and considered a Reliable Data Source;
3. A site visit by the CA or a third party who is acting as an agent for the CA; or
4. An Attestation Letter.

The MSC Trustgate.com may use the same documentation or communication described in 1 through 4 above to verify both the Applicant's identity and address. Alternatively, the CA MAY verify the address of the Applicant (but not the identity of the Applicant) using a utility bill, bank statement, credit card statement, government-issued tax document, or other form of identification that the CA determines to be reliable.

3.2.2.2 DBA/Tradename

If the Subject Identity Information is to include a DBA or tradename, the MSC Trustgate.com verify the Applicant's right to use the DBA/tradename using at least one of the following:

1. Documentation provided by, or communication with, a government agency in the jurisdiction of the Applicant's legal creation, existence, or recognition;
2. A Reliable Data Source;
3. Communication with a government agency responsible for the management of such DBAs or tradenames;
4. An Attestation Letter accompanied by documentary support; or
5. A utility bill, bank statement, credit card statement, government-issued tax document, or other form of identification that the CA determines to be reliable.

3.2.2.3 Verification of Country

If the subject: countryName field is present, then the MSC Trustgate.com verify the country associated with the Subject using one of the following:

1. The IP Address range assignment by country for either (i) the web site's IP address, as indicated by the DNS record for the web site or (ii) the Applicant's IP address;
2. The ccTLD of the requested Domain Name;
3. Information provided by the Domain Name Registrar; or
4. A method identified in Section 3.2.2.1.

The CA SHOULD implement a process to screen proxy servers in order to prevent reliance upon IP addresses assigned in countries other than where the Applicant is actually located.

3.2.2.4 Validation of Domain Authorization or Control

This section defines the permitted processes and procedures for validating the Applicant's ownership or control of the domain. The MSC Trustgate.com confirm that prior to issuance, the CA has validated each Fully-Qualified Domain Name (FQDN) listed in the Certificate as follows:

1. When the FQDN does not contain "onion" as the rightmost label, the MSC Trustgate.com validate the FQDN using at least one of the methods listed below; and
2. When the FQDN contains "onion" as the rightmost label, the MSC Trustgate.com does not issue Certificates for onion Domain.

Completed validations of Applicant authority may be valid for the issuance of multiple Certificates over time. In all cases, the validation must have been initiated within the time period specified in the relevant requirement (such as Section 4.2.1 of this document) prior to Certificate issuance. For purposes of domain validation, the term Applicant includes the Applicant's Parent Company, Subsidiary Company, or Affiliate.

CAs SHALL maintain a record of which domain validation method, including relevant BR version number, they used to validate every domain.

Note: FQDNs may be listed in Subscriber Certificates using `dNSNames` in the `subjectAltName` extension or in Subordinate CA Certificates via `dNSNames` in `permittedSubtrees` within the Name Constraints extension.

3.2.2.4.1 Validating the Applicant as a Domain Contact

This method (BR Section 3.2.2.4.1) is no longer used because it was deprecated as of 1-August-2018.

3.2.2.4.2 Email, Fax, SMS, or Postal Mail to Domain Contact

Email, Fax, SMS, or Postal Mail to the Domain Contact by sending a unique Random Value (valid for use not more than 30 days from its creation) and receiving confirmation by their use of the Random Value.

3.2.2.4.3 Phone Contact with Domain Contact

(BR Section 3.2.2.4.3) is no longer used because it was deprecated as of 31-May-2019.

3.2.2.4.4 Constructed Email to Domain Contact

Constructed Email to Domain Contact establishing the Applicant's control over the FQDN by sending an email created by using 'admin', 'administrator', 'webmaster', 'hostmaster' or 'postmaster' as the local part followed by the ("@" sign, followed by an Authorization Domain name, including a Random Value in the email, and receiving a response using the Random Value.

3.2.2.4.5 Domain Authorization Document

(BR Section 3.2.2.4.5) is no longer used because it was deprecated as of 1-August-2018.

3.2.2.4.6 Agreed-Upon Change to Website

An Agreed-Upon Change to the Website by the Applicant placing an agreed-upon Request Token or Random Value in the "/. well-known/pki-validation" directory.

3.2.2.4.7 DNS Change

Domain Name Service (DNS) Change by confirming the presence of a Random Value or Request Token in a DNS CNAME, TXT, or CAA record for either an Authorization Domain Name or an Authorization Domain Name prefixed with a label that begins with an underscore character.

3.2.2.4.8 IP Address

IP Address - by confirming the Applicant's control over the FQDN through control of an IP address returned from a DNS lookup for A or AAAA records for the FQDN.

3.2.2.4.9 Test Certificate

(BR Section 3.2.2.4.9) is no longer used because it was deprecated upon publication.

3.2.2.4.10 TLS Using a Random Number

(BR Section 3.2.2.4.10) is no longer used because it was deprecated upon publication

3.2.2.4.11 Any Other Method

(BR Section 3.2.2.4.11) is no longer used because it was deprecated as of 5-February-2018.

3.2.2.4.12 Validating Applicant as a Domain Contact

Confirming that the Applicant is the Domain Contact for the Base Domain Name (provided that the CA or RA is also the Domain Name Registrar or an Affiliate of the Registrar).

3.2.2.4.13 Email to DNS CAA Contac

Confirming the Applicant’s control over the FQDN by sending a Random Value via email and then receiving a confirming response utilizing the Random Value. The Random Value will be sent to a DNS CAA Email Contact. The relevant CAA Resource Record Set is found using the search algorithm defined in RFC 8659 Section 3.

3.2.2.4.14 Email to DNS TXT Contact

Confirming the Applicant’s control over the FQDN by sending a Random Value via email to the DNS TXT Record Email Contact for the Authorization Domain Name for the FQDN and then receiving a confirming response utilizing the Random Value

3.2.2.4.15 Phone Contact with Domain Contact

Confirming the Applicant’s control over the FQDN by calling the Domain Contact’s phone number and obtaining a confirming response to validate the authorized Domain Name. Each phone call can confirm control of multiple authorized Domain Names provided that the same Domain Contact phone number is listed for each authorized Domain Name being verified and they provide a confirming response for each authorized Domain Name.

3.2.2.4.16 Phone Contact with DNS TXT Record Phone Contact

Confirming the Applicant’s control over the FQDN by calling the DNS TXT Record Phone Contact’s phone number and obtaining a confirming response to validate the authorized Domain Name. Each phone call can confirm control of multiple authorized Domain Names provided that the same DNS TXT Record Phone Contact phone number is listed for each authorized Domain Name being verified and they provide a confirming response for each authorized Domain Name.

3.2.2.4.17 Phone Contact with DNS CAA Phone Contact

Confirming the Applicant's control over the FQDN by calling the DNS CAA Phone Contact’s phone number and obtain a confirming response to validate the ADN. Each phone call can confirm control of multiple ADNs provided that the same DNS CAA Phone Contact phone number is listed for each ADN being verified and they provide a confirming response for each ADN.

3.2.2.4.18 Agreed-Upon Change to Website v2

Confirming the Applicant's control over the FQDN by verifying that the Request Token or Random Value is contained in the contents of a file (such as a Request Token, Random Value that does not appear in the request used to retrieve the file and receipt of a successful HTTP 2xx status code response from the request.

3.2.2.4.19 Agreed-Upon Change to Website - ACME

Confirming the Applicant's control over a FQDN by validating domain control of the FQDN using the ACME HTTP Challenge method defined in section 8.3 of RFC 8555, performed in accordance with BR section 3.2.2.4.19 and section 8.3 of RFC 8555 as prescribed.

3.2.2.4.20 TLS Using ALPN

Confirming the Applicant's control over a FQDN by validating domain control of the FQDN by negotiating a new application layer protocol using the TLS Application-Layer Protocol Negotiation (ALPN) Extension performed in accordance with BR section 3.2.2.4.20 as defined in RFC 8737

Certificate	Authentication
Organization Validation (OV) SSL/TLS	MSC Trustgate.com validates the Organizations right to use or control the Domain Name(s) and the country code that will be listed in the Certificate using the Domain-related Certificates

	<p>validation procedures above with accordance of 3.2.2.4 of the Baseline Requirements.</p> <p>MSC Trustgate.com also authenticate the identity and address of the Applicant using the procedures found in section 3.2.2.1 or section 3.2.3 of the Baseline Requirements.</p> <p>MSC Trustgate.com verifies any DBA included in a Certificate using a third party or government source, attestation letter, or reliable form of identification in accordance with section 3.2.2.2 of the Baseline Requirements.</p>
<p>Document Signing Certificate-Advance.</p>	<p>The Applicant is required to provide the organization’s name and registered or trading address, legal name, assume name (if applicable) and legal form (where included in the request or part of the legal name in the jurisdiction of incorporation). MSC Trustgate.com validates the Organizations using one of the following:</p> <ul style="list-style-type: none"> • A government agency in the jurisdiction of the Applicant, or a superior governing governmental agency if the Applicant claims they are a government agency themselves; • A third-party database that is periodically updated and has been evaluated by MSC Trustgate.com to determine that it is reasonably accurate and reliable; • An attestation letter confirming that Subject Identity Information is correct written by an accountant, a lawyer, a government official, a judge, or other reliable third party customarily relied upon for such information; or • A Qualified Governmental Tax Information Source. <p>If the Applicant also include Country for subjectDN, MSC Trustgate.com will authenticate through same as 3.2.2.1 “Domain Validation Certificate”.</p>

MSC Trustgate.com maintains and utilizes a scoring system to flag certificate requests that potentially present a higher risk of fraud. Those certificate requests that are flagged “**high risk**” receive additional scrutiny or verification prior to issuance, which may include obtaining additional documentation from or additional communication with the Applicant.

MSC Trustgate.com uses a documented internal process to check the accuracy of information sources and databases to ensure that the data acquired is acceptable, including by reviewing the database provider’s terms of use.

MSC Trustgate.com uses data from databases and information sources after MSC Trustgate.com determines that the sources are:

1. Not self-reported; and
2. The database or the information sources that demonstrate transparent efforts and reported methods to be accurate which can then be verified by MSC Trustgate.com through analysis of the resource against other known reliable resources.

3.2.3 Authentication of individual identity

If a Certificate will contain the identity of an individual, then MSC Trustgate.com or an RA authenticate the identity of the individual using the following procedures:

3.2.3.1 Low Assurance Certificate

The applicant is required to demonstrate control their email address to which the Certificate relates. MSC Trustgate.com does not authenticate additional information/attributes which may be provided by the Applicant during the application and enrollment process. No additional evidence is required.

3.2.3.2 Medium Assurance Certificate

The Applicant is required to demonstrate control of certain identity attributes included in the request, such as his/her email address or domain name to which the Certificate relates if included in the Certificate Request.

The Applicant may also be required to submit a legible copy of a government issued photo ID (national ID, driving license, passport). Other relevant document may also be required for additional proof. MSC Trustgate.com will authenticate with enough evidence met for IAL 2 in NIST 800-63a for the Subject information such as Country or locality fields are correct.

MSC Trustgate.com MUST also authenticate through one of the following methods:

1. In-person appearance before a person performing identity proofing for a Registration Authority or a Trusted Agent (or entity certified by a state, federal, or national entity as authorized to confirm identities) with presentment of a government issued photo ID with biometric verification. If the applicant cannot be verified using biometric, the applicant needs to present:
 - a) Government issued photo ID and
 - b) One of the following additional document:
 - i. Such as another government issued photo ID; or
 - ii. EPF statement, bank statement, utilities bill, telecommunication bill; or
 - iii. Attestation letter.
2. Remote verification by providing the following:
 - a) Image of coloured government issued photo ID;
 - b) Supporting document (attestation letter, billing document); and
 - c) One or more of the following:
 - i. Ability to receive call or SMS to a trusted phone number; or
 - ii. Facial recognition; or
 - iii. Verified against trusted third-party database.

3.2.3.3 High Assurance Certificate

The Applicant is required to demonstrate control of certain identity attributes included in the request, such as his/her email address or domain name to which the Certificate relates if included in the Certificate Request.

The Applicant may also be required to submit a legible copy of a government issued photo ID (national ID, driving license, passport). Other relevant document may also be required for additional proof. MSC Trustgate.com will authenticate with enough evidence met for IAL 3 in NIST.SP 800-63a for the Subject information such as Country or locality fields are correct.

MSC Trustgate.com MUST authenticate through one of the following methods:

1. In-person appearance before a person performing identity proofing for a Registration Authority or a Trusted Agent (or entity certified by a state, federal, or national entity as authorized to confirm identities) with presentment of a government issued photo ID with biometric verification. If the applicant cannot be verified using biometric, the applicant needs to present;
 - a) Government issued photo ID and
 - b) One of the following additional document:
 - i. Another government issued photo ID; or
 - ii. EPF statement, bank statement, utilities bill, telecommunication bill; or
 - iii. Attestation letter.

2. Remote verification by providing the following:
 - a) Image of coloured government issued photo ID;
 - b) Supporting document (attestation letter, billing document); and
 - c) Secure video verification.

All accepted documents need to be in good faith.

3.2.4 Non-verified subscriber information

Non-verified subscriber information includes:

1. Organization Unit (OU) (with certain exceptions)
2. Subscriber's name in Class 1 certificates
3. Any other information designated as non-verified in the certificate.

3.2.5 Validation of authority

Validation of authority involves a determination of whether a person has specific rights, entitlements, or permissions, including the permission to act on behalf of an organization to obtain a Certificate.

Certificate Type	Verification
MyTrustID (Basic)	The request is verified via email sent to the email address to be contained in the Certificate Subject
MyTrustID (Enhance)	Verification through a reliable means of communication* with the individual Applicant together with verification that the Applicant has control over any email address included.
MyTrustID(Premium)	Verification through a reliable means of communication* with the individual Applicant together with verification that the Applicant has control over any email address included.
Document Signing Certificate	If the Applicant for a Certificate containing Subject Identity Information is an organization, then MSC Trustgate.com SHALL use a Reliable Method of Communication* to verify the authenticity of the Applicant Representative's certificate request.
DV SSL/TLS Certificate	The authority of the request is verified through the email address listed in the Certificate or with a person who has technical or administrative control over the domain or the email address to be listed in the Certificate.
OV SSL/TLS Certificate	The organization named in the Certificate confirms to MSC Trustgate.com or an RA that the individual is authorized to obtain the Certificate. The organization is required to request revocation of the Certificate when that affiliation ends.

An organization may limit who is authorized to request Certificates by sending a request to MSC Trustgate.com. A request to limit authorized individuals is not effective until approved by MSC Trustgate.com. MSC Trustgate.com will respond to an organization's verified request for MSC Trustgate.com's list of its authorized requesters.

3.2.6 Criteria for interoperation

No Stipulation.

3.3 Identification and authentication for re-key requests

3.3.1 Identification and authentication for routine re-key

Subscribers may request re-key of a Certificate prior to a Certificate's expiration. After receiving a request for re-key, MSC Trustgate.com creates a new Certificate with the same certificate contents except for a new Public Key and, optionally, an extended validity period. If the Certificate has an extended validity period, MSC Trustgate.com may perform some revalidation of the Applicant but may also rely on information previously provided or obtained.

Subscribers re-establish their identity as follows:

Certificate	Routine Re-Key Authentication	Re-Verification Required
DV SSL/TLS Certificates	Username and password	825 days
OV SSL/TLS Certificates	Username and password	825 days
MyTrustID (Basic)	Username and password	At least every nine years
MyTrustID (Enhance)	Current signature key or multi-factor authentication meeting NIST SP 800-63 Level 3 or a challenge phrase	At least every nine years
MyTrustID(Premium)	Current signature key or multi-factor authentication meeting NIST SP 800-63 Level 3 or a challenge phrase	At least every two years
Document Signing Certificate.	Current signature key or multi-factor authentication meeting NIST SP 800-63 Level 3 or a challenge phrase	At least every six years

MSC Trustgate.com does not re-key a Certificate without additional authentication if doing so it would allow the Subscriber to use the Certificate beyond the limits described above.

MSC Trustgate.com do require letter of authorization of the organization if the certificate have organization in the subjectDN.

3.3.2 Identification and authentication for re-key after revocation

If a Certificate was revoked for any reason other than a renewal, update, or modification action, then the Subscriber must undergo the initial registration process (described in Section 3.2) prior to rekeying the Certificate.

3.4 Identification and authentication for revocation request

Before the revocation process of a Certificate, MSC Trustgate.com verifies that the revocation is requested by the Certificate's Subscriber, the entity that approved the Certificate Application, for procedure to authenticating the revocation request of a Subscriber include:

1. Having the Subscriber for certain certificate types submit the Subscriber's Challenge Phrase (or the equivalent thereof) and revoking the Certificate automatically if it matches the Challenge Phrase (or the equivalent thereof) on record. (Note that this option may not be available to all customers.)
2. Receiving a message from the Subscriber that requests revocation and contains a digital signature verifiable with reference to the Certificate to be revoked,
3. Communication with the Subscriber providing reasonable assurances in light of the Class of Certificate that the person or organization requesting revocation is, in fact the Subscriber. Such communication, depending on the circumstances, may include one or more of the following: telephone, facsimile, e-mail, postal mail, or courier service.

MSC Trustgate.com Administrators are entitled to request the revocation of end user Subscriber Certificates within MSC Trustgate.com's PKI platform and authenticate the identity of Administrator via access control using SSL and client authentication before permitting them to perform revocation functions.

RAs using an Automated Administration Software Module may submit bulk revocation requests to MSC Trustgate.com. Such requests shall be authenticated via a digitally signed request signed with the private key in the RA's Automated Administration hardware token.

The requests to revoke a CA Certificate shall be authenticated by the MSC Trustgate.com to ensure that the revocation has in fact been requested by the CA.

4 CERTIFICATE LIFE-CYCLE OPERATIONAL REQUIREMENTS

4.1 Certificate Application

4.1.1 Who can submit a certificate application

Below is a list of people who may submit certificate applications:

1. Any individual who is the subject of the certificate,
2. Any authorized representative of an Organization or entity,
3. Any authorized representative of an RA.

No individual or entity listed on a government denied list, list of prohibited persons, or other list that prohibits doing business with such organization or person under the laws of the Malaysia may submit an application for a Certificate. Applicants or individuals authorized to request Certificates, who are not included in any of the previous lists, may apply for a Certificate.

4.1.2 Enrolment process and responsibilities

4.1.2.1 End-User Certificate Subscribers

All end-user Certificate Subscribers shall manifest assent to the relevant Subscriber Agreement that contains representations and warranties described in Section 9.6.3 and undergo an enrolment process (in no particular order) consisting of:

1. Completing a Certificate Application and providing true and correct information;
2. Generating, or arranging to have generated, a key pair;
3. Generating a Certificate Signing Request(CSR) using an appropriately secure tool;
4. Delivering his, her, or its public key, directly or through an RA, to MSC Trustgate.com;
5. Demonstrating possession and/or exclusive control of the private key corresponding to the public key delivered to MSC Trustgate.com;
6. Agreeing to the applicable Subscriber Agreement or Term of Access; and
7. Paying any applicable fees.

4.1.3 RA Certificates

RA Certificate Subscribers enter into a contract with MSC Trustgate.com. RA applicant shall provide their credentials to demonstrate their identity and provide contact information during the contracting process.

During this contracting process or, at the latest, prior to the Key Generation Ceremony to create RA key pair, the applicant shall cooperate with MSC Trustgate.com to determine the appropriate distinguished name and the content of the Certificate to be issued by the applicant.

4.2 Certificate application processing

4.2.1 Performing identification and authentication functions

MSC Trustgate.com or an RA shall perform identification and authentication of all Subscribers information to be included in the Certificate as set forth in Section 3.2. If an RA assists in the verification, the RA must create and maintain records sufficient to establish that it has performed the required verification tasks and communicate the completion of such task to MSC Trustgate.com for issuance of certificates.

MSC Trustgate.com may use the documents and data provided in Section 3.2 to verify certificate information, or may reuse previous validations themselves, provided that the MSC Trustgate.com obtained the data or document from a source specified under Section 3.2 or completed the validation itself no more than 825 days prior to issuing the certificate.

MSC Trustgate.com considers a source's availability, purpose and reputation to determine whether a third-party source is reasonably reliable. MSC Trustgate.com does not consider a database, source, or form of identification reasonably reliable if MSC Trustgate.com or the RA is the sole source of the information.

MSC Trustgate.com validates each server FQDN in publicly trusted SSL Certificates against the domain's CAA records. MSC Trustgate.com's CAA issuer domain is "msctrustgate.com". If a CAA record exists that does not list msctrustgate.com as an authorized CA, MSC Trustgate.com will not issue the certificate. MSC Trustgate.com:

1. Caches CAA records for reuse for up to 8 hours;
2. Supports the issue and issuewild CAA tags;
3. Processes but does not act on iodef property tag (i.e., MSC Trustgate.com does not dispatch reports of such issuance requests to the contact(s) stipulated in the CAA iodef record(s)); and
4. Does not support any additional property tags.

MSC Trustgate.com shall maintain procedures to identify and require additional verification activity for High-Risk Certificate Requests prior to the Certificate's approval, as reasonably necessary to ensure that such requests are properly verified under these Requirements

4.2.2 Approval or rejection of certificate applications

MSC Trustgate.com or an RA will approve an application for a certificate if the following criteria are met:

1. Successfully completed the identification and authentication of all required Subscriber information as set forth in Section 3.2.
2. Payment has been received.

MSC Trustgate.com or an RA will reject a certificate application if:

1. Identification and authentication of all required Subscriber information as set forth in Section 3.2 cannot be completed, or
2. The Subscriber fails to furnish supporting documentation upon request, or
3. The application has previously been rejected or violation of subscriber agreement, or
4. Payment has not been received, or
5. The RA believes that issuing a certificate to the Subscriber could damage or diminish MSC Trustgate.com reputation or business.

MSC Trustgate.com is not liable for any rejected Certificate and is not obligated to disclose the reasons for a rejection. Rejected Applicants may re-apply. Subscribers are required to check the Certificate's contents for accuracy prior to using the certificate.

MSC Trustgate.com shall not issue certificate containing internal name.

4.2.3 Time to process certificate applications

Under normal circumstances, MSC Trustgate.com verifies an Applicant's information and issues a digital Certificate within a reasonable time frame. Issuance time frames are greatly dependent on when the Applicant provides the details and documentation necessary to complete validation. MSC Trustgate.com will usually complete the validation process and issue or reject a certificate application within three (3) working days after receiving all of the necessary details and documentation from the Applicant, although such events outside of the control of MSC Trustgate.com can delay the issuance process.

4.3 Certificate issuance

4.3.1 CA actions during certificate issuance

MSC Trustgate.com confirms the source of a certificate request before issuance. Databases and CA processes occurring during certificate issuance are protected from unauthorized modification. After issuance is complete, the Certificate is stored in a database and sent to the Subscriber.

MSC Trustgate.com does not issue end entity Certificates directly from its root Certificates. CA Certificate issuance by the Root CA requires an individual authorized by MSC Trustgate.com (i.e. the CA system operator, system officer, or PKI administrator) to deliberately issue a direct command in order for the Root CA to perform a certificate signing operation.

4.3.2 Notification to subscriber by the CA of issuance of certificate

MSC Trustgate.com shall, either directly or through an RA, notify Subscribers within a reasonable time that they have created such Certificates, and provide Subscribers with access to the Certificates by notifying them that their Certificates are available.

Certificates shall be made available to end-user Subscribers, either by allowing them to download them from a web site or via a message sent to the Subscriber containing the Certificate.

4.4 Certificate acceptance

4.4.1 Conduct constituting certificate acceptance

Subscribers are solely responsible for installing the issued Certificate on the Subscriber's computer or hardware security module. Certificates are considered accepted thirty (30) days after the Certificate's issuance, or earlier upon use of the Certificate when evidence exists that the Subscriber used the Certificate.

Failure of the Subscriber to object to the certificate or its content constitutes certificate acceptance.

4.4.2 Publication of the certificate by the CA

MSC Trustgate.com publishes all CA Certificates and the Certificates in its publicly accessible repository.

4.4.3 Notification of certificate issuance by the CA to other entities

RAs may receive notification of a Certificate's issuance if the RA was involved in the issuance process.

4.5 Key pair and certificate usage

4.5.1 Subscriber private key and certificate usage

Use of the Private Key corresponding to the public key in the certificate is only permitted once the Subscriber agrees to the Subscriber Agreement and accepted the certificate. The certificate shall be used lawfully in accordance with MSC Trustgate.com's Subscriber Agreement, the terms of this CPS.

Subscribers are contractually obligated to protect their Private Keys from unauthorized use or disclosure, discontinue using a Private Key after expiration or revocation of the associated Certificate, and use Certificates in accordance with their intended purpose.

Parties other than the Subscriber shall not archive the Subscriber Private Key except as set forth in Section 4.12

4.5.2 Relying party public key and certificate usage

Relying Parties may only use software that is compliant with X.509, IETF RFCs, and other applicable standards. MSC Trustgate.com does not warrant that any third-party software will support or enforce the controls and requirements found herein.

A Relying Party should use discretion when relying on a Certificate and should consider the totality of the circumstances and risk of loss prior to relying on a Certificate. If the circumstances indicate that additional assurances are required, the Relying Party must obtain such assurances before using the Certificate. Any warranties provided by MSC Trustgate.com are only valid if a Relying Party's reliance was reasonable and if the Relying Party adhered to the Relying Party Agreement set forth in the MSC Trustgate.com repository.

A Relying Party should rely on a digital signature only if:

1. The digital signature was created during the operational period of a valid Certificate and can be verified by referencing a valid Certificate,
2. The Certificate is not revoked, and the Relying Party checked the revocation status of the Certificate prior to the Certificate's use by referring to the relevant CRLs or OCSP responses, and
3. The Certificate is being used for its intended purpose and in accordance with this CPS

4.6 Certificate renewal

Certificate renewal is the issuance of a new certificate to the subscriber with new serial number and new validity period but without changing the public key or any other information in the certificate.

4.6.1 Circumstance for certificate renewal

MSC Trustgate.com may renew a Certificate if:

1. The associated Public Key has not reached the end of its validity period,
2. The Subscriber and attributes are consistent,
3. The associated Private Key remains uncompromised, and
4. Re-verification of subscriber identity is not required by Section 3.3.1.

MSC Trustgate.com may also renew a Certificate if a CA Certificate is re-keyed or as otherwise necessary to provide services to a customer. MSC Trustgate.com may also notify Subscribers prior to a Certificate's expiration date. Certificate renewal requires payment of additional fees. MSC Trustgate.com may renew a certificate after expiration if the relevant industry permits such practices.

Prior to the expiration of an existing Subscriber's Certificate, it is necessary for the Subscriber to renew the expiring certificate to maintain continuity of Certificate usage.

4.6.2 Who may request renewal

Only the certificate subject or an authorized representative of the certificate subject may request renewal of the Subscriber's Certificates. MSC Trustgate.com may renew a Certificate without a corresponding request if the signing Certificate is re-keyed.

4.6.3 Processing certificate renewal requests

Renewal procedures is to ensure that the person or organization seeking to renew an end-user Subscriber Certificate is in fact that he or she is the Subscriber (or authorized by the Subscriber) of the Certificate.

Therefore, one acceptable procedure is through the use of a Challenge Phrase (or the equivalent thereof), or proof of possession of the private key. Subscribers will choose and submit with their enrolment information i.e., a Challenge Phrase (or the equivalent thereof). Upon renewal of a Certificate, if a Subscriber correctly submits the Subscriber's Challenge Phrase (or the equivalent thereof) with the

Subscriber's re-enrolment information, and the re-enrolment information (including Corporate and Technical contact information²) has not changed, a renewal Certificate is automatically issued.

Alternative to a Challenge Phrase (or equivalent) MSC Trustgate.com may send an e-mail message to the e-mail address associated with the verified corporate contact for the certificate being renewed, requesting confirmation of the Certificate renewal order and authorization to issue the Certificate. Upon receipt of confirmation authorizing issuance of the Certificate, MSC Trustgate.com will issue the Certificate if the enrolment information (including corporate and technical contact information) has not changed.

After renewal in this fashion, and on at least alternative instances of subsequent renewal thereafter, MSC Trustgate.com or an RA shall reconfirm the identity of the Subscriber in accordance with the requirements specified in this CPS for the authentication of an original Certificate Application.

For AATL certificates MSC Trustgate.com re-authenticates the Organization name and domain name included in the certificate at intervals described in Section 6.3.2. In circumstances where:

1. The challenge phrase is correctly used for the subsequent renewal certificate and;
2. The certificate Distinguished Name has not been changed, and
3. The Corporate and Technical Contact information remains unchanged from that, which was previously verified.

MSC Trustgate.com will not have to reconfirm by telephone, confirmatory postal mail, or comparable procedure to the Certificate Applicant certain information about the organization, that the organization has authorized the Certificate Application, and that the person submitting the Certificate Application on behalf of the Certificate Applicant is authorized to do so.

Other than this procedure or another MSC Trustgate.com approved procedure, the requirements for the authentication of an original Certificate Application shall be used for renewing an end-user Subscriber Certificate.

4.6.4 Notification of new certificate issuance to subscriber

Conduct constituting Notification of a renewed certificate is in accordance with Section 4.3.2.

4.6.5 Conduct constituting acceptance of a renewal certificate

Conduct constituting Acceptance of a renewed certificate is in accordance with Section 4.4.1.

4.6.6 Publication of the renewal certificate by the CA

The renewed certificate is published in MSC Trustgate.com's publicly accessible repository

4.6.7 Notification of certificate issuance by the CA to other entities

RAs may receive notification of a Certificate's renewal if the RA was involved in the issuance process.

4.7 Certificate re-key

Re-keying a Certificate consists of creating a new Certificate with a new Public Key and serial number while keeping the subject information the same.

4.7.1 Circumstance for certificate re-key

Subscribers requesting re-key should identify and authenticate themselves as permitted by section 3.3.1.

A certificate may also be re-keyed after expiration.

² If contact information has changed via an approved formal contact change procedure the certificate shall still qualify for automated renewal.

4.7.2 Who may request certification of a new public key

MSC Trustgate.com will only accept re-key requests from the subject of the Certificate, an authorized representative for an Organizational certificate, or the PKI sponsor. MSC Trustgate.com may initiate a certificate re-key at the request of the certificate subject or at MSC Trustgate.com's own discretion.

4.7.3 Processing certificate re-keying requests

MSC Trustgate.com will only accept re-key requests from the subject of the Certificate or the PKI sponsor. If the Private Key and any identity in a Certificate have not changed, then MSC Trustgate.com can issue a replacement Certificate using a previously issued Certificate or previously provided CSR. MSC Trustgate.com re-uses existing verification information unless re-verification and authentication is required under section 3.3.1 or if MSC Trustgate.com believes that the information has become inaccurate.

4.7.4 Notification of new certificate issuance to subscriber

Notification of issuance of a re-keyed certificate to the Subscriber is in accordance with Section 4.3.2.

4.7.5 Conduct constituting acceptance of a re-keyed certificate

Conduct constituting Acceptance of a re-keyed certificate is in accordance with Section 4.4.1.

4.7.6 Publication of the re-keyed certificate by the CA

The re-keyed certificate is published in MSC Trustgate.com's publicly accessible repository.

4.7.7 Notification of certificate issuance by the CA to other entities

RAs may receive notification of a Certificate's rekey if the RA was involved in the issuance process.

4.8 Certificate modification

4.8.1 Circumstance for certificate modification

Modifying a Certificate means creating a new Certificate for the same subject with authenticated information that differs slightly from the old Certificate (e.g., changes to email address or non-essential parts of names or attributes) provided that the modification otherwise complies with this CPS. The new Certificate may have the same or a different subject Public Key.

4.8.2 Who may request certificate modification

MSC Trustgate.com modifies Certificates at the request of certain certificate subjects or in its own discretion. MSC Trustgate.com does not make certificate modification services available to all Subscribers.

4.8.3 Processing certificate modification requests

After receiving a request for modification, MSC Trustgate.com verifies any information that will change in the modified Certificate. MSC Trustgate.com will only issue the modified Certificate after completing the verification process on all modified information. MSC Trustgate.com will not issue a modified Certificate that has a validity period that exceeds the applicable time limits found in section 3.3.1 or 6.3.2.

RAs are required to perform identification and authentication of all modified Subscriber information in terms of Section 3.2.

4.8.4 Notification of new certificate issuance to subscriber

See Section 4.3.2

4.8.5 Conduct constituting acceptance of modified certificate

See Section 4.4.1

4.8.6 Publication of the modified certificate by the CA

See Section 4.4.2

4.8.7 Notification of certificate issuance by the CA to other entities

See Section 4.4.3.

4.9 Certificate revocation and suspension

Revocation of a Certificate permanently ends the operational period of the Certificate prior to the Certificate reaching the end of its stated validity period. Prior to revoking a Certificate, MSC Trustgate.com and Issuer CAs verify that the revocation request was made by either the organization or individual that made the certificate application or by an entity with the legal jurisdiction and authority to request revocation. Issuer CAs are required to provide evidence of the revocation authorization to MSC Trustgate.com upon request.

4.9.1 Circumstances for revocation

MSC Trustgate.com will revoke a Certificate within twenty-four (24) hours after confirming one or more of the following occurred:

1. The Subscriber requests in writing that MSC Trustgate.com to revoke the Certificate;
2. The Subscriber notifies MSC Trustgate.com that the original Certificate request was not authorized and does not retroactively grant authorization;
3. MSC Trustgate.com obtains evidence that the Subscriber's Private Key corresponding to the Public Key in the Certificate suffered a Key Compromise; or
4. MSC Trustgate.com obtains evidence that the validation of domain authorization or control for any FDQN or IP address in the Certificate should not be relied upon.

MSC Trustgate.com may revoke a certificate within twenty-four (24) hours and will revoke a Certificate within five (5) days after confirming that one or more of the following occurred:

1. The Certificate no longer complies with the requirements of Sections 6.1.5 and 6.1.6 of the CA/B forum baseline requirements or any section of the Mozilla Root Store policy;
2. MSC Trustgate.com obtains evidence that the Certificate was misused and/or used outside the intended purpose as indicated by the relevant agreement;
3. The Subscriber or the cross-certified CA breached a material obligation under the CPS, or the relevant agreement;
4. MSC Trustgate.com confirms any circumstance indicating that use of a FQDN, IP address, or email address in the Certificate is no longer legally permitted (e.g., a court or arbitrator has revoked a Domain Name registrant's right to use the Domain Name, a relevant licensing or services agreement between the Domain Name registrant and the Applicant has terminated, or the Domain Name registrant has failed to renew the Domain Name);
5. MSC Trustgate.com confirms a material change in the information contained in the Certificate;
6. MSC Trustgate.com confirms that the Certificate was not issued in accordance with the CA/B forum requirements or relevant browser policy;
7. MSC Trustgate.com determines or confirms that any of the information appearing in the Certificate is inaccurate;
8. MSC Trustgate.com's right to issue Certificates under the CA/B forum requirements expires or is revoked or terminated, unless MSC Trustgate.com has made arrangements to continue maintaining the CRL/OCSP Repository;

9. Revocation is required by the MSC Trustgate.com CPS; or
10. MSC Trustgate.com confirms a demonstrated or proven method that exposes the Subscriber's Private Key to compromise, methods have been developed that can easily calculate it based on the Public Key (such as a debian weak key, see <http://wiki.debian.org/SSLkeys>), or if there is clear evidence that the specific method used to generate the Private Key was flawed.

MSC Trustgate.com may revoke any Certificate in its sole discretion, including if MSC Trustgate.com believes that:

1. Either the Subscriber's or MSC Trustgate.com's obligations under the CPS are delayed or prevented by circumstances beyond the party's reasonable control, including computer or communication failure, and, as a result, another entity's information is materially threatened or compromised;
2. MSC Trustgate.com received a lawful and binding order from a government or regulatory body to revoke the Certificate;
3. MSC Trustgate.com ceased operations and did not arrange for another Certificate authority to provide revocation support for the Certificates;
4. The technical content or format of the Certificate presents an unacceptable risk to application software vendors, Relying Parties, or others;
5. The Subscriber was added as a denied party or prohibited person to a blacklist or is operating from a destination prohibited under the laws of Malaysia;

MSC Trustgate.com always revokes a Certificate if the binding between the subject and the subject's Public Key in the certificate is no longer valid or if an associated Private Key is compromised.

MSC Trustgate.com will revoke a Subordinate CA Certificate within seven (7) days after confirming one or more of the following occurred:

1. The Subordinate CA requests revocation in writing.
2. The Subordinate CA notifies MSC Trustgate.com that the original Certificate request was not authorized and does not retroactively grant authorization.
3. MSC Trustgate.com obtains evidence that the Subordinate CA's Private Key corresponding to the Public Key in the Certificate suffered a key compromise or no longer complies with the requirements of Sections 6.1.5 and 6.1.6 of the CA/B forum baseline requirements or any section of the Mozilla Root Store policy;
4. MSC Trustgate.com obtains evidence that the CA Certificate was misused and/or used outside the intended purpose as indicated by the relevant agreement.
5. MSC Trustgate.com confirms that the CA Certificate was not issued in accordance with or that Subordinate CA has not complied with this document or the applicable Certificate Policy or Certification Practice Statement.
6. MSC Trustgate.com determines that any of the information appearing in the CA Certificate is inaccurate or misleading.
7. MSC Trustgate.com or the Subordinate CA ceases operations for any reason and has not made arrangements for another CA to provide revocation support for the CA Certificate.
8. MSC Trustgate.com's or the Subordinate CA's right to issue Certificates under the Baseline Requirements expires or is revoked or terminated, unless MSC Trustgate.com has made arrangements to continue maintaining the CRL/OCSP Repository.
9. Revocation is required by MSC Trustgate.com's Certificate Policy and/or Certification Practice Statement; or
10. The technical content or format of the CA Certificate presents an unacceptable risk to application software suppliers or Relying Parties.

MSC Trustgate.com will revoke a cross-Certificate if the cross-certified entity (including MSC Trustgate.com) no longer meets the stipulations of the corresponding policies, as indicated by policy OIDs listed in the policy mapping extension of the cross-Certificate.

MSC Trustgate.com may also revoke an Administrator Certificate if the Administrator's authority to act as Administrator has been terminated or otherwise has ended.

MSC Trustgate.com Subscriber Agreements require end-user Subscribers to immediately notify MSC Trustgate.com of a known or suspected compromise of its private key.

4.9.2 Who can request revocation

Individual Subscribers can request the revocation of their own individual Certificates through an authorized representative of MSC Trustgate.com or an RA. In the case of organizational Certificates, a duly authorized representative of the organization shall be entitled to request the revocation of Certificates issued to the organization. A duly authorized representative of MSC Trustgate.com or a RA shall be entitled to request the revocation of an RA Administrator's Certificate. The entity that approved a Subscriber's Certificate Application shall also be entitled to revoke or request the revocation of the Subscriber's Certificate.

Only MSC Trustgate.com is entitled to request or initiate the revocation of the Certificates issued to its own CAs. RAs are entitled, through their duly authorized representatives, to request the revocation of their own Certificates, and their Superior Entities shall be entitled to request or initiate the revocation of their Certificates.

4.9.3 Procedure for revocation request

4.9.3.1 Procedure for Requesting the Revocation of an End-User Subscriber Certificate

An end-user Subscriber requesting revocation is required to communicate the request to the MSC Trustgate.com, who in turn will initiate revocation of the certificate promptly.

4.9.3.2 Procedure for Requesting the Revocation of a CA or RA Certificate

A CA or RA requesting revocation of its CA or RA Certificate is required to communicate the request to MSC Trustgate.com. MSC Trustgate.com will then revoke the Certificate. MSC Trustgate.com may also initiate CA or RA Certificate revocation.

4.9.4 Revocation request grace period

The revocation request grace period is the time available to the subscriber within which the subscriber must make a revocation request after reasons for revocation have been identified.

Subscribers are required to request revocation within one (1) day after detecting the loss or compromise of the Private Key. MSC Trustgate.com may grant and extend revocation grace periods on a case-by-case basis if it does not violate this CPS, or any of the relevant requirements as listed in the sources of section 1.6.3.

MSC Trustgate.com reports the suspected compromise of its CA Private Key and requests revocation to both the policy authority and operating authority of the superior issuing CA within one hour of discovery.

4.9.5 Time within which CA must process the revocation request

MSC Trustgate.com will revoke a CA Certificate within one (1) hour after receiving clear instructions from the PMA.

Within twenty-four (24) hours after receiving a Certificate problem report, MSC Trustgate.com then will investigate the facts and circumstances related to a Certificate problem report and will provide a preliminary report on its findings to both the Subscriber and the entity who filed the Certificate problem report.

After reviewing the facts and circumstances, MSC Trustgate.com works with the Subscriber and any entity reporting the Certificate problem report or other revocation-related notice to establish whether or not the certificate will be revoked, and if so, a date which MSC Trustgate.com will revoke the certificate. The period

from receipt of the Certificate problem report or revocation-related notice to published revocation must not exceed the time frame set forth in Section 4.9.1. The date selected by MSC Trustgate.com will consider the following criteria:

1. The nature of the alleged problem (scope, context, severity, magnitude, risk of harm);
2. The consequences of revocation (direct and collateral impacts to Subscribers and Relying Parties);
3. The number of Certificate problem reports received about a particular Certificate or Subscriber;
4. The entity making the complaint (for example, a complaint from a law enforcement official that a Web site is engaged in illegal activities should carry more weight than a complaint from a consumer alleging that she didn't receive the goods she ordered); and
5. Relevant legislation.

Under normal operating circumstances, MSC Trustgate.com will revoke Certificates as quickly as practical after validating the revocation request following the guidelines of this section and Section 4.9.1, generally within the following time frames:

1. Certificate revocation requests for publicly-trusted Certificates are processed within 18 hours after their receipt,
2. Revocation requests received two or more hours before CRL issuance are processed before the next CRL is published, and
3. Revocation requests received within two hours of CRL issuance are processed before the following CRL is published.

4.9.6 Revocation checking requirement for relying parties

Prior to relying on information listed in a Certificate, a Relying Party must confirm the validity of each Certificate in the certificate path in accordance with IETF PKIX standards, including checking for certificate validity, issuer-to-subject name chaining, policy and key use constraints, and revocation status through CRLs or OCSP responders identified in each Certificate in the chain.

4.9.7 CRL issuance frequency

CRLs for end-user Subscriber Certificates are issued at least once per day.

CRLs for CA Certificates shall be issued at least every 6 months, but also whenever a CA Certificate is revoked.

4.9.8 Maximum latency for CRLs

CRLs for Certificates issued to end entity subscribers are posted automatically to the online repository within a commercially reasonable time after generation, usually within minutes of generation. Irregular, interim, or emergency CRLs are posted within four hours after generation. Regularly scheduled CRLs are posted prior to the nextUpdate field in the previously issued CRL of the same scope.

CRLs, and the serial number of a revoked certificate MUST remain on the CRL for at least 10 years after the expiration of the certificate for Code Signing Certificates and Timestamp Certificates.

4.9.9 On-line revocation/status checking availability

Online revocation and other Certificate status information are available via a web-based repository and, where offered, OCSP. Where OCSP support is required by the applicable CP, OCSP responses are provided within a commercially reasonable time and no later than ten seconds after the request is received, subject to transmission latencies over the Internet.

OCSP responses conform to RFC 6960. OCSP responses either:

1. Are signed by the CA that issued the Certificates whose revocation status is being checked, or

2. Are signed by an OCSP Responder whose Certificate is signed by the CA that issued the Certificate whose revocation status is being checked.

In the latter case, the OCSP signing Certificate contains an extension of type id-pkix-ocsp-nocheck, as defined by RFC 6960.

4.9.10 On-line revocation checking requirements

A relying party must confirm the validity of a Certificate in accordance with section 4.9.6 prior to relying on the Certificate.

MSC Trustgate.com supports an OCSP capability using the GET method for Certificates issued in accordance with the Baseline Requirements. OCSP Responders under MSC Trustgate.com's direct control will not respond with a "good" status for a certificate that has not been issued.

For the status of Subscriber Certificates: Prior to 2020-09-30: MSC Trustgate updates information provided via an Online Certificate Status Protocol at least every four days. OCSP responses from this service has a maximum expiration time of ten days.

Effective 2020-09-30:

1. OCSP responses have a validity interval greater than or equal to eight hours;
2. OCSP responses MUST have a validity interval less than or equal to ten days;
3. For OCSP responses with validity intervals less than sixteen hours, then MSC Trustgate.com updates the information provided via an Online Certificate Status Protocol prior to one-half of the validity period before the nextUpdate.
4. For OCSP responses with validity intervals greater than or equal to sixteen hours, then the MSC Trustgate updates the information provided via an Online Certificate Status Protocol at least eight hours prior to the nextUpdate, and no later than four days after the thisUpdate.

For the status of Subordinate CA Certificates, MSC Trustgate updates information provided via an Online Certificate Status Protocol (i) at least every twelve months; and (ii) within 24 hours after revoking a Subordinate CA Certificate.

OCSP Responders under MSC Trustgate.com's direct control will not respond with a "good" status for a certificate that has not been issued.

MSC Trustgate.com MAY provide OCSP responses for Code Signing Certificates and Timestamp Certificates for the time period specified in this CPS, which MAY be at least 10 years after the expiration of the certificate.

4.9.11 Other forms of revocation advertisements available

No Stipulation.

4.9.12 Special requirements re key compromise

MSC Trustgate.com uses commercially reasonable efforts to inform the subscribers if it discovers or suspects their Private Keys may have been compromised. If the key compromised had been ascertained, MSC Trustgate.com shall revoke the certificate using the procedure as set forth in Section 3.4. MSC Trustgate.com will transition any revocation reason code in a CRL to "key compromise" upon discovery of such reason or as required by an applicable Certificate Profile.

4.9.13 Circumstances for suspension

The Repository MUST NOT include entries that indicate that a Certificate is suspended.

4.9.14 Who can request suspension

No Stipulation.

4.9.15 Procedure for suspension request

No Stipulation.

4.9.16 Limits on suspension period

No Stipulation.

4.10 Certificate status services

4.10.1 Operational characteristics

Certificate status information is available via CRL and OCSP responder.

The serial number of a revoked Certificate remains on the CRL until one (1) additional CRL is published after the end of the Certificate's validity period.

4.10.2 Service availability

Certificate status services are available 24x7. This includes the online repository that application software can use to automatically check the current status of all unexpired Certificates issued by MSC Trustgate.com. MSC Trustgate.com operates and maintains its CRL and OCSP capability with resources sufficient to provide a response time of ten seconds or less under normal operating conditions.

MSC Trustgate.com also maintains a continuous 24x7 ability to respond internally to a high-priority Certificate Problem Report, and where appropriate, forward such a complaint to law enforcement authorities, and/or revoke a Certificate that is the subject of such a complaint.

4.10.3 Operational features

No Stipulation.

4.11 End of subscription

A Subscriber's subscription service ends if its Certificate expires or is revoked or if the applicable Subscriber Agreement expires without any renewal taken place.

4.12 Key escrow and recovery

4.12.1 Key escrow and recovery policy and practices

MSC Trustgate.com never escrows CA Private Keys under this CPS.

MSC Trustgate.com may escrow Subscriber key management keys to provide key recovery services. MSC Trustgate.com encrypts and protects escrowed Private Keys using the same or a higher level of security as used to generate and deliver the Private Key.

MSC Trustgate.com allows Subscribers and other authorized entities to recover escrowed (decryption) Private Keys. MSC Trustgate.com uses multi-person controls during key recovery to prevent unauthorized access to a Subscriber's escrowed Private Keys. MSC Trustgate.com accepts key recovery requests:

1. From the Subscriber or Subscriber's organization if the Subscriber has lost or damaged the private-key token;
2. From the Subscriber's organization, if the Subscriber is not available or is no longer part of the organization that contracted with MSC Trustgate.com for Private Key escrow;
3. From an authorized investigator or auditor, if the Private Key is part of a required investigation or audit;
4. From a requester authorized by a competent legal authority to access the communication that is encrypted using the key;

5. From a requester authorized by law or governmental regulation; or
6. From an entity contracting with MSC Trustgate.com for escrow of the Private Key when key recovery is mission critical or mission essential.

Entities using MSC Trustgate.com's key escrow services are required to:

1. Notify Subscribers and get his or her consent that their Private Keys are escrowed;
2. Protect escrowed keys from unauthorized disclosure;
3. Protect any authentication mechanisms that could be used to recover escrowed Private Keys;
4. Release an escrowed key only after making or receiving (as applicable) a properly authorized request for recovery; and
5. Comply with any legal obligations to disclose or keep confidential escrowed keys, escrowed key-related information, or the facts concerning any key recovery request or process.

4.12.2 Session key encapsulation and recovery policy and practices

No Stipulation

5 FACILITY, MANAGEMENT, AND OPERATIONAL CONTROLS

5.1 Physical controls

Compliance with these policies is included in MSC Trustgate.com's independent audit requirements described in Section 8. The MSC Trustgate.com Physical Security Policy contains sensitive security information and is only available upon agreement with MSC Trustgate.com. An overview of the requirements is described below.

5.1.1 Site location and construction

MSC Trustgate.com CA and RA operations are conducted within a physically protected environment that deters, prevents, and detects unauthorized use of, access to, or disclosure of sensitive information and systems whether covert or overt.

MSC Trustgate.com also maintains disaster recovery facilities for its CA operations. MSC Trustgate.com's disaster recovery facilities are protected by multiple tiers of physical security comparable to those of MSC Trustgate.com's primary facility

5.1.2 Physical access

5.1.2.1 Data Centers

Systems providing online certificate issuance (e.g., Issuer CAs) are located in commercial data centers. MSC Trustgate.com protects such online equipment from unauthorized access and implements physical controls to reduce the risk of equipment tampering. Access to the data centers housing the CA requires two-factor authentication — the individual must have an authorized access card and pass biometric access control authenticators. These biometric authentication access systems log each use of the access card. MSC Trustgate.com deactivates and securely stores its CA equipment when not in use in accordance with section 5.1.2.3. Activation data must either be memorized or recorded and stored in a manner commensurate with the security afforded the cryptographic module. Activation data is never stored with the cryptographic module or removable hardware associated with equipment used to administer MSC Trustgate.com's Private Keys. Cryptographic hardware includes a mechanism to lock the hardware after a certain number of failed login attempts.

The data center is not continuously attended. MSC Trustgate.com personnel who is the last person to depart will initial a sign-out sheet that indicates the date and time and asserts that all necessary physical protection mechanisms are in place and activated.

5.1.2.2 RA Operations Areas

MSC Trustgate.com's RA operations are protected against access from non-authorized individuals. Access to secure areas of buildings requires the use of an "access" or "pass" card. Access card use is logged by the building security system. The exterior and internal passageways of buildings are equipped with video cameras. Similarly, the support and vetting rooms where MSC Trustgate.com personnel perform identity vetting and other RA functions are equipped with video surveillance cameras. Access card logs and video records are reviewed on a regular basis. MSC Trustgate.com securely stores all removable media and paper containing sensitive plain-text information related to its CA or RA operations in secure containers.

5.1.2.3 Offline CA Key Storage Rooms

MSC Trustgate.com securely stores the cryptomodules used to generate and store offline CA Private Keys. Access to the rooms used for key storage is controlled and logged by the building access card system. When not in use during a key ceremony, CA cryptomodules are locked in a safe that provides two-person physical access control. Activation data is protected in accordance with section 6.4. Cryptomodule activation keys (operator cards and PED keys) are either sealed in tamper-evident bags and placed in safe deposit boxes or stored in the two-person safe when not in use. Access to the safe is manually logged. Access card logs and the manual logs of access to the safe are reviewed on a regular basis.

5.1.3 Power and air conditioning

MSC Trustgate.com's secure facilities are equipped with primary and backup:

1. Power systems to ensure continuous, uninterrupted access to electric power and
2. Heating/ ventilation/ air conditioning systems to control temperature and relative humidity.

5.1.4 Water exposures

The cabinets housing MSC Trustgate.com's CA systems are located on raised flooring and the data centers are equipped with monitoring systems to detect any excess moisture.

5.1.5 Fire prevention and protection

The data centers are equipped with fire suppression mechanisms.

5.1.6 Media storage

MSC Trustgate.com protects its media from accidental damage, environmental hazards, and unauthorized physical access. Backup files are created on a daily basis. MSC Trustgate.com's backup files are maintained at locations separate from MSC Trustgate.com's primary data operations facility.

5.1.7 Waste disposal

All unnecessary copies of printed sensitive information are shredded before disposal. Media used to collect or transmit sensitive information are rendered unreadable before disposal. Cryptographic devices are physically destroyed or zeroized in accordance the manufacturers' guidance prior to disposal.

5.1.8 Off-site backup

MSC Trustgate.com maintains at least one full backup and makes regular backup copies of any information necessary to recover from a system failure. Backup copies of CA Private Keys and activation data are stored for disaster recovery purposes off-site in safe deposit boxes located inside financial institutions and are accessible only by trusted personnel.

5.2 Procedural controls

5.2.1 Trusted roles

Trusted Persons include all employees, contractors, and consultants that have access to or control authentication or cryptographic operations that may materially affect:

1. The validation of information in Certificate Applications;
2. The acceptance, rejection, or other processing of Certificate Applications, revocation requests, renewal requests, or enrolment information;
3. The issuance, or revocation of Certificates, including personnel having access to restricted portions of its repository;
4. The handling of Subscriber information or requests.

Trusted Persons include, but are not limited to:

Trusted Role	MSC Trustgate Trusted Role Title ³
CA Administrator	Key Manager, Master Admin (MSA)
Registration Officer	Validation roles such as MPKI Administrators and Customer Service.
System Administrator/System Engineer (Operator)	System Administrators, Data Center Operators, and/or Designated Engineers
Internal Auditor	Security Personnel
RA Administrators	Enterprise Admin (ESA)

MSC Trustgate.com considers the categories of personnel identified in this section as Trusted Persons having a Trusted Position. Persons seeking to become Trusted Persons by obtaining a Trusted Position must successfully complete the screening requirements set out in this CPS.

5.2.2 Number of persons required per task

MSC Trustgate.com has established, maintains, and enforces rigorous control procedures to ensure the segregation of duties based on job responsibility and to ensure that multiple Trusted Persons are required to perform sensitive tasks.

Policy and control procedures are in place to ensure segregation of duties based on job responsibilities. The most sensitive tasks, such as access to and management of CA cryptographic hardware (cryptographic signing unit or CSU) and associated key material, require multiple Trusted Persons.

These internal control procedures are designed to ensure that at a minimum, two trusted personnel are required to have either physical or logical access to the device. Access to CA cryptographic hardware is strictly enforced by multiple Trusted Persons throughout its lifecycle, from incoming receipt and inspection to final logical and/or physical destruction. Once a module is activated with operational keys, further access controls are invoked to maintain split control over both physical and logical access to the device. Persons with physical access to modules do not hold “Secret Shares” and vice versa.

Other manual operations such as the validation and issuance of Class 3 Certificates, not issued by an automated validation and issuance system, require the participation of at least 2 Trusted Persons, or a combination of at least one trusted person and an automated validation and issuance process. Manual operations for Key Recovery may optionally require the validation of two (2) authorized Administrators.

5.2.3 Identification and authentication for each role

For all personnel seeking to become Trusted Persons, verification of identity is performed through the personal (physical) presence of such personnel before Trusted Persons performing human resource or security functions and a check of well-recognized forms of identification (e.g., passports and driver’s licenses). Identity is further confirmed through the background checking procedures in Section 5.3.1.

MSC Trustgate.com ensures that personnel have achieved Trusted Status and departmental approval has been given before such personnel are:

1. Issued access devices and granted access to the required facilities;

³ Staff appointed to trusted roles will not maintain more than one trusted role identity at a time in order to maintain the separation of duties as specified in section 5.2.4 of the MSC Trustgate.com CPS.

2. Issued electronic credentials to access and perform specific functions on MSC Trustgate.com CA, RA, or other IT systems.

5.2.4 Roles requiring separation of duties

Roles requiring Separation of duties include (but are not limited to):

1. The validation of information in Certificate Applications;
2. The acceptance, rejection, or other processing of Certificate Applications, revocation requests, recovery requests or renewal requests, or enrolment information;
3. The issuance, or revocation of Certificates, including personnel having access to restricted portions of the repository;
4. The handling of Subscriber information or requests;
5. The generation, issuing or destruction of a CA certificate; and
6. The loading of a CA to a Production environment.

5.3 Personnel controls

5.3.1 Qualifications, experience, and clearance requirements

The PMA is responsible and accountable for MSC Trustgate.com's PKI operations and ensures compliance with this CPS. MSC Trustgate.com's personnel and management practices provide reasonable assurance of the trustworthiness and competence of its employees and of the satisfactory performance of their duties.

There is no citizenship requirement for personnel performing trusted roles associated with the issuance of other kinds of Certificates.

The PMA ensures that all individuals assigned to trusted roles have proof of the requisite background, qualifications, and experience needed to perform their prospective job responsibilities competently and satisfactorily, to perform their duties under this CPS, as well as proof of any government clearances, if any, necessary to perform certification services under government contracts.

5.3.2 Background check procedures

MSC Trustgate verifies the identity of each employee appointed to a trusted role and performs a background check prior to allowing such person to act in a trusted role. MSC Trustgate requires each individual to appear in-person before a human resources employee whose responsibility it is to verify identity. The human resources employee verifies the individual's identity using government-issued photo identification (e.g., national identity card, passports and/or driver's licenses or comparable procedure for the jurisdiction in which the individual's identity is being verified)

Background checks may include a combination of the following as required:

1. Verification of the individual's identity,
2. Previous employment,
3. Professional reference,
4. Highest or most relevant educational degree obtained,
5. Criminal records (local, state or provincial, and national)
6. Credit/financial records
7. Driving records,
8. Employees Provident Fund (EPF) records, and previous residences

These procedures shall be subject to any limitations on background checks imposed by local law. To the extent that any of the requirements imposed by this section cannot be met due to a prohibition or limitation

in local law or other circumstances, MSC Trustgate.com will utilize a substitute investigative technique permitted by law that provides substantially similar information, including but not limited to obtaining a background check performed by the applicable governmental agency.

The factors revealed in a background check that may be considered grounds for rejecting candidates for Trusted Positions or for taking action against an existing Trusted Person generally include (but are not limited to) the following:

1. Misrepresentations made by the candidate or Trusted Person;
2. Highly unfavourable or unreliable professional references;
3. Certain criminal convictions; and
4. Indications of a lack of financial responsibility.

Reports containing such information are evaluated by human resource personnel, with the assistance of legal counsel when necessary, who determine the appropriate course of action in light of the type, magnitude, and frequency of the behaviour uncovered by the background check. Such actions may include measures up to and including the cancellation of offers of employment made to candidates for Trusted Positions or the termination of existing Trusted Persons.

The use of information revealed in a background check to take such actions is subject to the applicable Federal, State, and Local laws.

Background checks are refreshed, and re-adjudication occurs at least every five (5) years.

5.3.3 Training requirements

MSC Trustgate.com provides its personnel with training upon hire as well as the requisite on-the-job training needed for them to perform their job responsibilities competently and satisfactorily. MSC Trustgate.com maintains records of such training. MSC Trustgate.com periodically reviews and enhances its training programs, as necessary.

MSC Trustgate.com's training programs are tailored to the individual's responsibilities and include the following as relevant:

1. Basic Public Key Infrastructure (PKI) concepts;
2. MSC Trustgate.com security and operational policies and procedures;
3. Use and operation of deployed hardware and software;
4. Incident and Compromise reporting and handling,
5. Disaster recovery and business continuity procedures;
6. Authentication and verification policies and procedures;
7. Common threats to the validation process, including phishing and other social engineering tactics; and
8. CA/Browser Forum Guidelines and other applicable industry and government guidelines.

Training is provided via a mentoring process involving senior members of the team to which the employee belongs.

MSC Trustgate.com maintains records of who received training and what level of training was completed. Registration Officers must have the minimum skills necessary to satisfactorily perform validation duties before being granted validation privileges. All Registration Officers are required to pass an internal examination on the Baseline Requirements prior to validating and approving the issuance of Certificates. Where competence is demonstrated in lieu of training, MSC Trustgate.com maintains supporting documentation.

5.3.4 Retraining frequency and requirements

MSC Trustgate.com provides refresher training and updates to their personnel to the extent and frequency required to ensure that such personnel maintain the required level of proficiency to perform their job responsibilities competently and satisfactorily.

5.3.5 Job rotation frequency and sequence

No Stipulation.

5.3.6 Sanctions for unauthorized actions

Appropriate disciplinary actions are taken for unauthorized actions or other violations of MSC Trustgate.com policies and procedures, whether through negligence or malicious intent. Disciplinary actions may include measures up to and including termination and are commensurate with the frequency and severity of the unauthorized actions.

If a person who is entrusted with the role is alleged by management for unauthorized or inappropriate actions, the person will be immediately removed from the trusted role pending management review. After management review and discusses the incident with the trusted personnel, management may reassign the employee to a non-trusted role or dismiss the individual from employment as appropriate.

5.3.7 Independent contractor requirements

In limited circumstances, independent contractors or consultants may be used to fill Trusted Positions. Any such contractor or consultant will hold the same functional and security criteria that apply to a MSC Trustgate.com employees in a comparable position.

Independent contractors and consultants who have not completed or passed the background check procedures specified in Section 5.3.2 will permitted access to MSC Trustgate.com's secure facilities only to the extent that they are escorted and directly supervised by Trusted Personnel at all times.

5.3.8 Documentation supplied to personnel

MSC Trustgate.com provides its employees the requisite training and other documentation needed to perform their job responsibilities competently and satisfactorily.

5.4 Audit logging procedures

5.4.1 Types of events recorded

MSC Trustgate.com's systems require identification and authentication at system logon with a unique username and password. Important system actions are logged to establish the accountability of the operators who initiate such actions.

MSC Trustgate.com enables all essential event auditing capabilities of its CA applications in order to record the events listed below. If MSC Trustgate.com's applications cannot automatically record an event, MSC Trustgate.com implements manual procedures to satisfy the requirements. For each event, MSC Trustgate.com records the relevant:

1. Date and time;
2. Type of event;
3. Success or failure; and
4. User or system that caused the event or initiated the action.

MSC Trustgate.com records at least the following events:

1. CA key lifecycle management events, including:
 - a) Key generation, backup, storage, recovery, archival, and destruction; and
 - b) Cryptographic device lifecycle management events.
2. CA and Subscriber Certificate lifecycle management events, including:
 - a) Certificate requests, renewal, and re-key requests, and revocation;
 - b) All verification activities stipulated in the CABF Requirements, the MSC Trustgate.com in this CPS;
 - c) Date, time, phone number used, persons spoken to, and end results of verification telephone calls;
 - d) Acceptance and rejection of certificate requests;
 - e) Issuance of Certificates; and
 - f) Generation of Certificate Revocation Lists and OCSP entries.
3. Security events, including:
 - a) Successful and unsuccessful PKI system access attempts;
 - b) PKI and security system actions performed;
 - c) Security profile changes;
 - d) System crashes, hardware failures, and other anomalies;
 - e) Firewall and router activities; and
 - f) Entries to and exits from the CA facility.

Log entries include the following elements:

1. Date and time of entry;
2. Identity of the person making the journal entry; and
3. Description of the entry.

5.4.2 Frequency of processing log

As required, generally within at least once every three (3) months, MSC Trustgate.com administrator will review the logs generated by MSC Trustgate.com's systems, makes system and file integrity checks, and conducts a vulnerability assessment. The administrator may perform the checks using automated tools. During these checks, the administrator:

1. Checks whether anyone has tampered with the log;
2. Scans for anomalies or specific conditions, including any evidence of malicious activity; and
3. Prepares a written summary of the review.

Any anomalies or irregularities found in the logs are investigated. The summaries include recommendations to MSC Trustgate.com's operations management committee and are made available to MSC Trustgate.com's auditors upon request. MSC Trustgate.com documents any actions taken as a result of a review.

5.4.3 Retention period for audit log

Audit logs related to publicly trusted Certificates are retained for at least ten (10) years or in accordance with section 5.5.2. MSC Trustgate.com retains audit logs on-site until after they are reviewed. The individuals who remove audit logs from MSC Trustgate.com's CA systems are different than the individuals who control MSC Trustgate.com's signature keys.

5.4.4 Protection of audit log

CA audit log information is retained on equipment until after it is copied by a system administrator. MSC Trustgate.com's CA systems are configured to ensure that

1. Only authorized people have read access to logs;
2. Only authorized people may archive audit logs; and
3. Audit logs are not modified.

Audit logs are protected from destruction prior to the end of the audit log retention period and are retained securely on-site until transferred to a backup site. MSC Trustgate.com's off-site storage location is a safe and secure location that is separate from the location where the data was generated.

5.4.5 Audit log backup procedures

MSC Trustgate.com makes regular backup copies of audit logs and audit log summaries and saves a copy of the audit log to a secure, off-site location on at least a monthly basis.

Where required, MSC Trustgate.com creates incremental backups of audit logs daily and full backups weekly.

5.4.6 Audit collection system (internal vs. external)

Automatic audit processes begin on system startup and end at system shutdown. If an automated audit system fails and the integrity of the system or confidentiality of the information protected by the system is at risk, MSC Trustgate.com's Administrators and the PMA shall be notified, and the PMA will consider suspending the CA's or RA's operations until the problem is remedied.

5.4.7 Notification to event-causing subject

No stipulation.

5.4.8 Vulnerability assessments

MSC Trustgate.com performs annual risk assessments that identify and assess reasonably foreseeable internal and external threats that could result in unauthorized access, disclosure, misuse, alteration, or destruction of any certificate data or certificate issuance process.

MSC Trustgate.com also routinely assesses the sufficiency of the policies, procedures, information systems, technology, and other arrangements that MSC Trustgate.com has in place to control such risks. MSC Trustgate.com's Internal Auditors review the security audit data checks for continuity. MSC Trustgate.com's audit log monitoring tools alert the appropriate personnel of any events, such as repeated failed actions, requests for privileged information, attempted access of system files, and unauthenticated responses.

5.5 Records archival

MSC Trustgate.com complies with all record retention policies that govern by law and retrieved as necessary by request of authorized parties. MSC Trustgate.com includes sufficient detail in all archived records to show that a Certificate was issued in accordance with this CPS.

5.5.1 Types of records archived

MSC Trustgate.com retains the following information in its archives (as such information pertains to MSC Trustgate.com's CA operations):

1. Accreditations of MSC Trustgate.com;
2. CPS versions;
3. Contractual obligations and other agreements concerning the operation of the CA;

4. System and equipment configurations, modifications, and updates;
5. Rejection or acceptance of a certificate request;
6. Certificate issuance, rekey, renewal, and revocation requests;
7. Sufficient identity authentication data to satisfy the identification requirements of Section 3.2, including information about telephone calls made for verification purposes;
8. Any documentation related to the receipt or acceptance of a Certificate or token;
9. Subscriber Agreements;
10. Issued Certificates;
11. A record of certificate re-keys;
12. CRLs for CAs cross-certified with the Federal Bridge CA;
13. Data or applications necessary to verify an archive's contents;
14. Compliance auditor reports;
15. Changes to MSC Trustgate.com's audit parameters;
16. Any attempt to delete or modify audit logs;
17. CA Key generation and destruction;
18. Access to Private Keys for key recovery purposes;
19. Changes to trusted Public Keys;
20. Export of Private Keys;
21. Approval or rejection of a revocation request;
22. Appointment of an individual to a trusted role;
23. Destruction of a cryptographic module;
24. Certificate compromise notifications;
25. Remedial action taken as a result of violations of physical security; and
26. Violations of the CPS.

5.5.2 Retention period for archive

MSC Trustgate.com and the RA retains archived data associated Certificates for at least ten (10) years.

5.5.3 Protection of archive

Archive records are stored at a secure location and are maintained in a manner that prevents unauthorized modification, substitution, or destruction. Archives are not released except as allowed by the PMA or as required by law. MSC Trustgate.com maintains any software application required to process the archive data until the data is either destroyed or transferred to a newer medium.

If MSC Trustgate.com needs to transfer any media to a different archive site or equipment, MSC Trustgate.com will maintain both archived locations and/or pieces of equipment until the transfer are complete. All transfers to new archives will occur in a secure manner.

5.5.4 Archive backup procedures

MSC Trustgate.com incrementally backs up electronic archives of its issued Certificate information on a daily basis and performs full backups on a weekly basis. Copies of paper-based records shall be maintained in an off-site secure facility.

5.5.5 Requirements for time-stamping of records

MSC Trustgate.com automatically time-stamps archived records with system time (non-cryptographic method) as they are created. MSC Trustgate.com synchronizes its system time at least every eight hours using a real time value distributed by a recognized UTC(k) laboratory or National Metrology Institute of Malaysia (NMIM).

5.5.6 Archive collection system (internal or external)

The Archive collection system complies with the security requirements in Section 5.

5.5.7 Procedures to obtain and verify archive information

Details concerning the creation and storage of archive information are found in section 5.5.4. After receiving a request made for a proper purpose by a Customer, its agent, or a party involved in a dispute over a transaction involving the MSC Trustgate.com PKI, MSC Trustgate.com may elect to retrieve the information from archival. The integrity of archive information is verified by comparing a hash of the archive disk with the hash originally stored for that disk, as described in Section 5.5.4. MSC Trustgate.com may elect to transmit the relevant information via a secure electronic method or courier, or it may also refuse to provide the information in its discretion and may require prior payment of all costs associated with the data.

5.6 Key changeover

Key changeover procedures enable the smooth transition from expiring CA Certificates to new CA Certificates. Towards the end of a CA Private Key's lifetime, MSC Trustgate.com ceases using the expiring CA Private Key to sign Certificates and that uses the old Private Key only to sign CRLs and OCSP responder Certificates. A new CA signing Key Pair is commissioned and all subsequently issued Certificates and CRLs are signed with the new private signing key. Both the old and the new Key Pairs may be concurrently active. This key changeover process helps to minimize any adverse effects from CA certificate expiration. The corresponding new CA Public Key Certificate is provided to subscribers and relying parties through the delivery methods detailed in Section 6.1.4.

5.7 Compromise and disaster recovery

5.7.1 Incident and compromise handling procedures

MSC Trustgate.com has a Business Continuity Management and Disaster Recovery Plan. MSC Trustgate.com documents business continuity and disaster recovery procedures designed to notify and reasonably protect Application Software Suppliers, Subscribers and Relying Parties in the event of a disaster, security compromise, or business failure.

MSC Trustgate.com does not disclose business continuity plans to Subscribers, Relying Parties, or to Application Software Suppliers, but will provide business continuity plan and security plans to the MSC Trustgate.com's CA auditors upon request.

MSC Trustgate.com annually tests, reviews, and updates these procedures. The business continuity plan includes:

1. The conditions for activating the plan;
2. Emergency Procedures;
3. Fall- back procedures;
4. Resumption procedures;
5. A maintenance schedule for the plan;
6. Awareness and education requirements;
7. The responsibilities of the individuals;

8. Recovery time objective (RTO);
9. Regular testing of contingency plans;
10. The MSC Trustgate.com's plan to maintain or restore the MSC Trustgate.com's business operations in a timely manner following interruption to or failure of critical business processes;
11. A requirement to store critical cryptographic materials (i.e: secure cryptographic device and activation materials) at an alternate location;
12. What constitutes an acceptable system outage and recovery time;
13. How frequently backup copies of essential business information and software are taken;
14. The distance of recovery facilities to the MSC Trustgate.com's main site; and
15. Procedure for securing its facility to the extent possible during the period of time following a disaster and prior to restoring a secure environment either at the original or a remote site.

5.7.2 Computing resources, software, and/or data are corrupted

MSC Trustgate.com will makes regular system backups on weekly basis and maintains backup copies of its CA Private Keys, which are stored in a secure separate location. If MSC Trustgate.com discovers that any of its computing resources, software, or data operations have been compromised, MSC Trustgate.com assesses the threats and risks that the compromise presents to the integrity or security of its operations or those of affected parties. If MSC Trustgate.com determines that a continued operation could pose a significant risk to Relying Parties or Subscribers, MSC Trustgate.com suspends such operation until it determines that the risk is mitigated.

5.7.3 Entity private key compromise procedures

If MSC Trustgate.com suspects that one of its CA Private Keys Infrastructure has been comprised or lost then MSC Trustgate.com's Key Compromise Response procedures are enacted by the MSC Trustgate.com Security Incident Response Team (VSIRT). This team, which includes Security Manager, Cryptographic Business Operations, Production Services personnel, and other management representatives, assesses the situation, develops an action plan, and implements the action plan with approval from MSC Trustgate.com executive management. This incident must be reported. The report must detail the cause of the compromise or loss and the measures should be taken to prevent a reoccurrence.

If CA Certificate revocation is required, the following procedures are performed:

1. The Certificate's revoked status is communicated to Relying Parties through the MSC Trustgate.com Repository in accordance with Section 4.9.7;
2. Commercially reasonable efforts will be made to provide additional notice of the revocation to all affected MSC Trustgate.com PKI Participants; and
3. The CA will generate a new key pair in accordance with Section 5.6, except where the CA is being terminated in accordance with Section 5.8.

5.7.4 Business continuity capabilities after a disaster

To maintain the integrity of its services, MSC Trustgate.com implements data backup and recovery procedures as part of its Business Continuity Management Plan (BCMP). Stated goals of the BCMP are to ensure that the certificate status services will be only minimally affected by any disaster involving MSC Trustgate.com's primary facility and that MSC Trustgate.com will be capable of maintaining other services or resuming them as quickly as possible following a disaster. MSC Trustgate.com reviews, tests, and updates the BCMP and supporting procedures at least annually.

MSC Trustgate.com's systems are redundantly configured at its primary facility and are mirrored at a separate, geographically diverse location for failover in the event of a disaster. If a disaster causes MSC Trustgate.com's primary CA operations to become inoperative, MSC Trustgate.com will re-initiate its operations at its secondary location giving priority to the provision of certificate status information and time stamping capabilities, if affected.

5.8 CA or RA termination

In the event that it is necessary for a MSC Trustgate.com CA to cease operation, MSC Trustgate.com makes a commercially reasonable effort to notify its Subscribers, Relying Parties, and other affected entities of such termination in advance of the CA termination. Where CA termination is required, MSC Trustgate.com will develop a termination plan to minimize disruption to Subscribers and Relying Parties. Such termination plans may address the following, as applicable:

1. Provision of notice to parties affected by the termination, such as Subscribers and Relying Parties, informing them of the status of the CA;
2. Handling the cost of such notice;
3. Transfer all responsibilities to a qualified successor entity

If a qualified successor entity does not exist, MSC Trustgate.com will:

1. Transfer all relevant records to a government supervisory or legal body;
2. Revoke all Certificates that are still un-revoked or un-expired on a date as specified in the notice and publish final CRLs;
3. Destroy all Private Keys; and
4. Make other necessary arrangements that are in accordance with this CPS.

6 TECHNICAL SECURITY CONTROLS

6.1 Key pair generation and installation

6.1.1 Key pair generation

All keys must be generated using a FIPS-approved method or equivalent international standard.

MSC Trustgate.com's CA Key Pairs generation is performed by multiple pre-selected, trained and trusted individuals using Trustworthy Systems and processes that provide for the security and required cryptographic strength for the generated keys. The cryptographic modules used for key generation meet the requirements of FIPS 140-2 Level 3. Activation of the hardware requires the use of two-factor authentication tokens. MSC Trustgate.com creates auditable evidence during the key generation process to prove that the CPS was followed, and role separation was enforced during the key generation process.

The activities performed in each key generation ceremony are recorded, dated and signed by all individuals involved. For CA keys to be used as publicly trusted Certificates, MSC Trustgate.com requires that an external auditor to witness the generation of or review a recording of the CA keys. For other CA key pair generation ceremonies, an Internal Auditor, external auditor, or independent third party will attend the ceremony, or an external auditor examines the signed and documented record of the key generation ceremony, as allowed by applicable policy.

Generation of RA key pairs is generally performed by the RA using a minimum of FIPS 140-2 Level 2 certified cryptographic module.

Generation of end-user Subscriber key pairs is generally performed by the Subscriber in a manner that is appropriate for the certificate type. The Class 3 Certificates (Hardware-based) must be generated in a medium that prevents exportation or duplication and that meets or exceeds FIPS 140-2 Level 2 certification standards.

6.1.2 Private key delivery to subscriber

If MSC Trustgate.com or an RA generates a key for a Subscriber, then it must deliver the Private Key securely to the Subscriber. Keys may be delivered electronically (such as through secure email or stored in a cloud-based system) or on a hardware cryptographic module. In all cases:

1. Except where escrow/backup services are authorized and permitted, the key generator must not retain access to the Subscriber's Private Key after delivery;
2. The key generator must protect the Private Key from activation, compromise, or modification during the delivery process;
3. The Subscriber must acknowledge receipt of the Private Key(s), typically by having the Subscriber use the related Certificate, and
4. The key generator must deliver the Private Key in a way that ensures that the correct tokens and activation data are provided to the correct Subscribers, including:
 - a) For hardware modules, the key generator maintaining accountability for the location and state of the module until the Subscriber accepts possession of it; and
 - b) For electronic delivery of Private Keys, the key generator encrypting key material using a cryptographic algorithm and key size at least as strong as the Private Key. The key generator shall deliver activation data using a separate secure channel.

The entity assisting the Subscriber with key generation shall maintain a record of the Subscriber's acknowledgement of receipt of the device containing the Subscriber's Key Pair. A RA providing key delivery services is required to provide a copy of this record to MSC Trustgate.com.

S/MIME email signature certificates shall not be distributed as PKCS#12 packages. S/MIME encryption certificates can be distributed as PKCS#12 packages using secure channels and sufficiently secure passwords sent out of band from the package.

6.1.3 Public key delivery to certificate issuer

End-user Subscribers and RAs generate Key Pairs and submit the Public Key to MSC Trustgate.com for certification electronically through the use of a PKCS#10 Certificate Signing Request (CSR) or other digitally signed package in a session secured by Secure Sockets Layer (SSL). Where CA, RA, or end-user Subscriber key pairs are generated by MSC Trustgate.com, this requirement is No Stipulation.

6.1.4 CA public key delivery to relying parties

MSC Trustgate.com's Public Keys are provided to Relying Parties as:

1. Specified in a certificate validation or path discovery policy file;
2. Trust anchors in commercial browsers and operating system root store; and/or
3. Roots signed by other CAs.

All accreditation authorities supporting MSC Trustgate.com Certificates and all application software providers are permitted to redistribute MSC Trustgate.com's root anchors.

MSC Trustgate.com generally provides the full certificate chain (including the issuing CA and any CAs in the chain) to the end-user Subscriber upon Certificate issuance. MSC Trustgate.com may also distribute Public Keys that are part of an updated signature Key Pair as a self-signed Certificate, as a new CA Certificate, or in a key roll-over Certificate. Relying Parties may obtain MSC Trustgate.com's CA Certificates via MSC Trustgate.com's web site or by email.

6.1.5 Key sizes

MSC Trustgate.com generally follows the NIST timelines in using and retiring signature algorithms and key sizes. Accordingly, MSC Trustgate.com had phased out its use of the SHA-1 hash algorithm. Currently, MSC Trustgate.com generates and uses at least the following minimum key sizes, signature algorithms, and hash algorithms for signing Certificates, CRLs, and certificate status server responses:

Key Type	Key Size (bit)	OID	Algorithm hex-encoded bytes
RSA	> 2048	1.2.840.113549.1.1.1 with a NULL parameter	300d06092a864886f70d0101010500
ECDSA	256	1.2.840.10045.2.1	301306072a8648ce3d020106082a8648ce3d030107
ECDSA	384	1.2.840.10045.2.1	301006072a8648ce3d020106052b81040022

MSC Trustgate.com requires end-entity Certificates to contain a key size that is at least 2048 bits for RSA, or 256 bits for elliptic curve algorithms.

MSC Trustgate.com may require higher bit keys in its sole discretion if it is compliant with references in section 1.1 and 1.6.3.

For AATL program issued after July 1, 2017 must be at least 3072-bit for RSA and 256-bit for ECDSA.

MSC Trustgate.com and Subscribers may fulfill the transmission security requirements under the CP/ CPS using TLS or another protocol that provides similar security, provided the protocol requires at least AES 128 bits or equivalent for the symmetric key and at least 2048-bit RSA or equivalent for the asymmetric keys.

MSC Trustgate.com CAs shall reject a certificate request if the requested Public Key does not meet the minimum algorithm key sizes set forth in this section.

6.1.6 Public key parameters generation and quality checking

MSC Trustgate.com uses a cryptomodule that conforms to FIPS 186-4 and provides random number generation and on-board generation of Public Keys and a wide range of ECC curves. The value of this public exponent equates to an odd number equal to three or more.

6.1.7 Key usage purposes (as per X.509 v3 key usage field)

MSC Trustgate.com's Certificates includes key usage extension fields that specify the intended use of the Certificate and technically limit the Certificate's functionality in X.509v3-compliant software.

The use of a specific key is determined by the key usage extension in the X.509 Certificate.

Private Keys corresponding to Root CA Certificates are not used to sign Certificates except in the following cases:

1. Self-signed Certificates to represent the Root CA itself;
2. Certificates for Subordinate CAs and Cross Certificates;
3. Certificates for infrastructure purposes (e.g., administrative role certificates, internal CA operational device certificates; and
4. Certificates for OCSP Response verification.

The following is permitted Key Usage for each type of certificate:

Entity	Permitted Key Usage
CA Certificate	keyCertSign, cRLSign
OCSP Responder Certificate	digitalSignature
Subscriber Certificate	assert key usages based on the intended application of the Key Pair and cannot include anyExtendedKeyUsage

MSC Trustgate.com does not issue Certificates with key usage for both signing and encryption. Instead, MSC Trustgate.com issues Subscribers two Key Pairs—one for key management and one for digital signature and authentication.

6.2 Private Key Protection and Cryptographic Module Engineering Controls

MSC Trustgate.com has implemented a combination of physical, logical, and procedural controls to ensure the security of MSC Trustgate.com private keys. Subscribers are required by contract to take necessary precautions to prevent the loss, disclosure, modification, or unauthorized use of private keys.

6.2.1 Cryptographic module standards and controls

MSC Trustgate.com's cryptographic modules for all of its CA and OCSP responder Key Pairs are validated to the FIPS 140-2 Level 3.

Cryptographic module requirements for subscribers and registration authorities are shown in the table below:

Assurance Level	Subscriber	Registration Authorities
Class 1 Certificates	N/A	FIPS 140-2 Level 2 (Hardware)
Class 2 Certificates	FIPS 140-2 Level 1 (Software or Hardware)	FIPS 140-2 Level 2 (Hardware)
Class 3 Certificates	FIPS 140-2 Level 1 (Software) FIPS 140-2 Level 2 (Hardware)	FIPS 140-2 Level 2 (Hardware)

6.2.2 Private key (n out of m) multi-person control

MSC Trustgate.com has implemented technical and procedural mechanisms that requires the participation of multiple trusted individuals to perform sensitive CA cryptographic operations. MSC Trustgate.com uses “Secret Sharing” to split the activation data needed to make use of a CA private key into separate parts called “Secret Shares” which are held by trained and trusted individuals called “Shareholders.” A threshold number of Secret Shares (m) out of the total number of Secret Shares created and distributed for a particular hardware cryptographic module (n) is required to activate a CA private key stored on the module.

The threshold number of shares needed to sign a CA certificate is 3. It should be noted that the number of shares distributed for disaster recovery tokens may be less than the number distributed for operational tokens, while the threshold number of required shares remains the same. Secret Shares are protected in accordance with this CPS.

6.2.3 Private key escrow

MSC Trustgate.com does not escrow its CA private keys. Subscribers may not escrow their private signature keys. MSC Trustgate.com may provide escrow services for other types of Certificates in order to provide key recovery as described in section 4.12.1.

6.2.4 Private key backup

MSC Trustgate.com's Private Keys are generated and operated inside MSC Trustgate.com's cryptographic module, which has been evaluated to at least FIPS 140-2 Level 3. When keys are transferred to other media for backup and disaster recovery purposes, the keys are transferred and stored in an encrypted form. MSC Trustgate.com's CA Key Pairs are backed up by multiple trusted individuals using a cryptographic hardware device as part of scripted and video-recorded key backup process.

MSC Trustgate.com may provide backup services for Private Keys that are not required to be kept on a hardware device. Access to back up Certificates is protected in a manner that only the Subscriber can control the Private Key. Backed up keys are never stored in a plain text form outside of the cryptographic module.

6.2.5 Private key archival

MSC Trustgate.com does not archive Private Keys.

6.2.6 Private key transfer into or from a cryptographic module

All keys must be generated by and in a cryptographic module. Private Keys are exported from the cryptographic module into backup tokens only for HSM transfer, offline storage, and backup purposes. The Private Keys are encrypted when transferred out of the module and never exist in plaintext form. When transported between cryptographic modules, MSC Trustgate.com encrypts the Private Key and protects the keys used for encryption from disclosure. Private Keys used to encrypt backups are securely stored and require two-person access. If MSC Trustgate.com becomes aware that a Subordinate CA's Private Key has been communicated to an unauthorized person or an organization not affiliated with the Subordinate CA, then MSC Trustgate.com will revoke all certificates that include the Public Key corresponding to the communicated Private Key.

If MSC Trustgate.com pre-generates private keys and transfers them into a hardware token, for example transferring generated end-user Subscriber private keys into a smart card, it will securely transfer such private keys into the token to the extent necessary to prevent loss, theft, modification, unauthorized disclosure, or unauthorized use of such private keys.

6.2.7 Private key storage on cryptographic module

MSC Trustgate.com's Private Keys are generated and stored inside MSC Trustgate.com's cryptographic module, which has been evaluated to at least FIPS 140-2 Level 3. Root Private Keys are stored offline in cryptographic modules or backup tokens as described above in Sections 6.2.2, 6.2.4, and 6.2.6.

6.2.8 Method of activating private key

MSC Trustgate.com's Private Keys are activated according to the specifications of the cryptographic module manufacturer. Activation data entry is protected from disclosure.

Subscribers are solely responsible for protecting their Private Keys in a manner commensurate with the Certificate type. Subscribers should use a strong password or equivalent authentication method to prevent unauthorized access or use of the Subscriber's Private Key. Subscribers should also take commercially reasonable measures for the physical protection of their workstation to prevent use of the workstation and its associated private key without the Subscriber's authorization. When deactivated, private keys shall be kept in encrypted form only and secured. At a minimum, Subscribers are required to authenticate themselves to the cryptographic module before activating their Private Keys. See also Section 6.4.

6.2.9 Method of deactivating private key

MSC Trustgate.com's Private Keys are deactivated via logout procedures on the applicable HSM device when not in use. MSC Trustgate.com prevent unauthorized access to any activated cryptographic modules.

Subscribers should deactivate their Private Keys via logout and removal procedures when not in use.

6.2.10 Method of destroying private key

MSC Trustgate.com personnel, acting in trusted roles, destroy CA, RA, and status server Private Keys when no longer needed. Subscribers shall destroy their Private Keys when the corresponding Certificate is revoked or expired or if the Private Key is no longer needed.

MSC Trustgate.com may destroy a Private Key by deleting it from all known storage partitions. MSC Trustgate.com also zeroizes the HSM device and associated backup tokens according to the specifications of the hardware manufacturer. This reinitializes the device and overwrites the data with binary zeros. If the zeroization or re-initialization procedure fails, MSC Trustgate.com destroy CA private keys in a manner that reasonably ensures that there are no residuals remains of the key that could lead to the reconstruction of the key.

6.2.11 Cryptographic Module Rating

See Section 6.2.1.

6.3 Other aspects of key pair management

6.3.1 Public key archival

MSC Trustgate.com archives copies of Public Keys in accordance with Section 5.5.

6.3.2 Certificate operational periods and key pair usage periods

MSC Trustgate.com Certificates have maximum validity periods of:

Type	Private Key Use ⁴	Certificate Term
Publicly Trusted Root CAs	No stipulation	25 years
Publicly Trusted Sub CAs / Issuer CAs	No stipulation	15 years
Domain Validation SSL/TLS Certificates	No Stipulation	825 days/397 days*
Organization Validation SSL/TLS Certificates	No Stipulation	825 days/397 days*
AATL Certificate	No Stipulation	825 days
CRL and OCSP responder signing	3 years	31 days
Time Stamping Authority	15 months	135 months
All Subscriber Certificates	36 months	36 months

Participants shall cease all use of their key pairs after their usage periods have expired. Relying parties may still validate signatures generated with these keys after expiration of the Certificate.

MSC Trustgate.com may voluntarily retire its CA Private Keys before the periods listed above to accommodate key changeover processes. MSC Trustgate.com does not issue Subscriber Certificates with an expiration date that exceeds the Issuer CA's public key term stated in the table above or that exceeds the routine re-key identification requirements specified in Section 3.1.1.

6.4 Activation data

6.4.1 Activation data generation and installation

MSC Trustgate.com activates the cryptographic module containing its CA Private Keys according to the specifications of the hardware manufacturer. This method has been evaluated as meeting the requirements of FIPS 140-2 Level 3. The cryptographic hardware is held under two-person control as explained in Section 5.2.2 and elsewhere in this CPS. MSC Trustgate.com will only transmit activation data via an appropriately protected channel and at a time and place that is distinct from the delivery of the associated cryptographic module.

All MSC Trustgate.com personnel and Subscribers are instructed to use strong passwords and to protect PINs and passwords that meet the requirements specified by the CAB Forums Network Security Requirements. If MSC Trustgate.com uses passwords as activation data for a signing key, MSC Trustgate.com will change the activation data change upon rekey of the CA Certificate.

6.4.2 Activation data protection

MSC Trustgate.com protects data that used to unlock Private Keys from disclosure using a combination of cryptographic and physical access control mechanisms. Protection mechanisms include keeping activation mechanisms secure using role-based physical control. All MSC Trustgate.com personnel are instructed to memorize and not to write down their password or share it with any another individual. MSC Trustgate.com

⁴ CA Private Keys may continue to be used to sign CRLs and OCSP responses

locks accounts used to access secure CA processes if a certain number of failed password attempts occur as specified in the internal security policies, procedures, and relevant requirements in references listed in Section 1.6.3.

End-user Subscribers shall protect the activation data for their private keys, if any, to the extent necessary to prevent the loss, theft, modification, unauthorized disclosure, or unauthorized use of such private keys.

6.4.3 Other aspects of activation data

No Stipulation

6.5 Computer security controls

6.5.1 Specific computer security technical requirements

MSC Trustgate.com secures its CA systems and authenticates and protects communications between its systems and trusted roles. MSC Trustgate.com's CA servers and support-and-vetting workstations run on trustworthy systems that are configured and hardened using industry best practices. All CA systems are scanned for malicious code and protected against spyware and viruses.

RAs must ensure that the systems maintaining RA software and data files are trustworthy systems secure from unauthorized access, which can be demonstrated by compliance with audit criteria applicable under Section 5.4.1.

RAs must logically separate access to these systems and this information from other components. This separation prevents access except through defined processes. RAs must use firewalls to protect the network from internal and external intrusion and limit the nature and source of activities that may access such systems and information. RAs must require the use of passwords with a minimum character length and a combination of alphanumeric and special characters.

MSC Trustgate.com's CA systems are configured to:

1. Authenticate the identity of users before permitting access to the system or applications;
2. Manage the privileges of users and limit users to their assigned roles;
3. Generate and archive audit records for all transactions;
4. Enforce domain integrity boundaries for security critical processes; and
5. Support recovery from key or system failure.

All Certificate Status Servers:

1. Authenticate the identity of users before permitting access to the system or applications;
2. Manage privileges to limit users to their assigned roles;
3. Enforce domain integrity boundaries for security critical processes; and
4. Support recovery from key or system failure.

MSC Trustgate.com enforces multi-factor authentication on any account capable of directly causing Certificate issuance.

6.5.2 Computer security rating

No Stipulation

6.6 Life cycle technical controls

6.6.1 System development controls

MSC Trustgate.com uses only:

1. CA systems software that is provided by MSC Trustgate.com. MSC Trustgate.com shall have its own mechanisms in place to control and monitor the acquisition and development of the CA systems and shall be complied with the CPS;
2. All hardware and software are shipped under standard conditions to ensure delivery of the component directly to a trusted employee who ensures that the equipment is installed without opportunity for tampering; and
3. Hardware and software that is dedicated only to performing the CA functions for CA operation purposes.

Updates of equipment and software are purchased or developed in the same manner as the original equipment or software and are installed and tested by trusted and trained personnel. All hardware and software essential to MSC Trustgate.com's operations are scanned for malicious code on first use and periodically thereafter. MSC Trustgate.com does not install software that are not part of the CA's operation

6.6.2 Security management controls

MSC Trustgate.com has mechanisms and/or policies in place to control and monitor the configuration of its CA systems. MSC Trustgate.com creates a hash of all software packages and MSC Trustgate.com software updates. This hash is used to verify the integrity of such software manually. Upon installation and periodically thereafter, MSC Trustgate.com validates the integrity of its CA systems.

6.6.3 Life cycle security controls

No stipulation.

6.7 Network security controls

Issuer CA and RA functions are performed using networks secured in accordance with the standards documented in this CPS to prevent unauthorized access, tampering, and denial-of-service attacks. Communications of sensitive information shall be protected using point-to-point encryption for confidentiality and digital signatures for non-repudiation and authentication.

The Issuer MSC Trustgate.com document and control the configurations of its systems, including any upgrades or modifications made. The Issuer MSC Trustgate.com implement a process for detecting unauthorized modifications to its hardware or software and for installing and maintaining its systems.

The Issuer CA and its RAs shall implement appropriate network security controls, including turning off any unused network ports and services and only using network software that is necessary for the proper functioning of the CA systems. The Issuer MSC Trustgate.com implement the same network security controls to protect a CMS as used to protect its other CA equipment.

MSC Trustgate.com's CA system is connected to one internal network and is protected by firewalls and Network Address Translation for all internal IP addresses (e.g., 192.168.x.x). MSC Trustgate.com's customer support and vetting workstations are also protected by firewall(s) and only use internal IP addresses. Root Keys are kept offline and brought online only when necessary to sign Certificate-issuing subordinate CAs, OCSP Responder Certificates, or periodic CRLs. Firewalls and boundary control devices are configured to allow access only by the addresses, ports, protocols, and commands required for the trustworthy provision of PKI services by such systems.

MSC Trustgate.com's security policy is to block all ports and protocols and open only ports necessary to enable CA functions. All CA equipment is configured with a minimum number of services and all unused network ports and services are disabled. MSC Trustgate.com's network configuration is available for review on-site by its auditors and consultants under an appropriate non-disclosure agreement.

6.8 Timestamping

Certificates, CRLs, and other revocation database entries shall contain time and date information. Such time information need not be cryptographic-based.

The system time on MSC Trustgate.com is updated using the Network Time Protocol (NTP) to synchronize system clocks at least once every eight hours. All times are traceable to a real time value distributed by a UTC(k) laboratory or National Metrology Institute of Malaysia (NMIM) and are updated when a leap second occurs as notified by the appropriate body.

7 CERTIFICATE, CRL, AND OCSP PROFILES

MSC Trustgate.com uses the ITU X.509, version 3 standard to construct digital Certificates for use within the MSC Trustgate.com PKI. MSC Trustgate.com adds certain certificate extensions to the basic certificate structure for the purposes intended by X.509v3 as per Amendment 1 to ISO/IEC 9594-8, 1995. MSC Trustgate.com generates.

At a minimum, X.509 Certificates shall contain the basic fields and indicated prescribed values or value constraints in table below as well as certificate extension described in Section 7.1.2:

Field	Value or Value Constraint
Serial Number	Non-sequential Certificate serial numbers (positive numbers greater than zero) that contain at least 64 bits of output from a CSPRNG
Signature Algorithm	Object Identifier of the algorithm used to sign the certificate
Issuer DN	See Section 7.1.4
Validity Period	As per business contract terms requires but not exceeding three years as sanctioned by DSA 1997 Section 59.
Valid From	Universal Coordinate Time base. Synchronized with National Metrology Institute of Malaysia (NMIM). Encoded in accordance with RFC5280.
Valid To	Universal Coordinate Time base. Synchronized with National Metrology Institute of Malaysia (NMIM). Encoded in accordance with RFC5280.
Subject DN	See Section 7.1.4
Subject Public Key	Encoded in accordance with RFC 5280
Signature	Generated and encoded in accordance with RFC 5280

7.1 Certificate profile

7.1.1 Version number(s)

All Certificate are X.509 version 3 Certificates.

7.1.2 Certificate extensions

MSC Trustgate.com populates X.509 Version 3 with the extensions required by Table below. Private extensions are permissible, but the use of private extensions is not warranted under this CPS unless specifically included by reference. Effective 14 August 2020, the following certificate extension will be used:

7.1.2.1 Root CA Certificate

Certificate Extension	Criticality	Value or Value Constraint
basicConstraints	TRUE	MUST be present , cA MUST be TRUE, pathLenConstraint SHOULD not be present
keyUsage	TRUE	MUST be present, Bit positions for keyCertSign and cRLSign MUST be SET, Bit positions for digitalSignature MUST be SET if it is used for signing OCSP Responder
certificatePolicies	FALSE	SHOULD NOT be present
extKeyUsage	FALSE	SHOULD NOT be present
subjectKeyIdentifier	FALSE	MAY be present. Composed of the 160-bit SHA-1 hash of the public key of the Certificate.

7.1.2.2 Subordinate/Intermediate/Issuer CA Certificate

Certificate Extension	Criticality	Value or Value Constraint
basicConstraints	TRUE	MUST be present , CA MUST be TRUE, pathLenConstraint MAY be present
keyUsage	TRUE	<ul style="list-style-type: none"> MUST be present, Bit positions for keyCertSign and cRLSign MUST be SET, Bit positions for digitalSignature Must for signing OCSP Responder
certificatePolicies	FALSE	MUST be present, policyIdentifier (required), policyQualifiers:policyQualifierId (optional) policyQualifiers:qualifier:cPSuri (optional)
cRLDistributionPoints	FALSE	MUST be present, contains HTTP URL of the CA's CRL service
authorityInfoAccess	FALSE	SHOULD be present, contain the HTTP URL of the Issuing CA's certificate MAY contains HTTP URL of the Issuing CA's OCSP responder,

Certificate Extension	Criticality	Value or Value Constraint
extKeyUsage	FALSE	<p>MAY be present. If set:</p> <ul style="list-style-type: none"> aligning to Application Software Supplier granted trust bits and private PKI use cases MUST NOT contain the anyExtendedKeyUsage KeyPurposeId MUST NOT include both the id-kp-serverAuth and id-kp-emailProtection KeyPurposeIds in the same certificate <p>MUST be present for if the Sub CA issues Time Stamping Certificate</p> <ul style="list-style-type: none"> MUST contain id-kp-timeStamping MUST NOT contain the anyExtendedKeyUsage KeyPurposeId Other values SHOULD NOT be present. The value anyExtendedKeyUsage MUST NOT be present.
nameConstraints	TRUE	MUST be present if id-kp-emailProtection KeyPurposeIds is included. Contains verified domain to be used for S/MIME certificate
subjectKeyIdentifier	FALSE	MAY be present. Composed of the 160-bit SHA-1 hash of the public key of the Certificate.
authorityKeyIdentifier	FALSE	MUST be present. It MUST contain a keyIdentifier field and it MUST NOT contain a authorityCertIssuer or authorityCertSerialNumber field..

7.1.2.3 Subscriber Certificate

Certificate Extension	Criticality	Value or Value Constraint
basicConstraints	TRUE	MAY be present, cA MUST NOT be TRUE, pathLenConstraint NONE
keyUsage	TRUE	MAY be present, Bit positions for keyCertSign and cRLSign MUST NOT be SET, Bit positions for digitalSignature MUST be SET if it is used for signing OCSP Responder
certificatePolicies	FALSE	MUST be present, policyIdentifier (required), policyQualifiers:policyQualifierId (recommended) policyQualifiers:qualifier:cPSuri (optional)
cRLDistributionPoints	FALSE	MAY be present, MUST contains HTTP URL of the CA's CRL service

Certificate Extension	Criticality	Value or Value Constraint
authorityInfoAccess	FALSE	MUST be present, contains HTTP URL of the Issuing CA's certificate, MAY also contain the HTTP URL of the Issuing CA's OCSP responder, For publicly trusted certificates, MUST contain the HTTP URL of the Issuing CA's OCSP responder.
extKeyUsage	FALSE	MUST be present.: <ul style="list-style-type: none"> aligning to Application Software Supplier granted trust bits and private PKI use cases must MUST not contain the anyExtendedKeyUsage KeyPurposeId MUST not include both the id-kp-serverAuth and id-kp-emailProtection KeyPurposeIds in the same certificate
subjectKeyIdentifier	FALSE	MAY be present. Composed of the 160-bit SHA-1 hash of the public key of the Certificate.
authorityKeyIdentifier	FALSE	MUST be present. It MUST contain a keyIdentifier field and it MUST NOT contain a authorityCertIssuer or authorityCertSerialNumber field.

7.1.2.4 Timestamp Certificate

Certificate Extension	Criticality	Value or Value Constraint
basicConstraints	TRUE	MAY be present. If set: cA MUST NOT be TRUE, pathLenConstraint NONE
keyUsage	TRUE	MUST be present, Bit positions for digitalSignature MUST be set. Bit positions for keyCertSign and cRLSign MUST NOT be set. All other bit positions SHOULD NOT be set.
certificatePolicies	FALSE	MUST be present, policyIdentifier (required), policyQualifiers:policyQualifierId (recommended) policyQualifiers:qualifier:cPSuri (optional)
cRLDistributionPoints	FALSE	MUST be present, MUST contains HTTP URL of the CA's CRL service
authorityInfoAccess	FALSE	MUST be present, contains HTTP URL of the Issuing CA's certificate, MAY also contain the HTTP URL of the Issuing CA's OCSP responder

Certificate Extension	Criticality	Value or Value Constraint
extKeyUsage	TRUE	<p>MUST be present.</p> <ul style="list-style-type: none"> aligning to Application Software Supplier granted trust bits and private PKI use cases Value id-kp-timeStamping MUST be present MUST not contain the anyExtendedKeyUsage KeyPurposeIdOther values SHOULD NOT be present
subjectKeyIdentifier	FALSE	<p>MAY be present. Composed of the 160-bit SHA-1 hash of the public key of the Certificate.</p>
authorityKeyIdentifier	FALSE	<p>MUST be present. It MUST contain a keyIdentifier field and it MUST NOT contain a authorityCertIssuer or authorityCertSerialNumber field.</p>

7.1.3 Algorithm object identifiers

7.1.3.1 SubjectPublicKeyInfo

The following requirements apply to the subjectPublicKeyInfo field within a Certificate or Precertificate. No other encodings are permitted.

7.1.3.1.1 RSA

The CA SHALL indicate an RSA key using the rsaEncryption (OID: 1.2.840.113549.1.1.1) algorithm identifier. The parameters MUST be present, and MUST be an explicit NULL. The CA SHALL NOT use a different algorithm, such as the id-RSASSA-PSS (OID:1.2.840.113549.1.1.10) algorithm identifier, to indicate an RSA key.

When encoded, the AlgorithmIdentifier for RSA keys MUST be byte-for-byte identical with the following hex-encoded bytes: 300d06092a864886f70d0101010500

7.1.3.1.2 ECDSA

The CA SHALL indicate an ECDSA key using the id-ecPublicKey (OID: 1.2.840.10045.2.1) algorithm identifier. The parameters MUST use the namedCurve encoding.

1. For P-256 keys, the namedCurve MUST be secp256r1 (OID: 1.2.840.10045.3.1.7).
2. For P-384 keys, the namedCurve MUST be secp384r1 (OID: 1.3.132.0.34).

When encoded, the AlgorithmIdentifier for ECDSA keys MUST be byte-for-byte identical with the following hex-encoded bytes:

1. For P-256 keys, 301306072a8648ce3d020106082a8648ce3d030107.
2. For P-384 keys, 301006072a8648ce3d020106052b81040022.

7.1.3.2 Signature AlgorithmIdentifier

All objects signed by a CA Private Key MUST conform to these requirements on the use of the AlgorithmIdentifier or AlgorithmIdentifier-derived type in the context of signatures.

In particular, it applies to all of the following objects and fields:

1. The signatureAlgorithm field of a Certificate or Precertificate.
2. The signature field of a TBSCertificate (for example, as used by either a Certificate or Precertificate).
3. The signatureAlgorithm field of a CertificateList
4. The signature field of a TBSCertList
5. The signatureAlgorithm field of a BasicOCSPResponse.

No other encodings are permitted for these fields.

7.1.3.2.1 RSA

The CA SHALL use one of the following signature algorithms and encodings. When encoded, the AlgorithmIdentifier MUST be byte-for-byte identical with the specified hex-encoded bytes.

1. RSASSA-PKCS1-v1_5 with SHA-256:

Encoding: 300d06092a864886f70d01010b0500.

2. RSASSA-PKCS1-v1_5 with SHA-384:

Encoding: 300d06092a864886f70d01010c0500.

3. RSASSA-PSS with SHA-256, MGF-1 with SHA-256, and a salt length of 32 bytes:

Encoding:

304106092a864886f70d01010a3034a00f300d0609608648016503040201
0500a11c301a06092a864886f70d010108300d0609608648016503040201
0500a203020120

4. RSASSA-PSS with SHA-384, MGF-1 with SHA-384, and a salt length of 48 bytes:

Encoding:

304106092a864886f70d01010a3034a00f300d0609608648016503040202
0500a11c301a06092a864886f70d010108300d0609608648016503040202
0500a203020130

In addition, the MSC Trustgate.com MAY use the following signature algorithm and encoding if all of the following conditions are met:

1. If used within a Certificate, such as the signatureAlgorithm field of a Certificate or the signature field of a TBSCertificate:
 - a) The new Certificate is a Root CA Certificate or Subordinate CA Certificate that is a Cross-Certificate; and,
 - b) There is an existing Certificate, issued by the same issuing CA Certificate, using the following encoding for the signature algorithm; and,
 - c) The existing Certificate has a serialNumber that is at least 64-bits long; and,
 - d) The only differences between the new Certificate and existing Certificate are one of the following:
 - i. A new subjectPublicKey within the subjectPublicKeyInfo, using the same algorithm and key size; and/or,
 - ii. A new serialNumber, of the same encoded length as the existing Certificate; and/or
 - iii. The new Certificate's extKeyUsage extension is present, has at least one key purpose specified, and none of the key purposes specified are the id-kp-serverAuth (OID: 1.3.6.1.5.5.7.3.1) or the anyExtendedKeyUsage (OID: 2.5.2937.0) key purposes; and/or
 - iv. The new Certificate's basicConstraints extension has a pathLenConstraint that is zero.
2. If used within an OCSP response, such as the signatureAlgorithm of a BasicOCSPResponse:
 - a) All unexpired, un-revoked Certificates that contain the Public Key of the CA Key Pair and that have the same Subject Name MUST also contain an extKeyUsage extension with the only key usage present being the id-kp-ocspSigning (OID: 1.3.6.1.5.5.7.3.9) key usage.
3. If used within a CRL, such as the signatureAlgorithm field of a CertificateList or the signature field of a TBSCertList:
 - a) The CRL is referenced by one or more Root CA or Subordinate CA Certificates; and,
 - b) The Root CA or Subordinate CA Certificate has issued one or more Certificates using the following encoding for the signature algorithm.

Note: The above requirements do not permit MSC Trustgate.com to sign a Precertificate with this encoding.

1. RSASSA-PKCS1-v1_5 with SHA-1:

Encoding: 300d06092a864886f70d0101050500

7.1.3.2.2 ECDSA

The CA SHALL use the appropriate signature algorithm and encoding based upon the signing key used.

If the signing key is P-256, the signature MUST use ECDSA with SHA-256. When encoded, the AlgorithmIdentifier MUST be byte-for-byte identical with the following hex-encoded bytes: 300a06082a8648ce3d040302.

If the signing key is P-384, the signature MUST use ECDSA with SHA-384. When encoded, the AlgorithmIdentifier MUST be byte-for-byte identical with the following hex-encoded bytes: 300a06082a8648ce3d040303.

7.1.4 Name forms

Each Certificate includes a unique serial number that is never reused. MSC Trustgate.com has a process that limits information in OU fields that has not been verified in accordance with Section 3.

For CA certificates, the commonName attribute is present and the contents is an identifier that uniquely identifies the CA and distinguishes it from other CAs.

The content of the Certificate Issuer Distinguished Name field matches the Subject DN of the Issuer CA to support name chaining as specified in RFC 5280, section 4.1.2.4. Certificates are populated with the Issuer Name and Subject Distinguished Name required under Section 3.1.1.

In addition, MSC Trustgate.com may include within end-user Subscriber Certificates an additional Organizational Unit field that contains a notice stating that the terms of use of the Certificate are set forth in a URL which is a pointer to the applicable Relying Party Agreement. Exceptions to the foregoing requirement are permitted only when space, formatting, or interoperability limitations within Certificates make such an Organizational Unit impossible to use in conjunction with the application for which the Certificates are intended, or if a pointer to the applicable Relying Party Agreement is included in the policy extension of the certificate.

Entries in the dNSName are in the “preferred name syntax” as specified in IETF RFC 5280 and thus do not contain underscore characters.

7.1.5 Name constraints

MSC Trustgate.com may include name constraints in the nameConstraints field when appropriate.

7.1.6 Certificate policy object identifier

This section sets forth minimum requirements for the content of the Subscriber, Subordinate CA, and Root CA Certificates, as they relate to the identification (OID) of Certificate Policy.

The OIDs used by MSC Trustgate.com are listed in Section 1.2 and 7.1.6.1

The following Certificate Policy identifiers are reserved for use by MSC Trustgate.com as an optional means of asserting that a Certificate complies with related CA/B Forum Baseline Requirements.

7.1.6.1.1 Server Certificates

{joint-iso-itu-t(2) international-organizations(23) ca-browser-forum(140) certificate-policies(1) baseline-requirements(2) domain-validated(1)} (2.23.140.1.2.1)

{joint-iso-itu-t(2) international-organizations(23) ca-browser-forum(140) certificate-policies(1) baseline-requirements(2) organization-validated(2)} (2.23.140.1.2.2)

{joint-iso-itu-t(2) international-organizations(23) ca-browser-forum(140) certificate-policies(1) baseline-requirements(2) individual-validated(3)}(2.23.140.1.2.3)

{joint-iso-itu-t(2) international-organizations(23) ca-browser-forum(140) certificate-policies(1) ev-guidelines(1)}(2.23.140.1.1)

7.1.6.1.1 Timestamping Certificates

{joint-iso-itu-t(2) international-organizations(23) ca-browser-forum(140) certificate-policies(1) code-signing-requirements(4) timestamping(2)} (2.23.140.1.4.2)

7.1.6.2 Root CA Certificates

A Root CA Certificate SHOULD NOT contain the certificatePolicies extension.

7.1.6.3 Subordinate CA Certificates

A Certificate issued to a Subordinate CA that is not an Affiliate of the Issuing CA:

1. MUST include one or more explicit policy identifiers that indicate the Subordinate CA's adherence to and compliance with these Requirements (i.e. either the CA/Browser Forum Reserved Certificate Policy Identifiers or identifiers documented by the Subordinate CA in its Certificate Policy and/or Certification Practice Statement) and
2. MAY contain one or more identifiers documented by the Subordinate CA in its Certificate Policy and/or Certification Practice Statement and
3. MUST NOT contain the anyPolicy identifier (2.5.29.32.0).

A Certificate issued after 31 March 2022 to a Subordinate CA that issues Timestamping Certificates and is an Affiliate of the Issuing CA:

1. MUST include the CA/Browser Forum reserved identifier specified in Section 7.1.6.1 to indicate the Subordinate CA's compliance with CA/B Forum Baseline Requirements, and
2. MAY contain the "anyPolicy" identifier (2.5.29.32.0) in place of an explicit policy identifier.

A Subordinate CA MUST represent, in its Certificate Policy and/or Certification Practice Statement, that all Certificates containing a policy identifier indicating compliance with these Requirements are issued and managed in accordance with CA/B Forum Baseline Requirements.

7.1.6.4 Subscriber Certificates

A Certificate issued to a Subscriber MUST contain one or more policy identifier(s), defined by the MSC Trustgate.com, in the Certificate's certificatePolicies extension that indicates adherence to and compliance with these Requirements (i.e. either the CA/Browser Forum Reserved Certificate Policy Identifiers or identifiers documented by the Subordinate CA in its Certificate Policy and/or Certification Practice Statement) . MSC Trustgate.com MAY also assert the reserved policy OIDs in such Certificates.

The MSC Trustgate.com MUST document in its Certificate Policy or Certification Practice Statement that the Certificates it issues containing the specified policy identifier(s) are managed in accordance with CA/B Forum Baseline Requirements

7.1.7 Usage of Policy Constraints extension

No Stipulation.

7.1.8 Policy qualifiers syntax and semantics

MSC Trustgate.com generally populates X.509 Version 3 MSC Trustgate.com PKI Certificates with a policy qualifier within the Certificate Policies extension. Generally, such Certificates contain a CPS pointer

qualifier that points to the applicable Relying Party Agreement or the MSC Trustgate.com CPS. In addition, some Certificates contain a User Notice Qualifier which points to the applicable Relying Party Agreement.

7.1.9 Processing semantics for the critical Certificate Policies extension

No stipulation.

7.2 CRL profile

For revoked issuing CAs, the CRLReason indicated cannot be unspecified (0) or certificateHold(6). If the reason for revocation is unspecified, MSC Trustgate.com will omit the reasonCode entry extension, when not technically capable of issuance. If a reasonCode CRL entry extension is present, the CRLReason must indicate the most appropriate reason for revocation of the certificate. MSC Trustgate.com specifies the following reason codes from RFC 5280, section 5.3.1 as appropriate for most instances when used in accordance with the practices in this section and this CPS:

keyCompromise (1),

cACompromise (2),

affiliationChanged (3),

superseded (4),

cessationOfOperation (5),

7.2.1 Version number(s)

MSC Trustgate.com issues version 2 CRLs that contain the following fields:

Field	Value
Version	2
Signature Algorithm	Algorithm used to sign the CRL in accordance with RFC 3279.
Issuer	Issuer Entity who has signed and issued the CRL.
Effective Date	Issue date of the CRL. CRLs are effective upon issuance.
Next Update	Date by which the next CRL will be issued. CRL issuance frequency is in accordance with Section 4.9.7.
Revoked Certificates	Revoked Certificates Listing of revoked certificates, including the Serial Number of the revoked Certificate and the Revocation Date.
Issuer's Signature	[Signature]

7.2.2 CRL and CRL entry extensions

CRLs have the following extensions:

Extension	Value
CRL Number	Never repeated monotonically increasing integer
Authority Identifier Key	Same as the Authority Key Identifier listed in the Certificate
Invalidity Date	Optional. Date in UTC format

Extension	Value
Reason Code	Specify reason for revocation in list of reason codes in Section 7.2, if included.

7.3 OCSF profile

Effective 2020-09-30, if an OCSF response is for a Root CA or Subordinate CA Certificate, including Cross Certificates, and that certificate has been revoked, then the revocationReason field within the RevokedInfo of the CertStatus is present and asserted. Effective 2020-09-30, the CRLReason indicated contains a value permitted for CRLs, as specified in Section 7.2.2.

7.3.1 Version number(s)

MSC Trustgate.com's operates an OCSF in accordance with RFC 6960.

7.3.2 OCSF extensions

The singleExtension of an OCSF response cannot contain the reasonCode (OID 2.5.29.21) CRL entry extension.

8 COMPLIANCE AUDIT AND OTHER ASSESSMENTS

The practices in this CPS are designed to meet or exceed the requirements of generally accepted industry standards, including the latest versions of the WebTrust Programs for Certification Authorities as required by the Mozilla Root Store policy and other programs listed in section 1.1 and 1.6.3.

8.1 Frequency or circumstances of assessment

MSC Trustgate.com receives an annual period audit by an independent external auditor to assess MSC Trustgate.com's compliance with this CPS and the WebTrust for CA programs criteria. The audit covers MSC Trustgate.com's RA systems, and OCSP Responders.

Audits are conducted over unbroken sequences of audit periods with each period no longer than one (1) year duration.

8.2 Identity/qualifications of assessor

WebTrust auditors must meet the requirements of Section 8.2 of the CA/Browser Baseline Requirements. The auditors must also be accredited as qualified auditor by the Malaysian Communications & Multimedia Commission (MCMC). The list of qualified auditors can be found here: <https://www.mcmc.gov.my/en/sectors/digital-signature/list-of-qualified-auditors>.

8.3 Assessor's relationship to assessed entity

WebTrust audits of MSC Trustgate.com are performed by a public accounting firm that is independent of MSC Trustgate.com.

8.4 Topics covered by assessment

The audit covers MSC Trustgate.com's business practices disclosure, the integrity of MSC Trustgate.com's PKI operations, and MSC Trustgate.com's compliance with this CPS and referenced requirements. The audit verifies that MSC Trustgate.com is compliant with the CPS, and any MOA between it and any other PKI.

8.5 Actions taken as a result of deficiency

If an audit reports a material non-compliance with the applicable law, this CPS, or any other contractual obligations related to MSC Trustgate.com's services, then:

1. The auditor will document the discrepancy;
2. The auditor will promptly notify MSC Trustgate.com; and
3. MSC Trustgate.com will develop a plan to cure the noncompliance.

MSC Trustgate.com will submit the plan to the Management for approval and to any third party that MSC Trustgate.com is legally obligated to satisfy. The MSC Trustgate.com Management may require additional action if necessary, to rectify any significant issues created by the non-compliance, including requiring revocation of affected Certificates. MSC Trustgate.com is entitled to suspend and/or terminate of services through revocation or other actions as deemed by the MSC Trustgate.com Management to address the non-compliant Issuer CA.

8.6 Communication of results

The results of each audit are reported to the Management and to any third-party entities which are entitled by law, regulation, or agreement to receive a copy of the audit results. Copies of MSC Trustgate.com's WebTrust for CAs audit reports can be found at: <https://www.msctrustgate.com>. On an annual basis and within three months of completion, MSC Trustgate.com submits copies of relevant audit compliance reports to various parties, such as Malaysian Communications and Multimedia Commission (MCMC),

Mozilla, Adobe, and other relying body. In the event of a delay greater than three (3) months, MSC Trustgate.com shall provide an explanatory letter signed by the Qualified Auditor.

For Audit Reports in which the Audit Period includes a date later than 2020-08-01, then the requirements set forth in the remainder of this Section 8.6 SHALL be met. Audit Reports for Audit Periods that conclude prior to 2020-08-01 SHOULD meet these requirements.

The Audit Report MUST contain at least the following clearly-labelled information:

1. Name of the organization being audited;
2. Name and address of the organization performing the audit;
3. The SHA-256 fingerprint of all Roots and Subordinate CA Certificates, including Cross Certificates, that were in-scope of the audit;
4. Audit criteria, with version number(s), that were used to audit each of the certificates (and associated keys);
5. A list of the CA policy documents, with version numbers, referenced during the audit;
6. Whether the audit assessed a period of time or a point in time;
7. The start date and end date of the Audit Period, for those that cover a period of time;
8. The point in time date, for those that are for a point in time;
9. The date the report was issued, which will necessarily be after the end date or point in time date;
10. (for audits conducted in accordance with any of the ETSI standards) a statement to indicate if the audit was a full audit or a surveillance audit, and which portions of the criteria were applied and evaluated, e.g. DVCP, OVCP, NCP, NCP+, LCP, EVCP, EVCP+, QCP-w, Part 1 (General Requirements), and/or Part 2 (Requirements for Trust Service Providers); and
11. (for audits conducted in accordance with any of the ETSI standards) a statement to indicate that the auditor referenced the applicable CA/Browser Forum criteria, such as this document, and the version used.

An authoritative English language version of the publicly available audit information MUST be provided by the Qualified Auditor and the MSC Trustgate.com ensure it is publicly available.

The Audit Report MUST be available as a PDF and SHALL be text searchable for all information required. Each SHA-256 fingerprint within the Audit Report MUST be uppercase letters and MUST NOT contain colons, spaces, or line feeds.

8.7 Self-Audits

During the period in which the CA issues Certificates, the MSC Trustgate.com monitor adherence to its Certificate Policy, Certification Practice Statement and these Requirements and strictly control its service quality by performing self-audits on at least a quarterly basis against a randomly selected sample of the greater of one certificate or at least three percent of the Certificates issued by it during the period commencing immediately after the previous self-audit sample was taken. Except for Delegated Third Parties that undergo an annual audit that meets the criteria specified in Section 8.1, the MSC Trustgate.com strictly control the service quality of Certificates issued or containing information verified by a Delegated Third Party by having a Validation Specialist employed by the CA perform ongoing quarterly audits against a randomly selected sample of at least the greater of one certificate or three percent of the Certificates verified by the Delegated Third Party in the period beginning immediately after the last sample was taken. The MSC Trustgate.com review each Delegated Third Party's practices and procedures to ensure that the Delegated Third Party is in compliance with these Requirements and the relevant Certificate Policy and/or Certification Practice Statement. The MSC Trustgate.com internally audit each Delegated Third Party's compliance with these Requirements on an annual basis. During the period in which a Technically Constrained Subordinate CA issues Certificates, the CA which signed the Subordinate MSC Trustgate.Com monitor adherence to the CA's Certificate Policy and the Subordinate CA's Certification Practice Statement. On at least a quarterly basis, against a randomly selected sample of the greater of one certificate or at least

three percent of the Certificates issued by the Subordinate CA, during the period commencing immediately after the previous audit sample was taken, the MSC Trustgate.com ensure all applicable CP are met.

9 OTHER BUSINESS AND LEGAL MATTERS

9.1 Fees

9.1.1 Certificate issuance or renewal fees

MSC Trustgate.com is entitled to charge end-user Subscribers for the issuance, management, and renewal of Certificates.

9.1.2 Certificate access fees

MSC Trustgate.com does not charge a fee as a condition of making a Certificate available in a repository or otherwise making Certificates available to Relying Parties.

9.1.3 Revocation or status information access fees

MSC Trustgate.com does not charge a fee as a condition of making the CRLs required by this CPS available in a repository or otherwise available to Relying Parties. MSC Trustgate.com is, however, entitled to charge a fee for providing customized CRLs, OCSP services, or other value-added revocation and status information services.

MSC Trustgate.com does not permit access to revocation information, Certificate status information, or time stamping in their repositories by third parties that provide products or services that utilize such Certificate status information without MSC Trustgate.com's prior express written consent.

9.1.4 Fees for other services

MSC Trustgate.com does not charge a fee for access to this CPS. Any use made for purposes other than simply viewing the document, such as reproduction, redistribution, modification, or creation of derivative works, shall be subject to a license agreement with the entity holding the copyright to the document.

9.1.5 Refund policy

Within MSC Trustgate.com's Sub-domain, the following refund policy is in effect:

MSC Trustgate.com adheres to, and stands behind, rigorous practices and policies in undertaking certification operations and in issuing certificates. Nevertheless, if for any reason a subscriber is not completely satisfied with the certificate issued to him, her, or it, the subscriber may request that MSC Trustgate.com revoke the certificate within thirty (30) days of issuance and provide the subscriber with a refund. Following the initial thirty (30) day period, a subscriber may request that MSC Trustgate.com revoke the certificate and provide a refund if MSC Trustgate.com has breached a warranty or other material obligation under this CPS relating to the subscriber or the subscriber's certificate.

After MSC Trustgate.com revokes the subscriber's certificate, MSC Trustgate.com will promptly credit the subscriber's credit card account (if the certificate was paid for via credit card) or otherwise reimburse the subscriber via cheque or any other agreed method, for the full amount of the applicable fees paid for the certificate. To request a refund, please call customer service at +603 8318 1800. This refund policy is not an exclusive remedy and does not limit other remedies that may be available to subscribers.

9.2 Financial responsibility

9.2.1 Insurance coverage

MSC Trustgate.com maintains Professional Indemnity Insurance with a policy limit of at least two million Malaysia Ringgit (RM 2,000,000.00) in coverage.

9.2.2 Other assets

No Stipulation

9.2.3 Insurance or warranty coverage for end-entities

No Stipulation

9.3 Confidentiality of business information

9.3.1 Scope of confidential information

The following records of Subscribers shall, subject to Section 9.3.2, be kept confidential and private (“Confidential/Private Information”):

1. CA application records, whether approved or disapproved;
2. Certificate Application records;
3. Transactional records (both full records and the audit trail of transactions);
4. Audit trail records created or retained by MSC Trustgate.com or a Customer;
5. Audit reports created by MSC Trustgate.com or a Customer (to the extent such reports are maintained), or their respective auditors (whether internal or public);
6. Contingency planning and disaster recovery plans; and
7. Security measures controlling the operations of MSC Trustgate.com hardware and software and the administration of Certificate services and designated enrolment services.

9.3.2 Information not within the scope of confidential information

Certificates, Certificate revocation and other status information, MSC Trustgate.com repositories and information contained within them are not considered Confidential/ Private Information. Information not expressly deemed Confidential/ Private Information under Section 9.3.1 shall be considered neither confidential nor private. This section is subject to applicable privacy laws.

9.3.3 Responsibility to protect confidential information

MSC Trustgate.com secures private information from compromise and disclosure to the third parties.

9.4 Privacy of personal information

9.4.1 Privacy plan

MSC Trustgate.com has implemented a privacy policy, which is sited at: <https://www.msctrustgate.com/privacy-notice>.

9.4.2 Information treated as private

Any information about the Subscribers that is not publicly available through the content of the issued certificate, certificate directory and online CRLs is treated as private.

9.4.3 Information not deemed private

Subject to the local laws, all information made public in a certificate is deemed not private.

9.4.4 Responsibility to protect private information

MSC Trustgate.com PKI participants receiving private information shall secure it from being compromise and disclosure to third parties and shall comply with all local privacy laws in their jurisdiction.

9.4.5 Notice and consent to use private information

Unless where otherwise stated in this CPS, the applicable Privacy Policy or by agreement, private information will not be used without the consent of the party to whom that information applies. This section is subject to applicable privacy laws.

9.4.6 Disclosure pursuant to judicial or administrative process

MSC Trustgate.com shall be entitled to disclose Confidential/ Private Information if, in good faith, MSC Trustgate.com believes that:

1. Disclosure is necessary in response to subpoenas and search warrants; and
2. Disclosure is necessary in response to judicial, administrative, or other legal process during the discovery process in a civil or administrative action, such as subpoenas, interrogatories, requests for admission, and requests for production of documents.

This section is subject to applicable privacy laws.

9.4.7 Other information disclosure circumstances

No Stipulation.

9.5 Intellectual property rights

The allocation of Intellectual Property Rights among MSC Trustgate.com Sub-domain Participants other than Subscribers and Relying Parties is governed by the applicable agreements among such MSC Trustgate.com Sub-domain Participants. The following subsections of Section 9.5 apply to the Intellectual Property Rights in relation to Subscribers and Relying Parties.

9.6 Representations and warranties

9.6.1 CA representations and warranties

Subscribers warrant that:

1. Each digital signature created using the private key corresponding to the public key listed in the Certificate is the digital signature of the Subscriber and the Certificate has been accepted and is operational (not expired or revoked) at the time the digital signature is created;
2. Their private key is protected, and that no unauthorized person has ever had access to the Subscriber's private key;
3. All representations made by the Subscriber in the Certificate Application the Subscriber submitted are true;
4. All information supplied by the Subscriber and contained in the Certificate is true;
5. The Certificate is being used exclusively for authorized and legal purposes, consistent with this CPS; and
6. The Subscriber is an end-user Subscriber and not a CA and is not using the private key corresponding to any public key listed in the Certificate for purposes of digitally signing any Certificate (or any other format of certified public key) or CRL, as a CA or otherwise.

Subscriber Agreements may include additional representations and warranties.

9.6.2 RA Representations and Warranties

RAs warrant that:

1. There are no material misrepresentations of fact in the Certificate known to or originating from the entities approving the Certificate Application or issuing the Certificate;
2. There are no errors in the information in the Certificate that were introduced by the entities approving the Certificate Application as a result of a failure to exercise reasonable care in managing the Certificate Application;
3. Their Certificates meet all material requirements of this CPS; and

4. Revocation services (when applicable) and use of a repository conform to the applicable CPS in all material aspects;
5. Subscriber Agreements may include additional representations and warranties.

9.6.3 Subscriber representations and warranties

Subscribers warrant that:

1. Each digital signature created using the private key corresponding to the public key listed in the Certificate is the digital signature of the Subscriber and the Certificate has been accepted and is operational (not expired or revoked) at the time the digital signature is created;
2. Their private key is protected, and that no unauthorized person has ever had access to the Subscriber's private key;
3. All representations made by the Subscriber in the Certificate Application the Subscriber submitted are true;
4. All information supplied by the Subscriber and contained in the Certificate is true,
5. The Certificate is being used exclusively for authorized and legal purposes, consistent with this CPS; and
6. The Subscriber is an end-user Subscriber and not a CA and is not using the private key corresponding to any public key listed in the Certificate for purposes of digitally signing any Certificate (or any other format of certified public key) or CRL, as a CA or otherwise.

Subscriber Agreements may include additional representations and warranties.

9.6.4 Relying party representations and warranties

Relying Party Agreements require Relying Parties to acknowledge that they have sufficient information to make an informed decision as to the extent to which they choose to rely on the information in a Certificate, that they are solely responsible for deciding whether or not to rely on such information, and that they shall bear the legal consequences of their failure to perform the Relying Party obligations in terms of this CPS.

Relying Party Agreements may include additional representations and warranties.

9.6.5 Representations and warranties of other participants

No Stipulation.

9.7 Disclaimers of warranties

To the extent permitted by applicable law, Subscriber Agreements and Relying Party Agreements shall disclaim MSC Trustgate.com's possible warranties, including any warranty of merchantability or fitness for a particular purpose.

9.8 Limitations of liability

To the extent MSC Trustgate.com has issued and managed the Certificate(s) at issue in compliance with the MSC Trustgate.com Certificate Policy and the MSC Trustgate.com Certification Practice Statement, MSC Trustgate.com shall have no liability to the Subscriber, any Relying Party, or any other third parties for any damages or losses suffered as a result of the use or reliance on such Certificate(s). To the extent permitted by applicable law, Subscriber Agreements and Relying Party Agreements shall limit MSC Trustgate.com's liability. Limitations of liability shall include an exclusion of indirect, special, incidental, and consequential damages. They shall also include the following liability caps limiting MSC Trustgate.com's damages concerning a specific Certificate:

Assurance Level	Liability Caps
Low Assurance	Ringgit Malaysia Five Hundred (RM500.00)
Medium Assurance	Ringgit Malaysia Twenty-Five Thousand (RM25,000.00)
High Assurance	Ringgit Malaysia Four Hundred Thousand (RM400,000)

The liability (and/or limitation thereof) of Subscribers shall be as set forth in the applicable Subscriber agreements.

The liability (and/or limitation thereof) of enterprise RAs and the applicable MSC Trustgate.com be set out in the agreement(s) between them.

The liability (and/or limitation thereof) of Relying Parties shall be as set forth in the applicable Relying Party Agreements.

9.9 Indemnities

9.9.1 Indemnification by MSC Trustgate.com

To the extent permitted by applicable law, MSC Trustgate.com shall indemnify each Application Software Vendor against any claim, damage, or loss suffered by such Application Software Supplier related to a Certificate issued by MSC Trustgate.com, depending on the cause of action or legal theory involved which will be access by Legal Team appointed by MSC Trustgate.

This does not apply, however, to any claim, damages, or loss suffered by such Application Software Supplier related to a Certificate issued by the MSC Trustgate.com where such claim, damage, or loss was directly caused by such Application Software Supplier's software displaying as not trustworthy a Certificate that is still valid, or displaying as trustworthy:

1. A Certificate that has expired; or
2. A Certificate that has been revoked (but only in cases where revocation status is currently available from MSC Trustgate.com online, and the application software failed to check such status or ignored an indication of revoked status).

9.9.2 Indemnification by Subscribers

To the extent permitted by applicable law, Subscribers are required to indemnify MSC Trustgate.com for:

1. Falsehood or misrepresentation of fact by the Subscriber on the Subscriber's Certificate Application;
2. Failure by the Subscriber to disclose a material fact on the Certificate Application, if the misrepresentation or omission was made negligently or with intent to deceive any party;
3. The Subscriber's failure to protect the Subscriber's private key, to use a Trustworthy System, or to otherwise take the precautions necessary to prevent the compromise, loss, disclosure, modification, or unauthorized use of the Subscriber's private key; or
4. The Subscriber's use of a name (including without limitation within a common name, domain name, or e-mail address) that infringes upon the Intellectual Property Rights of a third party.

The applicable Subscriber Agreement may include additional indemnity obligations.

9.9.3 Indemnification by Relying Parties

To the extent permitted by applicable law, Relying Party Agreements shall require Relying Parties to indemnify MSC Trustgate.com for:

1. The Relying Party's failure to perform the obligations of a Relying Party;
2. The Relying Party's reliance on a Certificate that is not reasonable under the circumstances; or
3. The Relying Party's failure to check the status of such Certificate to determine if the Certificate is expired or revoked.

The applicable Relying Party Agreement shall include additional indemnity obligations.

9.10 Term and termination

9.10.1 Term

The CPS becomes effective upon publication in the MSC Trustgate.com repository. Amendments to this CPS become effective upon publication in the MSC Trustgate.com repository.

9.10.2 Termination

This CPS will be amended from time to time and shall remain in force until it is replaced by a new version.

9.10.3 Effect of termination and survival

Upon termination of this CPS, MSC Trustgate.com sub-domain participants are nevertheless bound by its terms for all certificates issued for the remainder of the validity periods of such certificates.

9.11 Individual notices and communications with participants

MSC Trustgate.com accepts notices related to this CPS at the locations specified in Section 2.2. Notices are deemed effective after the sender receives a valid and digitally signed acknowledgment of receipt from MSC Trustgate.com. If an acknowledgement of receipt is not received within five days, the sender must resend the notice in paper form to the street address specified in Section 2.2 using either a courier service that confirms delivery or via registered mail with postage prepaid and return receipt requested. MSC Trustgate.com may allow other forms of notice in its Subscriber Agreements.

MSC Trustgate.com will notify Adobe a month in advance of any updates or changes with the potential to affect compliance with the AATL program, including:

1. Additions of Root CAs and Subordinate CAs;
2. Additional CPS at the Root CA level;
3. Changes in Certificate issuance procedures; or
4. Terminations or transition of ownership of Root CAs or Subordinate CAs.

MSC Trustgate.com will notify Mozilla if:

1. Ownership or control of the CA certificates changes;
2. An organization other than the CA obtains control of an unconstrained intermediate certificate (as defined in section 5.3.2 of the Mozilla Root Store policy) that directly or transitively chains to MSC Trustgate.com included certificate(s);
3. Ownership or control of MSC Trustgate.com's operations changes; or
4. There is a material change in MSC Trustgate.com's operations (e.g., when the cryptographic hardware related to a certificate in Mozilla's root store is consequently moved from one place to another)

9.12 Amendments

9.12.1 Procedure for amendment

This CPS is reviewed annually. Amendments to this CPS may be made by the MSC Trustgate.com Policy Management Authority (PMA). Amendments shall either be in the form of a document containing an amended form of the CPS or an update. Amended versions or updates shall be linked to the Practices Updates and Notices section of the MSC Trustgate.com Repository located at: <https://www.msctrustgate.com/repository.htm>. The updates will supersede any designated or conflicting provisions of the referenced version of the CPS. The PMA shall determine whether the changes to the CPS require a change in the Certificate policy object identifiers of the Certificate policies corresponding to each Class of Certificate.

9.12.2 Notification mechanism and period

MSC Trustgate.com and the PMA reserve the right to amend the CPS without notification for amendments that are not material, including without limitation corrections of typographical errors, changes to URLs, and changes to contact information. The PMA's decision to designate amendments as material or non-material shall be within the PMA's sole discretion. Proposed amendments to the CPS shall appear in the Practices Updates and Notices section of the MSC Trustgate.com Repository, which is located at: <https://www.msctrustgate.com/repository.htm>.

Notwithstanding anything in the CPS to the contrary, if the PMA believes that the material amendments to the CPS are necessary immediately to stop or prevent a breach of the security of the MSC Trustgate.com or any portion of it, MSC Trustgate.com and the PMA shall be entitled to make such amendments by publication in the MSC Trustgate.com Repository. Such amendments will be effective immediately upon publication. Within a reasonable time after publication, MSC Trustgate.com shall provide notice to of such amendments to MSC Trustgate.com sub-domain participants.

9.12.3 Circumstances under which OID must be changed

If the PMA determines that a change is necessary in the object identifier corresponding to a Certificate policy, the amendment shall contain new object identifiers for the Certificate policies corresponding to each Class of Certificate. Otherwise, amendments shall not require a change in Certificate policy object identifier.

9.13 Dispute resolution provisions

To the extent permitted by applicable law, Subscriber Agreements and Relying Party Agreements shall contain a dispute resolution clause. Disputes involving MSC Trustgate.com require an initial negotiation period of sixty (60) days followed by litigation in court of Malaysia, in the case of claimants who are Malaysia residents, or, in the case of all other claimants, arbitration administered by the Asian International Arbitration Centre (AIAC) in Kuala Lumpur as per Rules of AIAC.

Parties are required to notify MSC Trustgate.com and attempt to resolve disputes directly with MSC Trustgate.com before resorting to any dispute resolution mechanism, including adjudication or any type of alternative dispute resolution.

9.14 Governing law

Subject to any limits appearing in applicable law, the laws of Malaysia shall govern the enforceability, construction, interpretation, and validity of this CPS, irrespective of contract or other choice of law provisions and without the requirement to establish a commercial nexus in Malaysia. This choice of law is made to ensure uniform procedures and interpretation for all MSC Trustgate.com sub-domain participants, no matter where they are located.

Provided that this Section 9.14 governs the enforceability, construction, interpretation, and validity of the terms of the CPS separate and apart from the remaining provisions of any such agreements, subject to any limitations appearing in applicable law.

9.15 Compliance with applicable law

This CPS is subject to applicable National, State, Local and Foreign laws, rules, regulations, ordinances, decrees, and orders including, but not limited to, restrictions on exporting or importing software, hardware, or technical information. MSC Trustgate.com licenses its CAs in each jurisdiction that it operates where licensing is required by the law of such jurisdiction for the issuance of Certificates

9.16 Miscellaneous provisions**9.16.1 Entire agreement**

No Stipulation

9.16.2 Assignment

No Stipulation

9.16.3 Severability

In the event that a clause or provision of this CPS is held to be unenforceable by a court of law or other tribunal having authority, the remainder of the CPS shall remain valid.

9.16.4 Enforcement (attorneys' fees and waiver of rights)

No Stipulation

9.16.5 Force Majeure

In no event shall the MSC Trustgate.com be deemed in default or liable for any loss or damage resulting from the failure or delay in the performance of its obligations under the CPS, any Subscription Agreement, or any Relying Party Agreement, arising out of or caused by, directly or indirectly, any event or circumstance beyond MSC Trustgate.com's reasonable control, including but not limited to, floods, fires, hurricanes, earthquakes, tornados, epidemics, pandemics, other acts of God or nature, strikes and other labor disputes, failure of utility, transportation or communications infrastructures, riots or other acts of civil disorder, acts of war, terrorism (including cyber terrorism), malicious damage, judicial action, lack of or inability to obtain export permits or approvals, acts of government such as expropriation, condemnation, embargo, changes in applicable laws or regulations, and shelter-in-place or similar orders, and acts or defaults of third party suppliers or service providers.

9.17 Other provisions

No Stipulation.