

MSC Trustgate Certification Practice Statement

Version 6.0

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MSC Trustgate Certification Practice Statement

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Revision History

#	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 CA/B Forum document (version 1.7.3 October 2020)	5.0
4	4 April 2022	This version: <ol style="list-style-type: none"> 1. Included validation for Onion Domain Certificate in section 3.2.2.4 2. Included the period of certificate status checking in CRL 3. Included OCSP responses period for Code Signing and Timestamp Certificate 4. Inserted Repository MUST NOT include entries that indicate certificate suspended in section 4.9.13 5. Changed the Re-Verification Required for Document Signing Certificate to At Least every six years. 6. Updated the Certificate Extension Section 7.1.2 according to CA/B Forum document 7. Added the CA issuing Timestamp Certificate and Timestamp Certificate extension in section 7.1.2 8. Inserted section 7.1.3.2, 7.1.3.2.1 and 7.1.3.2.2 to be standardized with CA/B Forum document 9. Added the Entries in the dNSName do not contain underscore characters in section 7.1.4 10. Inserted Reserved Certificate Policy Identifiers 11. Inserted section 7.1.6.1, 7.1.6.2, 7.1.6.3 and 7.1.6.4 to be standardized with CA/B Forum document 	5.1
5	29 April 2022	This version: <ul style="list-style-type: none"> • Includes the new root, bridge, and intermediate CA certificates in section 1.2 • Amended CA representations and warranties in section 9.6.1 • Inserted RA Liability in section 9.8.2 • Amended Indemnities in section 9.9 • Amended Governing and Compliance Law in section 9.14 and 9.15 	5.2
6	20 March 2023	<ul style="list-style-type: none"> • This version amended section 4.9.9 On-line revocation/status checking availability • Removed the OU attribute in subject DN in section 3.1.1 	5.3

#	Date	Changes	Version
7	15 August 2023	<p>This version:</p> <ul style="list-style-type: none"> • Added in new policies, guidelines, and requirements in section 1.1 • Inserted new requirement for S/MIME and SSL in section 1.3.2 • Inserted High Risk Certificate Request definition in section 1.6 • Updated the version of Mozilla Root Store to Mozilla Root Store Policy v.2.8.1 • Inserted SSL/TLS Certificates websites for user agent verification in section 2.2 • Ammended Validation of Domain Authorization or Control in section 3.2.2.4 • Amended Agreed-Upon Change to Website in section 3.2.2.4.6 • Amended Validation of authority in section 3.2.5 • Amended Identification and authentication for routine re-key in section 3.3.1 • Added EV certificate authentication process in section 4.2.1 • Updated the certificate policy in section 7.1.2 • Updated Name forms in section 7.1.4 	5.4
8	13 June 2024	<ul style="list-style-type: none"> • Added Law/Policy/Guidelines requirements in section 1.1 • Updated document name and identification table in section 1.2 • Updated the root certificate in section 1.2.1 • Updated the intermediate certificate in section 1.2.3 • Added CA high-level diagram and explanations in section 1.3 • Added PKI participants (Trusted Agent, Authorized Personnel, and PKI-Based ID Provider) in section 1.3.5 (Other Participants) • Updated an appropriate certificate usage in section 1.4.1 • Updated definitions and acronyms in section 1.6 • Updated identity and authentication in section 3. Sub-section updates: 3.1.1, 3.1.3, 3.2.5, 3.2.1, 3.2.2, and 3.2.5 • Changed section 4.1.3 "RA Certificates" to section 4.1.2.2 titled "RA/TA/AP Certificates" and added TA and AP in the explanation. • Updated key size in section 6.1.5 • Amended Cryptographic module standards and controls in section 6.2.1 • Added requirements of schedule three of DSR 1998 in section 6.8 • Updated section 7 – Certificate, CRL and OCSP Profile • Amended extKeyUsage table in section 7.1.2.7 • Amended Self-Audits in section 8.7 • Updated certificate issuance and renewal fees in section 9.1.1 • Amended Fees for other services in section 9.1.4 • Updated CA Liability in section 9.8.1 • Added Appendix A – Registration Scheme • Added High Assurance Certificates OID in section 1.2 • Added Validation of High Assurance Certificate in section 3.2.3.2 	6.0

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1 INTRODUCTION

1.1 Overview

This Certification Practice Statement (CPS) defines the procedural in managing certification and time-stamping services. This CPS pertains to all parties utilizing MSC Trustgate certificate and time-stamping services.

MSC Trustgate’s Certificate and Time-Stamp policies are controlled by the MSC Trustgate Policy Management Authority (PMA) that determines how this CPS applies to Certificate Authorities (CAs), Registration Authorities (RAs), Subscribers, Relying Parties, and other PKI entities that interoperate with or within the MSC Trustgate CA services.

This document specifies the policies of MSC Trustgate applies to meet the current versions of the following laws, 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
WebTrust Principles and Criteria for Certification Authorities – SSL Baseline with Network Security	https://www.cpacanada.ca/en/business-and-accounting-resources/audit-and-assurance/overview-of-webtrust-services/principles-and-criteria
WebTrust Principles and Criteria for Certification Authorities – EV SSL	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 scheme:

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
CA/B Forum Network and Certificate System Security Requirements	https://cabforum.org/network-security-requirements/
Certification Authority / Browser Forum ("CA/B Forum") Baseline Requirements for the Issuance and Management of Publicly-Trusted TLS Server Certificates	https://cabforum.org/working-groups/server/baseline-requirements/documents/
Guidelines for the Issuance and Management of Extended Validation Certificates	https://cabforum.org/extended-validation/
Baseline Requirements for the Issuance and Management of Publicly-Trusted S/MIME Certificates	https://cabforum.org/S/MIME-br/
Mozilla Root Store Policy	https://www.mozilla.org/en-US/about/governance/policies/security-group/certs/policy/

If any discrepancies arise between this CPS and the normative directives outlined in the preceding policies, guidelines, and requirements ("Stipulated Criteria"), then the Stipulated Criteria shall hold authority over this CPS. This CPS is part of several documents that govern MSC Trustgate CA services. The other important documents include registration authority agreements, subscriber agreements, relying party agreements, customer agreements, and privacy policies. MSC Trustgate 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 secure 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 and time-stamping services within the MSC Trustgate CA services. 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 Certificates contain object identifier values corresponding to the applicable MSC Trustgate Class of Certificate. The OID for MSC Trustgate is an iso (1) identified-organization (3) dod (6) internet (1) private (4) enterprise (1) MSC Trustgate.com (49530). MSC Trustgate issues certificates and time-stamp tokens containing the following OIDs arcs:

Digitally Signed Object	Object Identifier (OID)
Document Signing Certificate (Medium Assurance)	
Individual Certificates	1.3.6.1.4.1.49530.1.1.2
Government Services Certificates	1.3.6.1.4.1.49530.1.1.2.1 Effective 1 August 2024, MyGPKI certificates utilize the following OID: <ul style="list-style-type: none"> 1.3.6.1.4.1.49530.1.1.2.1.1
Individual Pro Certificates	1.3.6.1.4.1.49530.1.1.2.2
Organization Certificates	1.3.6.1.4.1.49530.1.1.2.3
AATL Certificates	Certificates issued before 1 August 2024 utilize OID 1.3.6.1.4.1.49530.1.1.3 Effective 1 August 2024, certificates issued utilize the following OID: <ul style="list-style-type: none"> 1.3.6.1.4.1.49530.1.1.2.4.1 (AATL Individual Certificates) 1.3.6.1.4.1.49530.1.1.2.4.2 (AATL Individual Pro Certificates) 1.3.6.1.4.1.49530.1.1.2.4.3 (AATL Organization Certificates)
LHDN e-Invoice Organization Certificates	1.3.6.1.4.1.49530.1.1.2.5
Document Signing Certificate (High Assurance)	
High Assurance Certificates	1.3.6.1.4.1.49530.1.1.3
National ID Certificates	
MyDigital ID	Certificates issued before 1 August 2024 utilize the OID 1.3.6.1.4.1.49530.1.1.3 Certificates effective 1 August 2024 utilize the OID 1.3.6.1.4.1.49530.1.6.1
Code Signing Certificates	
Code Signing Certificates	1.3.6.1.4.1.49530.1.2.1
Extended Validation Code Signing Certificates	1.3.6.1.4.1.49530.1.2.2
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
Organization Validation SSL Certificates	1.3.6.1.4.1.49530.1.4.2

Digitally Signed Object	Object Identifier (OID)
Extended Validation SSL Certificates	1.3.6.1.4.1.49530.1.4.3
Intranet Validation SSL Certificates	1.3.6.1.4.1.49530.1.4.4
S/MIME Certificates	
S/MIME Mailbox Validated	1.3.6.1.4.1.49530.1.5.1
S/MIME Individual Validated	1.3.6.1.4.1.49530.1.5.2
S/MIME Sponsored Validated	1.3.6.1.4.1.49530.1.5.3
S/MIME Organization Validated	1.3.6.1.4.1.49530.1.5.4

1.2.1 Root Certificate

CERT #	Subject	SHA256 Fingerprint
1	CN = Trustgate Class 2 Root Certificate Authority O = MSC Trustgate.com Sdn. Bhd. C = MY	E2026B5646F49F9671D4318E09094A23CE34C94B5410 F19B39D490A761CA65D1
2	CN = Trustgate RSA Certification Authority OU = Malaysia Licensed CA No LPBP-2/2010 (1) O = MSC Trustgate.com Sdn. Bhd. C = MY	DC7ACA56E0921E3C54E7DA854A13CDE917B3EEC386B8 E9D59201F812E4E9B40C
3	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
4	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
5	CN = MyTrust Class 2 ECC Root CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	97351977E28FD6602FE1ADAE58E8994212CB02D995F8 66D2F5DC41D9E946B855
6	CN = MyTrust Class 3 ECC Root CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	BFAEC1F8E11BD4840A91472E80040F568970FD48B28F 09AF018383AF9B0F9D1F
7	CN = MyTrust Class 2 RSA Root CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	A788D9F9EBE7648CFED6D8B071382A30780D9719A802 731F066F59B32124A8B3
8	CN = MyTrust Digital ID Root CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	D21BECEBF35470585672E8F5721697F71C7CC4D731C4 A0FCCDB1A18FCB5691FA
9	CN = Trustgate RSA Global Root CA O = MSC Trustgate.com Sdn. Bhd. C = MY	D2BE160D6A4391630BCEE932993E48547C9CABFE21A0 B052A60601C8A266C19E
10	CN = Trustgate Secure Server Root CA O = MSC Trustgate.com Sdn. Bhd. C = MY	A233FA00067C0A31EC80793F6F4623DED687E8FD7124 1FD560BA292D98AB3737
11	CN = Trustgate ID Root CA O = MSC Trustgate.com Sdn. Bhd. C = MY	433DB9E222A1EF0AF4F4C4DFAEE76643B9039F1758A1 3BDFBED36C7290114162
12	CN = Trustgate MPKI Root CA O = MSC Trustgate.com Sdn. Bhd. C = MY	075CEA0ADE7133F67F3EB44815A07E6E4865534901FF 1400C42A3C6D3123F95A
13	CN = Trustgate ECC Global Root CA	AFF58C68DFA45AF80B7D965545E8DC08221E527C8C10 90E41270DD9FE7B523D6

CERT #	Subject	SHA256 Fingerprint
	O = MSC Trustgate.com Sdn. Bhd C = MY	
14	CN = Trustgate ECC Time Stamping Root CA O = MSC Trustgate.com Sdn. Bhd C = MY	BEFD8058D1CE9482799FD62275A2019A84E47F592E1B618D17E563C6540301A4
15	CN = Trustgate ECC ID Root CA O = MSC Trustgate.com Sdn. Bhd C = MY	843C2B01DF6A1FDBAF54F7F640F41187F1818A5E429EB457EF627014AF2F5AD6
16	CN = Trustgate ECC MPKI Root CA O = MSC Trustgate.com Sdn. Bhd C = MY	1110EAA11E493C0E9448985D207DC40B7EE2C83EAF087F10BA172E2AC262F2C5

1.2.2 Bridge Certificate

CERT #	Subject	SHA256 Fingerprint
1	CN = Trustgate Secure Server Root CA O = MSC Trustgate.com Sdn. Bhd C = MY	1EA22856E474C9CF5B90F5117E17595A0FBE7E1AA3D172067676BED130C52CE6
2	CN = Trustgate ID Root CA O = MSC Trustgate.com Sdn. Bhd C = MY	45CD58326CC8D3637C4586717072A3849AA801B69811639AAE05CD53C1E59BCE
3	CN = Trustgate MPKI Root CA O = MSC Trustgate.com Sdn. Bhd C = MY	8E800BF38414B142440CD175398D29075C6946F0EC048A02357DCC5BEADEA32C
4	CN = Trustgate ECC Time Stamping Root CA O = MSC Trustgate.com Sdn. Bhd C = MY	27A491B41594F31517130E4B7EA94EB38C529358E0987E48849E3F9BC8C6D166
5	CN = Trustgate ECC ID Root CA O = MSC Trustgate.com Sdn. Bhd C = MY	FB5EF4B679D073B4D0C4DFA469288A0C3BB949CFF7699A6141B46E2B1EDAC017
6	CN = Trustgate ECC MPKI Root CA O = MSC Trustgate.com Sdn. Bhd C = MY	C1D86D24AAE0EF5FB7070DFBB685AAC62F0E4420907DA5C26B24BAE96A39BDCE

1.2.3 Intermediate Certificate

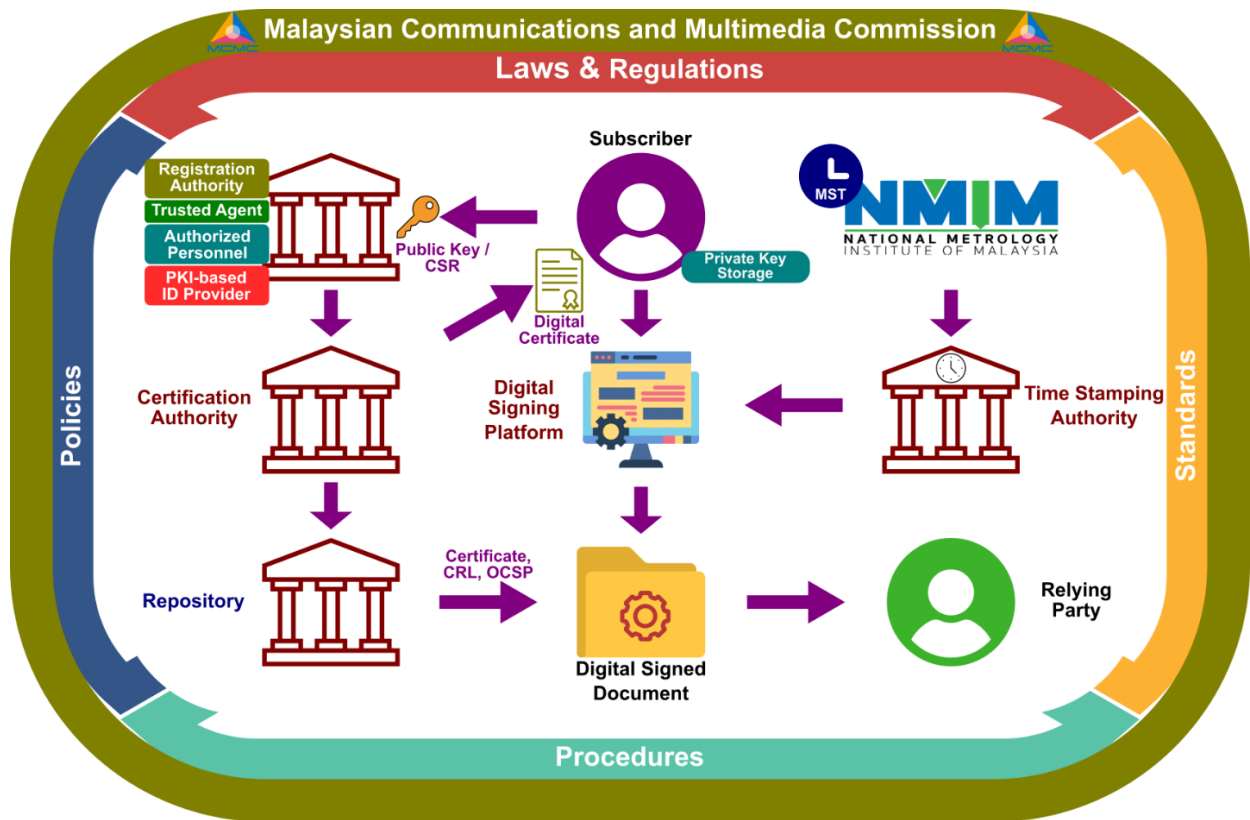
CERT #	Subject	SHA256 Fingerprint
1	CN = MSC Trustgate.com Class 2 MPKI CA O = MSC Trustgate.com Sdn. Bhd. C = MY	CC6ADC88D783574EA3E4F5114FF3AE4DB5B1470934242C62471B124A419C2F94
2	CN = MSC Trustgate.com Corporate ID (Token) CA OU = Malaysia Licensed CA No LPBP-2/2010(1) O = MSC Trustgate.com Sdn. Bhd. C = MY	A61D795B0EF27E96848585C2187C9476645528697ABE50BA3692F03663F08748
3	CN = Bank Negara Malaysia Class 2 CA-G3 O = MSC Trustgate.com Sdn. Bhd. C = MY	A4166F2E0125B553E84CBA1B7D240369AB2A5AB1846C0EF14E2332CEBD39E180
4	CN = INTECH-KLIS CA OU = Remote Signing System O = IDAMAN NURANI TECHNOLOGIES SDN. BHD C = MY,	D0D6BA9EA1822C1C57F96F39BEE2A47A431889B7FD4C3BA25FB2200DC1873EBF
5	CN = ABMB-MFA CA OU = Remote Signing System O = Alliance Bank Malaysia Berhad C = MY	F26EDD6166A7507C20C641D2961349E1875C2144C040D507EEA6EA7E173F43D7
6	CN = Trustgate Time Stamping Services CA (ECC) O = MSC Trustgate.com Sdn. Bhd. C = MY	67AC1B817817B9C626D6D3E8487A1C7FEC8AA27336D50148580F88BB67FFB7FF

CERT #	Subject	SHA256 Fingerprint
7	CN = Trustgate Time Stamping Services CA O = MSC Trustgate.com Sdn. Bhd. C = MY	091538A9476A4F6A6956F31B133992536881C28323D19B57E2C5D91EB4770B22
8	CN = MyTrust Class 2 ECC Individual CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	F040B8C96223510A3190E0E85233159986BD26187D11C909D65AB8E0D298AA22
9	CN = Bursa Anywhere CA OU = Remote Signing System O = Bursa Malaysia Berhad C = MY	2D01696CC852C4CE5317778A9FA16BBEA14CDEE10F5FBA91A3B37D8FF52768E5
10	CN = GPKI CA ECC OU = MAMPU, O = MSC Trustgate.com Sdn. Bhd C = MY	567EF5A4C14641BC6B46452540F187B5686407DF4BDD51E5A3B1C79E678F97B8
11	CN = MyLawyer ID CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	3B89B1CED28ED8045BA39015FAEB6C7FBF7D5E6A046B2F0198B846D7BEDA0006
12	CN = MyTrust Class 3 ECC Enterprise CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	8EA69844C4A6BDA29FC13FD65A2371E9E689C22C1BF6585432406B527F86730F
13	CN = MyTrust Class 2 RSA Individual CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	35F1FAF93C2FAB2BF302F551525C587FD4D434BB6BB247ED75B50DB0F2FE2AB3
14	CN = MyTrust Class 2 RSA Enterprise CA OU = MyTrust Gateway O = MSC Trustgate.com Sdn. Bhd. C = MY	1B1EE0498319BF0A223D4917A41A454D4EA08F44C5C8BD26F65121256377CB6A
15	CN = PayNet CA O = Payments Network Malaysia Sdn Bhd C = MY	B70119C3B78800839F1A5246CB1DF54F2F148012F785371755669B278D0384AF
16	CN = MyTrust Digital ID Class 2 CA OU = MyTrust Gateway, O = MSC Trustgate.com Sdn. Bhd, C = MY	D42F0C30DD9896F8E0EDED01FC4494F317B7DC7E6530590EDDB4D84228050C99
17	CN = MyTrust Digital ID Class 3 CA OU = MyTrust Gateway, O = MSC Trustgate.com Sdn. Bhd, C = MY	94B349BC4BE13041EA9A47315CE22E0EA327873FADA258EDC99B91F56F0F8439
18	CN = Trustgate Extended Validation Server CA O = MSC Trustgate.com Sdn. Bhd. C = MY	80689FEA931C13B6399096B44989CF2DDB3BB42DBFBA C25D56D274B9FEC23968
19	CN = Trustgate Secure Server CA O = MSC Trustgate.com Sdn. Bhd. C = MY	D25E03BDBF23BF7772167268834F1FFC094CEF1D9A27C320FEB8320EF1813DBC
20	CN = Trustgate Basic Server CA O = MSC Trustgate.com Sdn. Bhd. C = MY	F6330ED89B22D8C06E46B2F733DA812374CD853B89EF1D6222B9162B0A00CAFD
21	CN = Trustgate S/MIME Individual CA O = MSC Trustgate.com Sdn. Bhd. C = MY	2CFE9402F6DDAAA69154A541D713B8B7C7F83D33FAA696F8F0D1FB87271F3AE0
22	CN = Trustgate S/MIME Organization CA O = MSC Trustgate.com Sdn. Bhd. C = MY	B4AEF17549780191EEF9E9592D40E378CE491781C0066B4D82E4F5D67B3C0134
23	CN = Trustgate Document Signing CA O = MSC Trustgate.com Sdn. Bhd. C = MY	CA3A2B1EA210207F7D7A08BBC86EFDD391B1726EC7DD5357CC7576B7092C58CF
24	CN = Trustgate MPKI Individual Subscriber CA O = MSC Trustgate.com Sdn. Bhd. C = MY	2685AD25E4393E39944F95FEACB704261DD88BFD3100A06756A563D2CAB499DA

CERT #	Subject	SHA256 Fingerprint
25	CN = MyKad ID CA O = MSC Trustgate.com Sdn. Bhd. C = MY	0AE0DF704E86B6845CD0F94B0A4A51F27E8A5194D39A94BF32560F09ACEA4F88
26	CN = GPKI CA O = MSC Trustgate.com Sdn. Bhd. C = MY	962AD5D1976B0F65895788371795A1D4DEA139B82974E0E8E1EE518AEC1D6713
27	CN = eP ID CA O = MSC Trustgate.com Sdn. Bhd. C = MY	85FD130D83DBE0049818DCDB12203F6C16616289CE7EE2E6C14F03BD29FADA64
28	CN = NPRA ID CA O = MSC Trustgate.com Sdn. Bhd. C = MY	AC717550BB1446C617128B723E36D46B9CDE7AD58D89F2AE325BDD13036E95C0
29	CN = Healthcare ID CA O = MSC Trustgate.com Sdn. Bhd. C = MY	FBE9A14D3CAA3F72D0A402E5AE41581EAF1D7A79F12B4E3E722450B8372F1205
30	CN = ABMB-MFA CA - G2 O = MSC Trustgate.com Sdn. Bhd. C = MY	E623BD036F1C56E664536DE064710494816CEE48BCD5A5F36AAD744AC31CEF44
31	CN = PayNet CA - G2 O = MSC Trustgate.com Sdn. Bhd. C = MY	56B97166434D8BDE298B353F6F800A70BE185A23FF97274EE0A7765CEAEB78D0
32	CN = Trustgate ECC Time Stamping Services CA O = MSC Trustgate.com Sdn. Bhd. C = MY	7348112B9D8DF0042E920E202D532F6CA89A352BEDC59B8E85947C86F88B5EED
33	CN = Trustgate ECC Document Signing CA O = MSC Trustgate.com Sdn. Bhd. C = MY	6D21B608F47E08BFE8265015F25DF0ACD02B4DD6E08D20CBE56BE0DF4D69FB91
34	CN = Trustgate ECC MPKI Individual Subscriber CA O = MSC Trustgate.com Sdn. Bhd. C = MY	E10696EFAF72D5E0D0B62A80E687D4852227C30BAC367768F1451873A5C5BAB1
35	CN = Bursa Anywhere CA - G2 O = MSC Trustgate.com Sdn. Bhd. C = MY	9A7BC4FDC454F1B920BFF8A7E7D578CC805F2C0C09B7ADE2B68C484EAF7DA0C
36	CN = GPKI CA ECC - G2 O = MSC Trustgate.com Sdn. Bhd. C = MY	229028210BE6A3B6176E8F5441B5EE629DA94BF28F425BA997F2E5AD5D7F8812
37	CN = MyLawyer ID CA - G2 O = MSC Trustgate.com Sdn. Bhd. C = MY	EF4C2488FA68ABAA945445254C3DEB49EF8269F736593F093493B41C7103ADF3

1.3 PKI participants

The diagram below illustrates the key participants in the MSC Trustgate PKI ecosystem, focusing specifically on digital signatures.



A Subscriber may initiate a Certificate request to MSC Trustgate as a Certification Authority (CA) through either direct engagement with the MSC Trustgate Registration Authority (RA) team or through an External RA, Trusted Agent, Authorized Personnel, or PKI-based Identity Provider. This request involves presenting a valid Certificate Signing Request (CSR) to demonstrate control over the private key, alongside Personal Identifiable Information (PII). Following a verification and validation process by the CA, a Certificate is issued to the Subscriber. This Certificate is then utilized by the Subscriber to generate digital signatures via a Digital Signature Platform, resulting in digitally signed documents. The trusted time is obtained from the National Metrology Institute of Malaysia (NMIM) to enhance the security and trustworthiness of their electronic transactions and digital signatures. Subsequently, Relying Parties validate the digital signatures on these documents using the public key of the Certificate and verify the status of the Certificate through either Certificate Revocation Lists (CRL) or Online Certificate Status Protocols (OCSP) from repositories issued by the CA.

1.3.1 Certification Authorities

MSC Trustgate is a Certification Authorities (CA) that issues digital certificates using its own CA system. MSC Trustgate 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’s products and services are available at <https://www.msctrustgate.com>.

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 CA. MSC Trustgate may act as an RA for certificates it issues.

Third parties, who enter into a contractual agreement relationship with MSC Trustgate (RA agreement), may operate as RAs and authorize the issuance of certificates by MSC Trustgate CA. Third party RAs must abide by

all the requirements of MSC Trustgate CPS and the terms of their enterprise services agreement with MSC Trustgate. RAs may, however, implement more restrictive practices based on their internal requirements.

For S/MIME and SSL Certificates, MSC Trustgate does not delegate the RA function to third parties.

1.3.3 Subscribers

Subscribers under the MSC Trustgate CA services includes all end users (including entities) of certificates issued by a MSC Trustgate CA services. 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 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. 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 CA services.

1.3.5 Other participants

1.3.5.1 Trusted Agent

A Trusted Agent (TA) is a government agency or financial sector participants¹, that holds the authority to conduct identity verification and validation processes and possesses a reliable data source. Applicants may request a digital certificate from the Trusted Agent, who subsequently submits the validated personal identifiable information (PII) to MSC Trustgate for the issuance of a digital certificate based on the validated data. MSC Trustgate may get or validate additional PII data from another data source to construct a digital certificate. The TA must enter into a contractual agreement relationship with MSC Trustgate (TA agreement) before operation as TA for MSC Trustgate. The TA is required to pass the following data to MSC Trustgate for certificate issuance process and ensuring compliance with the Digital Signature Act 1997 and Digital Signature Regulations 1998 (DSA 1997 and DSR 1998):

- i. Personally Identifiable Information (PII): Any data that can be used to identify a specific individual. Examples of PII include a person's name, address, phone number, email address, Mykad number, passport number, and any other information that can be linked directly or indirectly to a particular person.
- ii. Authentication status: The outcome or result of an authentication process, confirming and establishing a linkage between the claimed identity and the real-life existence of the applicant presenting the government-issued photo ID as evidence.
- iii. Date and time of authentication: To indicate date and time when applicant's identity is authenticated during the certificate application process.

¹ <https://www.bnm.gov.my/regulations/fsp-directory>

- iv. Verifier: To identify the individual, entity, or device responsible for conducting the verification process.

1.3.5.2 Authorized Personnel

Authorized personnel (AP) are individual who is granted the authority by MSC Trustgate to receive certificate requests and verify the identity of the certificate applicants against government-issued photo IDs such as MyKad, valid passports, driver's licenses, or other national identity documents. The AP must enter into a contractual agreement relationship with MSC Trustgate (AP agreement) before operation as AP for MSC Trustgate. The AP is required to pass the following data to MSC Trustgate for further validation and certificate issuance process, ensuring compliance with the Digital Signature Act 1997 and Digital Signature Regulations 1998 (DSA 1997 and DSR 1998):

- i. **Personally Identifiable Information (PII):** This refers to any data that can be used to identify a specific individual. Examples of PII include a person's name, address, phone number, email address, Mykad number, passport number, and any other information that can be linked directly or indirectly to a particular person.
- ii. **Verification status:** Refers to the outcome or result of a verification process, confirming and establishing a linkage between the claimed identity and the real-life existence of the applicant presenting the government-issued photo ID as evidence.
- iii. **Date time of verification:** To indicate date and time when applicant's identity is verified during the certificate application process.
- iv. **Verifier:** Refers to identifying the individual, entity, or machine responsible for conducting the verification process.
- v. **Verification Method:** Refer to the method used by the AP to confirm the identity of the applicant. It can be, and is not limited one of the following:
 - a. Manual face-to-face verification
 - b. Manual face-to-face verification with biometric
 - c. Secure automated self-service verification with biometric
 - d. e-KYC (face recognition with liveness detection) as per Bank Negara Malaysia (BNM) Electronic Know-Your-Customer (e-KYC)²
- vi. **Evidence:** Refers to the supporting documents used to confirm and establish a linkage between the claimed identity and the real-life existence of the subject presenting the government-issued photo ID. Additionally, the Authorized Personnel (AP) may provide additional documents such as a letter of authorization (LoA) or a membership document to associate the applicant with an organization if this information is required to be included in the digital certificate.

1.3.5.3 PKI-based Identity Provider

PKI-based Identity Provider (IDP) is a trustworthy entity or system that manages digital identities utilizing PKI for authentication purposes. In this instance, MyDigital ID³ is one of the PKI based IDP that utilized by MSC Trustgate within its PKI ecosystem.

² https://www.bnm.gov.my/documents/20124/938039/pd_ekyc-apr2024.pdf

³ Refer to <https://www.mimos.my/main/portfolio/mydigital-id/>

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 uses

Certificates issued by MSC Trustgate 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
Document Signing	<p>Document Signing Certificates are used by individuals or organizations to authenticate and digitally sign 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).</p> <p>MSC Trustgate issues Document Signing Certificates in accordance with DSA 1997 and DSR 1998.</p> <p>MSC Trustgate has classified all Document Signing Certificates as Class 2 and Class 3 Certificates⁴. Class 2 is a medium Level of Assurance. Class 3 is a high Level of Assurance.</p>
MyDigital ID	MyDigital ID is a national digital identity authentication certificate used to verify the identity of users accessing digital services.
Domain Validation SSL/TLS Server Certificates	Authentication of a remote Domain Name and webservice and encryption of the communication channel.
Organization Validation SSL/TLS Server Certificates	Authentication of a remote Domain Name and associated organizational context and webservice and encryption of the communication channel.
Extended Validation SSL/TLS Server Certificates	Authentication of a remote Domain Name and associated organizational context and webservice and encryption of the communication channel.

⁴ According to Malaysian Communications and Multimedia Commission (MCMC) Licensing Guidebook – Digital Signature (“Guidebook”) dated 15 March 2024, Class 2 Certificates means a certificate that confirms that the information provided by the subscriber when applying for the certificate does not conflict with information accessible in widely recognised consumer data bases and provides a reasonable level of assurance as to the subscriber's identity, based on a automated on-line process. Class 3 certificate means a certificate that provides the higher level of confirmation and higher level of assurance as to the subscriber's identity then Class 1 and Class 2 certificate, which includes in-person and supervised remote proofing³. The application for the Class 3 certificate must be certified by a notary public duly appointed under the Notaries Public Act 1959.

Certificates	Appropriate Use
S/MIME Certificates	S/MIME Certificates is used to secure email communications. It provides a way to digitally sign and encrypt email messages, ensuring their confidentiality, integrity, and authenticity.
Code Signing Certificates	Code Signing Certificates are used by content and software developers and publishers to digitally sign executables and other content.
Time Stamping Certificates	Time Stamp Certificates are used to identify the existence of data at that point in time.
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.
OCSP Responder	An OCSP Responder Certificates is a digital certificate used to authenticate and verify the status of other digital certificates in real-time.

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.

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 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 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 recommends the use of MSC Trustgate Roots as root certificates.

1.5 Policy administration

1.5.1 Organization administering the document

MSC Trustgate 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: Compliance Officer
MSC Trustgate 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: compliance@msctrustgate.com

Revocation Reporting Contact Person

Attn: MPKI Support
MSC Trustgate 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 1.5.1 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 Repository located at: <https://www.msctrustgate.com/repository>. 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 individual or organization, applies for a certificate. After the certificate is issued, the applicant is then referred to as the subscriber. In the case of certificates issued to devices, the applicant is the entity that controls or operates the named device in the certificate.

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

“**CA/B 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.

“**Digital Signature Platform**” means software solution that facilitates the secure creation, management, and verification of digital signatures for electronic documents, offering tools for document preparation, digital signature creation, key management, authentication, timestamping, workflow management, integration, compliance, and audit trails.

“**DSA**” means the Malaysian Digital Signature Act 1997.

“**DSR**” means the Malaysian Digital Signature Regulations 1998.

“**High Risk Certificate Request**” A Request that the CA flags for additional scrutiny by reference to internal criteria and databases maintained by the CA, which may include names at higher risk for phishing or other fraudulent usage, names contained in previously rejected certificate requests or revoked Certificates, names listed on the Miller Smiles phishing list or the Google Safe Browsing list, or names that the CA identifies using its own risk-mitigation criteria.

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

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

“**Policy Management Authority**” means the committee responsible for managing the creation, review, and updating of Certificate Policies and Certification Practice Statements. This committee also reviews the results of audits conducted on Certification Authorities (CAs) to ensure compliance with established policies. Additionally, the PMA evaluates non-domain policies for acceptance within the domain and oversees the overall management of PKI certificate policies. For MSC Trustgate, the PMA comprises Senior Management, Compliance personnel, CA Operations 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.

“**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 Repository. The Relying Party Agreement is available for reference through a MSC Trustgate online repository.

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

“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”)
FIPS	(US Government) Federal Information Processing Standard
HSM	Hardware Security Module
HTTP	Hypertext Transfer Protocol
IANA	Internet Assigned Numbers Authority
IGTF	International Grid Trust Federation
IETF	Internet Engineering Task Force
ITU	International Telecommunication Union
IV	Individual Validated
LEI	Legal Entity Identifier
LHDN	Lembaga Hasil Dalam Negeri
NIST	National Institute of Standards and Technology
OCSF	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)
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

2 PUBLICATION AND REPOSITORY RESPONSIBILITIES

2.1 Repositories

MSC Trustgate makes its CA Certificates, revocation data for issued digital Certificates, CPS, Relying Party Agreements, and standard Subscriber Agreements available in public repositories. MSC Trustgate 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 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. If an SSL/TLS Server Certificate is intended to be trusted in Chrome, it is published by posting it in a Certificate Transparency log.

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

MSC Trustgate’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 certificate services and the repository are accessible through several means of communication:

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

As specified in section 1.1, this CPS and the corresponding CP are structured in accordance with RFC 3647 and includes all material required by RFC 3647.

Application Software Suppliers for SSL/TLS Certificates may use the following web sites for user agent verification:

Root CA	Status	URL
Trustgate Secure Server Root CA	Valid	https://tg-secureserver-valid.msctrustgate.com
Trustgate Secure Server Root CA	Revoked	https://tg-secureserver-revoked.msctrustgate.com
Trustgate Secure Server Root CA	Expired	https://tg-secureserver-expired.msctrustgate.com

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 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 access to repositories.

3 IDENTIFICATION AND AUTHENTICATION

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

MSC Trustgate verify the requests from parties seeking to revoke certificates.

3.1 Naming

3.1.1 Types of names

For Certificate issued to an Individual, the subject:commonName is specified as a Personal Name. For S/MIME Certificate, the subject:commonName can be an Email Address.

For Certificate issued to an organization or a legal entity, the subject:organizationName is specified the organization legal name registered with government agencies or an authority. The subject:commonName can be specified as the organization trademark or something that commonly associated with the organization.

For Certificate issued to a device, the subject:commonName contains MAC Address or device name.

For Certificate issued to a server, the subject:commonName contains only either Fully-Qualified Domain Name, Wildcard Domain Name or IPv4/IPv6 address.

MSC Trustgate EV SSL/TLS Certificates in compliance with the EV Guidelines section 11.

3.1.2 Need for names to be meaningful

MSC Trustgate use a meaningful representation of the Subject's name as verified in the identifying documentation or Enterprise RA records.

3.1.3 Anonymity or pseudonymity of subscribers

Each request for pseudonymity in an individual certificate will be evaluated on its merits by the PMA and, if allowed the subject:pseudonym attribute in the Certificate is used if the associated Subject has been verified according to Section 3.2.2. The subject:pseudonym attribute is either:

- i. a unique identifier selected by the MSC Trustgate for the Subject of the Certificate; or
- ii. an identifier verified from either of the following:
 - a. based on government-issued identity documents; or
 - b. an identifier selected by the Enterprise RA which uniquely identifies the Subject of the Certificate within the Organization included in the subject:organizationName attribute.

Pseudonym Certificates are not anonymous. MSC Trustgate treat Individual identity information relating to a Pseudonym as private in accordance with Section 9.4.2.

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

MSC Trustgate use subject Distinguished Name (DN) for uniqueness of names which contains specific identification attributes of the Certificate's holder.

For Individual Certificate, the `subject:serialNumber` is specified by government-issued identity number such as National Registration Identity Card (NRIC) number or a passport number, and this is accompanied by the `subject:countryName` in which is specified by the country that issued the identity number.

For Individual Certificate that present a regulated profession, the `subject:serialNumber` is specified by the respective membership number of the professional organization. and this is accompanied by the `subject:organizationName` in which is specified by the regulated professional organization and also by the `subject:countryName` in which is specified by the country that regulates the professional organization.

For Individual Certificate that present a corporate, the `subject:serialNumber` is optional to specify the employee number and the `subject:Title` is optional to specify the position held by the individual in the organization. The `subject:organizationName` is specified by the legal name of the organization and the `subject:countryName` is specified by the country that the organization registered with.

Except for LHDN e-Invoice organization certificates, the organization or legal entity Certificate issued after 18 April 2024 the `subject:organizationIdentifier` attribute in the Certificate is used. It contains Registration Reference for a Legal Entity assigned in accordance with the identified Registration Scheme (listed in Appendix A) used during verification process performed in accordance with Section 3.2.3. The Registration Scheme is identified using the following structure in the presented order:

- i. character Registration Scheme identifier;
- ii. 2-character ISO 3166 country code for the nation in which the Registration Scheme is operated, or if the scheme is operated globally ISO 3166 code "XG" SHALL be used;
- iii. For the NTR Registration Scheme identifier, where registrations are administrated at the subdivision (state or province) level, a plus "+" (0x2B (ASCII), U+002B (UTF-8)) followed by an up-to-three alphanumeric character ISO 3166-2 identifier for the subdivision of the nation in which the Registration Scheme is operated;
- iv. a hyphen-minus "-" (0x2D (ASCII), U+002D (UTF-8));
- v. Registration Reference allocated in accordance with the identified Registration Scheme.

For example:

- i. NTRMY-12345678 (NTR Scheme, Malaysia, Unique Identifier at Country level is 12345678)
- ii. NTRMY+10-12345678 (NTR Scheme, Malaysia - Selangor, Unique Identifier at State level is 12345678)

For the following types of entities that do not have an identifier from the Registration Schemes listed in Appendix A:

- i. For Government Entities, MSC Trustgate enter the Registration Scheme identifier 'GOV' followed by the 2-character ISO 3166 country code for the nation in which the Government Entity is located. If the Government Entity is verified at a subdivision (state or province) level, then a plus "+" (0x2B (ASCII), U+002B (UTF-8)) followed by an ISO 3166-2 identifier for the subdivision (up to three alphanumeric characters) is added.
- ii. For International Organization Entities, MSC Trustgate enter the Registration Scheme identifier 'INT' followed by the ISO 3166 code "XG". An International Organization Entity is founded by a constituent document, e.g., a charter, treaty, convention or similar document, signed by, or on behalf of, a minimum of two Sovereign State governments.

For example:

- i. GOVMY (Government Entity, Malaysia)
- ii. GOVMY+10 (Government Entity, Malaysia - Selangor)
- iii. INTXG (International Organization)

For Server Certificate, the `subject:serialNumber` attribute in the Certificate is used in accordance with the EV Guideline.

3.1.6 Recognition, authentication, and role of trademarks

MSC Trustgate shall not approve any Certificate Application that infringes upon the Intellectual Property Rights of others. MSC Trustgate 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 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 may use any legal means to authenticate the identity attributes of the Subject to be included in Certificate. For Server and S/MIME Certificate, the applicant shall have control over the Domain and/or Email Address.

MSC Trustgate 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 approved method. This requirement does not apply where a key pair is generated by MSC Trustgate on behalf of an Applicant.

3.2.2 Authentication of organization Identity

For Certificate to include the `subject:organizationName` attribute, MSC Trustgate authenticates the following Organization identity attributes if included in Certificate profiles:

- i. Formal name of the Legal Entity;
- ii. An Address of the Legal Entity
- iii. Jurisdiction of Incorporation or Registration of the Legal Entity;
- iv. Unique identifier and type of identifier for the Legal Entity.
- v. MSC Trustgate uses the `subject:serialNumber` attribute to specify the Organization Business Registration Number. However, for S/MIME certificate, MSC Trustgate uses the `subject:organizationIdentifier` attribute to specify the Organization Identifier.

For LHDN e-Invoice organization certificate, `subject:organizationIdentifier` is LHDN Tax Identification Number (TIN)⁵.

3.2.2.1 Attribute collection of organization identity

MSC Trustgate collects Organization identity attributes from one of the following sources:

- i. Reliable data source provided by or through communication with, at least one of the following:
 - a. A government agency in the jurisdiction of the Legal Entity's creation, existence or recognition, such as the Companies Commission of Malaysia (Suruhanjaya Syarikat Malaysia), local authorities, or municipal council.
 - b. A Legal Entity Identifier (LEI) data reference.
- ii. An Attestation that includes a copy of supporting documentation used to establish the Applicant's legal existence, such as a certificate of registration, articles of incorporation, operating agreement, statute, or regulatory act.

3.2.2.2 Validation of organization identity

MSC Trustgate validates all identity attributes of the Organization to be included in the Certificate.

MSC Trustgate verifies Applicant's identity and he/she affiliation to the Organization.

If an LEI data reference is used, MSC Trustgate verifies that the `RegistrationStatus` is ISSUED and the `EntityStatus` is ACTIVE. MSC Trustgate only allows the use of an LEI if the `ValidationSources` entry is FULLY_CORROBORATED. MSC Trustgate will not use LEI data reference if `ValidationSources` entry is PARTIALLY_CORROBORATED, PENDING, or ENTITY_SUPPLIED_ONLY.

⁵ Refer to <https://sdk.myinvois.hasil.gov.my/signature/>

3.2.2.3 DBA/Tradename

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

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

3.2.2.4 Verification of Country

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

- i. 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;
- ii. The ccTLD of the requested Domain Name;
- iii. Information provided by the Domain Name Registrar; or
- iv. A method identified in Section 3.2.2.

MSC Trustgate implements 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.

3.2.3 Authentication of individual identity

For Certificate issued to an Individual, MSC Trustgate authenticates the following Individual identity attributes if included in Certificate profiles:

- i. Personal name, or given name(s) and surname(s) which is current name;
- ii. National Registration Identity Card (NRIC) number, passport number or any other government-issued identity number;
- iii. Pseudonym;
- iv. Title;
- v. Address; and
- vi. Further information as needed to uniquely identify the Applicant.

MSC Trustgate comply with applicable data protection legislation in the gathering and retention of evidence relating to Individual identity supporting this Requirement in accordance with Section 9.4.

3.2.3.1 How Attribute collection of individual identity

MSC Trustgate collects Individual identity attributes from one of following sources:

- i. Government-issued photo ID such as MyKad, identity cards, passports or driver license.
- ii. Digital certificate from IDP. The Applicant has to digitally sign the Certificate Request using a valid personal Certificate. Identity attributes are collected from the signing Certificate only if the digital signature is valid.
- iii. General attestation. MSC Trustgate accepts Individual identity attributes in Applicant's Certificate Request form attested by a commission for oath, notary, other appointed government public officer, or recognized professional bodies.

- iv. Records maintained by Enterprise RA.
- v. Data passes by TA.
- vi. Data passes by AP.

MSC Trustgate also collects company attestation for an Individual to represent an Organization to be included in the subject:organizationName of the Certificate. MSC Trustgate still verifies the identity of the Individual in accordance with this section and the Organization in accordance with Section 3.2.3.

MSC Trustgate may additionally gather and verify supplementary evidence using authorized sources such as additional official documents, government or regulatory registers, or National Registration Department (Jabatan Pendaftaran Negara). Examples of scenarios:

- i. Changes of name. If the Subject presents an ID featuring an Applicant name that has subsequently been changed MSC Trustgate inspects an official document such as a marriage certificate or court order documenting the change.
- ii. Professional Title of a regulated profession in the subject:country, or a corporate Title linked to the subject:organizationName, MSC Trustgate verify against supporting documentation, a Reliable Data Source, or Attestation.
- iii. MSC Trustgate verify the address (but not the identity) of the Applicant using a utility bill, bank statement, credit card statement, EPF statement, or government-issued tax document.

3.2.3.2 Validation of individual identity

MSC Trustgate validates all identity attributes of the Individual to be included in the Certificate.

If the evidence has an explicit validity period, MSC Trustgate verify that the time of the identity validation is within this validity period. The notBefore and notAfter fields of a digital signature Certificate are within the validity period of the document.

The following is the process of MSC Trustgate performing individual identity validation.

i. Validation of government-issued photo ID

MSC Trustgate is to ensure that identity document is a genuine identity document that is not counterfeit or falsified or modified. MSC Trustgate use manual (in person) or online document verification.

If the online document verification cannot automatically validate the identity document, MSC Trustgate validates it manually.

ii. Validation of digital signature with certificate

The identity attributes obtained from the signed Certificate are considered valid. The level of assurance of the digital certificate used must be lower than the level of assurance of the Certificate to be issued.

iii. Validation of a General Attestation and Other Supporting Documents

MSC Trustgate verify the reliability of the attestation before considering the validity of the identity attributes.

iv. Validation using Enterprise and External RA records

An Enterprise and External RA validate all identity attributes of an Individual to be included in the Certificate. The Enterprise and External RA may rely upon existing internal records to validate Individual identity.

v. Validation using TA

MSC Trustgate believes that the data submitted by a TA has been validated through the TA's own processes, which are governed by their respective laws, regulations, or procedures.

vi. Validation for High Assurance Certificates

The application must be certified by a notary public duly appointed under Notaries Public Act 1959⁶.

vii. Validation for Document Signing Certificates

MSC Trustgate or the RA validates the information provided by the subscriber (to be included in Certificates such as commonName and serialNumber) during the certificate application process using information available from a reliable data source either manually or online. If the information can't be verified this way, MSC Trustgate will follow the validation process outlined in sections 3.2.3.2 (i) and/or 3.2.3.2 (iii).

viii. Validation for AATL Certificates

MSC Trustgate, its RA, or AP utilize biometric procedures such as face recognition with liveness detection or fingerprint scanning to verify the applicant's identity, as detailed in Section 3.2.3.2 (i). If biometric verification isn't feasible, MSC Trustgate, its RA, or AP will resort to face-to-face verification either in person or via secure video conference. Following a successful verification, a validation process outlined in Section 3.2.3.2 (vi) will be conducted.

ix. Validation for MyGPKI Certificates

For MyGPKI certificates, the GPKI AP submits the verified identity and document onto the MyGPKI portal. MSC Trustgate then validates the identity before certificate issuance.

3.2.4 Validation of Mailbox Control

This section outlines the operational procedures for verifying the Applicant's control of Mailbox Addresses for inclusion in issued Certificates.

MSC Trustgate verify that the Applicant controls the email accounts associated with all Mailbox Fields referenced in the Certificate or has obtained authorization from the respective email account holder to act on their behalf.

MSC Trustgate maintain a documented record specifying the validation method used, including the relevant version number from the TLS Baseline Requirements or S/MIME Baseline Requirements, for validating each domain or email address included in issued Certificates.

Once Applicant authority has been validated, it may be considered valid for the issuance of multiple Certificates over time. However, the validation process must always be initiated within the specified time period prior to Certificate issuance as required by relevant guidelines.

3.2.4.1 Validating Authority Over Mailbox Via Domain

MSC Trustgate confirm the Applicant, such as an Enterprise or External RA, has been authorized by the email account holder to act on their behalf by verifying the entity's control over the domain portion of the Mailbox Address intended for use in the Certificate.

MSC Trustgate use methods approved and specified in Section 3.2.5 to perform this verification.

For domain validation purposes, the term "Applicant" encompasses not only the Applicant itself but also its Parent Company, Subsidiary Company, or Affiliate.3.2.4.2 Validating Authority Over Mailbox Via Email

MSC Trustgate confirms the Applicant's control over each Mailbox Field to be included in a Certificate by sending a Random Value via email and then receiving a confirming response utilizing the Random Value.

Control over each Mailbox Address is confirmed using a unique Random Value. The Random Value is sent to the email being validated and is not shared in any other manner.

The Random Value is unique in each email. It remains valid for use in a confirming response for up to 24 hours from its creation.

The Random Value is reset upon each instance of the email sent by MSC Trustgate to a Mailbox Address. However, all relevant Random Values sent to that Mailbox Address can remain valid for use in a confirming

⁶ As per section 6(3) of DSA.

response within the specified validity period described in this Section. Additionally, the Random Value is reset upon first use by the user if intended for further use as an authentication factor following the Mailbox Address verification.

3.2.4.2 Validating Applicant as Operator of Associated Mail Server(s)

MSC Trustgate verifies the Applicant's control over each Mailbox Field intended for inclusion in the Certificate by confirming control of the SMTP Fully Qualified Domain Name (FQDN) to which messages delivered to the Mailbox Address should be directed.

The SMTP FQDN is identified using the address resolution algorithm specified in RFC 5321 Section 5.1, which determines the authoritative SMTP FQDNs for a given Mailbox Address. If multiple SMTP FQDNs are discovered, the CA will verify control of one SMTP FQDN following the selection process outlined in RFC 5321 Section 5.1. Aliases in MX record RDATA are not utilized for this validation method.

To confirm control over the SMTP FQDN, MSC Trustgate uses only the currently approved methods detailed in Section 3.2.5.

3.2.5 Validation of Domain Control

This section defines the permitted processes and procedures for validating the Applicant's ownership or control of the domain. MSC Trustgate does not issue certificate when the FQDN contains "onion" as the rightmost label.

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

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.

The MSC Trustgate confirm that prior to issuance, each Fully-Qualified Domain Name (FQDN) listed in the Certificate is validated as follows:

3.2.5.1 Validating the Applicant as a Domain Contact

This method (BR Section 3.2.2.4.1) has been retired and not be used. Prior validations using this method and validation data gathered according to this method is not use to issue certificates.

3.2.5.2 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.

3.2.5.3 Phone Contact with Domain Contact

This method (BR Section 3.2.2.4.3) has been retired and is not used. Prior validations using this method and validation data gathered according to this method is not used to issue certificates.

3.2.5.4 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.

3.2.5.5 Domain Authorization Document

This method (BR Section 3.2.2.4.5) has been retired and not be used. Prior validations using this method and validation data gathered according to this method is not used to issue certificates.

3.2.5.6 Agreed-Upon Change to Website

This method (BR Section 3.2.2.4.6) has been retired and not be used. Prior validations using this method and validation data gathered according to this method is not used to issue certificates.

3.2.5.7 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.

MSC Trustgate provide a Random Value unique to the Certificate request and not use the Random Value after

- i. 30 days or
- ii. if the Applicant submitted the Certificate request, the time frame permitted for reuse of validated information relevant to the Certificate (such as in Section 4.2.1 of these CPS or Section 11.14.3 of the EV Guidelines).

3.2.5.8 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 in accordance with section 3.2.8.

3.2.5.9 Test Certificate

This method (BR Section 3.2.2.4.9) has been retired and is not used. Prior validations using this method and validation data gathered according to this method is not used to issue certificates.

3.2.5.10 TLS Using a Random Number

This method (BR Section 3.2.2.4.10) has been retired and is not used. Prior validations using this method and validation data gathered according to this method is not used to issue certificates.

3.2.5.11 Any Other Method

This method (BR Section 3.2.2.4.11) has been retired and is not used.

3.2.5.12 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).

3.2.5.13 Email to DNS CAA Contact

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.

3.2.5.14 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

3.2.5.15 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.

3.2.5.16 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.

3.2.5.17 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.

3.2.5.18 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.

3.2.5.19 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.

3.2.5.20 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.

3.2.6 Authentication for an IP Address

This section defines the permitted processes and procedures for validating the Applicant's ownership or control of an IP Address listed in a Certificate.

MSC Trustgate confirm that, prior to issuance, each IP Address listed in the Certificate has been validated using at least one of the methods specified in this section.

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 CP/CPS) prior to Certificate issuance. For purposes of IP Address validation, the term Applicant includes the Applicant's Parent Company, Subsidiary Company, or Affiliate.

After July 31, 2019, MSC Trustgate SHALL maintain a record of which IP validation method, including the relevant BR version number, was used to validate every IP Address.

3.2.6.1 Agreed-Upon Change to Website

Confirming the Applicant's control over the requested IP Address by confirming the presence of a Request Token or Random Value contained in the content of a file or webpage in the form of a meta tag under the "/.well-known/pki-validation" directory, or another path registered with IANA for the purpose of validating control of IP Addresses, on the IP Address that is accessible by MSC Trustgate via HTTP/HTTPS over an Authorized Port. The Request Token or Random Value MUST NOT appear in the request.

If a Random Value is used, MSC Trustgate provide a Random Value unique to the certificate request and SHALL not use the Random Value after the longer of

- i. 30 days or

- ii. if the Applicant submitted the certificate request, the time frame permitted for reuse of validated information relevant to the certificate (such as in Section 4.2.1 of this document).

3.2.6.2 Email, Fax, SMS, or Postal Mail to IP Address Contact

Confirming the Applicant's control over the IP Address by sending a Random Value via email, fax, SMS, or postal mail and then receiving a confirming response utilizing the Random Value. The Random Value MUST be sent to an email address, fax/SMS number, or postal mail address identified as an IP Address Contact.

Each email, fax, SMS, or postal mail confirms control of multiple IP Addresses.

MSC Trustgate send the email, fax, SMS, or postal mail identified under this section to more than one recipient provided that every recipient is identified by the IP Address Registration Authority as representing the IP Address Contact for every IP Address being verified using the email, fax, SMS, or postal mail.

The Random Value is unique in each email, fax, SMS, or postal mail.

MSC Trustgate may resend the email, fax, SMS, or postal mail in its entirety, including reuse of the Random Value, provided that the communication's entire contents and recipient(s) remain unchanged. The Random Value remains valid for use in a confirming response for no more than thirty (30) days from its creation.

3.2.6.3 Reverse Address Lookup

Confirming the Applicant's control over the IP Address by obtaining a Domain Name associated with the IP Address through a reverse-IP lookup on the IP Address and then verifying control over the FQDN using a method permitted under Section 3.2.7.

3.2.6.4 Any Other Method

Not used.

3.2.6.5 Phone Contact with IP Address Contact

Confirming the Applicant's control over the IP Address by calling the IP Address Contact's phone number and obtaining a response confirming the Applicant's request for validation of the IP Address. MSC Trustgate place the call to a phone number identified by the IP Address Registration Authority as the IP Address Contact. Each phone call SHALL be made to a single number.

In the event that someone other than an IP Address Contact is reached, MSC Trustgate MAY request to be transferred to the IP Address Contact.

In the event of reaching voicemail, MSC Trustgate may leave the Random Value and the IP Address(es) being validated. The Random Value SHALL be returned to MSC Trustgate to approve the request.

The Random Value SHALL remain valid for use in a confirming response for no more than thirty (30) days from its creation.

3.2.6.6 ACME "http-01" method for IP Addresses

Reserved.

3.2.6.7 ACME "tls-alpn-01" method for IP Addresses

Reserved.

3.2.7 Wildcard Domain Validation

Before issuing a Wildcard Certificate, MSC Trustgate follows a documented procedure that determines if the FQDN portion of any Wildcard Domain Name in the Certificate is "registry-controlled" or is a "public suffix" (e.g. "*.com", "*.com.my"). This is done by regularly retrieving and consulting a "public suffix list" such as <http://publicsuffix.org/> (PSL).

If the FQDN portion of any Wildcard Domain Name is "registry-controlled" or is a "public suffix", MSC Trustgate SHALL refuse issuance unless the Applicant proves its rightful control of the entire Domain

Namespace. (e.g. MSC Trustgate SHALL NOT issue “*.com.my” or “*.local”, but MAY issue “*.example.com” to Example Co.).

3.2.8 Data Source Accuracy

Prior to using any data source as a Reliable Data Source, MSC Trustgate evaluate the source for its reliability, accuracy and resistance to alteration or falsification. MSC Trustgate considers the following criteria for its decision whether or not to accept data from a Data Source:

- i. The age of the information provided,
- ii. The frequency of updates to the information source,
- iii. The data provider and purpose of the data collection,
- iv. The public accessibility of the data availability, and
- v. The relative difficulty in falsifying or altering the data.

Databases maintained by MSC Trustgate do not qualify as a Reliable Data Source if the primary purpose of the database is to collect information for the purpose of fulfilling the validation requirements under this Section 3.2.

3.2.9 CAA Records

As part of the Certificate issuance process, MSC Trustgate retrieve and process CAA records in accordance with RFC 8659 for each dNSName in the subjectAltName extension that does not contain an Onion Domain Name. If MSC Trustgate issues, it is within the TTL of the CAA record, or 8 hours, whichever is greater.

When processing CAA records, MSC Trustgate process the issue, issuewild, and iodef property tags as specified in RFC 8659, although it is not required to act on the contents of the iodef property tag. Additional property tags MAY be supported but SHALL NOT conflict with or supersede the mandatory property tags set out in this document. MSC Trustgate respect the critical flag and not issue a certificate if it encounters an unrecognized property tag with this flag set.

MSC Trustgate may treat a non-empty CAA RRset that does not contain any issue property tags (and also does not contain any issuewild property tags when performing CAA processing for a Wildcard Domain Name) as permission to issue, provided that no records in the CAA RRset otherwise prohibit issuance.

CAA checking is optional.

For certificates for which a Certificate Transparency pre-certificate was created and logged in at least two public logs, and for which CAA was checked.

3.2.10 Non-verified subscriber information

MSC Trustgate does not include Subscriber information that has not been verified in accordance with this CPS in Document Signing Certificates, Timestamping Certificates, MyDigital ID Certificates and Publicly Trusted SSL/TLS, S/MIME, Code Signing Certificates.

3.2.11 Validation of authority

MSC Trustgate has implemented a procedure to determine the authorized individuals that can request certificates on behalf of an organization. Each organization may limit authorized certificate requestors.

Registration Authorities have procedures per which the Applicant’s status and relationship with the organization are being verified. This is possible either with electronic lists assembled by each RA from the qualified source (such as human resources department), or by presenting official id where the relationship of the Applicant with the organization is certified.

MSC Trustgate uses information from data sources per section 3.2.10 to establish a reliable method of communication.

For Extended Validation Certificate requests (either EV SSL/TLS or EV Code Signing), MSC Trustgate shall follow procedures described in section 11.8 of the Guidelines For The Issuance And Management of Extended Validation Certificates to verify the authority of the request.

3.2.12 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 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 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	397 days
OV SSL/TLS Certificates	Username and password	397 days
EV SSL/TLS Certificates	Username and password	397 days
Document Signing Certificates	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 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 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 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:

- i. 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.)
- ii. Receiving a message from the Subscriber that requests revocation and contains a digital signature verifiable with reference to the Certificate to be revoked,
- iii. 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 Administrators are entitled to request the revocation of end-user Subscriber Certificates within MSC Trustgate'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. 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 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:

- i. Any individual who is the subject of the certificate,
- ii. Any authorized representative of an Organization or entity,
- iii. Any authorized representative of an RA/TA/AP.

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:

- i. Completing a Certificate Application and providing true and correct information;
- ii. Generating, or arranging to have generated, a key pair;
- iii. Generating a Certificate Signing Request(CSR) using an appropriately secure tool;
- iv. Delivering his, her, or its public key, directly or through an RA, to MSC Trustgate;
- v. Demonstrating possession and/or exclusive control of the private key corresponding to the public key delivered to MSC Trustgate;
- vi. Agreeing to the applicable Subscriber Agreement or Term of Access; and
- vii. Paying any applicable fees.

4.1.2.2 RA/TA/AP Certificates

RA/TA/AP Certificates enter into a contract with MSC Trustgate. RA/TA/AP 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/TA/AP key pair, the applicant shall cooperate with MSC Trustgate 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 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 for issuance of certificates.

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

Effective 2021-10-01, for validation of Domain Names and IP Addresses according to section 3.2.2.4 and 3.2.2.5 of the CAB Forum Baseline Requirements, any reused data, document, or completed validation is obtained no more than 398 days prior to issuing the Certificate.

Prior to issuing a publicly-trusted SSL/TLS Server Certificate, MSC Trustgate checks the DNS for the existence of a CAA record for each `dNSName` in the `subjectAltName` extension of the certificate to be issued, as specified in RFC 8659, and in accordance with section 3.2.2.8 of the Baseline Requirements (for publicly issued TLS Certificates).

If the Certificate is issued, it will be issued within the Time to Live (TTL) of the CAA record, or 8 hours, whichever is greater.

MSC Trustgate logs actions taken based on CAA records, and documents issuance prevented by CAA. MSC Trustgate processes the "issue" and "issuewild" property tags and may not dispatch reports of issuance requests to the contact(s) listed in an "iodef" property tag.

MSC Trustgate's CAA issuer domain is "msctrustgate.com". MSC Trustgate.com MAY treat a non-empty CAA RRset that does not contain any issue property tags (and also does not contain any issuewild property tags when performing CAA processing for a Wildcard Domain Name) as permission to issue, provided that no records in the CAA RRset otherwise prohibit issuance.

CAA checking is optional.

For certificates for which a Certificate Transparency pre-certificate was created and logged in at least two public logs, and for which CAA was checked.

For EV Certificates, except for reissuance of an EV Certificate under section 11.14.2 of the EV Guidelines and except when permitted otherwise in section 11.14.1 of the EV Guidelines, the age of all data used to support issuance of an EV Certificate (before revalidation is required) SHALL NOT exceed the following limits:

- i. Legal existence and identity – three hundred ninety-seven (397) days;
- ii. Assumed name – three hundred ninety-seven (397) days;
- iii. Address of Place of Business – three hundred ninety-seven (397) days;
- iv. Verified Method of Communication – three hundred ninety-seven (397) days ;
- v. Operational existence – three hundred ninety-seven (397) days;
- vi. Domain Name – three hundred ninety-seven (397) days;

Name, Title, Agency, and Authority – three hundred ninety-seven (397) days, unless a contract between MSC Trustgate and the Applicant specifies a different term, in which case, the term specified in such contract controls. For example, the contract MAY include the perpetual assignment of EV roles until revoked by the Applicant or MSC Trustgate, or until the contract expires or is terminated. The three hundred ninety-seven (397) days period set forth above SHALL begin to run on the date the information was collected by MSC Trustgate.

MSC Trustgate MAY reuse a previously submitted EV Certificate Request, Subscriber Agreement, or Terms of Use, including use of a single EV Certificate Request in support of multiple EV Certificates containing the same Subject to the extent permitted under sections 11.9 and 11.10 of the EV Guidelines.

MSC Trustgate SHALL repeat the verification process for any information obtained outside the time limits specified above except when permitted otherwise under section 11.14.1 of the EV Guidelines.

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

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

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

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

MSC Trustgate 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 shall not issue certificates containing internal name.

4.2.3 Time to process certificate applications

Under normal circumstances, MSC Trustgate 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 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 can delay the issuance process.

4.3 Certificate issuance

4.3.1 CA actions during certificate issuance

MSC Trustgate 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 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 (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 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 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'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 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 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 repository.

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

- i. The digital signature was created during the operational period of a valid Certificate and can be verified by referencing a valid Certificate,
- ii. 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
- iii. 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 may renew a Certificate if:

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

MSC Trustgate may also renew a Certificate if a CA Certificate is re-keyed or as otherwise necessary to provide services to a customer. MSC Trustgate may also notify Subscribers prior to a Certificate's expiration date. Certificate renewal requires payment of additional fees. MSC Trustgate 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 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 information⁷) has not changed, a renewal Certificate is automatically issued.

Alternative to a Challenge Phrase (or equivalent) MSC Trustgate 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

⁷ If contact information has changed via an approved formal contact change procedure the certificate shall still qualify for automated renewal.

authorizing issuance of the Certificate, MSC Trustgate 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 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 re-authenticates the Organization name and domain name included in the certificate at intervals described in Section 6.3.2. In circumstances where:

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

MSC Trustgate 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 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'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.

4.7.2 Who may request certification of a new public key

MSC Trustgate 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 may initiate a certificate re-key at the request of the certificate subject or at MSC Trustgate's own discretion.

4.7.3 Processing certificate re-keying requests

MSC Trustgate 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 can issue a replacement Certificate using a previously issued Certificate or previously provided CSR. MSC Trustgate re-uses existing

verification information unless re-verification and authentication is required under section 3.3.1 or if MSC Trustgate 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'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 modifies Certificates at the request of certain certificate subjects or in its own discretion. MSC Trustgate 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 verifies any information that will change in the modified Certificate. MSC Trustgate will only issue the modified Certificate after completing the verification process on all modified information. MSC Trustgate 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 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 upon request.

4.9.1 Circumstances for revocation

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

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

MSC Trustgate 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:

- i. 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;
- ii. MSC Trustgate obtains evidence that the Certificate was misused and/or used outside the intended purpose as indicated by the relevant agreement;
- iii. The Subscriber or the cross-certified CA breached a material obligation under the CPS, or the relevant agreement;
- iv. MSC Trustgate 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);
- v. MSC Trustgate confirms a material change in the information contained in the Certificate;
- vi. MSC Trustgate confirms that the Certificate was not issued in accordance with the CA/B forum requirements or relevant browser policy;
- vii. MSC Trustgate determines or confirms that any of the information appearing in the Certificate is inaccurate;
- viii. MSC Trustgate's right to issue Certificates under the CA/B forum requirements expires or is revoked or terminated, unless MSC Trustgate has made arrangements to continue maintaining the CRL/OCSP Repository;
- ix. Revocation is required by the MSC Trustgate CPS; or
- x. MSC Trustgate 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 may revoke any Certificate in its sole discretion, including if MSC Trustgate believes that:

- i. Either the Subscriber's or MSC Trustgate'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;
- ii. MSC Trustgate received a lawful and binding order from a government or regulatory body to revoke the Certificate;
- iii. MSC Trustgate ceased operations and did not arrange for another Certificate authority to provide revocation support for the Certificates;
- iv. The technical content or format of the Certificate presents an unacceptable risk to application software vendors, Relying Parties, or others;
- v. 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 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 will revoke a Subordinate CA Certificate within seven (7) days after confirming one or more of the following occurred:

- i. The Subordinate CA requests revocation in writing.
- ii. The Subordinate CA notifies MSC Trustgate that the original Certificate request was not authorized and does not retroactively grant authorization.
- iii. MSC Trustgate 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;
- iv. MSC Trustgate obtains evidence that the CA Certificate was misused and/or used outside the intended purpose as indicated by the relevant agreement.
- v. MSC Trustgate 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.
- vi. MSC Trustgate determines that any of the information appearing in the CA Certificate is inaccurate or misleading.
- vii. MSC Trustgate 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.
- viii. MSC Trustgate's or the Subordinate CA's right to issue Certificates under the Baseline Requirements expires or is revoked or terminated, unless MSC Trustgate has made arrangements to continue maintaining the CRL/OCSP Repository.
- ix. Revocation is required by MSC Trustgate's Certificate Policy and/or Certification Practice Statement; or
- x. The technical content or format of the CA Certificate presents an unacceptable risk to application software suppliers or Relying Parties.

MSC Trustgate will revoke a cross-Certificate if the cross-certified entity (including MSC Trustgate) 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 may also revoke an Administrator Certificate if the Administrator's authority to act as Administrator has been terminated or otherwise has ended.

MSC Trustgate Subscriber Agreements require end-user Subscribers to immediately notify MSC Trustgate 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 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 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 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 MSC Trustgate, 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. MSC Trustgate will then revoke the Certificate. MSC Trustgate 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 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 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 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 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 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 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 will consider the following criteria:

- i. The nature of the alleged problem (scope, context, severity, magnitude, risk of harm);
- ii. The consequences of revocation (direct and collateral impacts to Subscribers and Relying Parties);
- iii. The number of Certificate problem reports received about a particular Certificate or Subscriber;
- iv. 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
- v. Relevant legislation.

Under normal operating circumstances, MSC Trustgate 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:

- i. Certificate revocation requests for publicly-trusted Certificates are processed within 18 hours after their receipt,
- ii. Revocation requests received two or more hours before CRL issuance are processed before the next CRL is published, and
- iii. 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:

- i. Are signed by the CA that issued the Certificates whose revocation status is being checked, or
- ii. 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 supports an OCSP capability using the GET method for Certificates issued in accordance with the Baseline Requirements. OCSP Responders under MSC Trustgate'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:

- i. OCSP responses have a validity interval greater than or equal to eight hours;
- ii. OCSP responses MUST have a validity interval less than or equal to ten days;
- iii. For OCSP responses with validity intervals less than sixteen hours, then MSC Trustgate updates the information provided via an Online Certificate Status Protocol prior to one-half of the validity period before the nextUpdate.
- iv. 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's direct control will not respond with a "good" status for a certificate that has not been issued.

MSC Trustgate 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 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 shall revoke the certificate using the procedure as set forth in Section 3.4. MSC Trustgate 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. MSC Trustgate 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.

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 never escrows CA Private Keys under this CPS.

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

- i. From the Subscriber or Subscriber's organization if the Subscriber has lost or damaged the private-key token;
- ii. From the Subscriber's organization, if the Subscriber is not available or is no longer part of the organization that contracted with MSC Trustgate for Private Key escrow;
- iii. From an authorized investigator or auditor, if the Private Key is part of a required investigation or audit;
- iv. From a requester authorized by a competent legal authority to access the communication that is encrypted using the key;
- v. From a requester authorized by law or governmental regulation; or
- vi. From an entity contracting with MSC Trustgate for escrow of the Private Key when key recovery is mission critical or mission essential.

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

- i. Notify Subscribers and get his or her consent that their Private Keys are escrowed;
- ii. Protect escrowed keys from unauthorized disclosure;
- iii. Protect any authentication mechanisms that could be used to recover escrowed Private Keys;
- iv. Release an escrowed key only after making or receiving (as applicable) a properly authorized request for recovery; and
- v. 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's independent audit requirements described in Section 8. The MSC Trustgate Physical Security Policy contains sensitive security information and is only available upon agreement with MSC Trustgate. An overview of the requirements is described below.

5.1.1 Site location and construction

MSC Trustgate 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 also maintains disaster recovery facilities for its CA operations. MSC Trustgate's disaster recovery facilities are protected by multiple tiers of physical security comparable to those of MSC Trustgate'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 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 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'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 personnel who are 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'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 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 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 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's secure facilities are equipped with primary and backup:

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

5.1.4 Water exposures

The cabinets housing MSC Trustgate'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 protects its media from accidental damage, environmental hazards, and unauthorized physical access. Backup files are created on a daily basis. MSC Trustgate's backup files are maintained at locations separate from MSC Trustgate'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 with the manufacturers' guidance prior to disposal.

5.1.8 Off-site backup

MSC Trustgate 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:

- i. The validation of information in Certificate Applications;
- ii. The acceptance, rejection, or other processing of Certificate Applications, revocation requests, renewal requests, or enrolment information;
- iii. The issuance, or revocation of Certificates, including personnel having access to restricted portions of its repository;
- iv. The handling of Subscriber information or requests.

Trusted Persons include, but are not limited to:

Trusted Role	MSC Trustgate Trusted Role Title ⁸
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 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 Position⁸ must successfully complete the screening requirements set out in this CPS.

5.2.2 Number of persons required per task

MSC Trustgate 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.

⁸ 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.

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

- i. Issued access devices and granted access to the required facilities;
- ii. Issued electronic credentials to access and perform specific functions on MSC Trustgate 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):

- i. The validation of information in Certificate Applications;
- ii. The acceptance, rejection, or other processing of Certificate Applications, revocation requests, recovery requests or renewal requests, or enrolment information;
- iii. The issuance, or revocation of Certificates, including personnel having access to restricted portions of the repository;
- iv. The handling of Subscriber information or requests;
- v. The generation, issuing or destruction of a CA certificate; and
- vi. 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's PKI operations and ensures compliance with this CPS. MSC Trustgate'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 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:

- i. Verification of the individual's identity,
- ii. Previous employment,
- iii. Professional reference,
- iv. Highest or most relevant educational degree obtained,

- v. Bankruptcy records,
- vi. Driving records.

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 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:

- i. Misrepresentations made by the candidate or Trusted Person;
- ii. Highly unfavourable or unreliable professional references;
- iii. Certain criminal convictions; and
- iv. 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 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 maintains records of such training. MSC Trustgate periodically reviews and enhances its training programs, as necessary.

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

- i. Basic Public Key Infrastructure (PKI) concepts;
- ii. MSC Trustgate security and operational policies and procedures;
- iii. Use and operation of deployed hardware and software;
- iv. Incident and Compromise reporting and handling,
- v. Disaster recovery and business continuity procedures;
- vi. Authentication and verification policies and procedures;
- vii. Common threats to the validation process, including phishing and other social engineering tactics; and
- viii. 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 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 maintains supporting documentation.

5.3.4 Retraining frequency and requirements

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

- i. Date and time;
- ii. Type of event;
- iii. Success or failure; and
- iv. User or system that caused the event or initiated the action.

MSC Trustgate records at least the following events:

- i. CA key lifecycle management events, including:
 - a. Key generation, backup, storage, recovery, archival, and destruction; and
 - b. Cryptographic device lifecycle management events.
- ii. 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 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.
- iii. 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:

- i. Date and time of entry;
- ii. Identity of the person making the journal entry; and
- iii. Description of the entry.

5.4.2 Frequency of processing log

As required, generally within at least once every three (3) months, MSC Trustgate administrator will review the logs generated by MSC Trustgate'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:

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

Any anomalies or irregularities found in the logs are investigated. The summaries include recommendations to MSC Trustgate's operations management committee and are made available to MSC Trustgate's auditors upon request. MSC Trustgate 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 retains audit logs on-site until after they are reviewed. The individuals who remove audit logs from MSC Trustgate's CA systems are different than the individuals who control MSC Trustgate'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's CA systems are configured to ensure that

- i. Only authorized people have read access to logs;
- ii. Only authorized people may archive audit logs; and
- iii. 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'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 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 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'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 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 also routinely assesses the sufficiency of the policies, procedures, information systems, technology, and other arrangements that MSC Trustgate has in place to control such risks. MSC Trustgate's Internal Auditors review the security audit data checks for continuity. MSC Trustgate'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 complies with all record retention policies that are governed by law and retrieved as necessary by request of authorized parties. MSC Trustgate 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 retains the following information in its archives (as such information pertains to MSC Trustgate's CA operations):

- i. Accreditations of MSC Trustgate;
- ii. CPS versions;
- iii. Contractual obligations and other agreements concerning the operation of the CA;
- iv. System and equipment configurations, modifications, and updates;
- v. Rejection or acceptance of a certificate request;
- vi. Certificate issuance, rekey, renewal, and revocation requests;
- vii. Sufficient identity authentication data to satisfy the identification requirements of Section 3.2, including information about telephone calls made for verification purposes;
- viii. Any documentation related to the receipt or acceptance of a Certificate or token;
- ix. Subscriber Agreements;
- x. Issued Certificates;

- xi. A record of certificate re-keys;
- xii. CRLs for CAs cross-certified with the Federal Bridge CA;
- xiii. Data or applications necessary to verify an archive's contents;
- xiv. Compliance auditor reports;
- xv. Changes to MSC Trustgate's audit parameters;
- xvi. Any attempt to delete or modify audit logs;
- xvii. CA Key generation and destruction;
- xviii. Access to Private Keys for key recovery purposes;
- xix. Changes to trusted Public Keys;
- xx. Export of Private Keys;
- xxi. Approval or rejection of a revocation request;
- xxii. Appointment of an individual to a trusted role;
- xxiii. Destruction of a cryptographic module;
- xxiv. Certificate compromise notifications;
- xxv. Remedial action taken as a result of violations of physical security
- xxvi. Violations of the CPS; and
- xxvii. Books of account.

5.5.2 Retention period for archive

MSC Trustgate 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 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 needs to transfer any media to a different archive site or equipment, MSC Trustgate 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 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 automatically time-stamps archived records with system time (non-cryptographic method) as they are created. MSC Trustgate 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 CA services, MSC Trustgate 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 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 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 has a Business Continuity Management and Disaster Recovery Plan. MSC Trustgate 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 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's CA auditors upon request.

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

- i. The conditions for activating the plan;
- ii. Emergency Procedures;
- iii. Fall- back procedures;
- iv. Resumption procedures;
- v. A maintenance schedule for the plan;
- vi. Awareness and education requirements;
- vii. The responsibilities of the individuals;
- viii. Recovery time objective (RTO);
- ix. Regular testing of contingency plans;
- x. The MSC Trustgate's plan to maintain or restore the MSC Trustgate's business operations in a timely manner following interruption to or failure of critical business processes;
- xi. A requirement to store critical cryptographic materials (i.e: secure cryptographic device and activation materials) at an alternate location;
- xii. What constitutes an acceptable system outage and recovery time;
- xiii. How frequently backup copies of essential business information and software are taken;
- xiv. The distance of recovery facilities to the MSC Trustgate's main site; and

- xv. 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 will make regular system backups on a weekly basis and maintains backup copies of its CA Private Keys, which are stored in a secure separate location. If MSC Trustgate discovers that any of its computing resources, software, or data operations have been compromised, MSC Trustgate 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 determines that a continued operation could pose a significant risk to Relying Parties or Subscribers, MSC Trustgate suspends such operation until it determines that the risk is mitigated.

5.7.3 Entity private key compromise procedures

If MSC Trustgate suspects that one of its CA Private Keys Infrastructure has been comprised or lost then MSC Trustgate's Key Compromise Response procedures are enacted by the MSC Trustgate Security Incident Response Team (SIRT). 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 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 recurrence.

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

- i. The Certificate's revoked status is communicated to Relying Parties through the MSC Trustgate Repository in accordance with Section 4.9.7;
- ii. Commercially reasonable efforts will be made to provide additional notice of the revocation to all affected MSC Trustgate CA services Participants; and
- iii. 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 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's primary facility and that MSC Trustgate will be capable of maintaining other services or resuming them as quickly as possible following a disaster. MSC Trustgate reviews, tests, and updates the BCMP and supporting procedures at least annually.

MSC Trustgate'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's primary CA operations to become inoperative, MSC Trustgate 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 CA to cease operation, MSC Trustgate 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 will develop a termination plan to minimize disruption to Subscribers and Relying Parties. Such termination plans may address the following, as applicable:

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

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

- i. Transfer all relevant records to a government supervisory or legal body;
- ii. Revoke all Certificates that are still un-revoked or un-expired on a date as specified in the notice and publish final CRLs;
- iii. Destroy all Private Keys; and
- iv. 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'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 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 requires that an external auditor to witness the generation of or review a recording of the CA keys and issue a report opining. 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 AATL 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 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:

- i. Except where escrow/backup services are authorized and permitted, the key generator must not retain access to the Subscriber's Private Key after delivery;
- ii. The key generator must protect the Private Key from activation, compromise, or modification during the delivery process;
- iii. The Subscriber must acknowledge receipt of the Private Key(s), typically by having the Subscriber use the related Certificate, and
- iv. 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.

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 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, this requirement is No Stipulation.

6.1.4 CA public key delivery to relying parties

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

- i. Specified in a certificate validation or path discovery policy file;
- ii. Trust anchors in commercial browsers and operating system root store; and/or
- iii. Roots signed by other CAs.

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

MSC Trustgate 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 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's CA Certificates via MSC Trustgate's web site or by email.

6.1.5 Key sizes

MSC Trustgate strictly adheres to the key sizes specified within this section and does not utilize any other sizes.

6.1.5.1 Related to Code Signing and Timestamping Certificates

For keys corresponding to Root and Subordinate CAs:

- i. For RSA keys, the modulus must be at least 4096 bits in length.
- ii. For ECDSA keys, the curve must be one of NIST P-256, P-384, or P-521.

For keys corresponding to subscriber certificates:

- i. For RSA keys, the modulus must be at least 3072 bits in length.
- ii. For ECDSA keys, the curve must be one of NIST P-256, P-384, or P-521.

6.1.5.2 Other type of Certificates

For RSA key pairs:

- i. The modulus must be at least 2048 bits in length.
- ii. The size must be evenly divisible by 8 when measured in bits.

For ECDSA key pairs:

- i. Keys must represent a valid point on one of the following elliptic curves: NIST P-256, P-384, or P-521.

6.1.6 Public key parameters generation and quality checking

MSC Trustgate 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'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:

- i. Self-signed Certificates to represent the Root CA itself;
- ii. Certificates for Subordinate CAs and Cross Certificates;
- iii. Certificates for infrastructure purposes (e.g., administrative role certificates, internal CA operational device certificates; and
- iv. 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 does not issue Certificates with key usage for both signing and encryption. Instead, MSC Trustgate issues Subscribers two Key Pairs—one for key management and one for digital signature and authentication.

6.2 Private Key Protection and Cryptographic

MSC Trustgate has implemented a combination of physical, logical, and procedural controls to ensure the security of MSC Trustgate 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's cryptographic modules for all of its CA and OCSP responder Key Pairs are validated to the FIPS 140-2 Level 3. MSC Trustgate's Validation Team (Internal RA) utilizes FIPS 140-2 Level 2 cryptographic devices to generate, store, and utilize Key Pairs that is used accessing Registration Authority system.

AATL Certificates are issued only when MSC Trustgate confirms that the Key Pairs are generated and stored using a trustworthy system employing cryptographic hardware devices certified to either FIPS 140-2 Level 2 or Level 3, or Common Criteria (ISO 15408 & ISO 18045) - Protection Profiles CEN prEN 14169 (all applicable parts) or equivalent certification. Additionally, key activation must rely on a minimum 2-factor authentication (2FA) process if the device is managed by third party on behalf of the signer (example roaming/remote Certificates).

For other types of certificates, subscribers have the option to use either a hardware-based cryptographic device, software, or a file for their Key Pairs.

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

MSC Trustgate has implemented technical and procedural mechanisms that requires the participation of multiple trusted individuals to perform sensitive CA cryptographic operations. MSC Trustgate 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 does not escrow its CA private keys. Subscribers may not escrow their private signature keys. MSC Trustgate 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's Private Keys are generated and operated inside MSC Trustgate'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'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 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 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 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 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 will revoke all certificates that include the Public Key corresponding to the communicated Private Key.

If MSC Trustgate 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's Private Keys are generated and stored inside MSC Trustgate'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'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’s Private Keys are deactivated via logout procedures on the applicable HSM device when not in use. MSC Trustgate 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 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 may destroy a Private Key by deleting it from all known storage partitions. MSC Trustgate 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 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 archives copies of Public Keys in accordance with Section 5.5.

6.3.2 Certificate operational periods and key pair usage periods

MSC Trustgate Certificates have maximum validity periods of:

Type	Private Key Use ⁹	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	395 days*
Organization Validation SSL/TLS Certificates	No Stipulation	395 days*
Extended validation SSL/TLS Certificates	No Stipulation	395 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 may voluntarily retire its CA Private Keys before the periods listed above to accommodate key changeover processes. MSC Trustgate 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.

⁹ CA Private Keys may continue to be used to sign CRLs and OCSP responses

6.4 Activation data

6.4.1 Activation data generation and installation

MSC Trustgate 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 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 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 uses passwords as activation data for a signing key, MSC Trustgate will change the activation data change upon rekey of the CA Certificate.

6.4.2 Activation data protection

MSC Trustgate 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 personnel are instructed to memorize and not to write down their password or share it with any another individual. MSC Trustgate 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 secures its CA systems and authenticates and protects communications between its systems and trusted roles. MSC Trustgate'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's CA systems are configured to:

- i. Authenticate the identity of users before permitting access to the system or applications;
- ii. Manage the privileges of users and limit users to their assigned roles;
- iii. Generate and archive audit records for all transactions;
- iv. Enforce domain integrity boundaries for security critical processes; and
- v. Support recovery from key or system failure.

All Certificate Status Servers:

- i. Authenticate the identity of users before permitting access to the system or applications;

- ii. Manage privileges to limit users to their assigned roles;
- iii. Enforce domain integrity boundaries for security critical processes; and
- iv. Support recovery from key or system failure.

MSC Trustgate 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 security controls

6.6.1 System development controls

MSC Trustgate uses only:

- i. CA systems software that is provided by MSC Trustgate. MSC Trustgate 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;
- ii. 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
- iii. 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's operations are scanned for malicious code on first use and periodically thereafter. MSC Trustgate does not install software that are not part of the CA's operation

6.6.2 Security management controls

MSC Trustgate has mechanisms and/or policies in place to control and monitor the configuration of its CA systems. MSC Trustgate creates a hash of all software packages and MSC Trustgate software updates. This hash is used to verify the integrity of such software manually. Upon installation and periodically thereafter, MSC Trustgate 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 document and control the configurations of its systems, including any upgrades or modifications made. The Issuer MSC Trustgate 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 implement the same network security controls to protect a CMS as used to protect its other CA equipment.

MSC Trustgate'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'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'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's network configuration is available for review on-site by its auditors and consultants under an appropriate non-disclosure agreement.

6.8 Timestamping

MSC Trustgate Date/Time Stamp service utilized a trusted time source by National Metrology Institute of Malaysia (NMIM).

If a timestamp is needed under any written law or if a specific time is important for using digitally signed data, the subscriber should subscribe to a service from a recognized date/time stamp provider such as MSC Trustgate.

If a digital signature on a document lacks a timestamp, it is advisable for the subscriber to re-sign the document with a new digital certificate before the current certificate expires.

7 CERTIFICATE, CRL, AND OCSP PROFILES

MSC Trustgate exclusively issues Certificates that meet technical requirements set forth in Section 2.2 - Publication of certification information, Section 6.1.5 - Key Sizes, and Section 6.1.6 - Public Key Parameters Generation and Quality Checking.

7.1 Certificate profile

Prior to 18 April 2024, MSC Trustgate issues certificates following either the profile outlined in this CPS, or the profile specified in CPS version 5.4. Effective 18 April 2024, MSC Trustgate issues certificates according to the profile outlined in this CPS.

MSC Trustgate generates Certificates in adherence to RFC 5280 standards, incorporating updates outlined in RFC 6818. The following section describes in detail the certificate profile that MSC Trustgate uses to generate certificates.

7.1.1 Version number(s)

MSC Trustgate generates only X.509 Version 3.

7.1.2 Certificate extensions

This section describes in detail the certificate extension that MSC Trustgate uses to generate Certificates.

7.1.2.1 Root CA Certificate Extensions

MSC Trustgate utilizes the following extension for all its Root CA Certificates:

Field	Criticality	Value or Value Constraint
basicConstraints	TRUE	MUST be present, cA MUST be TRUE, pathLenConstraint MUST NOT be present
keyUsage	TRUE	MUST be present, Bit positions for keyCertSign and cRLSign MUST be SET, Other bits MUST NOT be SET
subjectKeyIdentifier	FALSE	MUST be present. Composed of the 160-bit SHA-1 hash of the value of the BIT STRING subjectPublicKey (excluding the tag, length, and number of unused bits).
authorityKeyIdentifier	FALSE	MUST be present. keyIdentifier identical to the subjectKeyIdentifier field. authorityCertIssuer and authorityCertSerialNumber MUST NOT be present.
Any other extension		MUST NOT be present.

7.1.2.2 Subordinate CA Certificate Extensions

MSC Trustgate does not utilize its Subordinate CA Certificate to sign OCSP Responders. Additionally, MSC Trustgate employs the following extension for all of its Subordinate CA Certificates:

Certificate Extension	Criticality	Value or Value Constraint
basicConstraints	TRUE	MUST be present, cA MUST be TRUE, pathLenConstraint MAY be present
keyUsage	TRUE	MUST be present, Bit positions for keyCertSign and cRLSign MUST be SET, Other bit positions MUST NOT be SET

Certificate Extension	Criticality	Value or Value Constraint
subjectKeyIdentifier	FALSE	MUST be present. Composed of the 160-bit SHA-1 hash of the value of the BIT STRING subjectPublicKey (excluding the tag, length, and number of unused bits).
authorityKeyIdentifier	FALSE	MUST be present. Contain keyIdentifier that identical to the subjectKeyIdentifier field of the Issuing CA. MUST not contains authorityCertIssuer and authorityCertSerialNumber.
certificatePolicies	FALSE	MUST be present for Document Signing, SSL/TLS, S/MIME, Code Signing and Timestamping Certificates. Additionally, it MUST contain at least one PolicyInformation. See Section 7.1.2.6. MAY be present for other type of Certificates. If present, see Section 7.1.2.6.2
cRLDistributionPoints	FALSE	MUST be present, contains HTTP URL of the CA's CRL service
extKeyUsage	FALSE	MUST be present for SSL/TLS, S/MIME, Code Signing and Timestamping Certificates. MAY be present for other types of Certificats. See Section 7.1.2.7.
authorityInfoAccess	FALSE	SHOULD be present, contain the HTTP URL of the Issuing CA's certificate (accessMethod = 1.3.6.1.5.5.7.48.2). MAY contains HTTP URL of the Issuing CA's OCSP responder (accessMethod = 1.3.6.1.5.5.7.48.1).
nameConstraints	TRUE	MAY be present if id-kp-emailProtection KeyPurposeIds is included. See Section 7.1.5

7.1.2.3 Subscriber (End-user) Certificate

7.1.2.3.1 Document Signing Certificates

MSC Trustgate utilizes the following extension for all of its Document Signing Certificates:

Certificate Extension	Criticality	Value or Value Constraint
basicConstraints	TRUE	MAY be present, cA MUST NOT be TRUE, pathLenConstraint MUST NOT be present.
keyUsage	TRUE	MUST be present, For RSA Public Key, bit positions for digitalSignature MUST be SET. Bit position of nonrepudiation and keyEncipherment MAY be SET. For ECC Public Key, bit positions for digitalSignature MUST be SET. Bit position of nonrepudiation, keyAgreement, encipherOnly, decipherOnly MAY be SET. Other bit positions SHALL NOT be SET
subjectKeyIdentifier	FALSE	MUST be present. Composed of the 160-bit SHA-1 hash of the value of the BIT STRING subjectPublicKey (excluding the tag, length, and number of unused bits).
authorityKeyIdentifier	FALSE	MUST be present. Contain keyIdentifier that identical to the subjectKeyIdentifier field of the Issuing CA. MUST not contains authorityCertIssuer and authorityCertSerialNumber.
certificatePolicies	FALSE	MUST be present. See Section 7.1.2.6.2
cRLDistributionPoints	FALSE	MUST be present, contains HTTP URL of the CA's CRL service
extKeyUsage	FALSE	MUST be present. See Section 7.1.2.7. Additionally, the following EKUs MAY be present: <ul style="list-style-type: none"> Adobe Authentic Documents Trust (1.2.840.113583.1.1.5) Document Signing (1.3.6.1.4.1.311.10.3.12)
authorityInfoAccess	FALSE	SHOULD be present, contain the HTTP URL of the Issuing CA's certificate (accessMethod = 1.3.6.1.5.5.7.48.2 value of type id-ad-caIssuers). MAY contains HTTP URL of the Issuing CA's OCSP responder (accessMethod = 1.3.6.1.5.5.7.48.1 values of type id-ad-ocsp).

7.1.2.3.1.1 LHDN e-Invoice Organization Certificates

For LHDN e-Invoice Organization Certificates, MSC Trustgate employs the following certification extensions:

Certificate Extension	Criticality	Value or Value Constraint
basicConstraints	TRUE	cA = FALSE, pathLenConstraint NOT present.
keyUsage	TRUE	Only the following bits is SET: <ul style="list-style-type: none"> digitalSignature nonRepudiation
subjectKeyIdentifier	FALSE	Composed of the 160-bit SHA-1 hash of the value of the BIT STRING subjectPublicKey (excluding the tag, length, and number of unused bits).
authorityKeyIdentifier	FALSE	keyIdentifier = 780ddbeb312dc28d25bf5f3c1da5bb33f84ad495 (identical to the subjectKeyIdentifier field of the Issuing CA)
certificatePolicies	FALSE	MUST be present. PolicyInformation = { policyIdentifier = 1.3.6.1.4.1.49530.1.1.2.5, policyQualifiers = { policyQualifierId = id-qt-cps (OID: 1.3.6.1.5.5.7.2.1), qualifier = { cPSuri = https://www.msctrustgate.com/tgcps } }, { policyQualifierId = id-qt-unotice (OID: 1.3.6.1.5.5.7.2.2), qualifier = { userNotice = 1 explicitText = https://www.msctrustgate.com/tgrpa } } }
cRLDistributionPoints	FALSE	DistributionPoint = { distributionPoint = fullName, URI= https://pki.msctrustgate.com/crl/cdp/repo/tgmpkirca.crl }
extKeyUsage	FALSE	Only the following bits is SET: <ul style="list-style-type: none"> Document Signing (1.3.6.1.4.1.311.10.3.12)
authorityInfoAccess	FALSE	AuthorityInfoAccess = { accessMethod = id-ad-caIssuers (OID: 1.3.6.1.5.5.7.48.2) accessLocation = URI: https://www.msctrustgate.com/cacerts/Trustgate_MPki_IS_CA.cer }

7.1.2.3.2 MyDigital ID Certificates

MSC Trustgate generate MyDigital ID Certificates with the following extension:

Certificate Extension	Criticality	Value
basicConstraints	TRUE	cA = FALSE, pathLenConstraint NOT present.
keyUsage	TRUE	Only the following bits is SET: <ul style="list-style-type: none"> digitalSignature keyAgreement
subjectKeyIdentifier	FALSE	Composed of the 160-bit SHA-1 hash of the value of the BIT STRING subjectPublicKey (excluding the tag, length, and number of unused bits).
authorityKeyIdentifier	FALSE	keyIdentifier = 38:A2:9B:DC:0E:9B:49:AE:4D:8B:53:07:78:92:EA:62:61:A6:3B:82 (identical to the subjectKeyIdentifier field of the Issuing CA)
certificatePolicies	FALSE	PolicyInformation = { policyIdentifier = 1.3.6.1.4.1.49530.1.1.5.1, policyQualifiers = { policyQualifierId = id-qt-cps (OID: 1.3.6.1.5.5.7.2.1), qualifier = { cPSuri = https://www.msctrustgate.com/tgcps } }, { policyQualifierId = id-qt-unotice (OID: 1.3.6.1.5.5.7.2.2), qualifier = { userNotice = 1 explicitText = https://www.msctrustgate.com/tgrpa } } } }
cRLDistributionPoints	FALSE	DistributionPoint = { distributionPoint = fullName, URI= http://pki.msctrustgate.com/crl/cdp/MyTrust_Digital_ID_Class_3_CA.crl }
extKeyUsage	FALSE	Only the following bits is SET: <ul style="list-style-type: none"> clientAuthentication (OID: 1.3.6.1.5.5.7.3.2)

Certificate Extension	Criticality	Value
authorityInfoAccess	FALSE	<pre> AuthorityInfoAccess = { accessMethod = id-ad-caIssuers (OID: 1.3.6.1.5.5.7.48.2) accessLocation = URI:http://pki.msctrustgate.com/repo/ca/MyTrust_ Digital_ID_Class_3_CA.cer }, { accessMethod = id-ad-ocsp (OID: 1.3.6.1.5.5.7.48.1) accessLocation = URI:http://pki.msctrustgate.com/ocsp } </pre>

7.1.2.3.3 SSL/TLS Certificates

MSC Trustgate utilizes the following extension for all of its SSL/TLS Certificates:

Certificate Extension	Criticality	Value or Value Constraint
basicConstraints	TRUE	MAY be present, cA MUST NOT be TRUE, pathLenConstraint MUST NOT be present.
keyUsage	TRUE	SHOULD be present, For RSA Public Key, bit positions for digitalSignature and keyEncipherment MUST be SET. For ECC Public Key, bit positions for digitalSignature MUST be SET. Other bit positions MUST NOT be SET
subjectKeyIdentifier	FALSE	NOT RECOMMENDED.
authorityKeyIdentifier	FALSE	MUST be present. Contain keyIdentifier that identical to the subjectKeyIdentifier field of the Issuing CA. MUST not contains authorityCertIssuer and authorityCertSerialNumber.
certificatePolicies	FALSE	MUST be present. See Section 7.1.2.6.1.
cRLDistributionPoints	FALSE	SHALL be present, contains HTTP URL of the CA's CRL service
extKeyUsage	FALSE	MUST be present. See Section 7.1.2.7.
authorityInfoAccess	FALSE	MUST be present, contain the HTTP URL of the Issuing CA's certificate (accessMethod = 1.3.6.1.5.5.7.48.2). MAY contains HTTP URL of the Issuing CA's OCSP responder (accessMethod = 1.3.6.1.5.5.7.48.1).
subjectAltName	TRUE if subject field is empty, otherwise FALSE	See Section 7.1.4.2.1
nameConstraints	TRUE	MUST NOT be PRESENT.

7.1.2.3.4 S/MIME Certificates

MSC Trustgate utilizes the following extension for all of its S/MIME Certificates:

Certificate Extension	Criticality	Value or Value Constraint
basicConstraints	TRUE	MAY be present, cA MUST NOT be TRUE, pathLenConstraint MUST NOT be present.
keyUsage	TRUE	SHALL be present, For RSA Public Key, bit positions for digitalSignature and keyEncipherment SHALL be SET. Bit position of nonrepudiation MAY also be SET. For ECC Public Key, bit positions for digitalSignature and keyAgreement SHALL be SET. Bit position of nonrepudiation, encipherOnly, decipherOnly MAY also be SET. Other bit positions SHALL NOT be SET
subjectKeyIdentifier	FALSE	SHOULD be present. Composed of the 160-bit SHA-1 hash of the value of the BIT STRING subjectPublicKey (excluding the tag, length, and number of unused bits).
authorityKeyIdentifier	FALSE	SHALL be present. Contain keyIdentifier that identical to the subjectKeyIdentifier field of the Issuing CA. MUST not contains authorityCertIssuer and authorityCertSerialNumber.
certificatePolicies	FALSE	SHALL be present. See Section 7.1.2.6.1.
cRLDistributionPoints	FALSE	SHALL be present, contains HTTP URL of the CA's CRL service
extKeyUsage	FALSE	SHALL be present. See Section 7.1.2.7.
authorityInfoAccess	FALSE	SHOULD be present, contain the HTTP URL of the Issuing CA's certificate (accessMethod = 1.3.6.1.5.5.7.48.2 value of type id-ad-caIssuers). MAY contains HTTP URL of the Issuing CA's OCSP responder (accessMethod = 1.3.6.1.5.5.7.48.1 values of type id-ad-ocsp).
subjectAltName	TRUE if subject field is empty, otherwise FALSE	See Section 7.1.4.2.1

7.1.2.3.5 Code Signing Certificates

MSC Trustgate utilizes the following extension for all of its Code Signing Certificates:

Certificate Extension	Criticality	Value or Value Constraint
basicConstraints	TRUE	MAY be present, cA MUST NOT be TRUE, pathLenConstraint MUST NOT be present.
keyUsage	TRUE	MUST be present, Bit positions for digitalSignature MUST be SET. Other bit positions MUST NOT be SET
subjectKeyIdentifier	FALSE	MAY be present. Composed of the 160-bit SHA-1 hash of the value of the BIT STRING subjectPublicKey (excluding the tag, length, and number of unused bits).
authorityKeyIdentifier	FALSE	MUST be present. Contain keyIdentifier that identical to the subjectKeyIdentifier field of the Issuing CA. MUST not contains authorityCertIssuer and authorityCertSerialNumber.
certificatePolicies	FALSE	MUST be present. See Section 7.1.2.6.1.
cRLDistributionPoints	FALSE	MUST be present, contains HTTP URL of the CA's CRL service
extKeyUsage	FALSE	MUST be present. See Section 7.1.2.7. Additionally, the following EKUs MAY be present: <ul style="list-style-type: none"> • Lifetime Signing OID (1.3.6.1.4.1.311.10.3.13) • Document Signing (1.3.6.1.4.1.311.3.10.3.12)
authorityInfoAccess	FALSE	MUST be present, contain the HTTP URL of the Issuing CA's certificate (accessMethod = 1.3.6.1.5.5.7.48.2 value of type id-ad-caIssuers). MAY contains HTTP URL of the Issuing CA's OCSP responder (accessMethod = 1.3.6.1.5.5.7.48.1 values of type id-ad-ocsp).

7.1.2.3.6 Timestamping Certificates

MSC Trustgate utilizes the following extension for its Timestamping Certificates:

Certificate Extension	Criticality	Value or Value Constraint
basicConstraints	TRUE	MAY be present, cA MUST NOT be TRUE, pathLenConstraint MUST NOT be present.
keyUsage	TRUE	MUST be present, Bit positions for digitalSignature MUST be SET. Other bit positions MUST NOT be SET
subjectKeyIdentifier	FALSE	MAY be present. Composed of the 160-bit SHA-1 hash of the value of the BIT STRING subjectPublicKey (excluding the tag, length, and number of unused bits).
authorityKeyIdentifier	FALSE	MUST be present. Contain keyIdentifier that identical to the subjectKeyIdentifier field of the Issuing CA. MUST not contains authorityCertIssuer and authorityCertSerialNumber.
certificatePolicies	FALSE	MUST be present. See Section 7.1.2.6.1.
cRLDistributionPoints	FALSE	MUST be present, contains HTTP URL of the CA's CRL service
extKeyUsage	FALSE	MUST be present. See Section 7.1.2.7.
authorityInfoAccess	FALSE	MUST be present, contain the HTTP URL of the Issuing CA's certificate (accessMethod = 1.3.6.1.5.5.7.48.2 value of type id-ad-caIssuers). MAY contains HTTP URL of the Issuing CA's OCSP responder (accessMethod = 1.3.6.1.5.5.7.48.1 values of type id-ad-ocsp).

7.1.2.3.7 Device Certificates

MSC Trustgate utilizes the following extension for all of its Device Certificates:

Certificate Extension	Criticality	Value or Value Constraint
basicConstraints	TRUE	MAY be present, cA MUST NOT be TRUE, pathLenConstraint MUST NOT be present.
keyUsage	TRUE	MUST be present, For RSA Public Key, bit positions for digitalSignature and keyEncipherment MUST be SET. For ECC Public Key, bit positions for digitalSignature MUST be SET. Bit position of keyAgreement, encipherOnly, decipherOnly MAY be SET. Other bit positions SHALL NOT be SET
subjectKeyIdentifier	FALSE	MUST be present. Composed of the 160-bit SHA-1 hash of the value of the BIT STRING subjectPublicKey (excluding the tag, length, and number of unused bits).
authorityKeyIdentifier	FALSE	MUST be present. Contain keyIdentifier that identical to the subjectKeyIdentifier field of the Issuing CA. MUST not contains authorityCertIssuer and authorityCertSerialNumber.
certificatePolicies	FALSE	MAY be present. See Section 7.1.2.6.2.
cRLDistributionPoints	FALSE	MUST be present, contains HTTP URL of the CA's CRL service
extKeyUsage	FALSE	MUST be present. See Section 7.1.2.7. Additionally, the following EKUs MAY be present: <ul style="list-style-type: none"> Adobe Authentic Documents Trust (1.2.840.113583.1.1.5)
authorityInfoAccess	FALSE	SHOULD be present, contain the HTTP URL of the Issuing CA's certificate (accessMethod = 1.3.6.1.5.5.7.48.2 value of type id-ad-caIssuers). MAY contains HTTP URL of the Issuing CA's OCSP responder (accessMethod = 1.3.6.1.5.5.7.48.1 values of type id-ad-ocsp).

7.1.2.4 OCSP Responder Certificates

Certificate Extension	Criticality	Value or Value Constraint
basicConstraints	TRUE	MAY be present, cA MUST NOT be TRUE, pathLenConstraint MUST NOT be present.
keyUsage	TRUE	MUST be present, Bit positions for digitalSignature MUST be SET. Other bit positions MUST NOT be SET
subjectKeyIdentifier	FALSE	SHOULD be present. Composed of the 160-bit SHA-1 hash of the value of the BIT STRING subjectPublicKey (excluding the tag, length, and number of unused bits).
authorityKeyIdentifier	FALSE	MUST be present. Contain keyIdentifier that identical to the subjectKeyIdentifier field of the Issuing CA. MUST not contains authorityCertIssuer and authorityCertSerialNumber.
certificatePolicies	FALSE	MUST NOT be present.
cRLDistributionPoints	FALSE	MUST NOT be present.
extKeyUsage	FALSE	MUST be present. See Section 7.1.2.7.
authorityInfoAccess	FALSE	NOT RECOMMENDED.
nameConstraints	FALSE	MUST NOT be PRESENT.
subjectAltName	FALSE	MUST NOT be PRESENT.
id-pkix-ocsp-nocheck	FALSE	MUST be present. MUST have an extnValue OCTET STRING which is exactly the hex-encoded bytes. 0500, the encoded representation of the ASN.1 NULL value, as specified in RFC 6960, Section 4.2.2.2.1.

7.1.2.5 All Certificates

MSC Trustgate issues certificates with all fields and extensions set in accordance with RFC 5280. Furthermore, MSC Trustgate does not issue certificates containing keyUsage flags, extKeyUsage values, Certificate extensions, or other data not specified in Section 7.1.2.1, Section 7.1.2.2, or Section 7.1.2.3.

7.1.2.5.1 tbsCertificate Fields

All Certificates utilize the following fields within the tbsCertificate section:

Field	Description
version	MUST be v3(2)
serialNumber	MUST be a non-sequential number greater than zero (0) and less than 2^{159} containing at least 64 bits of output from a CSPRNG
signature	See Section 7.1.3.2
issuer	Encoded value that is byte-for-byte identical to the encoded subject
validity	See Section 7.1.2.5.2
subject	For Root and Subordinate CA, see Section 7.1.4.3 For subscriber (end-user), see Section 7.1.4.2
subjectPublicKeyInfo	See Section 7.1.3.1
issuerUniqueID	MUST NOT be present
subjectUniqueID	MUST NOT be present

7.1.2.5.2 Certificate Validity

notBefore is the date of signing, with the time set to midnight (00:00) Greenwich Mean Time (GMT).

notAfter is the date that is calculated by adding a specific number of days to the date of signing. The time is set to one second before midnight (23:59:59) Greenwich Mean Time (GMT). Furthermore, this date must not surpass the 'notAfter' date of its issuer. The exact number of days varies depending on the certificate type:

Certificate Type	Number of days
Root CA Certificates	Between 2,922 (approx. 8 years) and 9,132 days (approx. 25 years)
Subordinate CA Certificates	Less than 6,477 days (approx. 15 years)
Subscriber (End-user) Certificates	SSL/TLS Certificates: Less than 397 days. S/MIME Certificates: Less than 825 days. Code Signing Certificate: Less than 1187 days (approx. 39 months). Document Signing Certificates: Less than 1095 days (approx. 3 years). Timestamp Certificates: Less than 4,105 days (approx. 135 months) BUT is subject to a maximum key pair usage period of 455 days (approx. 15 months). Other type of Certificates: Unspecified.

The validity period of a certificate may also be contingent upon the validity period of any associated evidence. For instance, in the case of a registered professional required to periodically renew their membership, the notBefore and notAfter fields of a certificate must fall within the membership's validity period.

7.1.2.6 Certificate Policies

7.1.2.6.1 For SSL/TLS, S/MIME, Code Signing, and Timestamping Certificates

MSC Trustgate uses the Certificate Policies extension adhering to the following guidelines:

- i. The first PolicyInformation value MUST contain exactly one Reserved Certificate Policy Identifier (refer to section 7.1.6.1). The policyQualifiers SHOULD NOT be present.
- ii. The second PolicyInformation value SHALL contain the MSC Trustgate Certificate Policy Identifier (refer to section 7.1.6.2). This policyIdentifier MUST include only policyQualifiers with the id-qt-cps OID (1.3.6.1.5.5.7.2.1), with a value of the MSC Trustgate repository (<https://www.msctrustgate.com/repository>). The repository host MSC Trustgate Certificate Policies, Certification Practice Statement, and Relying Party Agreement. Other qualifier types SHOULD NOT be present.

7.1.2.6.2 For Document Signing Certificates and Other Type of Certificates

The PolicyInformation value MUST contain the MSC Trustgate Certificate Policy Identifier (refer to section 7.1.6.2). This policyIdentifier MUST include only policyQualifiers with the id-qt-cps OID (1.3.6.1.5.5.7.2.1), with a value of the MSC Trustgate repository (<https://www.msctrustgate.com/repository>). The repository host MSC Trustgate Certificate Policies, Certification Practice Statement, and Relying Party Agreement. Other qualifier types SHOULD NOT be present.

7.1.2.7 Extended Key Usage

The following table illustrates a possible extended Key Usage that can be included in Certificates. This is to technically constraints the Certificates to its intended purposes.

Certificate Purpose	extKeyUsage								
	id-kp-documentSigning	id-kp-serverAuth	id-kp-clientAuth	id-kp-emailProtection	id-kp-codeSigning	id-kp-timeStamping	id-kp-OCSPSigning	anyExtendedKeyUsage	Any other value
Document Signing	○	×	○	○	×	×	×	×	○
MyDigital ID	×	×	●	×	×	×	×	×	×
SSL/TLS	×	●	○	×	×	×	×	×	–
S/MIME	×	×	○	●	×	×	×	×	○
Code Signing	×	×	×	○	●	×	×	×	○
Timestamping	×	×	×	×	×	●	×	×	×
Device	×	○	○	×	×	×	×	×	×
OCSP Responder	×	×	×	×	×	×	●	×	×

Legend:

- MUST be present.
- MAY be present.
- ×
- NOT RECOMMENDED.

7.1.3 Algorithm object identifiers

7.1.3.1 SubjectPublicKeyInfo

MSC Trustgate issues certificates with the subjectPublicKeyInfo field strictly using one of the following algorithms:

7.1.3.1.1 RSA

To denote the usage of an RSA key, MSC Trustgate utilizes the rsaEncryption algorithm identifier (OID: 1.2.840.113549.1.1.1).

The algorithm parameters for RSA key is mandatory and must be explicitly NULL.

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

MSC Trustgate does not utilize alternative algorithms, such as the id-RSASSA-PSS algorithm identifier (OID: 1.2.840.113549.1.1.10), to indicate an RSA key.

7.1.3.1.2 ECDSA

To denote the usage of an ECDSA key, MSC Trustgate utilizes the id-ecPublicKey algorithm identifier (OID: 1.2.840.10045.2.1).

The algorithm parameters for ECDSA keys utilize the following namedCurve encodings:

Key	namedCurve (OID)	AlgorithmIdentifier Encoding
P-256	secp256r1 (OID: 1.2.840.10045.3.1.7)	301306072a8648ce3d020106082a8648ce3d030107
P-384	secp384r1 (OID: 1.3.132.0.34)	301006072a8648ce3d020106052b81040022
P-521	secp521r1 (OID: 1.3.132.0.35)	301006072a8648ce3d020106052b81040023

7.1.3.2 Signature AlgorithmIdentifier

All objects signed by MSC Trustgate's CA Private Key use only the signature AlgorithmIdentifier within this section, particularly focusing on the following objects and fields:

- i. The signatureAlgorithm field of a Certificate.
- ii. The signature field of a TBSCertificate (for example, as used by a Certificate).
- iii. The signatureAlgorithm field of a CertificateList
- iv. The signature field of a TBSCertList
- v. The signatureAlgorithm field of a BasicOCSPResponse

No other encodings are used for these fields.

7.1.3.2.1 RSA

MSC Trustgate utilizes one of the following signature algorithms and encodings. When encoded, the AlgorithmIdentifier must be byte-for-byte identical to the specified hex-encoded bytes:

Signature Algorithm	OID	AlgorithmIdentifier Encoding
RSASSA-PKCS1-v1_5 with SHA-256	1.2.840.113549.1.1.11	300d06092a864886f70d01010b0500
RSASSA-PKCS1-v1_5 with SHA-384	1.2.840.113549.1.1.12	300d06092a864886f70d01010c0500
RSASSA-PKCS1-v1_5 with SHA-512	1.2.840.113549.1.1.13	300d06092a864886f70d01010d0500

7.1.3.2.2 ECDSA

MSC Trustgate selects the appropriate signature algorithm and encoding based upon the signing key used.

Signing Key	Signature Algorithm	OID	AlgorithmIdentifier Encoding
P-256	ECDSA with SHA-256	1.2.840.10045.4.3.2	300a06082a8648ce3d040302
P-384	ECDSA with SHA-384	1.2.840.10045.4.3.3	300a06082a8648ce3d040303
P-521	ECDSA with SHA-521	1.2.840.10045.4.3.4	300a06082a8648ce3d040304

7.1.4 Name forms

MSC Trustgate encodes attribute values in accordance with the specifications defined in RFC 5280.

7.1.4.1 Name encoding

For every valid Certification Path (as defined by RFC 5280, Section 6):

- i. For each certificate in the Certification Path, the encoded content of the Issuer Distinguished Name field SHALL be byte-for-byte identical to the encoded form of the Subject Distinguished Name field of the issuing CA certificate.
- ii. For each CA certificate in the Certification Path, the encoded content of the Subject Distinguished Name field SHALL be byte-for-byte identical among all certificates whose Subject Distinguished Names can be compared as equal according to RFC 5280, Section 7.1, including expired and revoked certificates.

7.1.4.2 Subject information - subscriber certificates

When issuing a Certificate, MSC Trustgate affirms that all subject information was accurate and verified in accordance with the procedures outlined in this CPS as of the certificate's issuance date.

MSC Trustgate does not issue certificates with subject attributes that solely consist of metadata, such as '!', '-', and ' ' (space) characters, or any other indication suggesting absence, incompleteness, or inapplicability of the value.

7.1.4.2.1 Subject alternative name extension

7.1.4.2.1.1 SSL/TLS Certificates

The Subject Alternative Name MUST contain at least one entry of the following types:

- i. `dNSName` - MUST contain either a FQDN or Wildcard Domain Name. MUST NOT contain an Internal Name, and/or
- ii. `iPAddress` - MUST contain the IPv4 or IPv6 address. MUST NOT contain a Reserved IP Address

7.1.4.2.1.2 S/MIME Certificates

The Subject Alternative Name SHALL contain at least one `GeneralName` entry of the following types:

- i. `rfc822Name`, and/or
- ii. `otherName` of type `id-on-SmtpUTF8Mailbox`, encoded in accordance with RFC 8398

All Mailbox Addresses in the subject field or entries of type `dirName` of this extension SHALL be repeated as `rfc822Name` or `otherName` values of type `id-on-SmtpUTF8Mailbox` in this extension.

7.1.4.2.2 Subject distinguished name fields

MSC Trustgate utilizes the following Subject distinguished name fields for its subscriber certificates:

Field	OID	Contents
commonName	2.5.4.3	Personal Name, Pseudonym, Email Address, FQDN, or subject:organizationName
surname	2.5.4.4	Natural Person subject's names, as verified under Section 3.2.2, used the following guidelines: <ul style="list-style-type: none"> Subjects with a single legal name are required to provide the name in the subject:surname field. For societies that do not practice given and surname conventions, subjects may also provide their full name in the subject:surname field. The subject:surname and subject:givenName fields SHALL NOT be present if the subject:pseudonym is present.
givenName	2.5.4.42	
pseudonym	2.5.4.65	The subject:pseudonym field SHALL be verified according to Section 3.1.3. The subject:pseudonym field SHALL NOT be present if the subject:givenName and/or subject:surname are present.
serialNumber	2.5.4.5	Contain a Natural Person Identifier assigned by the country such as MyKad Number, Passport Number. It may also contain a Business Registration Number for a Legal Entity assigned by an authority. It may also contain an identifier assigned by the CA or RA to identify and/or to disambiguate the Subscriber.
emailAddress	1.2.840.113549.1.9.1	Contain a single Mailbox Address as verified under Section 3.2.4
title	2.5.4.12	Contain only an organizational role/title or a regulated professional designation verified according to Section 3.2.2
organizationName	2.5.4.10	Subject's full legal organization name and/or an Assumed Name as verified under Section 3.2.2
organizationIdentifier	2.5.4.97	Contain a Registration Reference for a Legal Entity assigned in accordance with the identified Registration Scheme. It SHALL be encoded as a PrintableString or UTF8String. See Appendix A.
localityName	2.5.4.7	Contain the Subject's locality information as verified under Section 3.2.2 (for an organization) or Section 3.2.3 (for an individual).
stateOrProvinceName	2.5.4.8	Contain the Subject's state or province information as verified under Section 3.2.2 (for an organization) or Section 3.2.3 (for an individual).

Field	OID	Contents
countryName	2.5.4.6	Contain the two-letter ISO 3166-1 country code associated with the location of the Subject as verified under Section 3.2.2 (for an organization) or Section 3.2.3 (for an individual).

7.1.4.2.2.1 Document Signing Certificates

MSC Trustgate issues various types of Document Signing Certificates, each with its own distinct set of subject DN attributes, outlined in this section.

7.1.4.2.2.1.1 AATL Certificates

MSC Trustgate issues AATL Certificates under Adobe Approved Trust List (AATL) program that enables subscribers to create digital signatures that are automatically trusted when the signed document is opened in Adobe® Acrobat® or Reader® software. There are various types of AATL Certificates, each with its own distinct set of subject DN attributes, outlined in this section.

7.1.4.2.2.1.1.1 Individual Basic Certificates

Individual Basic Certificates are distinguished only with Natural Person attributes in the Subject.

Attributes	Value or Value Constraint
commonName	MUST be present. Name as appear on MyKad or Passport.
serialNumber	MUST be present. MyKad or Passport Number.
countryName	MUST be present. Country that issue the subject:serialNumber.
Other Attributes	NOT RECOMMENDED.

7.1.4.2.2.1.1.2 Individual Pro Certificates

Individual Pro Certificates are uniquely identified through a blend of Natural Person attributes, complemented by the subject's organizationName attribute within the Subject field. For instance, such a certificate might be issued to an employee of an organization or a member of a regulated professional body.

Attributes	Value or Value Constraint
commonName	MUST be present. Name as appear on MyKad or Passport.
serialNumber	MAY be present. Contain a registration number of a regulated professional organization
title	MAY be present. Contain only an organizational role/title or a regulated professional designation.
organizationName	MUST be present.
organizationIdentifier	MAY be present. Contain a registration number of the subject:organizationName
localityName	MAY be present.
stateOrProvinceName	MAY be present.
countryName	MUST be present. Country that regulate or register the subject:organizationName.
Other Attributes	NOT RECOMMENDED.

See Appendix A.2 on how to construct serialNumber attributes.

7.1.4.2.2.1.1.3 Organization Certificates

Organization Certificates are distinguished by their registration number with a recognized authority, ensuring their legitimacy and credibility.

Attributes	Value or Value Constraint
commonName	MUST be present.
organizationName	MUST be present.
organizationIdentifier	MUST be present. Contain a registration number of the subject:organizationName
localityName	MAY be present.
stateOrProvinceName	MAY be present.
countryName	MUST be present. Country that regulate or register the subject:organizationName.
Other Attributes	NOT RECOMMENDED.

See Appendix A.1 on constructing organizationIdentifier attributes.

7.1.4.2.2.1.2 LHDN e-Invoice Organization Certificates

MSC Trustgate issues Organization Certificates for e-Invoice, facilitating companies, tax agents, or aggregators to digitally sign and submit e-Invoice to LHDN.

Here are the subject DN attributes for the Organization Certificates:

Attributes	Value or Value Constraint
commonName	MUST be present.
serialNumber	MUST be present. The Business Registration Number (BRN) of the subject:organizationName, registered with Suruhanjaya Syarikat Malaysia or any other country or state government agency. This BRN must be linked with subject:organizationIdentifier.
organizationName	MUST be present.
organizationIdentifier	MUST be present. The Tax Identification Number of the subject:organizationName, registered with Malaysia Inland Revenue Board (Lembaga Hasil Dalam Negeri).
countryName	MUST be present. Country that regulate or register the subject:organizationName.
Other Attributes	NOT RECOMMENDED.

7.1.4.2.2.1.3 MyGPKI

MSC Trustgate collaborates with Jabatan Digital Negara (formerly known as MAMPU) to issue MyGPKI Certificates to Malaysian government officers, facilitating secure online transactions and communications with government entities nationwide. These certificates play a vital role in authenticating users' identities, encrypting data, and digitally signing documents and transactions, thereby ensuring their confidentiality, integrity, and authenticity.

Below are the subject DN attributes for the MyGPKI Certificates:

Attributes	Value or Value Constraint
commonName	MUST be present. Name as appear on MyKad.
serialNumber	MUST be present. It represents MyKad number.
surname	MUST be present. It represents the MyKad number for backward compatibility with some applications.
countryName	MUST be present and set to MY. It indicates that the subject is a Malaysian citizen and an officer of the Malaysian government.
Other Attributes	NOT RECOMMENDED.

7.1.4.2.2.2 MyDigital ID Certificates

MSC Trustgate issues MyDigital ID Certificates, empowering subscribers to authenticate themselves across a range of Malaysian online services. Below are the subject DN attributes for the MyDigital ID Certificates:

Attributes	Value or Value Constraint
commonName	MUST be present. Name as appear on MyKad.
serialNumber	MUST be present. MyKad Number.
Other Attributes	MUST NOT be present.

7.1.4.2.2.3 SSL/TLS Certificates

7.1.4.2.2.3.1 Domain Validation (DV) Certificates

Here is subject DN for DV SSL/TLS Certificates:

Attributes	Value or Value Constraint
countryName	MAY be present. The two-letter ISO 3166-1 country code for the country associated with the Subject.
commonName	NOT RECOMMENDED. If present, MUST contain a value derived from the subjectAltName extension according to Section 7.1.4.2.1.1.
Other Attributes	NOT RECOMMENDED.

7.1.4.2.2.3.2 Organization Validation (OV) Certificates

Here is subject DN for DV SSL/TLS Certificates:

Attributes	Value or Value Constraint
countryName	MUST be present. The two-letter ISO 3166-1 country code for the country associated with the Subject.
stateOrProvinceName	MUST be present if localityName is absent, MAY be present otherwise. If present, MUST contain the Subject's state or province information.
localityName	MUST be present if stateOrProvinceName is absent, MAY be present otherwise. If present, MUST contain the Subject's locality information.
organizationName	The Subject's name or DBA. MSC Trustgate MAY include information in this field that differs slightly from the verified name, such as common variations or Abbreviations. MSC Trustgate documents the difference and any abbreviations used are locally accepted abbreviations; e.g. if the official record shows "Company Name Berhad", MSC Trustgate MAY use "Company Name Bhd." or "Company Name".
commonName	NOT RECOMMENDED. If present, MUST contain a value derived from the subjectAltName extension according to Section 7.1.4.2.1.1.
Other Attributes	NOT RECOMMENDED.

7.1.4.2.2.4 S/MIME Certificates

7.1.4.2.2.4.1 Mailbox Validated Certificates

Attributes	Value or Value Constraint
commonName	MAY be present.
serialNumber	MAY be present.
emailAddress	MAY be present.
Other Attributes	SHALL NOT be present.

7.1.4.2.2.4.2 Organization Validated Certificates

Attributes	Value or Value Constraint
commonName	MAY be present.
serialNumber	MAY be present.
emailAddress	MAY be present.
organizationName	SHALL be present.
organizationIdentifier	SHALL be present.
localityName	MAY be present
stateOrProvinceName	MAY be present
countryName	MAY be present
Other Attributes	SHALL NOT be present.

7.1.4.2.2.4.3 Sponsor Validated Certificates

Attributes	Value or Value Constraint
commonName	MAY be present.
givenName	MAY be present.
surname	MAY be present.
pseudonym	MAY be present.
serialNumber	MAY be present.
emailAddress	MAY be present.
organizationName	SHALL be present.
organizationIdentifier	SHALL be present.
title	MAY be present.
localityName	MAY be present
stateOrProvinceName	MAY be present
countryName	MAY be present

Attributes	Value or Value Constraint
Other Attributes	SHALL NOT be present.

7.1.4.2.2.4.4 Individual Validated Certificates

Attributes	Value or Value Constraint
commonName	MAY be present.
givenName	MAY be present.
surname	MAY be present.
pseudonym	MAY be present.
serialNumber	MAY be present.
emailAddress	MAY be present.
title	MAY be present.
localityName	MAY be present
stateOrProvinceName	MAY be present
countryName	MAY be present
Other Attributes	SHALL NOT be present.

7.1.4.3 Subject information - root and subordinate CA certificates

When issuing a Subordinate CA Certificate, MSC Trustgate affirms that all subject information was accurate and verified in accordance with the procedures outlined in this CPS as of the certificate's issuance date.

7.1.4.3.1 Subject distinguished name fields

MSC Trustgate utilizes the following Subject distinguished name fields for its subscriber certificates:

Field	OID	Contents
commonName	2.5.4.3	MUST be present. This field SHOULD contain an identifier for the Certificate such that the Certificate's Name is unique across all Certificates issued by the Issuing CA
organizationName	2.5.4.10	MUST be present. This field SHALL contain either the Subject CA's name or DBA as verified under Section 3.2.3.3.
countryName	2.5.4.6	MUST be present. This field SHALL contain the two-letter ISO 3166-1 country code for the country in which the CA's place of business is located.
Other Subject Attributes		MAY be present. If present, MSC Trustgate verifies the information contained in other attributes.

7.1.5 Name constraints

For a Subordinate CA Certificate to be considered Technically Constrained, the Certificate SHALL include an Extended Key Usage (EKU) extension specifying all extended key usages for which the Subordinate CA Certificate is authorized to issue Certificates. The anyExtendedKeyUsage KeyPurposeId SHALL NOT appear within this extension.

If the Subordinate CA Certificate includes the id-kp-emailProtection extended key usage, then for the Subordinate CA Certificate to be considered Technically Constrained it SHALL include the nameConstraints X.509v3 extension with constraints on rfc822Name and directoryName as follows:

- i. For each rfc822Name in permittedSubtrees, each rfc822Name SHALL contain either a FQDN or a U+002E FULL STOP (".") character followed by a FQDN. The rfc822Name SHALL NOT contain an email address. The CA SHALL confirm that the Applicant has registered the FQDN contained in the rfc822Name or has been authorized by the domain registrant to act on the registrant's behalf in line with the verification practices of Section 3.2.5.
- ii. For each directoryName in permittedSubtrees, the CA SHALL confirm the Applicant's and/or Subsidiary's Organizational name and location such that end entity Certificates issued from the Subordinate CA Certificate will be in compliance with Section 7.1.2.4.

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.

7.1.6.1 Reserved Certificate Policy Identifiers

The following CA/Browser Forum Certificate Policy identifiers are reserved for use by MSC Trustgate to assert that a Certificate issued and managed in accordance to respective CA/B Baseline Requirements.

Certificate Types	Policy Identifier
SSL/TLS Domain-validated	2.23.140.1.2.1
SSL/TLS Organization-validated	2.23.140.1.2.2
SSL/TLS Individual-validated	2.23.140.1.2.3
SSL/TLS Extended-validated	2.23.140.1.1
S/MIME Mailbox-validated	2.23.140.1.5.1.3
S/MIME Organization-validated	2.23.140.1.5.2.3
S/MIME Sponsor-validated	2.23.140.1.5.3.3
S/MIME Individual-validated	2.23.140.1.5.4.3
Non-EV Code Signing Certificates	2.23.140.1.4.1
EV Code Signing Certificates	2.23.140.1.3
Timestamp Certificates	2.23.140.1.4.2

7.1.6.2 Root CA Certificates

A Root CA Certificate DOES NOT contain the certificatePolicies extension.

7.1.6.3 Subordinate CA Certificates

An SSL/TLS, S/MIME, Code Signing and Timestamping Certificate issued to a Subordinate CA:

- i. MUST include one or more explicit policy identifiers defined in Section 7.1.6.1 that indicate the Subordinate CA's adherence to and compliance with respective CA/B Forum Baseline Requirement, and
- ii. MAY contain one identifier in Section 1.2 and
- iii. MUST NOT contain the anyPolicy identifier (2.5.29.32.0).

For other Certificates issued to a Subordinate CA:

- i. MAY contain one identifier Section 1.2 and
- ii. MAY contain the "anyPolicy" identifier (2.5.29.32.0) in place of an explicit policy identifier.

7.1.6.4 Subscriber Certificates

An SSL/TLS, S/MIME, Code Signing and Timestamping Certificate issued to a Subscriber:

- i. MUST include one or more explicit policy identifiers defined in Section 7.1.6.1 that indicate the Subordinate CA's adherence to and compliance with respective CA/B Forum Baseline Requirement, and
- ii. MAY contain one identifier in Section 1.2 and
- iii. MUST NOT contain the anyPolicy identifier (2.5.29.32.0).

For other Certificates issued to a Subscriber:

- i. MAY contain one identifier Section 1.2 and
- ii. MAY contain the “anyPolicy” identifier (2.5.29.32.0) in place of an explicit policy identifier.

7.1.7 Usage of Policy Constraints extension

Reserved.

7.1.8 Policy qualifiers syntax and semantics

MSC Trustgate generally populates Certificates with a policy qualifier within the certificatePolicies extension. Generally, such Certificates contain a CPS pointer qualifier that points to the applicable Relying Party Agreement or the MSC Trustgate 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

Reserved.

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 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 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:

- i. keyCompromise (1),
- ii. affiliationChanged (3),
- iii. superseded (4),
- iv. cessationOfOperation (5),
- v. privilegeWithdrawn (9).

7.2.1 Version number(s)

MSC Trustgate 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 Key Identifier	Same as the Authority Key Identifier listed in the Certificate
Invalidity Date	Optional. Date in UTC format
Reason Code	Specify reason for revocation in list of reason codes in Section 7.2, if included.

7.3 OCSP profile

Effective 2020-09-30, if an OCSP 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's operates an OCSP in accordance with RFC 6960.

7.3.2 OCSP extensions

The singleExtension of an OCSP 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.

8.1 Frequency or circumstances of assessment

MSC Trustgate receives an annual period audit by an independent external auditor to assess MSC Trustgate's compliance with this CPS and the WebTrust for CA programs criteria. The audit covers MSC Trustgate'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 are performed by a public accounting firm that is independent of MSC Trustgate.

8.4 Topics covered by assessment

The audit covers MSC Trustgate's business practices disclosure, the integrity of MSC Trustgate's PKI operations, and MSC Trustgate's compliance with this CPS and referenced requirements. The audit verifies that MSC Trustgate 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's services, then:

- i. The auditor will document the discrepancy;
- ii. The auditor will promptly notify MSC Trustgate; and
- iii. MSC Trustgate will develop a plan to cure the noncompliance.

MSC Trustgate will submit the plan to the Management for approval and to any third party that MSC Trustgate is legally obligated to satisfy. The MSC Trustgate 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 is entitled to suspend and/or terminate of services through revocation or other actions as deemed by the MSC Trustgate 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'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 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 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:

- i. Name of the organization being audited;
- ii. Name and address of the organization performing the audit;
- iii. The SHA-256 fingerprint of all Roots and Subordinate CA Certificates, including Cross Certificates, that were in-scope of the audit;
- iv. Audit criteria, with version number(s), that were used to audit each of the certificates (and associated keys);
- v. A list of the CA policy documents, with version numbers, referenced during the audit;
- vi. Whether the audit assessed a period of time or a point in time;
- vii. The start date and end date of the Audit Period, for those that cover a period of time;
- viii. The point in time date, for those that are for a point in time;
- ix. The date the report was issued, which will necessarily be after the end date or point in time date;
- x. All incidents disclosed by the CA, discovered by the auditor, or reported by a third party, that, at any time during the audit period, occurred or were open in Mozilla's Bugzilla reporting system.

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

MSC Trustgate ensures compliance with the Certificate Policy, Certification Practice Statement, and other external requirements specified in section 1.1 through regular self-audits. These audits involve monitoring service quality through quarterly assessments, which include randomly selecting samples representing at least 3% of the issued Certificates. This process supports maintaining strict control over service quality.

9 OTHER BUSINESS AND LEGAL MATTERS

9.1 Fees

9.1.1 Certificate issuance or renewal fees

MSC Trustgate is entitled to charge end-user Subscribers for the issuance, management, and renewal of Certificates. For Document Signing Certificates, the fee is not more than Ringgit Malaysia One Hundred Twenty (RM 120) for Medium Assurance certificates. For High Assurance certificates the fee is Ringgit Malaysia One Thousand Five Hundred (RM 1500). However, the fee does not include government tax, postage, public notary fee, storage, signing services, date/time stamping services, and others.

9.1.2 Certificate access fees

MSC Trustgate 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 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 is, however, entitled to charge a fee for providing customized CRLs, OCSP services, or other value-added revocation and status information services.

MSC Trustgate 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's prior express written consent.

9.1.4 Fees for other services

MSC Trustgate 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.

MSC Trustgate reserves the right to charge for additional services, including digital signing services, key management services for roaming/remote certificates, and date/time stamping services.

9.1.5 Refund policy

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

MSC Trustgate 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 to 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 revoke the certificate and provide a refund if MSC Trustgate has breached a warranty or other material obligation under this CPS relating to the subscriber or the subscriber's certificate.

After MSC Trustgate revokes the subscriber's certificate, MSC Trustgate 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 only be liable for the issuance certificates not exceeding the amount as per section 9.8.

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”):

- i. CA application records, whether approved or disapproved;
- ii. Certificate Application records;
- iii. Transactional records (both full records and the audit trail of transactions);
- iv. Audit trail records created or retained by MSC Trustgate or a Customer;
- v. Audit reports created by MSC Trustgate or a Customer (to the extent such reports are maintained), or their respective auditors (whether internal or public);
- vi. Contingency planning and disaster recovery plans; and
- vii. Security measures controlling the operations of MSC Trustgate 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 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 secures private information from compromise and disclosure to third parties.

9.4 Privacy of personal information

9.4.1 Privacy plan

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

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

- i. Disclosure is necessary in response to subpoenas and search warrants; and
- ii. 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 Sub-domain Participants other than Subscribers and Relying Parties is governed by the applicable agreements among such MSC Trustgate Sub-domain Participants.

9.6 Representations and warranties

9.6.1 CA representations and warranties

CA warrant that:

- i. 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;
- ii. Their private key is protected, and that no unauthorized person has ever had access to the Subscriber's private key;
- iii. All representations made by the Subscriber in the Certificate Application the Subscriber submitted are true;
- iv. All information supplied by the Subscriber and contained in the Certificate is true;
- v. The Certificate is being used exclusively for authorized and legal purposes, consistent with this CPS; and
- vi. 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:

- i. 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;
- ii. 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;
- iii. Their Certificates meet all material requirements of this CPS; and
- iv. Revocation services (when applicable) and use of a repository conform to the applicable CPS in all material aspects;
- v. Subscriber Agreements may include additional representations and warranties.

9.6.3 Subscriber representations and warranties

Subscribers warrant that:

- i. 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;
- ii. Their private key is protected, and that no unauthorized person has ever had access to the Subscriber's private key;
- iii. All representations made by the Subscriber in the Certificate Application the Subscriber submitted are true;
- iv. All information supplied by the Subscriber and contained in the Certificate is true,
- v. The Certificate is being used exclusively for authorized and legal purposes, consistent with this CPS; and
- vi. 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's possible warranties, including any warranty of merchantability or fitness for a particular purpose.

9.8 Limitations of liability

9.8.1 CA Liability

To the extent MSC Trustgate has issued and managed the Certificate(s) at issue in compliance with the MSC Trustgate Certificate Policy and the MSC Trustgate Certification Practice Statement, MSC Trustgate 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'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's damages concerning a specific Certificate:

Certificate Type	Liability Caps
AATL Individual Basic	Ringgit Malaysia Thirty Thousand (RM30,000)
AATL Individual Pro	Ringgit Malaysia Forty Thousand (RM40,000)
AATL Organization	Ringgit Malaysia Eighty Thousand (RM80,000)
Document Signing (Medium Assurance)	Ringgit Malaysia Twenty-Five Thousand (RM25,000)
Document Signing for Organization (Medium Assurance)	Ringgit Malaysia Fifty Thousand (RM50,000)
Document Signing (High Assurance)	Ringgit Malaysia Four Hundred Thousand (RM400,000)
MyDigital ID	Ringgit Malaysia Four Hundred Thousand (RM400,000)
SSL Domain Validation (non-public trusted)	Ringgit Malaysia Five Hundred (RM500)
SSL Organization Validation (non-public trusted)	Ringgit Malaysia Fifty Thousand (RM50,000)
S/MIME Mailbox (non-public trusted)	Ringgit Malaysia Five Hundred (RM500)
S/MIME Individual (non-public trusted)	Ringgit Malaysia Ten Thousand (RM10,000)
S/MIME Sponsored (non-public trusted)	Ringgit Malaysia Twenty-Five Thousand (RM25,000)
S/MIME Organization (non-public trusted)	Ringgit Malaysia Fifty Thousand (RM50,000)

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 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.

9.8.2 RA Liability

RAs shall be subject to the same liabilities as applicable to MSC Trustgate, as listed in CPS Part 9.8.1 should there be any violation of provision in the CPS that may cause damage to the subscribers.

9.9 Indemnities

9.9.1 Indemnification by MSC Trustgate

MSC Trustgate assumes no financial responsibility for improperly used certificates, CRLs, etc.

9.9.2 Indemnification by Subscribers

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

- i. Falsehood or misrepresentation of fact by the Subscriber on the Subscriber's Certificate Application;
- ii. 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;
- iii. 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
- iv. 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 for:

- i. The Relying Party's failure to perform the obligations of a Relying Party;
- ii. The Relying Party's reliance on a Certificate that is not reasonable under the circumstances; or
- iii. 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 repository. Amendments to this CPS become effective upon publication in the MSC Trustgate 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 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 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. 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 may allow other forms of notice in its Subscriber Agreements.

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

- i. Additions of Root CAs and Subordinate CAs;
- ii. Additional CPS at the Root CA level;
- iii. Changes in Certificate issuance procedures; or
- iv. Terminations or transition of ownership of Root CAs or Subordinate CAs.

MSC Trustgate will notify Mozilla if:

- i. Ownership or control of the CA certificates changes;
- ii. 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 included certificate(s);
- iii. Ownership or control of MSC Trustgate's operations changes; or
- iv. There is a material change in MSC Trustgate'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 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 Repository located at: <https://www.msctrustgate.com/repository>. 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 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 Repository, which is located at: <https://www.msctrustgate.com/repository>.

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 or any portion of it, MSC Trustgate and the PMA shall be entitled to make such amendments by publication in the MSC Trustgate Repository. Such amendments will be effective immediately upon publication. Within a reasonable time after publication, MSC Trustgate shall provide notice to of such amendments to MSC Trustgate 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 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 and attempt to resolve disputes directly with MSC Trustgate before resorting to any dispute resolution mechanism, including adjudication or any type of alternative dispute resolution.

9.14 Governing law

This CPS complies with Malaysian law, i.e., the Digital Signature Act 1997 (Act 562) and the Digital Regulations 1998, and compliance with other applicable laws.

9.15 Compliance with applicable law

MSC Trustgate is obliged to adhere to the applicable legislation as stated under 9.14.

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 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'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

9.17.1 Personal Data

MSC Trustgate are subjected to the PDPA Act 2010 (Act 709) and registered and party with the Jabatan Perlindungan Data Peribadi (JPDP). All the obligation stipulated in the act is deemed to be accepted by all

parties as final and will not be subjected to any other obligations. The personal data involved shall be protected under the law.

9.17.2 Right to audit

MSC Trustgate has been deemed been audit by its independent external auditor appointed by MCMC and shall not be subjected to any other audit requirements as stipulated by any other written law as it will conflicting the jurisdiction among government agencies i.e., MCMC and any other Commissions and legislations.

APPENDIX A: REGISTRATION SCHEME

A.1 organizationIdentifier

MSC Trustgate utilizes the following Registration Scheme derived from the CA/Browser Forum S/MIME Baseline Requirements for incorporating the `subject:organizationIdentifier` attribute, as outlined in Section 7.1.4.2.2.

Registration Scheme Identifier	Description
NTR	For an identifier allocated by a national or state trade register to the Legal Entity named in the <code>subject:organizationName</code> .
VAT	For an identifier allocated by the national tax authorities to the Legal Entity named in the <code>subject:organizationName</code> .
OTH	For an identifier allocated by other national authorities to the Legal Entity named in the <code>subject:organizationName</code> .
LEI	For a Legal Entity Identifier as specified in ISO 17442 for the entity named in the <code>subject:organizationName</code> . The 2 characters ISO 3166 country code SHALL be set to 'XG'.

The country code used in the Registration Scheme identifier SHALL match that of the `subject:countryName` in the Certificate as specified in Section 7.1.4.2.2.

MSC Trustgate verifies organizations in accordance with Section 3.2.3, ensuring that the Registration Scheme used during verification is reflected in the `subject:organizationIdentifier` of the Certificate. MSC Trustgate sets the value of `subject:organizationIdentifier` using the following structure in the presented order:

- A 3-character Registration Scheme identifier.
- A 2-character ISO 3166 country code for the nation where the Registration Scheme is operated. If the scheme is operated globally, the ISO 3166 code "XG" is used.
- For the NTR Registration Scheme identifier, where registrations are administered at the state level, a plus "+" (0x2B ASCII, U+002B UTF-8) followed by an up-to-three alphanumeric character ISO 3166-2 identifier for the subdivision of the nation where the Registration Scheme is operated.
- For the VAT Registration Scheme identifier, a plus "+" (0x2B ASCII, U+002B UTF-8) followed by three characters identifier for each of tax authorities. These are 2 recognized tax authorities in Malaysia:
 - Inland Revenue Board (IRB) collects income tax, real property gain taxes, stamp duties, petroleum income tax.
 - Royal Malaysia Customs (RMC) Department collects import duties, export duties, excise duties, sales tax, service tax, and tourism tax.
- For the OTH Registration Scheme identifier, a plus "+" (0x2B ASCII, U+002B UTF-8) followed by three characters identifier for each of tax authorities. These are recognized other authorities in Malaysia:
 - Construction Industry Development Board (CIDB) is a government agency under the Ministry of Works, established by the Malaysia Construction Industry Development Act (Act 520). Among its key responsibilities is the registration and accreditation of contractors and personnel within the construction sector.
 - Board of Architects Malaysia (BAM) is a statutory authority under the Ministry of Works, responsible for the enforcement of the Malaysia Architects Act 1967. Among its key responsibilities is the registration of Architects, Graduate Architects, Interior Designers, Graduate Interior Designers, Building Draughtsmen, Inspector of Works and Architectural

Technologists; and registration of Architectural Consultancy Practices and Interior Design Consultancy Practices.

- A hyphen-minus "-" (0x2D ASCII, U+002D UTF-8).
- Registration Reference allocated in accordance with the identified Registration Scheme.

In Malaysia, the national trade register shall refer to Suruhanjaya Syarikat Malaysia (SSM) under Registration of Businesses Act 1956 [Act 197], Companies Act 2016 [Act 777] and Limited Liability Partnerships Act 2012 [Act 743].

In Sabah, the trade register is the administrative officer or his assistant in charge of the district in which the premises are situated or the person usually resides as mentioned in Section 4(1) of Trades Licensing Ordinance 1948 (Sabah Cap. 144).

In Sarawak, the state trade register is the District Officers in districts other than Kuching as mentioned in Section 3 of Business Names Ordinance 1958 (Chapter 64) and Section 5 of Businesses, Professions and Trades Licensing Ordinance 1958 (Sarawak Chapter 33). The name can be verified via Electronic Resident & District Office (<https://erndo2.sarawak.gov.my/>).

Note 1: Registration References MAY contain hyphens but Registration Schemes, ISO 3166 country codes, and ISO 3166-2 identifiers do not. Therefore, if more than one hyphen appears in the structure, the leftmost hyphen is a separator, and the remaining hyphens are part of the Registration Reference. For example:

- NTRMY-478231-X (NTR scheme, Malaysia, Unique Identifier at Country level is 478231-X).
- NTRMY+13-1128178-A (NTR scheme, Malaysia – 13 Sarawak, Unique Identifier at State Level is 1128178-A)
- VATMY+IRB-C2584563202 (VAT scheme, Malaysia – Inland Revenue Board, Tax Identification Number (TIN) is C2584563202)

Note 2: For the following types of entities that do not have an identifier from the Registration Schemes listed in Appendix A:

- For Government Entities, the CA SHALL enter the Registration Scheme identifier 'GOV' followed by the 2 character ISO 3166 country code for the nation in which the Government Entity is located. If the Government Entity is verified at a subdivision (state or province) level, then a plus "+" (0x2B (ASCII), U+002B (UTF-8)) followed by an ISO 3166-2 identifier for the subdivision (up to three alphanumeric characters) is added.
- For International Organization Entities, the CA SHALL enter the Registration Scheme identifier 'INT' followed by the ISO 3166 code "XG". An International Organization Entity is founded by a constituent document, e.g., a charter, treaty, convention or similar document, signed by, or on behalf of, a minimum of two Sovereign State governments.

For example:

- GOVMY (Government Entity, Malaysia)
- GOVMY+04 (Government Entity, Malaysia - 04 Melaka)
- INTXG (International Organization)

A.2 Natural Person Identifier

MSC Trustgate implements a Registration Scheme aligned with the CA/Browser Forum S/MIME Baseline Requirements, specifically derived from Section 7.1.4.2.2. This scheme incorporates the `subject:serialNumber` attribute. If an individual or sponsored certificate's `subject:serialNumber` attribute contains solely a numeric value and the `subject:country` attribute indicates "MY" (indicating Malaysia), it shall be interpreted as referring to the Malaysian National Registration (MyKad) Number. Other cases will be handled according to the following:

Registration Scheme Identifier	Description
PAS	For an identifier based on a passport number issued to the Subject Individual.
IDC	For an identifier based on a national identity card issued to the Subject Individual.
PNO	For an identifier based on a national personal number (or national civic registration number) issued to the Subject Individual.
TIN	For an identifier based on Tax Identification Number issued to the Subject Individual.
MMC	For an identifier issued by Malaysian Medical Council (MMC).
BAM	For an identifier issued by Board of Architects Malaysia.
BEM	For an identifier issued by Board of Engineers Malaysia.
MBOT	For an identifier issued by Malaysia Board of Technologist.
RISM	For an identifier issued by Royal Institute of Surveyor Malaysia.
ILAM	For an identifier issued by Institute of Landscape Architects Malaysia.
MIP	For an identifier issued by Malaysian Institute of Planners.
MIA	For an identifier issued by Malaysian Institute of Accountants.

The Registration Scheme identifier SHALL refer to the identifier issued by `subject:countryName` in the Certificate as specified in Section 7.1.4.2.2.

An illustrative example of a Subject Distinguished Name (DN) for Individual Pro Certificates might be as follows:

Use case	Example of Subject DN
Ali Ahmad is a Director of Trust Services at MSC Trustgate.com Sdn. Bhd.	CN=Ali Ahmad, T=Director, Trust Services, O=ABC Sdn Bhd, organizationIdentifier=NTRMY-478231X, C=MY
Dr Mazlina Alias is a Pegawai Perubatan UD48 at Hospital Putrajaya (Government Hospital)	CN=Dr Mazlina Alias, serialnumber=MMC-12345, T=Pegawai Perubatan UD48, O=Hospital Putrajaya, organizationIdentifier=GOVMY, C=MY
Dr Faiz Othman is a General Paediatrics at Kajang Specialist Hospital Sdn Bhd (Private Hospital)	CN=Dr Faiz Othman, serialnumber=MMC-13579, T=General Paediatrics, O=Kajang Specialist Hospital Sdn Bhd, organizationIdentifier=NTRMY-211797T, L=Kajang, ST=Selangor, C=MY
Hafiz Ahmad is a registered Engineer working as Mechatronics Engineer at Robotic Manufacturing Sdn Bhd	CN=Hafiz Ahmad, serialnumber=BEM-G24680A, T=Mechatronics Engineer, O=Robotic Manufacturing Sdn Bhd, organizationIdentifier=NTRMY-431697M, C=MY

Use case	Example of Subject DN
David Law is a registered architect working as Architect at ABC Professional Service Sdn Bhd which also a registered Architecture with Board of Architect	CN=David Law, serialnumber=BAM-384/2024, T=Architect, O=ABC Professional Service Sdn Bhd, organizationIdentifier=OTHMY+BAM-MDP/IC, C=MY
Fahmy Ahmad is a construction worker working at ABC Enterprise. He and his company registered with CIDB	CN=Fahmy Ahmad, serialNumber=880808181357, T=Construction Personnel, O=ABC Enterprise, organizationIdentifier=OTHMY+CIDB-20214342-432455, C=MY