

Symantec Trust Network (STN) Certification Practice Statement

Version 3.8.27

December 19, 2016



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Symantec Trust Network (STN) Certification Practices Statement

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Printed in the United States of America.

Published date: December 19, 2016

Important – Acquisition Notice

On August 9, 2010, Symantec Corporation completed the acquisition of VeriSign Inc's Authentication division. As a result Symantec is now the registered owner of this Certificate Practices Statement document and the PKI Services described within this document.

However a hybrid of references to both "VeriSign" and "Symantec" shall be evident within this document for a period of time until it is operationally practical to complete the re-branding of the Certification Authorities and services. Any references to VeriSign as a corporate entity should be strictly considered to be legacy language that solely reflects the history of ownership.

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1. INTRODUCTION

This document is the Symantec Trust Network (STN) Certification Practice Statement (“CPS”). It states the practices that Symantec certification authorities (“CAs”) employ in providing certification services that include, but are not limited to, issuing, managing, revoking, and renewing certificates in accordance with the specific requirements of the Symantec Trust Network Certificate Policies (“CP”).

The CP is the principal statement of policy governing the STN. It establishes the business, legal, and technical requirements for approving, issuing, managing, using, revoking, and renewing, digital Certificates within the STN and providing associated trust services. These requirements, called the “STN Standards,” protect the security and integrity of the STN, apply to all STN Participants, and thereby provide assurances of uniform trust throughout the STN. More information concerning the STN and STN Standards is available in the CP.

Symantec has authority over a portion of the STN called its “Sub-domain” of the STN. Symantec’s Sub-domain includes entities subordinate to it such as its Customers, Subscribers, and Relying Parties.

While the CP sets forth requirements that STN Participants must meet, this CPS describes how Symantec meets these requirements within Symantec’s Sub-domain of the STN. More specifically, this CPS describes the practices that Symantec employs for:

- securely managing the core infrastructure that supports the STN, and
- issuing, managing, revoking, and renewing STN Certificates

within Symantec’s Sub-domain of the STN, in accordance with the requirements of the CP and its STN Standards.

This CPS conforms to the Internet Engineering Task Force (IETF) RFC 3647 for Certificate Policy and Certification Practice Statement construction. CAs within the Symantec Trust Network hierarchy conform to the current version of the CA/Browser Forum (CABF) requirements including:

- Guidelines for the Issuance and Management of Extended Validation (EV) Certificates,
- Guidelines for the Issuance and Management of Extended Validation (EV) Code-Signing Certificates, and,
- Baseline Requirements for the Issuance and Management of Publicly-Trusted Certificates,

published at www.cabforum.org. In the event of any inconsistency between this document and those Requirement, those Requirements take precedence over this document.

At this time, Symantec’s Extended Validation (EV) SSL certificates, Extended Validation (EV) Code-Signing certificates and Domain-Validated (DV) and Organization-Validated (OV) SSL Certificates¹ issued by Symantec CAs under this CP conform with the CABF Requirements. Such DV and OV certificates are issued containing the corresponding policy identifier(s) specified in section 1.2 of the CP indicating adherence to and conformance with these requirements. Symantec CAs assert that all Certificates issued containing these policy identifier(s) are issued and managed in conformance with the CABF Requirements.

¹ Additionally, Symantec issues organizational Client (non-SSL) certificates that are not subject to the CA Browser Forum Baseline Requirements. In addition to practices pertaining exclusively to the CA Browser Forum (ie, for OV SSL certificates), this CPS describes practices that pertain to any Class 2 or Class 3 certificate that is issued to an organization and contains organization information. Such certificates are referred to throughout this CPS as “organizational certificates”.

Management may make exceptions to this policy on a case by case basis to mitigate material, imminent impacts to customers, partners, relying parties, and/or others within the certificate ecosystem where practical workarounds do not exist. Any such management exceptions are documented, tracked, and reported as part of the audit process.

The Symantec Trust Network is managed within a dedicated business unit within Symantec and operates separately from the business units responsible for the Company's other security offerings. The STN shall not issue SSL inspection intermediate CAs from roots that are part of the Network. Only roots with no current or previous trust in Application Software Supplier products (private roots) may be used to create intermediate CAs used for SSL inspection.

Effective February 1, 2017 and after, the STN adopts the current version of the Minimum Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates published at <https://aka.ms/csbr>. If there is any inconsistency between this document and those Requirements, those Requirements take precedence over this document.

Code signing certificates issued on or after February 1st, 2017 and intended for use in Microsoft Authenticode and subsequent technologies will include the applicable certificate policy identifier, 2.23.140.1.4.1, to indicate compliance with the Minimum Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates.

Cross-Certification

The Symantec Non-Federal Shared Service Provider (SSP) sub-domain of the STN, is cross-certified with the US Federal Bridge CA and operates in compliance with the requirements of the X.509 Certificate Policy for the Federal Bridge Certification Authority (FBCA) and the Symantec Non-Federal Shared Service Provider (SSP) Certification Practice Statement.

1.1 Overview

This CPS is specifically applicable to:

- Symantec's Public Primary Certification Authorities (PCAs),
- Symantec Infrastructure CAs, and Symantec Administrative CAs² supporting the Symantec Trust Network
- Symantec's Public CAs and the CAs of Enterprise Customers, who issue Certificates within Symantec's sub-domain of the STN.

Note: As of the dates indicated, the following root certificates are excluded from the scope of this document:

- As of December 1, 2015:
VeriSign Class 3 Public Primary Certification Authority
Country = US
Organization = VeriSign, Inc.
Organizational Unit = Class 3 Public Primary Certification Authority
- As of March 27, 2015:
VeriSign Class 3 Public Primary Certification Authority – G2
Country = US
Organization = VeriSign, Inc.
Organizational Unit = Class 3 Public Primary Certification Authority - G2
Organizational Unit = (c) 1998 VeriSign, Inc. - For authorized use only
Organizational Unit = VeriSign Trust Network

Any references to PCAs or Class 3 PCAs in this CPS no longer apply to these root certificates.

These root certificates are only intended to be used for private purposes and should be disabled in browsers' trusted root lists. The Symantec Trust Network CP and CPS no longer govern the use of these root certificates and any of their subordinate services.

More generally, the CPS also governs the use of STN services within Symantec's sub-domain of the STN by all individuals and entities within Symantec's Sub-domain (collectively, Symantec Sub-domain Participants") including STN CAs managed by Symantec Japan Inc. Unless specifically noted within this CPS, Private CAs and hierarchies managed by Symantec are outside the scope of this CPS.³ The CAs managed by Affiliates are also outside the scope of this CPS.

The STN includes four classes of Certificates, Classes 1-4. The CP is a single document that defines these certificate policies, one for each of the Classes, and sets STN Standards for each Class.

Symantec currently offers three Classes of Certificates within its Sub-domain of the STN. This CPS describes how Symantec meets the CP requirements for each Class within its Sub-domain. Thus, the CPS, as a single document, covers practices and procedures concerning the issuance and management of all three Certificate Classes.

Symantec may publish Certificate Practices Statements that are supplemental to this CPS in order to conform with the specific policy requirements of Government, or other industry standards and requirements.

These supplemental certificate policies shall be made available to subscribers for the certificates issued under the supplemental policies and their relying parties.

The CPS is only one of a set of documents relevant to Symantec's Sub-domain of the STN. These other documents include:

- Ancillary confidential security and operational documents⁴ that supplement the CP and CPS by providing more detailed requirements, such as:
 - The *Symantec Physical Security Policy*, which sets forth security principles governing the STN infrastructure,
 - The *Symantec Security and Audit Requirements (SAR) Guide*, which describes detailed requirements for Symantec and Affiliates concerning personnel, physical, telecommunications, logical, and cryptographic key management security, and
 - *Key Ceremony Reference Guide*, which presents detailed key management operational requirements.
- Ancillary agreements imposed by Symantec. These agreements bind Customers, Subscribers, and Relying Parties of Symantec. Among other things, the agreements flow down STN Standards to these STN Participants and, in some cases, state specific practices for how they must meet STN Standards.

In many instances, the CPS refers to these ancillary documents for specific, detailed practices implementing STN Standards where including the specifics in the CPS could compromise the security of Symantec's Sub-domain of the STN.

1.2 Document Name and Identification

This document is the Symantec Trust Network (STN) Certification Practice Statement (CPS). STN Certificates contain object identifier values corresponding to the applicable STN Class of Certificate as listed in section 1.2 of the STN CP. Therefore, Symantec has not assigned this

³ Authenticated Content Signing Certificates (ACS) are issued by a non-STN CA. However, reference is made to these certificates in certain sections of this CPS, for ACS customers to understand certain procedural differences used for these certificates.

⁴ Although these documents are not publicly available their specifications are included in Symantec's Annual WebTrust for Certification authorities audit and may be made available to customer under special Agreement

CPS an object identifier value. Certificate Policy Object Identifiers are used in accordance with Section 7.1.6.

Domain validated and organization validated SSL Certificates contain the corresponding OID value in section 1.2 of the STN CP that indicates adherence to and compliance with the CA / Browser Forum Baseline Requirements.

1.3 PKI Participants

1.3.1 Certification Authorities

The term Certification Authority (CA) is an umbrella term that refers to all entities authorized to issue public key certificates within the STN. The CA term encompasses a subcategory of issuers called Primary Certification Authorities (PCA). PCAs act as roots of four domains⁵, one for each class of Certificate. Each PCA is a Symantec entity. Subordinate to the PCAs are Certification Authorities that issue Certificates to end-user Subscribers or other CAs.

Symantec also operates the Symantec Class 3 Internal Administrator CA hierarchy that is limited to Symantec internal administrative uses.

Symantec also operates the “Symantec Universal Root Certification Authority” and the “Symantec ECC Universal Root Certification Authority”. The Universal Root CAs issue Class 3 and selected Class 2 Subordinate CAs.

Symantec enterprise customers may operate their own CAs as subordinate CAs to a public STN PCA. Such a customer enters into a contractual relationship with Symantec to abide by all the requirements of the STN CP and the STN CPS. These subordinate CAs may, however implement a more restrictive practices based on their internal requirements.

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 a STN CA. Symantec may act as an RA for certificates it issues.

Third parties, who enter into a contractual relationship with Symantec, may operate their own RA and authorize the issuance of certificates by a STN CA. Third party RAs must abide by all the requirements of the STN CP, the STN CPS and the terms of their enterprise services agreement with Symantec. RAs may, however implement more restrictive practices based on their internal requirements.⁶

1.3.3 Subscribers

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

In some cases certificates are issued directly to individuals or entities for their own use. However, there commonly exist 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

⁵ Class 4 certificates are not currently issued by the STN

⁶ An example of a third party RA is a customer of Managed PKI services customer.

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 Symantec for the issuance of credentials and; "Subject", is the person to whom the credential is bound. The Subscriber bears ultimate responsibility for the use 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" is 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.

CAs are technically also subscribers of certificates within the STN, either as a PCA issuing a self-signed Certificate to itself, or as a CA issued a Certificate by a superior CA. References to "end entities" and "subscribers" in this CPS, however, apply only to end-user Subscribers.

1.3.4 Relying Parties

A Relying Party is an individual or entity that acts in reliance of a certificate and/or a digital signature issued under the STN. A Relying party may, or may not also be a Subscriber within the STN.

1.3.5 Other Participants

Not applicable

1.4 Certificate Usage

1.4.1 Appropriate Certificate Usages

1.4.1.1 Certificates Issued to Individuals

Individual Certificates are normally used by individuals to sign and encrypt e-mail and to authenticate to applications (client authentication). While the most common usages for individual certificates are included in Table 1 below, an individual certificate may be used for other purposes, provided that a Relying Party is able to reasonably rely on that certificate and the usage is not otherwise prohibited by law, the STN CP, the CPS under which the certificate has been issued and any agreements with Subscribers.

Certificate Class	Assurance Level			Usage		
	Low assurance level	Medium assurance level	High assurance level	Signing	Encryption	Client Authentication
Class 1 Certificates	✓			✓	✓	✓
Class 2 Certificates		✓		✓	✓	✓
Class 3 Certificates			✓	✓	✓	✓

Table 1. Individual Certificate Usage

1.4.1.2 Certificates Issued to Organizations

Organizational Certificates are issued to organizations after authentication that the Organization legally exists and that other Organization attributes included in the certificate (excluding non-verified subscriber information) are authenticated e.g. ownership of an Internet or e-mail domain. It is not the intent of this CPS to limit the types of usages for Organizational Certificates. While the most common usages are included in Table 2 below, an Organizational Certificate may be used for other purposes, provided that a Relying Party is able to reasonably rely on that certificate and the usage is not otherwise prohibited by law, by the STN CP, by any CPS under which the certificate has been issued and any agreements with Subscribers.

Certificate Class	Assurance Level				Usage			
	Medium	High with Extended Validation	High with CABF OV Validation	High	Code/Content Signing	Secure SSL/TLS-sessions	Authentication	Signing and Encryption
Class 3 Certificates				✓	✓	✓	✓	✓
Class 3 EV SSL Certificates		✓		✓		✓	✓	✓
Class 3 EV Code Signing Certificates		✓		✓	✓		✓	✓
Class 3 OV Certificates			✓	✓		✓	✓	✓
Class 3 DV Certificates	✓					✓	✓ (domain only)	✓

Table 2. Organizational Certificate Usage⁷

1.4.1.3 Assurance levels

Low assurance certificates are certificates that should not be used for authentication purposes or to support Non-repudiation. The digital signature provides modest assurances that the e-mail originated from a sender with a certain e-mail address. The Certificate, however, provides no proof of the identity of the Subscriber. The encryption application enables a Relying Party to use the Subscriber's Certificate to encrypt messages to the Subscriber, although the sending Relying Party cannot be sure that the recipient is in fact the person named in the Certificate.

Medium assurance certificates are certificates that are suitable for securing some inter- and intra-organizational, commercial, and personal e-mail requiring a medium level of assurances of the Subscriber identity, in relation to Class 1 and 3.

Symantec Basic DV Certificates are issued to domains to provide encryption. Symantec validates that the person enrolling for the certificate has control of the domain by a Domain Authorization or by having the Applicant demonstrate practical control over the FQDN. No organization authentication is performed on the owner of the domain.

⁷ "In limited circumstances Class 2 certificates may be issued by a Managed PKI customer to an affiliated organization (and not an individual within the organization). Such certificate may be used for organization authentication and application signing only. Except as expressly authorized by Symantec through an Enterprise Service Agreement imposing authentication and practice requirements consistent with the security standards of this CPS, Subscribers are prohibited from using this certificate for code and content signing, SSL encryption and S/mime signing and such key usage will be disabled for these certificates."

High assurance certificates are individual and organizational certificates Class 3 Certificates that provide a high level of assurance of the identity of the Subscriber in comparison with Class 1 and 2.

High assurance with extended validation certificates are Class 3 certificates issued by Symantec in conformance with the Guidelines for Extended Validation Certificates.

1.4.2 Prohibited Certificate Uses

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

Symantec Certificates are not designed, intended, or authorized for use or resale as control equipment in hazardous circumstances or for uses requiring fail-safe performance such as the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control systems, or weapons control systems, where failure could lead directly to death, personal injury, or severe environmental damage. Also, Class 1 Certificates shall not be used as proof of identity or as support of non-repudiation of identity or authority. Client Certificates are intended for client applications and shall not be used as server or organizational Certificates.

CA Certificates may not be used for any functions except CA functions. In addition, end-user Subscriber Certificates shall not be used as CA Certificates.

The STN and its Participants do not issue any certificate that can be used for man-in-the-middle (MITM) or traffic management of domain names or IP addresses that the certificate holder does not legitimately own or control. Such certificate usage is expressly prohibited.

Symantec periodically rekeys 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. Symantec 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. Symantec recommends the use of PCA Roots as root certificates.

1.5 Policy Administration

1.5.1 Organization Administering the Document

Symantec Corporation
350 Ellis Street
Mountain View CA 94043
USA

1.5.2 Contact Person

PKI Policy Manager,
Symantec Trust Network Policy Management Authority
c/o Symantec Corporation
350 Ellis Street
Mountain View, CA 94043 USA
+1 (650) 527-8000 (voice)
+1 (650) 527-8050 (fax)
practices@symantec.com

Contact information for the CA/Browser Forum is available here:
<https://cabforum.org/leadership/>

1.5.3 Person Determining CP Suitability for the Policy

The STN Policy Management Authority (PMA) determines the suitability and applicability of this CPS.

1.5.4 CPS Approval Procedure

Approval of this CPS and subsequent amendments shall be made by the PMA. Amendments shall either be in the form of a document containing an amended form of the CPS or an update notice. Amended versions or updates shall be linked to the Practices Updates and Notices section of the Symantec Repository located at:

www.symantec.com/about/profile/policies/repository.jsp. Updates supersede any designated or conflicting provisions of the referenced version of the CPS. The PMA shall determine whether changes to the CPS require a change in the Certificate policy object identifiers of the Certificate policies corresponding to each Class of Certificate.

1.6 Definitions and Acronyms

See Appendix A for a table of acronyms and definitions.

2. Publication and Repository Responsibilities

2.1 Repositories

Symantec is responsible for the repository functions for its own CAs and the CAs of its Enterprise Customers (Managed PKI customers). Symantec publishes Certificates it issues to end-user Subscribers in the repository in accordance with CPS § 2.2.

Upon revocation of an end-user Subscriber's Certificate, Symantec publishes notice of such revocation in the repository. Symantec issues CRLs for its own CAs and the CAs of Service Centers and Enterprise Customers within its Sub-domain, pursuant to the provisions of this CPS. In addition, Enterprise Customers who have contracted for Online Certificate Status Protocol ("OCSP") services, Symantec provides OCSP services pursuant to the provisions of this CPS.

2.2 Publication of Certificate Information

Symantec maintains a web-based repository that permits Relying Parties to make online inquiries regarding revocation and other Certificate status information. Symantec provides Relying Parties with information on how to find the appropriate repository to check Certificate status and, if OCSP (Online Certificate Status Protocol) is available, how to find the right OCSP responder.

Symantec publishes the Certificates it issues on behalf of its own CAs, and the CAs of Client Service Centers in their Sub-domain. Upon revocation of an end-user Subscriber's Certificate, Symantec shall publish notice of such revocation in the repository. In addition, Symantec issues Certificate Revocation Lists (CRLs) and, if available, provide OCSP services (Online Certificate Status Protocol) for its own CAs and the CAs of Service Centers within its Sub-domain.

Symantec will at all times publish a current version of:

- The STN CP
- This STN CPS,

- Subscriber Agreements,
- Relying Party Agreements

Symantec is responsible for the repository function for:

- Symantec’s Public Primary Certification Authorities (PCAs) and Symantec Infrastructure/Administrative CAs supporting the STN, and
- Symantec’s CAs and Enterprise Customers’ CAs that issue Certificates within Symantec’s Sub-domain of the STN.

Symantec publishes certain CA information in the repository section of Symantec’s web site at www.symantec.com/about/profile/policies/repository.jsp as described below.

Symantec publishes the STN CP, this CPS, Subscriber Agreements, and Relying Party Agreements in the repository section of Symantec’s web site.

Symantec publishes Certificates in accordance with Table 3 below.

Certificate Type	Publication Requirements
STN PCA and STN Issuing Root CA Certificates	Available to Relying Parties through inclusion in current browser software and as part of a Certificate Chain that can be obtained with the end-user Subscriber Certificate through the query functions described below.
STN Issuing CA Certificates	Available to Relying Parties as part of a Certificate Chain that can be obtained with the end-user Subscriber Certificate through the query functions described below.
Certificate of the STN CA supporting Managed PKI Lite Certificates and CA Certificates of Managed PKI Customers	Available through query of the LDAP directory server at directory.verisign.com .
Symantec OCSP Responder Certificates	Available through query of the LDAP directory server at directory.verisign.com .
End-User Subscriber Certificates with exceptions for certain Class 3 Certificates depending on usage.	Optionally published and available to Relying Parties through query functions in the Symantec Repository at https://pki-search.symauth.com/pki-search/index.html and query of the LDAP directory server at directory.verisign.com , except for Class 3 SSL and Code Signing Certificates.
End-User Subscriber Certificates issued through Managed PKI Customers	Made available through the query functions listed above, although at the discretion of the Managed PKI Customer, the Certificate may be accessible only via a search using the Certificate’s serial number.
End-User Subscriber Certificates issued by Symantec Class 3 Organizational VIP Device CA	Not available through public query

Table 3 – Certificate Publication Requirements

2.3 Time or Frequency of Publication

Updates to this CPS are published in accordance with Section 9.12. Updates to Subscriber Agreements and Relying Party Agreements are published as necessary. Certificates are published upon issuance. Certificate status information is published in accordance with the provisions of this CPS.

2.4 Access Controls on Repositories

Information published in the repository portion of the Symantec web site is publicly-accessible information. Read only access to such information is unrestricted. Symantec requires persons to agree to a Relying Party Agreement or CRL Usage Agreement as a condition to accessing Certificates, Certificate status information, or CRLs. Symantec has implemented logical and

physical security measures to prevent unauthorized persons from adding, deleting, or modifying repository entries. Symantec and Affiliates make their repositories publicly available in a read-only manner, and specifically at the link stated in section 1.5.4 or specified in an Affiliate's CPS.

3. Identification and Authentication

3.1 Naming

Unless where indicated otherwise in this STN CP, this CPS or the content of the digital certificate, names appearing in Certificates issued under STN are authenticated.

3.1.1 Type of Names

While the STN is currently owned by Symantec Corporation, legacy certificates have been issued in the name of the former owner. Any legacy certificate that indicates the Organization (O) as "VeriSign, Inc." and Organizational Unit (OU) as "VeriSign Trust Network" shall mean Symantec Corporation and the Symantec Trust Network, respectively. Any legacy certificate that indicates the Organization (O) as "VeriSign Japan K.K." shall mean Symantec Japan Inc. Any legacy certificate that indicates the Organization (O) as "VeriSign Australia" shall mean Symantec Corporation.

STN CA Certificates contain an X.501 Distinguished Name (DN) in the Issuer and Subject fields. STN CA Distinguished Names consist of the components specified in Table 4 below.

Attribute	Value
Country (C) =	2-letter ISO country code or not used.
Organization (O) =	"Symantec Corporation", or <organization name> ⁸
Organizational Unit (OU) =	Symantec CA Certificates may contain multiple OU attributes. Such attributes may contain one or more of the following: <ul style="list-style-type: none"> • CA Name • Symantec Trust Network • A statement referencing the applicable Relying Party Agreement governing terms of use of the Certificate • A copyright notice. • Text to describe the type of Certificate.
State or Province (S) =	Not used.
Locality (L) =	Not used except for the Symantec Commercial Software Publishers CA, which uses "Internet."
Common Name (CN) =	This attribute includes the CA Name (if the CA Name is not specified in an OU attribute) or is not used.

Table 4 – Distinguished Name Attributes in CA Certificates

End-user Subscriber Certificates contain an X.501 DN in the Subject name field and consist of the components specified in Table 5 below.

Attribute	Value
Country (C) =	2 letter ISO country code or not used.
Organization (O) =	The Organization attribute is used as follows:

⁸ For a CA dedicated to a customer organization, the (o=) component shall be the legal name of the organization.

Attribute	Value
	<ul style="list-style-type: none"> • “Symantec Corporation” for OCSP Responder and optionally for individual Certificates⁹ that do not have an organization affiliation. • Subscriber organizational name for web server Certificates and individual Certificates that have an organization affiliation. • Not used for Basic DV Certificates
Organizational Unit (OU) =	<p>Symantec end-user Subscriber Certificates may contain multiple OU attributes. Such attributes may contain one or more of the following:</p> <ul style="list-style-type: none"> • Subscriber organizational unit (for organizational Certificates and individual Certificates that have an organization affiliation) • Symantec Trust Network • A statement referencing the applicable Relying Party Agreement governing terms of use of the Certificate • A copyright notice • “Authenticated by Symantec¹⁰” and “Member, Symantec Trust Network” in Certificates whose applications were authenticated by Symantec • “Domain Validated”, where appropriate • Text to describe the type of Certificate. ¹¹ • “No organization affiliation” (for code signing certificates issued to individuals)
State or Province (S) =	Indicates the Subscriber’s State or Province (State is not a required field in certificates issued to individuals).
Locality (L) =	Indicates the Subscriber’s Locality (Locality is not a required field in certificates issued to individuals).
Common Name (CN) =	<p>This attribute includes:</p> <ul style="list-style-type: none"> • The OCSP Responder Name (for OCSP Responder Certificates) • Domain name or public IP address (for web server Certificates) • Organization name (for code/object signing Certificates) • Person’s name (for individual Certificates or code-signing certificates issued to individuals). • “Persona Not Validated” for Class 1 individual Certificates ¹² • Class 1 Individual Certificates may omit this attribute
E-Mail Address (E) =	<p>E-mail address may appear in Class 1 individual Certificates and MPKI Subscriber Certificates.</p> <p>Optional e-mail address for Class 3 organizational e-mail signing Certificates</p>

Table 5 – Distinguished Name Attributes in End User Subscriber Certificates

The Common Name (CN=) component of the Subject distinguished name of end-user Subscriber Certificates is authenticated in the case of Class 2-3 Certificates. The Common Name is either omitted or may contain “Persona Not Validated” for Class 1 Certificates.

- The authenticated Common Name value included in the Subject DN of Organizational Certificates is a domain name) or the legal name of the organization or unit within the organization.

⁹ In the case of the Symantec Corporation organization, under certain approved cases for Class 2 certificates, the O value may additionally include a suffix containing internal information used for internal purposes. Symantec attests that the organization name in the format “Symantec Corporation – “ <suffix> (e.g., Symantec Corporation – Build 5315) shall accurately represent the legal entity Symantec Corporation.

¹⁰ An affiliate or customer that contracts to perform the RA services shall indicate the name of the organization performing the Subscriber authentication.

¹¹ Under certain approved cases, Class 2 certificates may be issued for internal purposes. Such certificates shall contain the Symantec organization name in the DN and an OU value reflecting the inherent lack of trust in the certificate for usage other than the intended internal purpose.

¹² Existing Symantec-approved “Class1 Managed PKI” customers as of March 20, 2014 may issue Class 1 Individual Certificates with a pseudonym name in the common name field instead as long as “Persona Not Validated” is included in an OU field.

- The authenticated Common Name value included in the Subject DN of a Class 3 Organizational ASB Certificate, however, is the generally accepted personal name of the organizational representative authorized to use the organization's private key, and the organization (O=) component is the legal name of the organization.
- The Common Name value included in the Subject DN of individual Certificates represents the individual's generally accepted personal name.
- For all web server certificates, the subjectAltName extension is populated with the authenticated value in the Common Name field of the subject DN (domain name or public IPAddress). The subjectAltName extension may contain additional domain names or public IPAddresses which will be authenticated in the same way as the Common Name value.

EV SSL certificate content and profile requirements are discussed in Appendix B3 to this CPS.

Basic DV certificates contain an X.501 distinguished name in the Subject field which consists of the components specified in the table below.

Attribute	Value
Country (C) =	Not used
State or Province (P) =	Not used
Locality (L) =	Not used
Organization (O) =	Not used
Organizational Unit (OU) =	Basic DV certificates contain the following OU attributes: <ul style="list-style-type: none"> • Symantec Trust Network • "Domain Validated"
Common Name (CN) =	Registered domain name
E-Mail (E) =	Not used

Table 5A – Certificate Subject Details for Basic DV Distinguished Name Attributes in End User Subscriber Certificates

3.1.1.1 CABF Naming Requirements

EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA / Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively.

3.1.2 Need for Names to be Meaningful

Class 2 and 3 end-user Subscriber Certificates contain names with commonly understood semantics permitting the determination of the identity of the individual or organization that is the Subject of the Certificate.

STN CA certificates contain names with commonly understood semantics permitting the determination of the identity of the CA that is the Subject of the Certificate.

3.1.3 Anonymity or Pseudonymity of Subscribers

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

3.1.4 Rules for Interpreting Various Name Forms

No stipulation

3.1.5 Uniqueness of Names

Symantec ensures that Subject Distinguished Name (DN) of the Subscriber is unique within the domain of a specific CA through automated components of the Subscriber enrollment process. It is possible for a Subscriber to have two or more certificates with the same Subject DN.

3.1.6 Recognition, Authentication, and Role of Trademarks

Certificate Applicants are prohibited from using names in their Certificate Applications that infringe upon the Intellectual Property Rights of others. Symantec, 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. Symantec is entitled, without liability to any Certificate Applicant, to reject or suspend any Certificate Application because of such dispute.

3.2 Initial Identity Validation

3.2.1 Method to Prove Possession of Private Key

The certificate applicant must demonstrate that it 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, another cryptographically equivalent demonstration, or another Symantec-approved method. This requirement does not apply where a key pair is generated by a CA on behalf of a Subscriber, for example where pre-generated keys are placed on smart cards.

3.2.2 Authentication of Organization identity

Whenever a certificate contains an organization name, the identity of the organization and other enrollment information provided by Certificate Applicants (except for Non-verified Subscriber Information) is confirmed in accordance with the procedures set forth in Symantec's documented Validation Procedures.

At a minimum Symantec shall:

- Determine that the organization exists by using at least one third party identity proofing service or database, or alternatively, organizational documentation issued by or filed with the applicable government agency or competent authority that confirms the existence of the organization,
- Confirm 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.

When a certificate includes the name of an individual as an authorized representative of the Organization, the employment of that individual and his/her authority to act on behalf of the Organization shall also be confirmed.

Where a domain name or e-mail address is included in the certificate Symantec authenticates the Organization's right to use that domain name either as a fully qualified Domain name or an e-mail

domain. For Organization Validated (OV) and Extended Validation (EV) Certificates domain validation is completed in all cases along with Organizational validation.

Additional checks necessary to satisfy United States export regulations and licenses issued by the United States Department of Commerce Bureau of Industry and Science (“BIS”) are performed by Symantec and Affiliates when required.

Additional procedures are performed for specific types of Certificates as described in Table 6 below.

Certificate Type	Additional Procedures
Extended Validation (EV) Certificates	Symantec’s procedures for issuing EV SSL Certificates are described in Appendix B1 to this CPS. Symantec’s procedures for issuing EV Code-Signing Certificates are described in Appendix C to this CPS.
Organization Validated (OV) and Domain Validated (DV) Certificates	Symantec’s procedures for issuing OV and DV certificates, distinguished throughout the CPS as ‘CABF requirements for OV and DV certificates’ are described in Appendix D to this CPS.
OFX Server IDs	Symantec verifies that the Organization is a bank or financial institution, or classified under one of the following SIC codes: <ul style="list-style-type: none"> • 60xx Depository institutions • 61xx Non-depository credit institutions • 62xx Security, commodity brokers, and services • 63xx Insurance carriers • 64xx Insurance agents, brokers, and services • 67xx Holding and other investment offices • 7372 Prepackaged software • 7373 Computer integrated systems design • 7374 Data processing and preparation • 3661 Telephone and telegraph apparatus • 8721 Accounting, auditing, and bookkeeping.
Hardware Protected SSL Certificate and Hardware Protected EV Code-Signing Certificate	Symantec verifies that the key pair was generated on FIPS 140 certified hardware
Managed PKI for Intranet SSL Certificate	Symantec verifies that the host name or IP address assigned to a Device is not accessible from the Internet (publicly facing), and is owned by the Certificate Subscriber.* * The use of Certificates with a subjectAlternativeName extension or Subject commonName field containing a Reserved IP Address or Internal Name has been deprecated by the CA / Browser Forum and will be eliminated by October 2016. Any such certificate still being issued after the effective date must have an expiry date of 1 November 2015 or earlier. Previously issued certificates with expiry dates after 1 October 2016 will be revoked effective 1 October 2016.
Authenticated Content Signing (ACS) Certificate	Before Symantec digitally signs any content using ACS it authenticates that the content is the original content signed by the Organization using its Code Signing Certificate.
Class 3 organizational e-mail signing Certificates	Symantec authenticates the Organization’s ownership of e-mail domain name.

Table 6 – Specific Authentication Procedures

3.2.2.1 CABF Verification Requirements for Organization Applicants

EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA / Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively.

3.2.2.2 Mozilla Verification Requirements for Organization Applicants

For requests for internationalized domain names (IDNs) in Certificates, Symantec performs domain name owner verification to detect cases of homographic spoofing of IDNs. Symantec employs an automated process that searches various 'whois' services to find the owner of a particular domain. A search failure result is flagged for manual review and the RA may manually reject the Certificate Request. Additionally, the RA rejects any domain name that visually appears to be made up of multiple scripts within one hostname label.

Symantec actively participates in the CA/Browser Forum providing input to the standards for IDN Certificates and conforms to standards ratified by that body.

3.2.2.3 Domain Validation

Symantec uses the following methods of vetting a domain name, with option 1 being the primary method:

1. Confirm the Applicant as the Domain Name Registrant directly with the Domain Name Registrar by performing a whois look up.
2. Communicate directly with the Domain Name Registrant using an address, email, or telephone number provided by the Domain Name Registrar;
3. Rely upon a Domain Authorization Document;
4. Communicate directly with the Domain Name Registrant using the contact information listed in the WHOIS record's "registrant", "technical", or "administrative" field;
5. Communicate with the Domain's administrator using an email address created by pre-pending 'admin', 'administrator', 'webmaster', 'hostmaster', or 'postmaster' in the local part, followed by the at-sign ("@"), followed by the Domain Name, which may be formed by pruning zero or more components from the requested FQDN;
6. Having the Applicant demonstrate practical control over the FQDN by making an agreed-upon change to information found on an online Web page identified by a uniform resource identifier containing the FQDN.

3.2.3 Authentication of Individual Identity

Authentication of individual identity differs according to the Class of Certificate. The minimum authentication standard for each class of STN certificate is explained in Table 7 below.

Certificate Class	Authentication of Identity
Class 1	No identity authentication. Email address validation – Limited confirmation that the certificate subscriber has access to the email address. Symantec performs a challenge-response type of procedure in which Symantec sends email to the email address to be included in the certificate, containing unpredictable information such as a randomly generated PIN/Password unique to the owner of the email address. The owner of the email address (the subscriber of the certificate) demonstrates control over the email address by using the information within the email, to then proceed with accessing a portal with the unique information sent in the email, to download and install the certificate.

Certificate Class	Authentication of Identity
Class 2	Authenticate identity by: <ul style="list-style-type: none"> ▪ Manual check performed by the enterprise administrator customer for each subscriber requesting a certificate, “in which the subscriber <u>receives the certificate</u> via an email sent to the address provided during enrollment” or ▪ Passcode-based authentication where a randomly-generated passcode is delivered out-of-band by the enterprise administrator customer to the subscriber entitled to enroll for the certificate, and the subscriber provides this passcode at enrollment time or ▪ Comparing information provided by the subscriber to information contained in business records or databases (customer directories such as Active Directory or LDAP).
Class 3	<p>The authentication of Class 3 individual Certificates is based on the personal (physical) presence of the Certificate Applicant before an agent of the CA or RA, or before a notary public or other official with comparable authority within the Certificate Applicant’s jurisdiction. The agent, notary or other official shall check the identity of the Certificate Applicant against a well-recognized form of government-issued photographic identification, such as a passport or driver’s license and one other identification credential.</p> <p>The authentication of Class 3 Administrator certificates is based on authentication of the organization and a confirmation from the organization of the identity and authorization of the person to act as Administrator.</p> <p>Symantec may also have occasion to approve Certificate Applications for their own Administrators. Administrators are “Trusted Persons” within an organization. In this case, authentication of their Certificate Applications shall be based on confirmation of their identity in connection with their employment or retention as an independent contractor and background checking procedures.¹³</p> <p>Email address validation – For Class 3 Organizational Email certificates, Symantec verifies that the subscriber owns the base domain using methods 1 or 3 from Section 3.2.2.4, and allows the subscriber to put in the certificate any email address from that verified domain.</p>
Shared Service Provider (SSP) Certificates for Non-Federal entities	<p>The identity of the Certificate Subscriber is verified substantially in compliance with the requirements of the X.509 Certificate Policy for the Federal Bridge Certification Authority (FBCA) and the Symantec Non-Federal Shared Service Provider (SSP) Certification Practice Statement.</p>

Table 7. Authentication of individual identity

3.2.4 Non-Verified Subscriber information

Non-verified subscriber information includes:

¹³ Symantec may approve Administrator Certificates to be associated with a non-human recipient such as a device, or a server. Authentication of a Class 3 Administrator Certificate Application for a non-human recipient shall include:

- Authentication of the existence and identity of the service named as the Administrator in the Certificate Application
- Authentication that the service has been securely implemented in a manner consistent with it performing an Administrative function
- Confirmation of the identity and authorization of the person enrolling for the Administrator certificate for the service named as Administrator in the Certificate Application.

- Organization Unit (OU) with certain exceptions¹⁴
- Subscriber's name in Class 1 certificates
- Any other information designated as non-verified in the certificate.

3.2.5 Validation of Authority

Whenever an individual's name is associated with an Organization name in a certificate in such a way to indicate the individual's affiliation or authorization to act on behalf of the Organization the Symantec or a RA:

- determines that the Organization exists by using at least one third party identity proofing service or database, or alternatively, organizational documentation issued by or filed with the applicable government that confirms the existence of the organization, and
- Uses information contained in the business records or databases of business information (employee or customer directories) of an RA approving certificates to its own affiliated individuals or confirms by telephone, confirmatory postal mail, or comparable procedure to the organization, the employment with the Organization of the individual submitting the Certificate Application and, when appropriate, his/her authority to act on behalf of the Organization.

3.2.6 Criteria for Interoperation

- No stipulation.

3.3 Identification and Authentication for Re-key Requests

Prior to the expiration of an existing Subscriber's Certificate, it is necessary for the Subscriber to obtain a new certificate to maintain continuity of Certificate usage. Symantec generally requires that the Subscriber generate a new key pair to replace the expiring key pair (technically defined as "rekey") However, in certain cases (i.e., for web server certificates) Subscribers may request a new certificate for an existing key pair (technically defined as "renewal").

Generally speaking, both "Rekey" and "Renewal" are commonly described as "Certificate Renewal", focusing on the fact that the old Certificate is being replaced with a new Certificate and not emphasizing whether or not a new key pair is generated. For all Classes and Types of STN Certificates, except for Class 3 Server Certificates, this distinction is not important as a new key pair is always generated as part of Symantec's end-user Subscriber Certificate replacement process. However, for Class 3 Server Certificates, because the Subscriber key pair is generated on the web server and most web server key generation tools permit the creation of a new Certificate Request for an existing key pair, there is a distinction between "rekey" and "renewal."

3.3.1 Identification and Authentication for Routine Re-key

Re-key procedures ensure that the person or organization seeking to rekey an end-user Subscriber Certificate is in fact the Subscriber of the Certificate.

One acceptable procedure is through the use of a Challenge Phrase (or the equivalent thereof), or proof of possession of the private key. Subscribers choose and submit with their enrollment information a Challenge Phrase. Upon renewal of a Certificate, if a Subscriber correctly submits the Subscriber's Challenge Phrase (or the equivalent thereof) with the Subscriber's reenrollment information, and the enrollment information (including Corporate and Technical contact information) has not changed, a renewal Certificate is automatically issued. As an alternative to using a challenge phrase (or equivalent) Symantec may send an e-mail message to the e-mail

¹⁴ Domain-validated and organization-validated certificates that attest compliance with CA/Browser Forum guidelines may contain Organizational Unit values that are validated.

address associated with the verified corporate contact for the certificate being renewed, requesting confirmation of the Certificate renewal order and authorization to issue the Certificate. Upon receipt of confirmation authorizing issuance of the Certificate, Symantec will issue the Certificate if the enrollment information (including Corporate and Technical contact information¹⁵) has not changed.

After rekeying or renewal in this fashion, and on at least alternative instances of subsequent rekeying or renewal thereafter, Symantec or the RA reconfirms the identity of the Subscriber in accordance with the identification and authentication requirements of an original Certificate Application.¹⁶

In particular, for retail Class 3 Organizational SSL Certificates, Symantec re-authenticates the Organization name and domain name included in the certificate at intervals described in section 6.3.2. In circumstances where:

- The challenge phrase is correctly used for the subsequent renewal certificate, or a confirmatory response is obtained to an e-mail to the corporate contact and:
- The certificate Distinguished Name has not been changed, and
- The Corporate and Technical Contact information remains unchanged from that which was previously verified,

Symantec 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.”

Rekey after 30-days from expiration of the Certificate are re-authenticated as an original Certificate Application and are not automatically issued.

3.3.2 Identification and Authentication for Re-key After Revocation

Re-key/renewal after revocation is not permitted if the revocation occurred because:

- the Certificate (other than a Class 1 Certificate) was issued to a person other than the one named as the Subject of the Certificate, or
- the Certificate (other than a Class 1 Certificate) was issued without the authorization of the person or entity named as the Subject of such Certificate, or
- the entity approving the Subscriber’s Certificate Application discovers or has reason to believe that a material fact in the Certificate Application is false. or
- For any other reason deemed necessary by Symantec to protect the STN

Subject to the foregoing paragraph, renewal of an Organizational or CA Certificate following revocation of the Certificate is permissible as long as renewal procedures ensure that the Organization or CA seeking renewal is in fact the Subscriber of the Certificate. Renewed Organizational Certificates shall contain the same Subject DN as the Subject DN of the Organizational Certificate being renewed.

Renewal of an individual Certificate following revocation must ensure that the person seeking renewal is, in fact, the Subscriber. One acceptable procedure is the use of a Challenge Phrase (or the equivalent thereof). Other than this procedure or another Symantec-approved procedure, the requirements for the identification and authentication of an original Certificate Application shall be used for renewing a Certificate following revocation.

¹⁵ If contact information has changed via an approved formal contact change procedure the certificate shall still qualify for automated renewal.

¹⁶ The authentication of a request to rekey/renew a Class 3 Organizational ASB Certificate, however, requires the use of a Challenge Phrase as well as the same identification and authentication as for the original Certificate Application.

3.4 Identification and Authentication for Revocation Request

Prior to the revocation of a Certificate, Symantec verifies that the revocation has been requested by the Certificate's Subscriber, the entity that approved the Certificate Application.

Acceptable procedures for authenticating the revocation requests of a Subscriber include:

- 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.)
- Receiving a message from the Subscriber that requests revocation and contains a digital signature verifiable with reference to the Certificate to be revoked,
- 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.

Symantec Administrators are entitled to request the revocation of end-user Subscriber Certificates within Symantec's sub-domain. Symantec authenticates the identity of Administrators via access control using SSL and client authentication before permitting them to perform revocation functions, or another STN-approved procedure.

RAs using an Automated Administration Software Module may submit bulk revocation requests to Symantec. 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 Symantec 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:

- Any individual who is the subject of the certificate,
- Any authorized representative of an Organization or entity,
- Any authorized representative of a CA,
- Any authorized representative of an RA.

4.1.2 Enrollment 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 enrollment process consisting of:

- completing a Certificate Application and providing true and correct information,
- generating, or arranging to have generated, a key pair,
- delivering his, her, or its public key, directly or through an RA, to Symantec
- demonstrating possession and/or exclusive control of the private key corresponding to the public key delivered to Symantec.

4.1.2.2 CABF Certificate Application Requirements

EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA / Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively.

4.1.2.3 CA and RA Certificates

Subscribers of CA and RA Certificates enter into a contract with Symantec. CA and RA Applicants 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 a CA or RA key pair, the applicant shall cooperate with Symantec to determine the appropriate distinguished name and the content of the Certificates to be issued by the applicant.¹⁷

4.2 Certificate Application Processing

4.2.1 Performing Identification and Authentication Functions

Symantec or an RA shall perform identification and authentication of all required Subscriber information in terms of Section 3.2.

4.2.2 Approval or Rejection of Certificate Applications

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

- Successful identification and authentication of all required Subscriber information in terms of Section 3.2
- Payment has been received

Symantec or an RA will reject a certificate application if:

- Identification and authentication of all required Subscriber information in terms of Section 3.2 cannot be completed, or
- The Subscriber fails to furnish supporting documentation upon request, or
- The Subscriber fails to respond to notices within a specified time, or
- Payment has not been received, or
- The RA believes that issuing a certificate to the Subscriber may bring the STN into disrepute.

4.2.3 Time to Process Certificate Applications

Symantec begins processing certificate applications within a reasonable time of receipt. There is no time stipulation to complete the processing of an application unless otherwise indicated in the relevant Subscriber Agreement, CPS or other Agreement between STN participants. A certificate application remains active until rejected.

4.2.4 Certificate Authority Authorization (CAA)

As of October 1, 2015, Symantec will check Certificate Authority Authorization (CAA) records as part of its public SSL certificate authentication and verification processes. Prior to this date

¹⁷ On an exceptional basis there may be instances where subscriber certificates will be issued directly from the root. This exception shall only be used in the event of a subscriber certificate with a key pair size and length that is 2048 bit or less

Symantec may not check CAA records for all public SSL certificate orders. 'Public SSL Certificates' are those that are chain up to our publicly available root certificates and which meet CA/Browser Forum Baseline and Extended Validation Requirements.

4.3 Certificate Issuance

4.3.1 CA Actions during Certificate Issuance

A Certificate is created and issued following the approval of a Certificate Application by Symantec or following receipt of an RA's request to issue the Certificate. Symantec creates and issues to a Certificate Applicant a Certificate based on the information in a Certificate Application following approval of such Certificate Application.

4.3.2 Notifications to Subscriber by the CA of Issuance of Certificate

Symantec shall, either directly or through an RA, notify Subscribers 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.

4.3.3 CABF Requirement for Certificate Issuance by a Root CA

EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA / Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively.

4.4 Certificate Acceptance

4.4.1 Conduct Constituting Certificate Acceptance

The following conduct constitutes certificate acceptance:

- Downloading a Certificate or installing a Certificate from a message attaching it constitutes the Subscriber's acceptance of 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

Symantec publishes the Certificates it issues in a publicly accessible repository.

4.4.3 Notification of Certificate Issuance by the CA to Other Entities

RAs may receive notification of the issuance of certificates they approve.

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 shall only be permitted once the Subscriber has agreed to the Subscriber Agreement and accepted the certificate. The certificate shall be used lawfully in accordance with Symantec's Subscriber Agreement the terms of the STN CP and this CPS. Certificate use must be consistent with the *KeyUsage* field

extensions included in the certificate (e.g., if Digital Signature is not enabled then the certificate must not be used for signing).

Subscribers shall protect their private keys from unauthorized use and shall discontinue use of the private key following expiration or revocation of the certificate. 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 shall assent to the terms of the applicable Relying Party Agreement as a condition of relying on the certificate.

Reliance on a certificate must be reasonable under the circumstances. If the circumstances indicate a need for additional assurances, the Relying Party must obtain such assurances for such reliance to be deemed reasonable.

Before any act of reliance, Relying Parties shall independently assess:

- the appropriateness of the use of a Certificate for any given purpose and determine that the Certificate will, in fact, be used for an appropriate purpose that is not prohibited or otherwise restricted by this CPS. Symantec is not responsible for assessing the appropriateness of the use of a Certificate.
- That the certificate is being used in accordance with the *KeyUsage* field extensions included in the certificate (e.g., if Digital Signature is not enabled then the certificate may not be relied upon for validating a Subscriber's signature).
- The status of the certificate and all the CAs in the chain that issued the certificate. If any of the Certificates in the Certificate Chain have been revoked, the Relying Party is solely responsible to investigate whether reliance on a digital signature performed by an end-user Subscriber Certificate prior to revocation of a Certificate in the Certificate chain is reasonable. Any such reliance is made solely at the risk of the Relying party.

Assuming that the use of the Certificate is appropriate, Relying Parties shall utilize the appropriate software and/or hardware to perform digital signature verification or other cryptographic operations they wish to perform, as a condition of relying on Certificates in connection with each such operation. Such operations include identifying a Certificate Chain and verifying the digital signatures on all Certificates in the Certificate Chain.

4.6 Certificate Renewal

Certificate renewal is the issuance of a new certificate to the subscriber without changing the public key or any other information in the certificate. Certificate renewal is supported for Class 3 certificates where the key pair is generated on a web server as most web server key generation tools permit the creation of a new Certificate Request for an existing key pair.

4.6.1 Circumstances for Certificate Renewal

Prior to the expiration of an existing Subscriber's Certificate, it is necessary for the Subscriber to renew a new certificate to maintain continuity of Certificate usage. A certificate may also be renewed after expiration.

4.6.2 Who May Request Renewal

Only the subscriber for an individual certificate or an authorized representative for an Organizational certificate may request certificate renewal.

4.6.3 Processing Certificate Renewal Requests

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

One acceptable procedure is through the use of a Challenge Phrase (or the equivalent thereof), or proof of possession of the private key. Subscribers choose and submit with their enrollment information 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 reenrollment information, and the enrollment information (including Corporate and Technical contact information¹⁸) has not changed, a renewal Certificate is automatically issued. As an alternative to using a challenge phrase (or equivalent) Symantec may send an e-mail message to the e-mail address associated with the verified corporate contact for the certificate being renewed, requesting confirmation of the Certificate renewal order and authorization to issue the Certificate. Upon receipt of confirmation authorizing issuance of the Certificate, Symantec will issue the Certificate if the enrollment information (including Corporate and Technical contact information¹⁹) has not changed.

After renewal in this fashion, and on at least alternative instances of subsequent renewal thereafter, Symantec 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.

In particular, for retail Class 3 Organizational SSL Certificates, Symantec re-authenticates the Organization name and domain name included in the certificate at intervals described in section 6.3.2.

In circumstances where:

- The challenge phrase is correctly used for the subsequent renewal certificate, or a confirmatory response is obtained to an e-mail to the corporate contact, and:
- The certificate Distinguished Name has not been changed, and
- The Corporate and Technical Contact information remains unchanged from that which was previously verified,

Symantec 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 Symantec-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

Notification of issuance of certificate renewal to the Subscriber 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

¹⁸ If contact information has changed via an approved formal contact change procedure the certificate shall still qualify for automated renewal.

¹⁹ If contact information has changed via an approved formal contact change procedure the certificate shall still qualify for automated renewal.

4.6.6 Publication of the Renewal Certificate by the CA

The renewed certificate is published in Symantec's publicly accessible repository.

4.6.7 Notification of Certificate Issuance by the CA to Other Entities

RAs may receive notification of the issuance of certificates they approve.

4.7 Certificate Re-Key

Certificate rekey is the application for the issuance of a new certificate that certifies the new public key. Certificate rekey is supported for all certificate Classes.

4.7.1 Circumstances for Certificate Re-Key

Prior to the expiration of an existing Subscriber's Certificate, it is necessary for the Subscriber to re-key the certificate to maintain continuity of Certificate usage. A certificate may also be re-keyed after expiration.

4.7.2 Who May Request Certification of a New Public Key

Only the subscriber for an individual certificate or an authorized representative for an Organizational certificate may request certificate renewal

4.7.3 Processing Certificate Re-Keying Requests

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

One acceptable procedure is through the use of a Challenge Phrase (or the equivalent thereof), or proof of possession of the private key. Subscribers choose and submit with their enrollment information 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 reenrollment information, and the enrollment information (including contact information²⁰) has not changed, a renewal Certificate is automatically issued. Subject to the provisions of Section 3.3.1, after re-keying in this fashion, and on at least alternative instances of subsequent re-keying thereafter, Symantec 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.

Other than this procedure or another Symantec-approved procedure, the requirements for the authentication of an original Certificate Application shall be used for re-keying an end-user Subscriber Certificate.

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

²⁰ If contact information has changed via an approved formal contact change procedure the certificate shall still qualify for automated renewal.

4.7.6 Publication of the Re-Keyed Certificate by the CA

The re-keyed certificate is published in Symantec's publicly accessible repository.

4.7.7 Notification of Certificate Issuance by the CA to Other Entities

RAs may receive notification of the issuance of certificates they approve.

4.8 Certificate Modification

4.8.1 Circumstances for Certificate Modification

Certificate modification refers to the application for the issuance of a new certificate due to changes in the information in an existing certificate (other than the subscriber's public key).

Certificate modification is considered a Certificate Application in terms of Section 4.1.

4.8.2 Who May Request Certificate Modification

See Section 4.1.1.

4.8.3 Processing Certificate Modification Requests

Symantec or an RA shall perform identification and authentication of all required 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

4.9.1 Circumstances for Revocation

Only in the circumstances listed below, will an end-user Subscriber certificate be revoked by Symantec (or by the Subscriber) and published on a CRL. Upon request from a subscriber who can no longer use (or no longer wishes to use) a certificate for a reason other than one mentioned below, Symantec will flag the certificate as inactive in its database but will not publish the certificate on a CRL.

An end-user Subscriber Certificate is revoked if:

- Symantec, a Customer, or a Subscriber has reason to believe or strongly suspects that there has been a Compromise of a Subscriber's private key,
- Symantec or a Customer has reason to believe that the Subscriber has materially breached a material obligation, representation, or warranty under the applicable Subscriber Agreement,
- The Subscriber Agreement with the Subscriber has been terminated,
- The affiliation between an Enterprise Customer with a Subscriber is terminated or has otherwise ended,
- The affiliation between an organization that is a Subscriber of a Class 3 Organizational ASB Certificate and the organizational representative controlling the Subscriber's private key is terminated or has otherwise ended,
- Symantec or a Customer has reason to believe that the Certificate was issued in a manner not materially in accordance with the procedures required by the applicable CPS, the Certificate (other than a Class 1 Certificate) was issued to a person other than the one named as the Subject of the Certificate, or the Certificate (other than a Class 1 Certificate) was issued without the authorization of the person named as the Subject of such Certificate,
- Symantec or a Customer has reason to believe that a material fact in the Certificate Application is false,
- Symantec or a Customer determines that a material prerequisite to Certificate Issuance was neither satisfied nor waived,
- In the case of Class 3 organizational Certificates, the Subscriber's organization name changes,
- The information within the Certificate, other than Non-verified Subscriber Information, is incorrect or has changed,
- The Subscriber identity has not been successfully re-verified in accordance with section 6.3.2,
- In the case of code signing certificates,
 - An Application Software Supplier requests the CA revoke and an investigation indicates that the certificate is being used to sign malware or other unwanted software,
 - A report is submitted to the STN participant indicating that the certificate was used to sign malware
- The Subscriber has not submitted payment when due, or
- The continued use of that certificate is harmful to the STN.

When considering whether certificate usage is harmful to the STN, Symantec considers, among other things, the following:

- The nature and number of complaints received
- The identity of the complainant(s)
- Relevant legislation in force
- Responses to the alleged harmful use from the Subscriber

When considering whether the use of a Code Signing Certificate is harmful to the STN, Symantec additionally considers, among other things, the following:

- The name of the code being signed
- The behavior of the code
- Methods of distributing the code
- Disclosures made to recipients of the code
- Any additional allegations made about the code
- Effective February 1, 2017, whether the Code Signing Certificate satisfies any of the Reasons for Revoking a Subscriber Certificate in section 13.1.5 of the Minimum Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates as adopted by Microsoft

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

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

4.9.1.1 CABF Requirements for Reasons for Revocation

EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA / Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively.

4.9.2 Who Can Request Revocation

Individual Subscribers can request the revocation of their own individual Certificates through an authorized representative of Symantec 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 Symantec 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.

Regarding code signing certificates, Symantec and Affiliates that issue code signing certificates provide Anti-Malware Organizations, Subscribers, Relying Parties, Application Software Suppliers, and other third parties with clear instructions on how they can report suspected Private Key Compromise, Certificate misuse, Certificates used to sign Suspect Code, Takeover Attacks, or other types of possible fraud, compromise, misuse, inappropriate conduct, or any other matter related to Certificates. Symantec and Affiliates publicly disclose the instructions on its website.

Symantec and those Affiliates that both issue code signing certificates and are granted revocation privilege revoke a Code Signing Certificate in any of these four circumstances: (1) the Application Software Supplier requests revocation and Symantec or its Affiliate does not intend to pursue an alternative course of action, (2) the authenticated subscriber requests revocation, (3) a third party provides information that leads the CA to believe that the certificate is compromised or is being used for Suspect Code, or (4) the CA otherwise decides that the certificate should be revoked. Symantec and Affiliates that issue code signing certificates shall follow the process for handling revocation requests detailed at section 13.1.5 of the Minimum Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates.

Only Symantec 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.

Any person claiming to have witnessed certificate misuse, inappropriate conduct related to certificates, fraud or key compromise may submit a Certificate Problem Report using the online form available at the Symantec website, <https://www.symantec.com/contact/authentication/ssl-certificate-complaint.jsp>. Symantec will investigate all Certificate Problem Reports and take action within the prescribed timing stated in the CABF Baseline Requirements.

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 Symantec or the Customer approving the Subscriber's Certificate Application, who in turn will initiate revocation of the certificate promptly. For Enterprise customers, the Subscriber is required to communicate the request to the Enterprise Administrator who will communicate the revocation request to Symantec for processing. Communication of such revocation request shall be in accordance with CPS § 3.4. Non-Enterprise customers shall communicate a revocation request in accordance with CPS § 3.4.

Where an Enterprise Customer initiates revocation of an end-user Subscriber Certificate upon its own initiative, the Managed PKI Customer or ASB Customer instructs Symantec to revoke the Certificate.

4.9.3.2 CABF Requirements for Certificate Revocation Process

EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA / Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively.

4.9.3.3 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 Symantec. Symantec will then revoke the Certificate. Symantec may also initiate CA or RA Certificate revocation.

4.9.4 Revocation Request Grace Period

Revocation requests shall be submitted as promptly as possible within a commercially reasonable time.

4.9.5 Time within Which CA Must Process the Revocation Request

Symantec takes commercially reasonable steps to process revocation requests without delay. Effective February 1, 2017, Symantec complies with the revocation timeframes specified for malware in the Minimum Requirements for Issuance and Management of Publicly-Trusted Code Signing Certificates in section 13.1.5.3 for code signing certificates.

4.9.6 Revocation Checking Requirements for Relying Parties

Relying Parties shall check the status of Certificates on which they wish to rely. One method by which Relying Parties may check Certificate status is by consulting the most recent CRL from the CA that issued the Certificate on which the Relying Party wishes to rely. Alternatively, Relying Parties may meet this requirement either by checking Certificate status using the applicable web-based repository or by using OCSP (if available). CAs shall provide Relying Parties with information on how to find the appropriate CRL, web-based repository, or OCSP responder (where available) to check for revocation status.

Due to the numerous and varying locations for CRL repositories, relying parties are advised to access CRLs using the URL(s) embedded in a certificate's CRL Distribution Points extension.

The proper OCSP responder for a given certificate is placed in its Authority Information Access extension.

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 annually, but also whenever a CA Certificate is revoked.²¹

CRLs for Authenticated Content Signing (ACS) Root CAs are published annually and also whenever a CA Certificate is revoked.

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

4.9.7.1 CABF Requirements for CRL Issuance

CRL issuance for EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA / Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C, and Appendix D, respectively.

4.9.7.2 Microsoft Requirements for CRL Issuance

Frequency of CRL issuance for code signing and timestamp certificates is documented in this CPS and complies with section 13.2.2 of the Minimum Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates published at <https://aka.ms/csbr>.

4.9.8 Maximum Latency for CRLs

CRLs are posted to the repository within a commercially reasonable time after generation. This is generally done automatically within minutes of generation.

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. In addition to publishing CRLs, Symantec provides Certificate status information through query functions in the Symantec Repository.

Certificate status information for Individual Certificates is available through web-based query functions accessible through the Symantec Repository at

- <https://pki-search.symauth.com/pki-search/index.html>

Symantec also provides OCSP Certificate status information. Enterprise Customers who contract for OCSP services may check Certificate status through the use of OCSP. The URL for the relevant OCSP Responder is communicated to the Enterprise Customer.

Symantec provides OCSP responses for Code Signing Certificates and Timestamp Certificates for at least 10 years after the expiration of the certificate. Serial numbers of revoked certificates remain on the CRL for at least 10 years after the expiration of the certificate.

²¹ CRLs for the "Symantec Class 3 Organizational VIP Device CA" are only issued whenever a certificate issued by that CA is revoked.

4.9.9.1 CABF Requirements for OCSP Availability

OCSP availability for EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA / Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C, and Appendix D, respectively.

4.9.10 On-Line Revocation Checking Requirements

A relying party must check the status of a certificate on which he/she/it wishes to rely. If a Relying Party does not check the status of a Certificate on which the Relying Party wishes to rely by consulting the most recent relevant CRL, the Relying Party shall check Certificate status by consulting the applicable repository or by requesting Certificate status using the applicable OCSP responder (where OCSP services are available).

4.9.11 Other Forms of Revocation Advertisements Available

Not applicable.

4.9.12 Special Requirements regarding Key Compromise

Symantec uses commercially reasonable efforts to notify potential Relying Parties if it discovers, or have reason to believe, that there has been a Compromise of the private key of one of their own CAs or one of the CAs within their sub-domains.

4.9.13 Circumstances for Suspension

Not applicable.

4.9.14 Who Can Request Suspension

Not applicable.

4.9.15 Procedure for Suspension Request

Not applicable.

4.9.16 Limits on Suspension Period

Not applicable.

4.10 Certificate Status Services

4.10.1 Operational Characteristics

The Status of public certificates is available via CRL at Symantec's website, LDAP directory and via an OCSP responder (where available).

4.10.2 Service Availability

Certificate Status Services are available 24x7 without scheduled interruption.

Certificate status services for EV SSL Certificates, EV Code Signing, and Organization-validated and Domain-validated SSL Certificates, conform to the CA / Browser Forum requirements as set

forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively.

4.10.3 Optional Features

OCSP is an optional status service feature that is not available for all products and must be specifically enabled for other products.

4.11 End of Subscription

A subscriber may end a subscription for a Symantec certificate by:

- Allowing his/her/its certificate to expire without renewing or re-keying that certificate
- Revoking of his/her/its certificate before certificate expiration without replacing the certificates.

4.12 Key Escrow and Recovery

With the exception of enterprises deploying Managed PKI Key Management Services no STN participant may escrow CA, RA or end-user Subscriber private keys.

Enterprise customers using the Key Escrow option within the Symantec Managed PKI Service can escrow copies of the private keys of Subscribers whose Certificate Applications they approve. The enterprise customer may escrow keys either within the enterprise's premises or Symantec's secure data center. If operated out of the enterprise's premises, Symantec does not store copies of Subscriber private keys but nevertheless plays an important role in the Subscriber key recovery process.

4.12.1 Key Escrow and Recovery Policy and Practices

Enterprise customers using the Key Escrow option within the Symantec Managed PKI service (or an equivalent service approved by Symantec) are permitted to escrow end-user Subscribers' private key. Escrowed private keys shall be stored in encrypted form using the Managed PKI Key Manager software. Except for enterprise customers using the Managed PKI Key Manager Service (or an equivalent service approved by Symantec), the private keys of CAs or end-user Subscribers shall not be escrowed.

End-user Subscriber private keys shall only be recovered under the circumstances permitted within the Managed PKI Key Management Service Administrator's Guide, under which:

- Enterprise customers using Managed PKI Key Manager shall confirm the identity of any person purporting to be the Subscriber to ensure that a purported Subscriber request for the Subscriber's private key is, in fact, from the Subscriber and not an imposter,
- Enterprise customers shall recover a Subscriber's private key without the Subscriber's authority only for their legitimate and lawful purposes, such as to comply with judicial or administrative process or a search warrant, and not for any illegal, fraudulent, or other wrongful purpose, and
- Such Enterprise customers shall have personnel controls in place to prevent Key Management Service Administrators and other persons from obtaining unauthorized access to private keys.

It is recommended that Enterprise Customers using the Key Escrow option within the Symantec Managed PKI Service:

- Notify the subscribers that their private keys are escrowed
- Protect subscribers' escrowed keys from unauthorized disclosure,
- Protect all information, including the administrator's own key(s) that could be used to recover subscribers' escrowed keys.

- Release subscribers' escrowed keys only for properly authenticated and authorized requests for recovery.
- Revoke the Subscriber's Key pair prior to recovering the encryption key under certain circumstances such as to discontinue the use of a lost certificate.
- Not be required to communicate any information concerning a key recovery to the subscriber except when the subscriber him/herself has requested recovery.
- Not disclose or allow to be disclosed escrowed keys or escrowed key-related information to any third party unless required by the law, government rule, or regulation; by the enterprise's organization policy; or by order of a court of competent jurisdiction.

4.12.2 Session Key Encapsulation and Recovery Policy and Practices

Private keys are stored in the Key Manager database in encrypted form. Each Subscriber's private key is individually encrypted with its own triple-DES symmetric key. A Key Escrow Record (KER) is generated then the triple-DES key is combined with a random session key to form a session key mask (MSK). The resulting MSK together with the certificate request information is securely sent and stored in the Managed PKI database at Symantec. The KER (containing the end user's private key) and the individual session key are stored in the Key Manager database and all residual key material is destroyed.

The Managed PKI database is operated out of Symantec's secure data center. The enterprise customer may choose to operate the Key Manager database either on the enterprise's premises or out of Symantec's secure data center.

Recovery of a private key and digital certificate requires the Managed PKI administrator to securely log on to the Managed PKI Control Center, select the appropriate key pair to recover and click a "recover" hyperlink. Only after an approved administrator clicks the "recover" link is the MSK for that key pair returned from the Managed PKI database. The Key Manager retrieves the session key from the KMD and combines it with the MSK to regenerate the triple-DES key which was used to originally encrypt the private key, allowing recovery of the end user's private key. As a final step, an encrypted PKCS#12 file is returned to the administrator and ultimately distributed to the end user.

5. Facility, Management, and Operational Controls

5.1 Physical Controls

Symantec has implemented the Symantec Physical Security Policy, which supports the security requirements of this CPS. Compliance with these policies is included in Symantec's independent audit requirements described in Section 8. Symantec Physical Security Policy contains sensitive security information and is only available upon agreement with Symantec. An overview of the requirements are described in the subsections following.

5.1.1 Site Location and Construction

STN 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.

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

5.1.2 Physical Access

STN CA systems are protected by a minimum of four tiers of physical security, with access to the outer tier required before gaining access to the inner tier.

Progressively restrictive physical access privileges control access to each tier. Sensitive CA operational activity, any activity related to the lifecycle of the certification process such as authentication, verification, and issuance, occur within very restrictive physical tiers. Access to each tier requires the use of a proximity card employee badge. Physical access is automatically logged and video recorded. Additional tiers enforce individual access control through the use of two factor authentication including biometrics. Unescorted personnel, including untrusted employees or visitors, are not allowed into such secured areas.

The physical security system includes additional tiers for key management security which serves to protect both online and offline storage of CSUs and keying material. Areas used to create and store cryptographic material enforce dual control, each through the use of two factor authentication including biometrics. Online CSUs are protected through the use of locked cabinets. Offline CSUs are protected through the use of locked safes, cabinets and containers. Access to CSUs and keying material is restricted in accordance with Symantec's segregation of duties requirements. The opening and closing of cabinets or containers in these tiers is logged for audit purposes.

5.1.3 Power and Air Conditioning

Symantec's secure facilities are equipped with primary and backup:

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

5.1.4 Water Exposures

Symantec has taken reasonable precautions to minimize the impact of water exposure to Symantec systems.

5.1.5 Fire Prevention and Protection

Symantec has taken reasonable precautions to prevent and extinguish fires or other damaging exposure to flame or smoke. Symantec's fire prevention and protection measures have been designed to comply with local fire safety regulations.

5.1.6 Media Storage

All media containing production software and data, audit, archive, or backup information is stored within Symantec facilities or in a secure off-site storage facility with appropriate physical and logical access controls designed to limit access to authorized personnel and protect such media from accidental damage (e.g., water, fire, and electromagnetic).

5.1.7 Waste Disposal

Sensitive documents and materials are shredded before disposal. Media used to collect or transmit sensitive information are rendered unreadable before disposal. Cryptographic devices are physically destroyed or zeroized in accordance the manufacturers' guidance prior to disposal. Other waste is disposed of in accordance with Symantec's normal waste disposal requirements.

5.1.8 Off-Site Backup

Symantec performs routine backups of critical system data, audit log data, and other sensitive information. Offsite backup media are stored in a physically secure manner using a bonded third party storage facility and Symantec's disaster recovery facility.

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:

- the validation of information in Certificate Applications;
- the acceptance, rejection, or other processing of Certificate Applications, revocation requests, renewal requests, or enrollment information;
- the issuance, or revocation of Certificates, including personnel having access to restricted portions of its repository;
- the handling of Subscriber information or requests.

Trusted Persons include, but are not limited to:

- customer service personnel,
- cryptographic business operations personnel,
- security personnel,
- system administration personnel,
- designated engineering personnel, and
- executives that are designated to manage infrastructural trustworthiness.

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

5.2.2 Number of Persons Required per Task

Symantec 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 two (2) Trusted Persons, or a combination of at least one trusted person and an automated validation and issuance process. Manual operations for Key Recovery may optionally require the validation of two (2) authorized Administrators.

5.2.3 Identification and Authentication for Each Role

For all personnel seeking to become Trusted Persons, verification of identity is performed through the personal (physical) presence of such personnel before Trusted Persons performing Symantec HR 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 CPS § 5.3.1.

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

- issued access devices and granted access to the required facilities;
- issued electronic credentials to access and perform specific functions on STN 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)

- the validation of information in Certificate Applications;
- the acceptance, rejection, or other processing of Certificate Applications, revocation requests, key recovery requests or renewal requests, or enrollment information;
- the issuance, or revocation of Certificates, including personnel having access to restricted portions of the repository;
- the handling of Subscriber information or requests
- the generation, issuing or destruction of a CA certificate
- the loading of a CA to a Production environment

5.3 Personnel Controls

Personnel seeking to become Trusted Persons must present proof of the requisite background, qualifications, and experience needed to perform their prospective job responsibilities competently and satisfactorily, as well as proof of any government clearances, if any, necessary to perform certification services under government contracts. Background checks are repeated at least every 5 years for personnel holding Trusted Positions.

5.3.1 Qualifications, Experience, and Clearance Requirements

Symantec requires that personnel seeking to become Trusted Persons present proof of the requisite background, qualifications, and experience needed to perform their prospective job responsibilities competently and satisfactorily, as well as proof of any government clearances, if any, necessary to perform certification services under government contracts.

5.3.2 Background Check Procedures

Prior to commencement of employment in a Trusted Role, Symantec conducts background checks which include the following:

- confirmation of previous employment,
- check of professional reference,
- confirmation of the highest or most relevant educational degree obtained,
- search of criminal records (local, state or provincial, and national),
- check of credit/financial records,
- search of driver's license records, and
- search of Social Security Administration records.

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, Symantec 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:

- Misrepresentations made by the candidate or Trusted Person,
- Highly unfavorable or unreliable professional references,
- Certain criminal convictions, and
- Indications of a lack of financial responsibility.

Reports containing such information are evaluated by human resources and security personnel, who determine the appropriate course of action in light of the type, magnitude, and frequency of the behavior 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.

5.3.3 Training Requirements

Symantec 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. Symantec maintains records of such training. Symantec periodically reviews and enhances its training programs as necessary.

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

- Basic PKI concepts,
- Job responsibilities,
- Symantec security and operational policies and procedures,
- Use and operation of deployed hardware and software,
- Incident and Compromise reporting and handling, and
- Disaster recovery and business continuity procedures.

5.3.3.1 CABF Requirements for Training and Skill Level

For EV SSL Certificates, EV Code Signing, and Organization-validated and Domain-validated SSL Certificates, personnel training is provided as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively.

5.3.4 Retraining Frequency and Requirements

Symantec 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 Symantec policies and procedures. Disciplinary actions may include measures up to and including termination and are commensurate with the frequency and severity of the unauthorized actions.

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 is held to the same functional and security criteria that apply to a Symantec employees in a comparable position.

Independent contractors and consultants who have not completed or passed the background check procedures specified in CPS § 5.3.2 are permitted access to Symantec's secure facilities only to the extent they are escorted and directly supervised by Trusted Persons at all times.

5.3.8 Documentation Supplied to Personnel

Symantec 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

Symantec manually or automatically logs the following significant events:

- CA key life cycle management events, including:
 - Key generation, backup, storage, recovery, archival, and destruction
 - Changes to CA details or keys
 - Cryptographic device life cycle management events.
- CA and Subscriber certificate life cycle management events, including:
 - Certificate Applications, issuance, renewal, rekey, and revocation
 - Successful or unsuccessful processing of requests
 - Changes to certificate creation policies
 - Generation and issuance of Certificates and CRLs.
- Trusted Employee Events, including:
 - Logon and logoff attempts
 - Attempts to create, remove, set passwords or change the system privileges of any privileged users
 - Personnel changes.
- Security-related events including:
 - Successful and unsuccessful PKI system access attempts
 - Start-up and shutdown of systems and applications
 - Possession of activation data for CA private key operations
 - System configuration changes and maintenance
 - PKI and security system actions performed by Symantec personnel
 - Security sensitive files or records read, written, deleted or destroyed
 - Security profile changes
 - System crashes, hardware failures and other anomalies
 - Firewall and router activity
 - CA facility visitor entry/exit.

Log entries include the following elements:

- Date and time of the entry

- Serial or sequence number of entry, for automatic journal entries
- Identity of the entity making the journal entry
- Description/kind of entry.

Symantec RAs and Enterprise Administrators log Certificate Application information including:

- Kind of identification document(s) presented by the Certificate Applicant
- Record of unique identification data, numbers, or a combination thereof (e.g., Certificate Applicant's driver's license number) of identification documents, if applicable
- Storage location of copies of applications and identification documents
- Identity of entity accepting the application
- Method used to validate identification documents, if any
- Name of receiving CA or submitting RA, if applicable.

EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA /Browser Forum requirements as set forth in the STN Supplemental Procedures Appendix B1, Appendix C and Appendix D, respectively.

5.4.2 Frequency of Processing Log

The CA system is continuously monitored to provide real time alerts of significant security and operational events for review by designated system security personnel. Monthly reviews of the audit logs include verifying that the logs have not been tampered with and thoroughly investigating any alerts or irregularities detected in the logs. Actions taken based on audit log reviews are also documented.

5.4.3 Retention Period for Audit Log

Audit logs shall be retained onsite for at least two (2) months after processing and thereafter archived in accordance with Section 5.5.2.

5.4.4 Protection of Audit Log

Audit logs are protected with an electronic audit log system that includes mechanisms to protect the log files from unauthorized viewing, modification, deletion, or other tampering.

5.4.5 Audit Log Backup Procedures

Incremental backups of audit logs are created daily and full backups are performed weekly.

5.4.6 Audit Collection System (Internal vs. External)

Automated audit data is generated and recorded at the application, network and operating system level. Manually generated audit data is recorded by Symantec personnel.

5.4.7 Notification to Event-Causing Subject

Where an event is logged by the audit collection system, no notice is required to be given to the individual, organization, device, or application that caused the event.

5.4.8 Vulnerability Assessments

Events in the audit process are logged, in part, to monitor system vulnerabilities. Logical security vulnerability assessments ("LSVAs") are performed, reviewed, and revised following an

examination of these monitored events. LSVAs are based on real-time automated logging data and are performed on a daily, monthly, and annual basis. An annual LSVA will be an input into an entity's annual Compliance Audit.

5.5 Records Archival

5.5.1 Types of Records Archived

Symantec archives:

- All audit data collected in terms of Section 5.4
- Certificate application information
- Documentation supporting certificate applications
- Certificate lifecycle information e.g., revocation, rekey and renewal application information

5.5.2 Retention Period for Archive

Records shall be retained for at least the time periods set forth below following the date the Certificate expires or is revoked.

- Five (5) years for Class 1 Certificates,
- Ten (10) years and six (6) months for Class 2 and Class 3 Certificates

5.5.3 Protection of Archive

Symantec protects the archive so that only authorized Trusted Persons are able to obtain access to the archive. The archive is protected against unauthorized viewing, modification, deletion, or other tampering by storage within a Trustworthy System. The media holding the archive data and the applications required to process the archive data shall be maintained to ensure that the archive data can be accessed for the time period set forth in this CPS.

5.5.4 Archive Backup Procedures

Symantec 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

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

5.5.6 Archive Collection System (Internal or External)

Symantec archive collection systems are internal, except for enterprise RA Customers. Symantec assists its enterprise RAs in preserving an audit trail. Such an archive collection system therefore is external to that enterprise RA.

5.5.7 Procedures to Obtain and Verify Archive Information

Only authorized Trusted Personnel are able to obtain access to the archive. The integrity of the information is verified when it is restored.

5.6 Key Changeover

STN CA key pairs are retired from service at the end of their respective maximum lifetimes as defined in this CPS. STN CA Certificates may be renewed as long as the cumulative certified lifetime of the CA key pair does not exceed the maximum CA key pair lifetime. New CA key pairs will be generated as necessary, for example to replace CA key pairs that are being retired, to supplement existing, active key pairs and to support new services.

Prior to the expiration of the CA Certificate for a Superior CA, key changeover procedures are enacted to facilitate a smooth transition for entities within the Superior CA's hierarchy from the old Superior CA key pair to new CA key pair(s). Symantec's CA key changeover process requires that:

- A Superior CA ceases to issue new Subordinate CA Certificates no later than 60 days before the point in time ("Stop Issuance Date") where the remaining lifetime of the Superior CA key pair equals the approved Certificate Validity Period for the specific type(s) of Certificates issued by Subordinate CAs in the Superior CA's hierarchy.
- Upon successful validation of Subordinate CA (or end-user Subscriber) Certificate requests received after the "Stop Issuance Date," Certificates will be signed with a new CA key pair.

The Superior CA continues to issue CRLs signed with the original Superior CA private key until the expiration date of the last Certificate issued using the original key pair has been reached

5.7 Compromise and Disaster Recovery

5.7.1 Incident and Compromise Handling Procedures

Backups of the following CA information shall be kept in off-site storage and made available in the event of a Compromise or disaster: Certificate Application data, audit data, and database records for all Certificates issued. Back-ups of CA private keys shall be generated and maintained in accordance with CP § 6.2.4. Symantec maintains backups of the foregoing CA information for their own CAs, as well as the CAs of Enterprise Customers within its Sub-domain.

5.7.2 Computing Resources, Software, and/or Data Are Corrupted

In the event of the corruption of computing resources, software, and/or data, such an occurrence is reported to Symantec Security and Symantec's incident handling procedures are enacted. Such procedures require appropriate escalation, incident investigation, and incident response. If necessary, Symantec's key compromise or disaster recovery procedures will be enacted.

5.7.3 Entity Private Key Compromise Procedures

Upon the suspected or known Compromise of a STN CA, Symantec infrastructure or Customer CA private key, Symantec's Key Compromise Response procedures are enacted by the Symantec Security Incident Response Team (SSIRT). This team, which includes Security, Cryptographic Business Operations, Production Services personnel, and other Symantec management representatives, assesses the situation, develops an action plan, and implements the action plan with approval from Symantec executive management.

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

- The Certificate's revoked status is communicated to Relying Parties through the Symantec Repository in accordance with CPS § 4.9.7,
- Commercially reasonable efforts will be made to provide additional notice of the revocation to all affected STN Participants, and

- The CA will generate a new key pair in accordance with CPS § 5.6, except where the CA is being terminated in accordance with CPS § 5.8.

5.7.4 Business Continuity Capabilities after a Disaster

Symantec has created and maintains business continuity plans so that in the event of a business disruption, critical business functions may be resumed. Symantec maintains a Disaster Recovery Facility (DRF) located at a facility geographically separate from the primary Production Facility. The DRF is a hardened facility designed to federal government and military specifications and is also specifically equipped to meet Symantec's security standards.²²

In the event of a natural or man-made disaster requiring permanent cessation of operations from Symantec's primary facility, the Corporate Symantec Business Continuity Team and the Symantec Authentication Operations Incident Management Team will coordinate with cross functional management teams to make the decision to formally declare a disaster situation and manage the incident. Once a disaster situation is declared, restoration of Symantec's Production services functionality at the DRF will be initiated.

Symantec has developed a Disaster Recovery Plan (DRP) for its managed PKI services including the STN PKI service. The DRP identifies conditions for activating the plan and what constitutes an acceptable system outage and recovery time. The DRP defines the procedures for the teams to reconstitute Symantec STN operations using backup data and backup copies of the STN keys.

Additionally, for EV SSL Certificates, EV Code Signing, and Organization-validated and Domain-validated SSL Certificates, Symantec's DRP includes the CA / Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively.

The target recovery time for restoring critical Production service functionality is no greater than 24 hours.

Symantec conducts at least one disaster recovery test per calendar year to ensure functionality of services at the DRF. Formal Business Continuity Exercises are also conducted yearly in coordination with the Corporate Symantec Business Continuity Team where procedures for additional types of scenarios (e.g. pandemic, earthquake, flood, power outage) are tested and evaluated.

Symantec takes significant steps to develop, maintain, and test sound business recovery plans, and Symantec's planning for a disaster or significant business disruption is consistent with many of the best practices established within the industry.

Symantec maintains redundant hardware and backups of its CA and infrastructure system software at its disaster recovery facility. In addition, CA private keys are backed up and maintained for disaster recovery purposes in accordance with CPS § 6.2.4.

Symantec maintains offsite backups of important CA information for STN CAs as well as the CAs of Service Centers, and Enterprise Customers, within Symantec's Sub-domain. Such information includes, but is not limited to: Certificate Application data, audit data (per Section 4.5), and database records for all Certificates issued.

²² Symantec Japan Inc. as well as Symantec's Australia facility maintain a DRF located at a facility geographically separate from the primary Production Facility. Both DRFs are specifically equipped to meet Symantec's security standards.

5.8 CA or RA Termination

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

- Provision of notice to parties affected by the termination, such as Subscribers, Relying Parties, and Customers, informing them of the status of the CA,
- Handling the cost of such notice,
- The revocation of the Certificate issued to the CA by Symantec,
- The preservation of the CA's archives and records for the time periods required in this CPS,
- The continuation of Subscriber and customer support services,
- The continuation of revocation services, such as the issuance of CRLs or the maintenance of online status checking services,
- The revocation of unexpired unrevoked Certificates of end-user Subscribers and subordinate CAs, if necessary,
- Refunding (if necessary) Subscribers whose unexpired unrevoked Certificates are revoked under the termination plan or provision, or alternatively, the issuance of replacement Certificates by a successor CA,
- Disposition of the CA's private key and the hardware tokens containing such private key, and
- Provisions needed for the transition of the CA's services to a successor CA.

5.9 Data Security

For the issuance of EV SSL Certificates, EV Code Signing, and Organization-validated and Domain-validated SSL Certificates, Symantec conforms to the CA / Browser Forum requirements for Data Security as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively.

6. Technical Security Controls

6.1 Key Pair Generation and Installation

6.1.1 Key Pair Generation

CA key pair 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. For PCA and Issuing Root CAs, the cryptographic modules used for key generation meet the requirements of FIPS 140-1 level 3. For other CAs (including STN CAs and Managed PKI Customer CAs), the cryptographic modules used meet the requirements of at least FIPS 140-1 level 2.

All CA key pairs are generated in pre-planned Key Generation Ceremonies in accordance with the requirements of the Key Ceremony Reference Guide, the CA Key Management Tool User's Guide, and the Symantec SAR Guide. The activities performed in each key generation ceremony are recorded, dated and signed by all individuals involved. These records are kept for audit and tracking purposes for a length of time deemed appropriate by Symantec Management.

Generation of RA key pairs is generally performed by the RA using a FIPS 140-1 level 1 certified cryptographic module provided with their browser software.

Enterprise Customers generate the key pair used by their Automated Administration servers. Symantec recommends that Automated Administration server key pair generation be performed using a FIPS 140-1 level 2 certified cryptographic module.

Generation of end-user Subscriber key pairs is generally performed by the Subscriber. For Class 1 Certificates, Class 2 Certificates, and Class 3 Code/Object Signing Certificates, the Subscriber typically uses a FIPS 140-1 level 1 certified cryptographic module provided with their browser software for key generation. For server Certificates, the Subscriber typically uses the key generation utility provided with the web server software.

For ACS Application IDs, Symantec generates a key pair on behalf of the Subscriber using a random numbers seed generated on a cryptographic module that, at a minimum, meets the requirements of FIPS 140-1 level 3.

Supplementary practices in Appendix B and C identify additional requirements for Certificates conforming to the CA/Browser Forum requirements.

6.1.2 Private Key Delivery to Subscriber

When end-user Subscriber key pairs are generated by the end-user Subscriber, private key delivery to a Subscriber is not applicable. For ACS Application IDs, private key delivery to a Subscriber is also not applicable.

Where RA or end-user Subscriber key pairs are pre-generated by Symantec on hardware tokens or smart cards, such devices are distributed to the RA or end-user Subscriber using a commercial delivery service and tamper evident packaging. The data required to activate the device is communicated to the RA or end-user Subscriber using an out of band process. The distribution of such devices is logged by Symantec.

Where end-user Subscriber key pairs are pre-generated by Enterprise Customers on hardware tokens or smart cards, such devices are distributed to the end-user Subscriber using a commercial delivery service and tamper evident packaging. The required activation data required to activate the device is communicated to the RA or end-user Subscriber using an out of band process. The distribution of such devices is logged by the Enterprise Customer.

For Enterprise Customers using Managed PKI Key Manager for key recovery services, the Customer may generate encryption key pairs (on behalf of Subscribers whose Certificate Applications they approve) and transmit such key pairs to Subscribers via a password protected PKCS #12 file.

6.1.3 Public Key Delivery to Certificate Issuer

End-user Subscribers and RAs submit their public key to Symantec 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 Symantec, this requirement is not applicable.

6.1.4 CA Public Key Delivery to Relying Parties

Symantec makes the CA Certificates for its PCAs and root CAs available to Subscribers and Relying Parties through their inclusion in web browser software. As new PCA and root CA

Certificates are generated, Symantec provides such new Certificates to the browser manufacturers for inclusion in new browser releases and updates.

Symantec generally provides the full certificate chain (including the issuing CA and any CAs in the chain) to the end-user Subscriber upon Certificate issuance. STN CA Certificates may also be downloaded from the LDAP Directory at directory.verisign.com.²³

6.1.5 Key Sizes

Key pairs shall be of sufficient length to prevent others from determining the key pair's private key using cryptanalysis during the period of expected utilization of such key pairs. The Symantec Standard for minimum key sizes is the use of key pairs equivalent in strength to 2048 bit RSA for PCAs and CAs.²⁴ The following table lists Symantec Root key pairs and strengths:

Public Key Algorithm	Signature Algorithm	Class	Generation
2048 bit RSA	SHA1	Class 1, 2, 3 PCAs	G3 PCAs
		Class 3 PCA	G5 PCA
	SHA256	Class 1, 2 and Class 3 Universal Root PCA	G6 PCAs
384 bit ECC	SHA384	Class 1, 2, 3* PCAs	G4 PCAs
4096 bit RSA	SHA384	Class 3 PCA	G6 PCA
2048_256 bit DSA	SHA256	Class 1, 2, 3 PCAs	G7 PCAs

* There are two Class 3 G4 Roots (one branded VeriSign (legacy) and one branded Symantec).

Table: Symantec Root CAs and Key Sizes

All Classes of STN PCAs and CAs, and RAs and end entity certificates use SHA-2 for digital signature hash algorithm and certain versions of Symantec Processing Center support the use of SHA-256 and SHA-384 hash algorithms in end-entity Subscriber Certificates. SHA-1 may be used to support legacy applications and use cases other than SSL and EV Code Signing provided that such usage does not violate procedures and policies set forth by the CA/Browser Forum and related Application Software Suppliers.

6.1.5.1 CABF Requirements for Key Sizes

EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA /Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively²⁵.

Symantec Root CA Certificates meet the following requirements for algorithm type and key size:

	Validity period beginning on or before 31 Dec 2010	Validity period beginning after 31 Dec 2010

²³ STN CA certificates issued by Symantec Japan Inc. or VeriSign Japan K.K. may also be downloaded from the LDAP directory at directory.verisign.co.jp.

²⁴

Symantec reserves the right to issue a minimal undisclosed number of SSL server certificates intended to be used by client software other than standard web browsers. These certificates contain a critical EKU extension without the serverAuth flag and with a special flag 2.16.840.1.113733.1.8.54.1 that indicates that it should not be used with standard web browsers

²⁵ STN certificates that have a non-standard key pair and key length size of less than 2048bit are authorized to be used within a selected group or closed eco system.

Digest algorithm	MD5 Not Recommended, SHA-1, SHA-256, SHA-384 or SHA-512	SHA-1*, SHA-256, SHA-384 or SHA-512
Minimum RSA modulus size (bits)	2048**	2048
Minimum DSA modulus size (bits)	N/A	2048
ECC curve	NIST P-256, P-384 or P-521	NIST P-256, P-384 or P-521

Table 4A – Algorithms and key sizes for Root CA Certificates

Symantec Subordinate CA Certificates meet the following requirements for algorithm type and key size:

	Validity period beginning on or before 31 Dec 2010 and ending on or before 31 Dec 2013	Validity period beginning after 31 Dec 2010 or ending after 31 Dec 2013
Digest algorithm	SHA-1, SHA-256, SHA-384 or SHA-512	SHA-1*, SHA-256, SHA-384 or SHA-512
Minimum RSA modulus size (bits)	1024	2048
Minimum DSA modulus size (bits)	2048	2048
ECC curve	NIST P-256, P-384 or P-521	NIST P-256, P-384 or P-521

Table 4B – Algorithms and key sizes for Subordinate CA Certificates

Symantec CAs shall only issue Subscriber certificates with keys containing the following algorithm types and key sizes.

	Validity period ending on or before 31 Dec 2013	Validity period ending after 31 Dec 2013
Digest algorithm	SHA-1*, SHA-256, SHA-384 or SHA-512	SHA-1*, SHA-256, SHA-384 or SHA-512
Minimum RSA modulus size (bits)	1024	2048
Minimum DSA modulus size (bits)	2048	2048
ECC curve	NIST P-256, P-384 or P-521	NIST P-256, P-384 or P-521

Table 4C – Algorithms and key sizes for Subscriber Certificates

* SHA-1 MAY be used with RSA keys in accordance with the criteria defined in Section 7.1.3 of the CA/Browser Forum Baseline Requirements for the Issuance and Management of Publicly-Trusted Certificates where applicable..

** A Root CA Certificate issued prior to 31 Dec 2010 with an RSA key size less than 2048 bits may still serve as a trust anchor Subscriber Certificates issued in accordance with these Requirements.

Symantec CAs reserve the right to reject a certificate request if the requested Public Key does not meet the minimum algorithm key sizes set forth in this section.

6.1.6 Public Key Parameters Generation and Quality Checking

Not applicable.

6.1.7 Key Usage Purposes (as per X.509 v3 Key Usage Field)

Refer to Section 7.1.2.1.

6.2 Private Key Protection and Cryptographic Module Engineering Controls

Symantec has implemented a combination of physical, logical, and procedural controls to ensure the security of Symantec and Enterprise Customer CA 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

For PCA and Issuing Root CA key pair generation and CA private key storage, Symantec uses hardware cryptographic modules that are certified at or meet the requirements of FIPS 140-1 Level 3. Symantec recommends that enterprise RA Customers perform all Automated Administration RA cryptographic operations on a cryptographic module rated at least FIPS 140-1 level 2.

6.2.2 Private Key (m out of n) Multi-Person Control

Symantec has implemented technical and procedural mechanisms that require the participation of multiple trusted individuals to perform sensitive CA cryptographic operations. Symantec 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 three (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

CA private keys are not escrowed. Escrow of private keys for end user subscribers is explained in more detail in Section 4.12.

6.2.4 Private Key Backup

Symantec creates backup copies of CA private keys for routine recovery and disaster recovery purposes. Such keys are stored in encrypted form within hardware cryptographic modules and associated key storage devices. Cryptographic modules used for CA private key storage meet the requirements of this CPS. CA private keys are copied to backup hardware cryptographic modules in accordance with this CPS.

Modules containing onsite backup copies of CA private keys are subject to the requirements of CPS. Modules containing disaster recovery copies of CA private keys are subject to the requirements of this CPS.

Symantec does not store copies of RA private keys. For the backup of end-user Subscriber private keys, see Section 6.2.3 and Section 4.12. For ACS Application IDs, Symantec does not store copies of Subscriber private keys.

6.2.5 Private Key Archival

Upon expiration of a STN CA Certificate, the key pair associated with the certificate will be securely retained for a period of at least 5 years using hardware cryptographic modules that meet

the requirements of this CPS. These CA key pairs shall not be used for any signing events after the expiration date of the corresponding CA Certificate, unless the CA Certificate has been renewed in terms of this CPS.

Symantec does not archive copies of RA and Subscriber private keys.

6.2.6 Private Key Transfer Into or From a Cryptographic Module

Symantec generates CA key pairs on the hardware cryptographic modules in which the keys will be used. In addition, Symantec makes copies of such CA key pairs for routine recovery and disaster recovery purposes. Where CA key pairs are backed up to another hardware cryptographic module, such key pairs are transported between modules in encrypted form.

6.2.7 Private Key Storage on Cryptographic Module

CA or RA private keys held on hardware cryptographic modules are stored in encrypted form.

6.2.8 Method of Activating Private Key

All Symantec sub-domain Participants shall protect the activation data for their private keys against loss, theft, modification, unauthorized disclosure, or unauthorized use.

6.2.8.1 Class 1 Certificates

The Standard for Class 1 private key protection is for Subscribers to take commercially reasonable measures for the physical protection of the Subscriber's workstation to prevent use of the workstation and its associated private key without the Subscriber's authorization. In addition, Symantec recommends that Subscribers use a password in accordance with Section 6.4.1 or security of equivalent strength to authenticate the Subscriber before the activation of the private key, which includes, for instance, a password to operate the private key, a Windows logon or screen saver password, or a network logon password.

6.2.8.2 Class 2 Certificates

The Standard for Class 2 Private Key protection is for Subscribers to:

- Use a password in accordance with Section 6.4.1 or security of equivalent strength to authenticate the Subscriber before the activation of the private key, which includes, for instance, a password to operate the private key, or a Windows logon or screen saver password; and
- Take commercially reasonable measures for the physical protection of the Subscriber's 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.

6.2.8.3 Class 3 Certificates other than Administrator Certificates

The Standard for Class 3 private key protection (other than Administrators) requires Subscribers to:

- Use a smart card, biometric access device or security of equivalent strength to authenticate the Subscriber before the activation of the private key; and
- Take commercially reasonable measures for the physical protection of the Subscriber's workstation to prevent use of the workstation and its associated private key without the Subscriber's authorization.

Use of a password along with a smart card or biometric access device in accordance with Section 6.4.1 is recommended. When deactivated, private keys shall be kept in encrypted form only.

6.2.8.4 Administrators' Private Keys (Class 3)

The Standard for Administrators' private key protection requires them to:

- Use a smart card, biometric access device, password in accordance with Section 6.4.1, or security of equivalent strength to authenticate the Administrator before the activation of the private key, which includes, for instance, a password to operate the private key, a Windows logon or screen saver password, or a network logon password; and
- Take commercially reasonable measures for the physical protection of the Administrator's workstation to prevent use of the workstation and its associated private key without the Administrator's authorization.

In cases where technical controls do not constrain issuance to pre-approved domains, Symantec requires that Administrators use a smart card, biometric access device, or security of equivalent strength along with the use of a password in accordance with Section 6.4.1 to authenticate the Administrator before the activation of the private key that can cause the issuance of certificates that gain trust through distribution of root certificates by Application Software Suppliers.

When deactivated, private keys shall be kept in encrypted form only.

6.2.8.5 Enterprise RAs using a Cryptographic Module (with Automated Administration or with Managed PKI Key Manager Service)

The Standard for private key protection for Administrators using such a cryptographic module requires them to:

- Use the cryptographic module along with a password in accordance with Section 6.4.1 to authenticate the Administrator before the activation of the private key; and
- Take commercially reasonable measures for the physical protection of the workstation housing the cryptographic module reader to prevent use of the workstation and the private key associated with the cryptographic module without the Administrator's authorization.

6.2.8.6 Private Keys Held by Processing Centers (Class 1-3)

An online CA's private key shall be activated by a threshold number of Shareholders, as defined in Section 6.2.2, supplying their activation data (stored on secure media). Once the private key is activated, the private key may be active for an indefinite period until it is deactivated when the CA goes offline. Similarly, a threshold number of Shareholders shall be required to supply their activation data in order to activate an offline CA's private key. Once the private key is activated, it shall be active only for one time.

6.2.9 Method of Deactivating Private Key

STN CA private keys are deactivated upon removal from the token reader. RA private keys (used for authentication to the RA application) are deactivated upon system log off. RAs are required to log off their workstations when leaving their work area.

Client Administrators, RA, and end-user Subscriber private keys may be deactivated after each operation, upon logging off their system, or upon removal of a smart card from the smart card reader depending upon the authentication mechanism employed by the user. In all cases, end-user Subscribers have an obligation to adequately protect their private key(s) in accordance with this CPS. The private key associated with an ACS Application ID is deleted immediately after it has been used for code signing.

6.2.10 Method of Destroying Private Key

Where required, Symantec destroys 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. Symantec utilizes the zeroization function of its hardware cryptographic modules and other appropriate means to ensure the complete destruction of CA private keys. When performed, CA key destruction activities are witnessed. The private key associated with an ACS Application ID is deleted immediately after it has been used for code signing.

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

STN CA, RA and end-user Subscriber Certificates are backed up and archived as part of Symantec's routine backup procedures.

6.3.2 Certificate Operational Periods and Key Pair Usage Periods

The Operational Period of a Certificate ends upon its expiration or revocation. The Operational Period for key pairs is the same as the Operational Period for the associated Certificates, except that they may continue to be used for decryption and signature verification. The maximum Operational Periods for Symantec Certificates for Certificates issued on or after the effective date of this CPS are set forth in Table 8 below²⁶. End user Subscriber Certificates that are renewals of existing subscriber certificates may have a longer validity period (up to 3 months).

In addition, STN CAs stop issuing new Certificates at an appropriate date (60 days plus maximum validity period of issued Certificates) prior to the expiration of the CA's Certificate such that no Certificate issued by a Subordinate CA expires after the expiration of any Superior CA Certificates.

<i>Certificate Issued By:</i>	<i>Validity Period</i>
PCA self-signed (1024 bit RSA)	Up to 30 years
PCA self-signed (2048 bit RSA)	Up to 37 years
PCA self-signed (256 bit ECC)	Up to 30 years
PCA self-signed (384 bit ECC)	Up to 30 years
PCA to Offline intermediate CA	Generally 10 years but up to 15 years after renewal
PCA to online CA	Generally 5 years but up to 10 years after renewal ²⁷
Offline intermediate CA to online CA	Generally 5 years but up to 10 years after renewal ²⁸

²⁶ Individual exceptions must be approved by Symantec for certificate validity periods beyond the limits set in Section 6.3.2 and are strictly limited to certificates using stronger encryption algorithms or longer key lengths e.g. the use of SHA 2 or ECC algorithms and/or the use of 4096 bit or larger keys. In consideration of approval, additional requirements for protection of the private key may be imposed, such as generation and storage on a Hardware device.

²⁷ The Symantec Onsite Administrator CA-Class 3, Class 3 Secure Server Operational Administrator CA and Class 3 OnSite Enterprise Administrator CA – G2 have a validity beyond 10 years to support legacy systems and shall be revoked when appropriate

²⁸ If 6-year end-user subscriber certificates are issued, the online CA certificate's operational period will be 10 years with no option to renew. CA re-key will be required after 5 years.

Certificate Issued By:	Validity Period
Online CA to End-user Individual Subscriber	Normally up to 3 years, but under the conditions described below, Certificates may be renewed once, up to 6 years ²⁹ . After 6 years new enrollment is required.
Online CA to End-Entity Organizational Subscriber	Constrained by section 6.3.2.1 below, normally up to 6 years ³⁰ under the conditions described below with no option to renew or re-key. After 6 years new enrollment is required.

Table 8 – Certificate Operational Periods

Except as noted in this section, Symantec sub-domain participants shall cease all use of their key pairs after their usage periods have expired.

Certificates issued by CAs to end-user Subscribers may have Operational Periods longer than three years, up to six years, if the following requirements are met:

- Protection of the Subscriber key pairs in relation to its operational environment for Organizational Certificates, operation within the enhanced protection of a data center and for Individual Certificates, the Subscribers' key pairs reside on a hardware token, such as a smart card,
- Subscribers are required to undergo re-authentication at least every 3 years under Section 3.2.3,
- If a Subscriber is unable to complete re-authentication procedures successfully or is unable to prove possession of such private key when required by the foregoing, the CA shall revoke the Subscriber's Certificate.

Symantec also operates the "Symantec Class 3 International Server CA", "Thawte SGC CA" and the "Class 3 Open Financial Exchange CA" which are online CAs signed by a PCA. The validity of these CAs may exceed the validity periods described in Table 8 above to ensure continued interoperability of certificates offering SGC and OFX capability.

6.3.2.1 CABF Validity Period Requirements

EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA /Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively.

6.4 Activation Data

6.4.1 Activation Data Generation and Installation

Activation data (Secret Shares) used to protect tokens containing STN CA private keys is generated in accordance with the requirements of CPS § 6.2.2 and the Key Ceremony Reference Guide. The creation and distribution of Secret Shares is logged.

RAs are required to select strong passwords to protect their private keys. Symantec's password selection guidelines require that passwords:

- be generated by the user;
- have at least fifteen characters;
- have at least one alphabetic and one numeric character;

²⁹ If 6-year end-user subscriber certificates are issued, the online CA certificate's operational period will be 10 years with no option to renew. CA re-key will be required after 5 years.

³⁰At a minimum, the Distinguished Name of certificates issued with a validity of more than 3 years is re-verified after three years from date of certificate issuance. With the exception of the Symantec Automated Administration certificate, Organizational end-entity certificates used solely to support the operation of a portion of the STN may be issued with a validity period of 5 years and up to a maximum of 10 years after renewal.

- have at least one lower-case letter;
- not contain many occurrences of the same character;
- not be the same as the operator's profile name; and
- not contain a long substring of the user's profile name.

Symantec strongly recommends that Enterprise Administrators, RAs, and end-user Subscribers choose passwords that meet the same requirements. Symantec also recommends the use of two factor authentication mechanisms (e.g., token and passphrase, biometric and token, or biometric and passphrase) for private key activation.

6.4.2 Activation Data Protection

Symantec Shareholders are required to safeguard their Secret Shares and sign an agreement acknowledging their Shareholder responsibilities.

RAs are required to store their Administrator/RA private keys in encrypted form using password protection and their browser's "high security" option.

Symantec strongly recommends that Client Administrators, RAs and end-user Subscribers store their private keys in encrypted form and protect their private keys through the use of a hardware token and/or strong passphrase. The use of two factor authentication mechanisms (e.g., token and passphrase, biometric and token, or biometric and passphrase) is encouraged.

6.4.3 Other Aspects of Activation Data

6.4.3.1 Activation Data Transmission

To the extent activation data for private keys are transmitted, STN Participants shall protect the transmission using methods that protect against the loss, theft, modification, unauthorized disclosure, or unauthorized use of such private keys. To the extent Windows or network logon user name/password combination is used as activation data for an end-user Subscriber, the passwords transferred across a network shall be protected against access by unauthorized users.

6.4.3.2 Activation Data Destruction

Activation data for CA private keys shall be decommissioned using methods that protect against the loss, theft, modification, unauthorized disclosure, or unauthorized use of the private keys protected by such activation data. After the record retention periods in Section 5.5.2 lapse, Symantec shall decommission activation data by overwriting and/or physical destruction.

6.5 Computer Security Controls

Symantec performs all CA and RA functions using Trustworthy Systems that meet the requirements of Symantec's SAR Guide. Enterprise Customers must use Trustworthy Systems.

6.5.1 Specific Computer Security Technical Requirements

Symantec ensures that the systems maintaining CA software and data files are Trustworthy Systems secure from unauthorized access. In addition, Symantec limits access to production servers to those individuals with a valid business reason for such access. General application users do not have accounts on production servers.

Symantec's production network is logically separated from other components. This separation prevents network access except through defined application processes. Symantec uses firewalls

to protect the production network from internal and external intrusion and limit the nature and source of network activities that may access production systems.

Symantec requires the use of passwords that have a minimum character length and a combination of alphanumeric and special characters. Symantec requires that passwords be changed on a periodic basis.

Direct access to Symantec databases supporting Symantec's CA Operations is limited to Trusted Persons in Symantec's Production Operations group having a valid business reason for such access.

6.5.1.1 CABF Requirements for System Security

EV SSL Certificates, EV Code Signing, and domain validated and organization validated SSL Certificates conform to the CA /Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively.

6.5.2 Computer Security Rating

No stipulation.

6.6 Life Cycle Technical Controls

6.6.1 System Development Controls

Applications are developed and implemented by Symantec in accordance with Symantec systems development and change management standards. Symantec also provides software to its Enterprise Customers for performing RA and certain CA functions. Such software is developed in accordance with Symantec system development standards.

Symantec developed software, when first loaded, provides a method to verify that the software on the system originated from Symantec, has not been modified prior to installation, and is the version intended for use.

6.6.2 Security Management Controls

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

6.6.3 Life Cycle Security Controls

No stipulation

6.7 Network Security Controls

Symantec performs all its CA and RA functions using networks secured in accordance with the Security and Audit Requirements (SAR) Guide to prevent unauthorized access and other malicious activity. Symantec protects its communications of sensitive information through the use of encryption and digital signatures.

6.8 Time-Stamping

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

7. Certificate, CRL, and OCSP Profiles

7.1 Certificate Profile

Symantec Certificates generally conform to (a) ITU-T Recommendation X.509 (1997): Information Technology - Open Systems Interconnection - The Directory: Authentication Framework, June 1997 and (b) RFC 5280: Internet X.509 Public Key Infrastructure Certificate and CRL Profile, April 2002 ("RFC 5280")³¹. As applicable to the Certificate type, STN Certificates conform to the current version of the CA/Browser Forum Baseline Requirements for the Issuance and Management of Publicly-Trusted Certificates.³²

At a minimum, X.509 Certificates shall contain the basic fields and indicated prescribed values or value constraints in Table 9 below:

Field	Value or Value constraint
Serial Number	Unique value per Issuer DN that contains at least 64 bits of entropy output from a CSPRNG.
Signature Algorithm	Object identifier of the algorithm used to sign the certificate (See CP § 7.1.3)
Issuer DN	See Section 7.1.4
Valid From	Universal Coordinate Time base. Synchronized to Master Clock of U.S. Naval Observatory. Encoded in accordance with RFC 5280.
Valid To	Universal Coordinate Time base. Synchronized to Master Clock of U.S. Naval Observatory. Encoded in accordance with RFC 5280.
Subject DN	See CP § 7.1.4
Subject Public Key	Encoded in accordance with RFC 5280
Signature	Generated and encoded in accordance with RFC 5280

Table 9 – Certificate Profile Basic Fields

7.1.1 Version Number(s)

Symantec Certificates are X.509 Version 3 Certificates although certain Root Certificates are permitted to be X.509 Version 1 Certificates to support legacy systems. CA certificates shall be X.509 Version 1 or Version 3 CA Certificates. End-user Subscriber Certificates shall be X.509 Version 3.

7.1.2 Certificate Extensions

Symantec populates X.509 Version 3 STN Certificates with the extensions required by Section 7.1.2.1-7.1.2.8. Private extensions are permissible, but the use of private extensions is not warranted under this CP and the applicable CPS unless specifically included by reference.

EV SSL certificate extension requirements are described in Appendix B3 to this CPS.

³¹ While STN certificates generally conform to RFC 5280, certain limited provisions may not be supported.

³² STN certificates that do not conform to the current version of the CA/Browser Forum Baseline Requirements that have a key pair and key length size less than 2048bit may have server auth removed and/or a designated OID of 2.16.840.1.113733.1.8.54.1.

7.1.2.1 Key Usage

X.509 Version 3 Certificates are generally populated in accordance with RFC 5280: Internet X.509 Public Key Infrastructure Certificate and CRL Profile, April 2002. The criticality field of the KeyUsage extension is generally set to TRUE for CA certificates and for end entity Subscriber certificates.

Note: The non-Repudiation bit³³ is not required to be set in these Certificates because the PKI industry has not yet reached a consensus as to what the non-Repudiation bit means. Until such a consensus emerges, the non-Repudiation bit might not be meaningful for potential Relying Parties. Moreover, the most commonly used applications do not always respect the non-Repudiation bit. Therefore, setting the bit might not help Relying Parties make a trust decision. Consequently, this CPS does not require that the non-Repudiation bit be set. It may be set in the case of dual key pair signature Certificates issued through Managed PKI Key Manager, or as otherwise requested. Any dispute relating to non-repudiation arising from the use of a digital certificate is a matter solely between the Subscriber and the Relying Party(s). Symantec shall incur no liability in relation thereto.

7.1.2.2 Certificate Policies Extension

The *CertificatePolicies* extension of X.509 Version 3 Certificates are populated with the object identifier for the STN CP in accordance with CP Section 7.1.6 and with policy qualifiers set forth in CP Section 7.1.8. The criticality field of this extension shall be set to FALSE.

7.1.2.2.1 CABF Requirement for Certificate Policies Extension

EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA / Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C, and Appendix D, respectively.

7.1.2.3 Subject Alternative Names

The *subjectAltName* extension of X.509 Version 3 Certificates are populated in accordance with RFC 5280 with the exception of those issued under Public Lite accounts which may optionally exclude the email address in *SubjectAltName*. The criticality field of this extension shall be set to FALSE.

For all web server certificates, the SubjectAltName extension is populated with the authenticated value in the Common Name field of the subject DN (domain name or public IPAddress). The SubjectAltName extension may contain additional authenticated domain names or public IPAddresses.

7.1.2.4 Basic Constraints

Symantec X.509 Version 3 CA Certificates *BasicConstraints* extension shall have the CA field set to TRUE. End-user Subscriber Certificates *BasicConstraints* extension shall have the CA field set to FALSE. The criticality field of this extension shall be set to TRUE for CA Certificates, but may be set to TRUE or FALSE for end-user Subscriber Certificates.

³³ The non-Repudiation bit may also be referred to as ContentCommitment in Digital Certificates in accordance with the X.509 standard.

Symantec X.509 Version 3 CA Certificates may have a “*pathLenConstraint*” field of the *BasicConstraints* extension set to the maximum number of CA certificates that may follow this Certificate in a certification path. CA Certificates issued to an online Enterprise Customer issuing end-user Subscriber Certificates shall have a “*pathLenConstraint*” field set to a value of “0” indicating that only an end-user Subscriber Certificate may follow in the certification path.

7.1.2.5 Extended Key Usage

By default, *ExtendedKeyUsage* is set as a non-critical extension. STN CA Certificates do not include the *ExtendedKeyUsage* extension. Symantec Certificates may contain the *ExtendedKeyUsage* extension, aligning to Application Software Supplier granted trust bits and private PKI use cases.

7.1.2.6 CRL Distribution Points

Most Symantec X.509 Version 3 end user Subscriber Certificates and Intermediate CA Certificates include the *cRLDistributionPoints* extension containing the URL of the location where a Relying Party can obtain a CRL to check the CA Certificate’s status. The criticality field of this extension is set to FALSE. URLs comply with Mozilla requirements to exclude the LDAP protocol, and may appear multiple times within a *cRLDistributionPoints* extension.

7.1.2.7 Authority Key Identifier

Symantec generally populates the Authority Key Identifier extension of X.509 Version 3 end user Subscriber Certificates and Intermediate CA Certificates. When the certificate issuer contains the Subject Key Identifier extension, the Authority Key Identifier is composed of the 160-bit SHA-1 hash of the public key of the CA issuing the Certificate. Otherwise, the Authority Key Identifier extension includes the issuing CA’s subject distinguished name and serial number. The criticality field of this extension is set to FALSE.

7.1.2.8 Subject Key Identifier

Where Symantec populates X.509 Version 3 STN Certificates with a *subjectKeyIdentifier* extension, the *keyIdentifier* based on the public key of the Subject of the Certificate is generated in accordance with one of the methods described in RFC 5280. Where this extension is used, the criticality field of this extension is set to FALSE.

7.1.3 Algorithm Object Identifiers

Symantec Certificates are signed using one of following algorithms.

- ***sha256withRSAEncryption*** OBJECT IDENTIFIER ::= {iso(1) member-body(2) us(840) rsadsi(113549) pkcs(1) pkcs-1(1) 11}
- ***ecdsa-with-Sha256*** OBJECT IDENTIFIER ::= {iso(1) member-body(2) us(840) ansi-X9-62(10045) signatures(4) ecdsa-with-SHA2 (3) 2}
- ***ecdsa-with-Sha384*** OBJECT IDENTIFIER ::= {iso(1) member-body(2) us(840) ansi-X9-62(10045) signatures(4) ecdsa-with-SHA2 (3) 3}
- ***sha-1WithRSAEncryption*** OBJECT IDENTIFIER ::= {iso(1) member-body(2) us(840) rsadsi(113549) pkcs(1) pkcs-1(1) 5}

Certificate signatures produced using these algorithms shall comply with RFC 3279. *sha256WithRSAEncryption* will be used over *sha-1 WithRSAEncryption*³⁴.

7.1.4 Name Forms

Symantec populates STN Certificates with an Issuer Name and Subject Distinguished Name in accordance with Section 3.1.1. The Issuer Name shall be populated in each Certificate issued containing the Country, Organization Name and the Common Name of the Issuer CA.

In addition, Symantec may include within end-user Subscriber Certificates an additional Organizational Unit field that contains a notice stating that the terms of use of the Certificate are set forth in a URL which is a pointer to the applicable Relying Party Agreement. This OU must appear if a pointer to the applicable Relying Party Agreement is not included in the policy extension of the certificate.

7.1.5 Name Constraints

No stipulation

7.1.6 Certificate Policy Object Identifier

Where the Certificate Policies extension is used, Certificates contain the object identifier for the Certificate Policy corresponding to the appropriate Class of Certificate as set forth in the STN CP Section 1.2. For legacy Certificates issued prior to the publication of the STN CP which include the Certificate Policies extension, Certificates refer to the STN CPS.

7.1.6.1 CABF Requirements for Certificate Policy Object Identifier

EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA / Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C and Appendix D, respectively.

7.1.7 Usage of Policy Constraints Extension

No stipulation

7.1.8 Policy Qualifiers Syntax and Semantics

Symantec generally populates X.509 Version 3 STN Certificates with a policy qualifier within the Certificate Policies extension. Generally, such Certificates contain a CPS pointer qualifier that points to the applicable Relying Party Agreement or the STN CPS. In addition, some Certificates contain a User Notice Qualifier which points to the applicable Relying Party Agreement.

7.1.9 Processing Semantics for the Critical Certificate Policies Extension

No stipulation

³⁴ *sha-1 WithRSAEncryption* is used only with prior approval to preserve business continuity of legacy applications.

7.2 CRL Profile

As applicable to the Certificate type, corresponding CRLs conform to the current version of the CA/Browser Forum Baseline Requirements for the Issuance and Management of Publicly-Trusted Certificates.

Version 2 CRLs conform to RFC 5280 and contain the basic fields and contents specified in Table 13 below:

Field	Value or Value constraint
Version	See Section 7.2.1.
Signature Algorithm	Algorithm used to sign the CRL in accordance with RFC 3279. (See CPS § 7.1.3)
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 the requirements of Section 4.9.7.
Revoked Certificates	Listing of revoked certificates, including the Serial Number of the revoked Certificate and the Revocation Date.

Table 13 – CRL Profile Basic Fields

7.2.1 Version Number(s)

Symantec supports both X.509 Version1 and Version 2 CRLs. Version 2 CRLs comply with the requirements of RFC 5280.

7.2.2 CRL and CRL Entry Extensions

No stipulation.

7.3 OCSP Profile

OCSP (Online Certificate Status Protocol) is a way to obtain timely information about the revocation status of a particular certificate. Symantec validates:

- Class 2 Enterprise certificates using the Enterprise OCSP which conforms to RFC 2560, and
- Class 2 Enterprise certificates and Class 3 organization certificates using the Symantec Trusted Global Validation (TGV) service which conforms to RFC 6960.

CABF Requirement for OCSP Signing

For EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates, Symantec provides OCSP responses as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C, and Appendix D, respectively.

7.3.1 Version Number(s)

Version 1 of the OCSP specification as defined by RFC2560, RFC 5019, and RFC 6960 are supported.

7.3.2 OCSP Extensions

Symantec TGV Service uses secure timestamp and validity period to establish the current freshness of each OCSP response. Symantec does not use a nonce to establish the current freshness of each OCSP response and clients should not expect a nonce in the response to a request that contains a nonce. Instead, clients should use the local clock to check for response freshness.

8. Compliance Audit and Other Assessments

An annual WebTrust for Certification Authorities v2.0 or later examination is performed for Symantec's data center operations and key management operations supporting Symantec's public and Managed PKI CA services including the STN Root CAs, Class 3 Organizational CAs, Class 2 Organizational and Individual CAs, and Class 1 Individual CAs specified in Section 1.3.1. The external audit scheme of Symantec Japan Inc.'s public CAs is ISAE3402/SSAE16 instead of WebTrust for Certification Authorities. Symantec shall be entitled to require that Enterprise Customers undergo a compliance audit under this CPS and audit programs for these types of Customers.

In addition to compliance audits, Symantec shall be entitled to perform other reviews and investigations to ensure the trustworthiness of Symantec's Sub-domain of the STN, which include, but are not limited to:

- A "Security and Practices Review" of an Affiliate before it is permitted to begin operations. A Security and Practices Review consists of a review of an Affiliate's secure facility, security documents, CPS, STN-related agreements, privacy policy, and validation plans to ensure that the Affiliate meets STN Standards.
- Symantec shall be entitled, within its sole and exclusive discretion, to perform at any time an "Exigent Audit/Investigation" on itself, an Affiliate, or an Enterprise Customer in the event Symantec has reason to believe that the audited entity has failed to meet STN Standards, has experienced an incident or compromise, or has acted or failed to act, such that the audited entity's failure, the incident or compromise, or the act or failure to act poses an actual or potential threat to the security or integrity of the STN.
- Symantec shall be entitled to perform "Supplemental Risk Management Reviews" on a Customer following incomplete or exceptional findings in a Compliance Audit or as part of the overall risk management process in the ordinary course of business.

Symantec shall be entitled to delegate the performance of these audits, reviews, and investigations to a third party audit firm. Entities that are subject to an audit, review, or investigation shall provide reasonable cooperation with Symantec and the personnel performing the audit, review, or investigation.

CABF Requirement for Self-Audits

For EV SSL Certificates, EV Code Signing, and Organization-validated and Domain-validated SSL Certificates, Symantec shall conduct self-audits as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C, and Appendix D, respectively.

8.1 Frequency and Circumstances of Assessment

Compliance Audits are conducted at least annually at the sole expense of the audited entity. Audits are conducted over unbroken sequences of audit periods with each period no longer than one year duration.

8.2 Identity/Qualifications of Assessor

Symantec's CA compliance audits are performed by a public accounting firm that:

- Demonstrates proficiency in conducting the WebTrust for Certification Authorities v2.0 or later,
- Demonstrates proficiency in public key infrastructure technology, information security tools and techniques, security auditing, and the third-party attestation function,

- Is accredited by the American Institute of Certified Public Accountants (AICPA), which requires the possession of certain skill sets, quality assurance measures such as peer review, competency testing, standards with respect to proper assignment of staff to engagements, and requirements for continuing professional education,
- Is bound by law, government regulation, or professional code of ethics; and
- maintains Professional Liability/Errors & Omissions insurance with policy limits of at least one million US dollars in coverage.

8.3 Assessor's Relationship to Assessed Entity

Compliance audits of Symantec's operations are performed by a public accounting firm that is independent of Symantec.

8.4 Topics Covered by Assessment

The scope of Symantec's annual WebTrust for Certification Authorities (or equivalent) audit includes CA environmental controls, key management operations and Infrastructure/Administrative CA controls, certificate life cycle management and CA business practices disclosure.

Audits of RAs (Class 1-2)

Enterprise customers approving Class 1 and 2 certificates may undergo an annual compliance audit. Upon request from Symantec and/or a Superior Entity (if the Superior Entity is not Symantec), Enterprise customers may undergo an audit noting any exceptions or irregularities to STN policies and the steps taken to remedy the irregularities.

Audit of an RA (Class 3)

Enterprise Customers authorizing the issuance of Class 3 SSL certificates undergo an annual compliance audit of their obligations under the STN.³⁵ Upon request from Symantec and/or a Superior Entity (if the Superior Entity is not Symantec) Enterprise Customers undergo an audit noting any exceptions or irregularities to STN policies and the steps taken to remedy the irregularities.

Audit of Symantec or an Affiliate (Class 1-3)

Symantec and each Affiliate is audited pursuant to the guidelines provided in the American Institute of Certificate Public Accounts' Statement on Service Organizations Control (SOC) Reports on the risks associated with Service Organizations. Their Compliance Audits are the WebTrust for Certification Authorities audit or an equivalent audit standard approved by Symantec which includes: A Report of Policies and Procedures in Operation and Test of Operational Effectiveness.

8.5 Actions Taken as a Result of Deficiency

With respect to compliance audits of Symantec's operations, significant exceptions or deficiencies identified during the Compliance Audit will result in a determination of actions to be taken. This determination is made by Symantec management with input from the auditor. Symantec management is responsible for developing and implementing a corrective action plan. If

³⁵ Symantec and/or Affiliates perform all identification and authentication of Class 3 SSL certificates authorized for issuance by the Enterprise Customers.

Symantec determines that such exceptions or deficiencies pose an immediate threat to the security or integrity of the STN, a corrective action plan will be developed within 30 days and implemented within a commercially reasonable period of time. For less serious exceptions or deficiencies, Symantec Management will evaluate the significance of such issues and determine the appropriate course of action.

8.6 Communications of Results

Symantec makes its annual Audit Report publicly available no later than three (3) months after the end of the audit period. In the event of a delay greater than three months, Symantec shall provide an explanatory letter signed by the Qualified Auditor. A copy of Symantec's WebTrust for CA audit report can be found at www.symantec.com/about/profile/policies/repository.jsp.

9. Other Business and Legal Matters

9.1 Fees

9.1.1 Certificate Issuance or Renewal Fees

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

9.1.2 Certificate Access Fees

Symantec 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

Symantec does not charge a fee as a condition of making the CRLs required by the CP available in a repository or otherwise available to Relying Parties. Symantec is, however, entitled to charge a fee for providing customized CRLs, OCSP services, or other value-added revocation and status information services. Symantec 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 Symantec's prior express written consent.

9.1.4 Fees for Other Services

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

9.1.5 Refund Policy

Within Symantec's Sub-domain, the following refund policy (reproduced at www.symantec.com/about/profile/policies/repository.jsp) is in effect:

Symantec 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 Symantec 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 Symantec

revoke the certificate and provide a refund if Symantec has breached a warranty or other material obligation under this CPS or the NetSure^(sm) Protection Plan relating to the subscriber or the subscriber's certificate. After Symantec revokes the subscriber's certificate, Symantec will promptly credit the subscriber's credit card account (if the certificate was paid for via credit card) or otherwise reimburse the subscriber via check, for the full amount of the applicable fees paid for the certificate. To request a refund, please call customer service at +1 650 426-3400. 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

Enterprise Customers are encouraged to maintain a commercially reasonable level of insurance coverage for errors and omissions, either through an errors and omissions insurance program with an insurance carrier or a self-insured retention. Symantec maintains such errors and omissions insurance coverage.

9.2.2 Other Assets

Enterprise Customers shall have sufficient financial resources to maintain their operations and perform their duties, and they must be reasonably able to bear the risk of liability to Subscribers and Relying Parties. Symantec's financial resources are set forth in disclosures appearing at: <http://investor.symantec.com/phoenix.zhtml?c=89422&p=irol-irhome>.

9.2.3 Extended Warranty Coverage

The NetSure Protection Plan is an extended warranty program that provides Symantec SSL and code signing certificate subscribers with protection against loss or damage that is due to a defect in Symantec's issuance of the certificate or other malfeasance caused by Symantec's negligence or breach of its contractual obligations, provided that the subscriber of the certificate has fulfilled its obligations under the applicable service agreement. For general information concerning the NetSure Protection Plan, and a discussion of which Certificates are covered by it, see www.symantec.com/about/profile/policies/repository.jsp.

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"):

- CA application records, whether approved or disapproved,
- Certificate Application records,
- Private keys held by enterprise Customers using Managed PKI Key Manager and information needed to recover such Private Keys,
- Transactional records (both full records and the audit trail of transactions),
- Audit trail records created or retained by Symantec or a Customer,
- Audit reports created by Symantec or a Customer (to the extent such reports are maintained), or their respective auditors (whether internal or public),
- Contingency planning and disaster recovery plans, and
- Security measures controlling the operations of Symantec hardware and software and the administration of Certificate services and designated enrollment services.

9.3.2 Information Not Within the Scope of Confidential Information

Certificates, Certificate revocation and other status information, Symantec 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

Symantec secures private information from compromise and disclosure to third parties.

9.4 Privacy of Personal Information

9.4.1 Privacy Plan

Symantec has implemented a Privacy Policy, which is located at: www.symantec.com/about/profile/privacypolicy/index.jsp, in compliance with CP § 9.4.1.³⁶

9.4.2 Information Treated as Private

Any information about 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 local laws, all information made public in a certificate is deemed not private.

9.4.4 Responsibility to Protect Private Information

Symantec and Affiliates secure private information from compromise and disclosure to third parties and complies 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

Symantec shall be entitled to disclose Confidential/Private Information if, in good faith, Symantec believes that:

- disclosure is necessary in response to subpoenas and search warrants.
- 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

³⁶ The Privacy Policy in Japanese is also available at <http://www.symantec.com/ja/jp/about/profile/policies/privacy.jsp>.

9.5 Intellectual Property rights

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

9.5.1 Property Rights in Certificates and Revocation Information

CAs retain all Intellectual Property Rights in and to the Certificates and revocation information that they issue. Symantec and Customers grant permission to reproduce and distribute Certificates on a nonexclusive royalty-free basis, provided that they are reproduced in full and that use of Certificates is subject to the Relying Party Agreement referenced in the Certificate. Symantec and Customers shall grant permission to use revocation information to perform Relying Party functions subject to the applicable CRL Usage Agreement, Relying Party Agreement, or any other applicable agreements.

9.5.2 Property Rights in the CPS

STN Participants acknowledge that Symantec retains all Intellectual Property Rights in and to this CPS.

9.5.3 Property Rights in Names

A Certificate Applicant retains all rights it has (if any) in any trademark, service mark, or trade name contained in any Certificate Application and distinguished name within any Certificate issued to such Certificate Applicant.

9.5.4 Property Rights in Keys and Key Material

Key pairs corresponding to Certificates of CAs and end-user Subscribers are the property of the CAs and end-user Subscribers that are the respective Subjects of these Certificates, subject to the rights of enterprise Customers using Managed PKI Key Manager, regardless of the physical medium within which they are stored and protected, and such persons retain all Intellectual Property Rights in and to these key pairs. Without limiting the generality of the foregoing, Symantec's Root public keys and the Root Certificates containing them, including all PCA public keys and self-signed Certificates, are the property of Symantec. Symantec licenses software and hardware manufacturers to reproduce such root Certificates to place copies in trustworthy hardware devices or software. Finally, Secret Shares of a CA's private key are the property of the CA, and the CA retains all Intellectual Property Right in and to such Secret Shares even though they cannot obtain physical possession of the those shares or the CA from Symantec.

9.6 Representations and Warranties

9.6.1 CA Representations and Warranties

Symantec warrants that:

- 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,
- There are no errors in the information in the Certificate that were introduced by the entities approving the Certificate Application or issuing the Certificate as a result of a failure to exercise reasonable care in managing the Certificate Application or creating the Certificate,
- Their Certificates meet all material requirements of this CPS, and

- Revocation services and use of a repository conform to the applicable CPS in all material aspects.

Subscriber Agreements may include additional representations and warranties.

9.6.1.1 CABF Warranties and Obligations

EV SSL Certificates, EV Code Signing, and domain-validated and organization-validated SSL Certificates conform to the CA / Browser Forum requirements as set forth in the STN Supplemental Procedures, Appendix B1, Appendix C, and Appendix D, respectively.

9.6.2 RA Representations and Warranties

RAs warrant that:

- 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,
- 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,
- Their Certificates meet all material requirements of this CPS, and
- Revocation services (when applicable) and use of a repository conform to the applicable CPS in all material aspects.

Subscriber Agreements may include additional representations and warranties.

9.6.3 Subscriber Representations and Warranties

Subscribers warrant that:

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

9.8 Limitations of Liability

To the extent Symantec has issued and managed the Certificate(s) at issue in compliance with its Certificate Policy and its Certification Practice Statement, Symantec 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 Symantec's liability outside the context of the NetSure Protection Plan. Limitations of liability shall include an exclusion of indirect, special, incidental, and consequential damages. They shall also include the following liability caps limiting Symantec's damages concerning a specific Certificate:

Class	Liability Caps
Class 1	One Hundred U.S. Dollars (\$ 100.00 US)
Class 2	Five Thousand U.S. Dollars (\$ 5,000.00 US)
Class 3	One Hundred Thousand U.S. Dollars (\$ 100,000.00 US)

Table 14 – Liability Caps

The liability caps in Table 14 limit damages recoverable outside the context of the NetSure Protection Plan. Amounts paid under the NetSure Protection Plan are subject to their own liability caps. The liability caps under the NetSure Protection Plan for different kinds of Certificates range from \$10,000 US to \$1,750,000 US. See the NetSure Protection Plan for more detail at www.symantec.com/about/profile/policies/repository.jsp.

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 CA shall 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.

Syantec's limitation of liability for EV certificates is further described in Appendix B1 to this CPS.

9.9 Indemnities

9.9.1 Indemnification by Subscribers

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

- Falsehood or misrepresentation of fact by the Subscriber on the Subscriber's Certificate Application,
- 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,

- 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
- 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.

9.9.2 Indemnification by Relying Parties

To the extent permitted by applicable law, Relying Party Agreements shall require Relying Parties to indemnify Symantec for:

- The Relying Party's failure to perform the obligations of a Relying Party,
- The Relying Party's reliance on a Certificate that is not reasonable under the circumstances, or
- 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 may include additional indemnity obligations.

9.9.3 Indemnification of Application Software Suppliers

Notwithstanding any limitations on its liability to Subscribers and Relying Parties, the CA understands and acknowledges that the Application Software Suppliers who have a Root Certificate distribution agreement in place with the Symantec Root CA do not assume any obligation or potential liability of the CA under these Requirements or that otherwise might exist because of the issuance or maintenance of Certificates or reliance thereon by Relying Parties or others.

Thus the CA shall defend, indemnify, and hold harmless each Application Software Supplier for any and all claims, damages, and losses suffered by such Application Software Supplier related to a Certificate issued by the CA, regardless of the cause of action or legal theory involved. This does not apply, however, to any claim, damages, or loss suffered by such Application Software Supplier related to a Certificate issued by the CA where such claim, damage, or loss was directly caused by such Application Software Supplier's software displaying as not trustworthy a Certificate that is still valid, or displaying as trustworthy: (1) a Certificate that has expired, or (2) a Certificate that has been revoked (but only in cases where the revocation status is currently available from the CA online, and the application software either failed to check such status or ignored an indication of revoked status).

9.10 Term and Termination

9.10.1 Term

The CPS becomes effective upon publication in the Symantec Repository. Amendments to this CPS become effective upon publication in the Symantec Repository.

9.10.2 Termination

This CPS as amended from time to time 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, Symantec 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

Unless otherwise specified by agreement between the parties, Symantec Sub-domain participants shall use commercially reasonable methods to communicate with each other, taking into account the criticality and subject matter of the communication.

9.12 Amendments

9.12.1 Procedure for Amendment

Amendments to this CPS may be made by the Symantec 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 Policies and Agreements section of the Symantec Repository located at:

www.symantec.com/about/profile/policies/repository.jsp. Updates supersede any designated or conflicting provisions of the referenced version of the CPS. The PMA shall determine whether 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

Symantec 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 Policies and Agreements section of the Symantec Repository, which is located at:

www.symantec.com/about/profile/policies/repository.jsp.

The PMA solicits proposed amendments to the CPS from other Symantec Sub-domain participants. If the PMA considers such an amendment desirable and proposes to implement the amendment, the PMA shall provide notice of such amendment in accordance with this section.

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

At a minimum Symantec and the PMA will update this CPS annually in compliance with CA/Browser Forum guidelines.

9.12.2.1 Comment Period

Except as otherwise stated, the comment period for any material amendments to the CPS shall be fifteen (15) days, starting on the date on which the amendments are posted on the Symantec Repository. Any Symantec Sub-domain participant shall be entitled to file comments with the PMA up until the end of the comment period.

9.12.2.2 Mechanism to Handle Comments

The PMA shall consider any comments on the proposed amendments. The PMA shall either (a) allow the proposed amendments to become effective without amendment, (b) amend the proposed amendments and republish them as a new amendment when required, or (c) withdraw the proposed amendments. The PMA is entitled to withdraw proposed amendments by notifying Affiliates and providing notice in the Practices Updates and Notices section of the Symantec Repository. Unless proposed amendments are amended or withdrawn, they shall become effective upon the expiration of the comment period.

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

9.13.1 Disputes among Symantec, Affiliates, and Customers

Disputes among Symantec Sub-domain participants shall be resolved pursuant to provisions in the applicable agreements among the parties.

9.13.2 Disputes with End-User Subscribers or Relying Parties

To the extent permitted by applicable law, Subscriber Agreements and Relying Party Agreements shall contain a dispute resolution clause. Disputes involving Symantec require an initial negotiation period of sixty (60) days followed by litigation in the federal or state court encompassing Santa Clara County, California, in the case of claimants who are U.S. residents, or, in the case of all other claimants, arbitration administered by the International Chamber of Commerce (“ICC”) in accordance with the ICC Rules of Conciliation and Arbitration, unless otherwise approved by Symantec.

9.14 Governing Law

Subject to any limits appearing in applicable law, the laws of the State of California, U.S.A., shall govern the enforceability, construction, interpretation, and validity of this CPS, irrespective of contract or other choice of law provisions and without the requirement to establish a commercial nexus in California, USA. This choice of law is made to ensure uniform procedures and interpretation for all STN Participants, no matter where they are located.

This governing law provision applies only to this CPS. Agreements incorporating the CPS by reference may have their own governing law provisions, provided that this Section 9.14 governs the enforceability, construction, interpretation, and validity of the terms of the CPS separate and apart from the remaining provisions of any such agreements, subject to any limitations appearing in applicable law.

This CPS is subject to applicable national, state, local and foreign laws, rules, regulations, ordinances, decrees, and orders including, but not limited to, restrictions on exporting or importing software, hardware, or technical information.

9.15 Compliance with Applicable Law

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

9.16 Miscellaneous Provisions

9.16.1 Entire Agreement

Not applicable

9.16.2 Assignment

Not applicable

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 (Attorney's Fees and Waiver of Rights)

Not applicable

9.16.5 Force Majeure

To the extent permitted by applicable law, Subscriber Agreements and Relying Party Agreements shall include a force majeure clause protecting Symantec.

9.17 Other Provisions

Not applicable

Appendix A: Table of Acronyms and Definitions

Table of Acronyms

Term	Definition
AICPA	American Institute of Certified Public Accountants.
ANSI	The American National Standards Institute.
ACS	Authenticated Content Signing.
BIS	The United States Bureau of Industry and Science of the United States Department of Commerce.
CA	Certification Authority.
ccTLD	Country Code Top-Level Domain
CICA	Canadian Instituted of Chartered Accountants
CP	Certificate Policy.
CPS	Certification Practice Statement.
CRL	Certificate Revocation List.
CSPRNG	Cryptographically Secure Pseudo-Random Number Generator
DBA	Doing Business As
DNS	Domain Name System
EV	Extended Validation
FIPS	United State Federal Information Processing Standards.
FQDN	Fully Qualified Domain Name
ICC	International Chamber of Commerce.
IM	Instant Messaging
IANA	Internet Assigned Numbers Authority
ICANN	Internet Corporation for Assigned Names and Numbers
ISO	International Organization for Standardization
KRB	Key Recovery Block.
LSVA	Logical security vulnerability assessment.
NIST	(US Government) National Institute of Standards and Technology
OCSP	Online Certificate Status Protocol.
OID	Object Identifier
PCA	Primary Certification Authority.
PIN	Personal identification number.
PKCS	Public-Key Cryptography Standard.
PKI	Public Key Infrastructure.
PMA	Policy Management Authority.
QGIS	Qualified Government Information Source
QIIS	Qualified Independent Information Source
RA	Registration Authority.
RFC	Request for comment.
SAR	Security Audit Requirements
S/MIME	Secure multipurpose Internet mail extensions.
SSL	Secure Sockets Layer.
STN	Symantec Trust Network.
TLD	Top-Level Domain
TLS	Transport Layer Security

Definitions

Term	Definition
Administrator	A Trusted Person within the organization of a Processing Center, Service Center, Managed PKI Customer, or Gateway Customer that performs validation and other CA or RA functions.
Administrator Certificate	A Certificate issued to an Administrator that may only be used to perform CA or RA functions.
Affiliate	A leading trusted third party, for example in the technology, telecommunications, or financial services industry, that has entered into an agreement with Symantec to be a STN distribution and services channel within a specific territory. In the CAB Forum context, the term "Affiliate" refers to: A corporation, partnership, joint venture or other entity controlling, controlled by, or under common control with another entity, or an agency, department, political subdivision, or any entity operating under the direct control of a Government Entity.
Affiliate Practices Legal Requirements Guidebook	A Symantec document setting forth requirements for Affiliate CPSs, agreements, validation procedures, and privacy policies, as well as other requirements that Affiliates must meet.
Affiliated Individual	A natural person that is related to a Managed PKI Customer, Managed PKI Lite Customer, or Gateway Customer entity (i) as an officer, director, employee, partner, contractor, intern, or other person within the entity, (ii) as a member of a Symantec registered community of interest, or (iii) as a person maintaining a relationship with the entity where the entity has business or other records providing appropriate assurances of the identity of such person.
Applicant	The Private Organization or Government Entity that applies for (or seeks renewal of) an EV Certificate naming it as the Subject.
Applicant Representative	An individual person employed by the Applicant for an EV certificate: (i) who signs and submits, or approves an EV Certificate Request on behalf of an Applicant, and/or (ii) who signs and submits a Subscriber Agreement on behalf of an Applicant.
Application Software Vendor	A developer of Internet browser software or other software that displays or uses certificates and distributes root certificates, such as KDE, Microsoft Corporation, Mozilla Corporation, Opera Software ASA, and Red Hat, Inc.
Applicant	The natural person or Legal Entity that applies for (or seeks renewal of) a Certificate. Once the Certificate issues, the Applicant is referred to as the Subscriber. For Certificates issued to devices, the Applicant is the entity that controls or operates the device named in the Certificate, even if the device is sending the actual certificate request.
Applicant Representative	A natural person or human sponsor who is either the Applicant, employed by the Applicant, or an authorized agent who has express authority to represent the Applicant: (i) who signs and submits, or approves a certificate request on behalf of the Applicant, and/or (ii) who signs and submits a Subscriber Agreement on behalf of the Applicant, and/or (iii) who acknowledges and agrees to the Certificate Terms of Use on behalf of the Applicant when the Applicant is an Affiliate of the CA.
Application Software Supplier	A supplier of Internet browser software or other relying-party application software that displays or uses Certificates and incorporates Root Certificates.
Attestation Letter	A letter attesting that Subject Information is correct written by an accountant, lawyer, government official, or other reliable third party customarily relied upon for such information.
Audit Report	A report from a Qualified Auditor stating the Qualified Auditor's opinion on whether an entity's processes and controls comply with the mandatory provisions of these Requirements.
Automated Administration	A procedure whereby Certificate Applications are approved automatically if enrollment information matches information contained in a database.
Automated Administration Software Module	Software provided by Symantec that performs Automated Administration.
Certificate	A message that, at least, states a name or identifies the CA, identifies the Subscriber, contains the Subscriber's public key, identifies the Certificate's Operational Period, contains a Certificate serial number, and is digitally signed by the CA.
Certificate Applicant	An individual or organization that requests the issuance of a Certificate by a CA.
Certificate Application	A request from a Certificate Applicant (or authorized agent of the Certificate Applicant) to a CA for the issuance of a Certificate.
Certificate Approver	□A Certificate Approver is a natural person who is employed by the Applicant, or an authorized agent who has express authority to represent the Applicant of an EV Certificate to (i) act as a Certificate Requester and to authorize other employees or third parties to act as a Certificate Requester, and (ii) to approve EV Certificate Requests submitted by other Certificate Requesters.
Certificate Chain	An ordered list of Certificates containing an end-user Subscriber Certificate and CA Certificates, which terminates in a root Certificate.
Certificate Data	Certificate requests and data related thereto (whether obtained from the Applicant or otherwise) in the CA's possession or control or to which the CA has access.
Certificate Management Control Objectives	Criteria that an entity must meet in order to satisfy a Compliance Audit.

Term	Definition
Certificate Management Process	Processes, practices, and procedures associated with the use of keys, software, and hardware, by which the CA verifies Certificate Data, issues Certificates, maintains a Repository, and revokes Certificates.
Certificate Policies (CP)	This document, which is entitled "Symantec Trust Network Certificate Policies" and is the principal statement of policy governing the STN.
Certificate Problem Report	Complaint of suspected Key Compromise, Certificate misuse, or other types of fraud, compromise, misuse, or inappropriate conduct related to Certificates
Certificate Requester	A Certificate Requester is a natural person who is employed and authorized by the Applicant, or an authorized agent who has express authority to represent the Applicant or a third party (such as an ISP or hosting company) that completes and submits an EV Certificate Request on behalf of the Applicant.
Certificate Revocation List (CRL)	A periodically (or exigently) issued list, digitally signed by a CA, of identified Certificates that have been revoked prior to their expiration dates in accordance with CP § 3.4. The list generally indicates the CRL issuer's name, the date of issue, the date of the next scheduled CRL issue, the revoked Certificates' serial numbers, and the specific times and reasons for revocation.
Certificate Signing Request	A message conveying a request to have a Certificate issued.
Certification Authority (CA)	An entity authorized to issue, manage, revoke, and renew Certificates in the STN.
Certification Practice Statement (CPS)	A statement of the practices that Symantec or an Affiliate employs in approving or rejecting Certificate Applications and issuing, managing, and revoking Certificates, and requires its Managed PKI Customers and Gateway Customers to employ.
Challenge Phrase	A secret phrase chosen by a Certificate Applicant during enrollment for a Certificate. When issued a Certificate, the Certificate Applicant becomes a Subscriber and a CA or RA can use the Challenge Phrase to authenticate the Subscriber when the Subscriber seeks to revoke or renew the Subscriber's Certificate.
Class	A specified level of assurances as defined within the CP. See CP § 1.1.1.
Client Service Center	A Service Center that is an Affiliate providing client Certificates either in the Consumer or Enterprise line of business.
Compliance Audit	A periodic audit that a Processing Center, Service Center, Managed PKI Customer, or Gateway Customer undergoes to determine its conformance with STN Standards that apply to it.
Compromise	A violation (or suspected violation) of a security policy, in which an unauthorized disclosure of, or loss of control over, sensitive information may have occurred. With respect to private keys, a Compromise is a loss, theft, disclosure, modification, unauthorized use, or other compromise of the security of such private key.
Confidential/Private Information	Information required to be kept confidential and private pursuant to CP § 2.8.1.
Contract Signer	A Contract Signer is a natural person who is employed by the Applicant, or an authorized agent who has express authority to represent the Applicant who has authority on behalf of the Applicant to sign Subscriber Agreements on behalf of the Applicant for an EV Certificate.
Country	A Country shall mean a Sovereign state as defined in the Guidelines.
CRL Usage Agreement	An agreement setting forth the terms and conditions under which a CRL or the information in it can be used.
Cross Certificate	A certificate that is used to establish a trust relationship between two Root CAs.
Cryptographically Secure Pseudo-Random Number Generator	A random number generator intended for use in a cryptographic system.
Customer	An organization that is either a Managed PKI Customer, or Gateway Customer.
Delegated Third Party	A natural person or Legal Entity that is not the CA but is authorized by the CA to assist in the Certificate Management Process by performing or fulfilling one or more of the CA requirements found herein.
Demand Deposit Account	A deposit account held at a bank or other financial institution, the funds deposited in which are payable on demand. The primary purpose of demand accounts is to facilitate cashless payments by means of check, bank draft, direct debit, electronic funds transfer, etc. Usage varies among countries, but a demand deposit account is commonly known as: a checking account, a share draft account, a current account, or a checking account.
Domain Authorization	Correspondence or other documentation provided by a Domain Name Registrant attesting to the authority of an Applicant to request a Certificate for a specific Domain Namespace.
Domain Name	The label assigned to a node in the Domain Name System.
Domain Namespace	The set of all possible Domain Names that are subordinate to a single node in the Domain Name System.
Domain Name Registrant	Sometimes referred to as the "owner" of a Domain Name, but more properly the person(s) or entity(ies) registered with a Domain Name Registrar as having the right to control how a Domain

Term	Definition
	Name is used, such as the natural person or Legal Entity that is listed as the "Registrant" by WHOIS or the Domain Name Registrar.
Domain Name Registrar	A person or entity that registers Domain Names under the auspices of or by agreement with: (i) the Internet Corporation for Assigned Names and Numbers (ICANN), (ii) a national Domain Name authority/registry, or (iii) a Network Information Center (including their affiliates, contractors, delegates, successors, or assigns).
Enterprise, as in Enterprise Service Center	A line of business that an Affiliate enters to provide Managed PKI services to Managed PKI Customers.
Enterprise EV Certificate:	An EV Certificate that an Managed PKI for SSL Customer authorizes Symantec to issue at third and higher domain levels that contain the domain that have been verified by Symantec.
Enterprise RA	A Managed PKI for SSL customer that can request multiple valid EV Certificates for Domains and Organizations verified by Symantec for domains at third and higher domain levels that contain a domain that was verified by Symantec in the original EV Certificate, in accordance with the requirements of these Guidelines.
Expiry Date	The "Not After" date in a Certificate that defines the end of a Certificate's validity period.
EV Certificate:	A digital certificate that contains information specified in the EV Guidelines and that has been validated in accordance with the Guidelines.
EV OID	An identifying number, called an "object identifier," that is included in the <i>certificatePolicies</i> field of an EV certificate that: (i) indicates which CA policy statement relates to that certificate, and which, (ii) by pre-agreement with one or more Application Software Vendor, marks the certificate as being an EV Certificate.
Exigent Audit/Investigation	An audit or investigation by Symantec where Symantec has reason to believe that an entity's failure to meet STN Standards, an incident or Compromise relating to the entity, or an actual or potential threat to the security of the STN posed by the entity has occurred.
Extended Validation	Validation Procedures defined by the Guidelines for Extended Validation Certificates published by a forum consisting of major certification authorities and browser vendors.
Fully-Qualified Domain Name	A Domain Name that includes the labels of all superior nodes in the Internet Domain Name System.
Government Entity	A government-operated legal entity, agency, department, ministry, branch, or similar element of the government of a country, or political subdivision within such country (such as a state, province, city, county, etc.).
Intellectual Property Rights	Rights under one or more of the following: any copyright, patent, trade secret, trademark, and any other intellectual property rights.
Intermediate Certification Authority (Intermediate CA)	A Certification Authority whose Certificate is located within a Certificate Chain between the Certificate of the root CA and the Certificate of the Certification Authority that issued the end-user Subscriber's Certificate.
Internal Name	A string of characters (not an IP address) in a Common Name or Subject Alternative Name field of a Certificate that cannot be verified as globally unique within the public DNS at the time of certificate issuance because it does not end with a Top Level Domain registered in IANA's Root Zone Database.
International Organization	An International Organization is an organization founded by a constituent document, e.g., charter, treaty, convention, or similar document, signed by, or on behalf of, a minimum of two or more Sovereign State governments.
Issuing CA	In relation to a particular Certificate, the CA that issued the Certificate. This could be either a Root CA or a Subordinate CA.
Key Compromise	A Private Key is said to be compromised if its value has been disclosed to an unauthorized person, an unauthorized person has had access to it, or there exists a practical technique by which an unauthorized person may discover its value.
Key Generation Ceremony	A procedure whereby a CA's or RA's key pair is generated, its private key is transferred into a cryptographic module, its private key is backed up, and/or its public key is certified.
Key Generation Script	A documented plan of procedures for the generation of a CA Key Pair.
Key Manager Administrator	An Administrator that performs key generation and recovery functions for a Managed PKI Customer using Managed PKI Key Manager.
Key Pair	The Private Key and its associated Public Key.
Key Recovery Block (KRB)	A data structure containing a Subscriber's private key that is encrypted using an encryption key. KRBs are generated using Managed PKI Key Manager software.
Key Recovery Service	A Symantec service that provides encryption keys needed to recover a Key Recovery Block as part of a Managed PKI Customer's use of Managed PKI Key Manager to recover a Subscriber's private key.
Legal Entity	An association, corporation, partnership, proprietorship, trust, government entity or other entity with legal standing in a country's legal system.
Managed PKI	Symantec's fully integrated managed PKI service that allows enterprise Customers of Symantec and its Affiliates to distribute Certificates to individuals, such as employees, partners, suppliers, and customers, as well as devices, such as servers, routers, and firewalls. Managed PKI permits

Term	Definition
	enterprises to secure messaging, intranet ³⁷ , extranet, virtual private network, and e-commerce applications.
Managed PKI Administrator	An Administrator that performs validation or other RA functions for an Managed PKI Customer.
Managed PKI Control Center	A web-based interface that permits Managed PKI Administrators to perform Manual Authentication of Certificate Applications
Managed PKI Key Manager	A key recovery solution for those Managed PKI Customers choosing to implement key recovery under a special Managed PKI Agreement.
Managed PKI Key Management Service Administrator's Guide	A document setting forth the operational requirements and practices for Managed PKI Customers using Managed PKI Key Manager.
Manual Authentication	A procedure whereby Certificate Applications are reviewed and approved manually one-by-one by an Administrator using a web-based interface.
NetSure Protection Plan	An extended warranty program, which is described in CP § 9.2.3.
Nonverified Subscriber Information	Information submitted by a Certificate Applicant to a CA or RA, and included within a Certificate, that has not been confirmed by the CA or RA and for which the applicable CA and RA provide no assurances other than that the information was submitted by the Certificate Applicant.
Non-repudiation	An attribute of a communication that provides protection against a party to a communication falsely denying its origin, denying that it was submitted, or denying its delivery. Denial of origin includes the denial that a communication originated from the same source as a sequence of one or more prior messages, even if the identity associated with the sender is unknown. Note: only an adjudication by a court, arbitration panel, or other tribunal can ultimately prevent repudiation. For example, a digital signature verified with reference to a STN Certificate may provide proof in support of a determination of Non-repudiation by a tribunal, but does not by itself constitute Non-repudiation.
Object Identifier	A unique alphanumeric or numeric identifier registered under the International Organization for Standardization's applicable standard for a specific object or object class.
OCSP (Online Certificate Status Protocol)	An online Certificate-checking protocol for providing Relying Parties with real-time Certificate status information.
OCSP Responder	An online server operated under the authority of the CA and connected to its Repository for processing Certificate status requests. See also, Online Certificate Status Protocol.
Offline CA	STN PCAs, Issuing Root CAs and other designated intermediate CAs that are maintained offline for security reasons in order to protect them from possible attacks by intruders by way of the network. These CAs do not directly sign end user Subscriber Certificates.
Online CA	CAs that sign end user Subscriber Certificates are maintained online so as to provide continuous signing services.
Online Certificate Status Protocol (OCSP)	A protocol for providing Relying Parties with real-time Certificate status information.
Operational Period	The period starting with the date and time a Certificate is issued (or on a later date and time certain if stated in the Certificate) and ending with the date and time on which the Certificate expires or is earlier revoked.
Parent Company	Parent Company: A parent company is defined as a company that owns a majority of the Subsidiary Company and this can be verified by referencing a QIIS or from financial statement supplied by a registered Chartered Professional Accountant (CPA) or equivalent outside of the USA.
PKCS #10	Public-Key Cryptography Standard #10, developed by RSA Security Inc., which defines a structure for a Certificate Signing Request.
PKCS #12	Public-Key Cryptography Standard #12, developed by RSA Security Inc., which defines a secure means for the transfer of private keys.
Policy Management Authority (PMA)	The organization within Symantec responsible for promulgating this policy throughout the STN.
Primary Certification Authority (PCA)	A CA that acts as a root CA for a specific Class of Certificates, and issues Certificates to CAs subordinate to it.
Principal Individual(s)	Individuals of a Private Organization, Government Entity or Business Entity that are either owners, partners, managing members, directors or officers, as identified by their title of employment, or an employee, contractor or agent authorized by such entity or organization to conduct business related to the request, issuance and use of EV Certificates.
Private Key	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.

³⁷ The use of SSL/Code Signing Certificates with a subjectAlternativeName extension or Subject commonName field containing a Reserved IP Address or Internal Name has been deprecated by the CA / Browser Forum and will be eliminated by October 2016. Any such certificate still being issued after the effective date must have an expiry date of 1 November 2015 or earlier. Previously issued certificates with expiry dates after 1 October 2016 will be revoked effective 1 October 2016.

Term	Definition
Processing Center	An organization (Symantec or certain Affiliates) that creates a secure facility housing, among other things, the cryptographic modules used for the issuance of Certificates. In the Consumer and Web Site lines of business, Processing Centers act as CAs within the STN and perform all Certificate lifecycle services of issuing, managing, revoking, and renewing Certificates. In the Enterprise line of business, Processing Centers provide lifecycle services on behalf of their Managed PKI Customers or the Managed PKI Customers of the Service Centers subordinate to them.
Public Key	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.
Public Key Infrastructure (PKI)	The architecture, organization, techniques, practices, and procedures that collectively support the implementation and operation of a Certificate-based public key cryptographic system. The STN PKI consists of systems that collaborate to provide and implement the STN.
Publicly-Trusted Certificate	A Certificate that is trusted by virtue of the fact that its corresponding Root Certificate is distributed as a trust anchor in widely-available application software.
Qualified Auditor	A natural person or Legal Entity that meets the requirements of Section 17.6 (Auditor Qualifications).
Registered Domain Name	A Domain Name that has been registered with a Domain Name Registrar.
Registration Agency	A Governmental Agency that registers business information in connection with an entity's business formation or authorization to conduct business under a license, charter or other certification. A Registration Agency MAY include, but is not limited to (i) a State Department of Corporations or a Secretary of State; (ii) a licensing agency, such as a State Department of Insurance; or (iii) a chartering agency, such as a state office or department of financial regulation, banking or finance, or a federal agency such as the Comptroller of Currency (OCC) or Office of Thrift Supervision (OTC)
Registration Authority (RA)	An entity approved by a CA to assist Certificate Applicants in applying for Certificates, and to approve or reject Certificate Applications, revoke Certificates, or renew Certificates.
Regulated Financial Institution	A financial institution that is regulated, supervised, and examined by governmental, national, state or provincial, or local authorities having regulatory authority over such financial institution based on the governmental, national, state or provincial, or local laws under which such financial institution was organized and/or licensed.
Reliable Method of Communication	A method of communication, such as a postal/courier delivery address, telephone number, or email address, that was verified using a source other than the Applicant Representative.
Relying Party	An individual or organization that acts in reliance on a certificate and/or a digital signature.
Relying Party Agreement	An agreement used by a CA setting forth the terms and conditions under which an individual or organization acts as a Relying Party.
Repository	An online database containing publicly-disclosed PKI governance documents (such as Certificate Policies and Certification Practice Statements) and Certificate status information, either in the form of a CRL or an OCSP response.
Reseller	An entity marketing services on behalf of Symantec or an Affiliate to specific markets.
Reserved IP Address	An IPv4 or IPv6 address that the IANA has marked as reserved: http://www.iana.org/assignments/ipv4-address-space/ipv4-address-space.xml http://www.iana.org/assignments/ipv6-address-space/ipv6-address-space.xml
Retail Certificate	A Certificate issued by Symantec or an Affiliate, acting as CA, to individuals or organizations applying one by one to Symantec or an Affiliate on its web site.
Root CA	The top level Certification Authority whose Root Certificate is distributed by Application Software Suppliers and that issues Subordinate CA Certificates.
Root Certificate	The self-signed Certificate issued by the Root CA to identify itself and to facilitate verification of Certificates issued to its Subordinate CAs.
RSA	A public key cryptographic system invented by Rivest, Shamir and Adleman.
Secret Share	A portion of a CA private key or a portion of the activation data needed to operate a CA private key under a Secret Sharing arrangement.
Secret Sharing	The practice of splitting a CA private key or the activation data to operate a CA private key in order to enforce multi-person control over CA private key operations under CP § 6.2.2.
Secure Sockets Layer (SSL)	The industry-standard method for protecting Web communications developed by Netscape Communications Corporation. The SSL security protocol provides data encryption, server authentication, message integrity, and optional client authentication for a Transmission Control Protocol/Internet Protocol connection.
Security and Audit Requirements (SAR) Guide	A Symantec document that sets forth the security and audit requirements and practices for Processing Centers and Service Centers.
Security and Practices Review	A review of an Affiliate performed by Symantec before an Affiliate is permitted to become operational.
Service Center	An Affiliate that does not house Certificate signing units for the issuance of Certificates for the purpose of issuing Certificates of a specific Class or type, but rather relies on a Processing Center to perform issuance, management, revocation, and renewal of such Certificates.

Term	Definition
Sovereign State	A Sovereign state is a state, or country, that administers its own government, and is not dependent upon, or subject to, another power.
Sub-domain	The portion of the STN under control of an entity and all entities subordinate to it within the STN hierarchy.
Subject	The natural person, device, system, unit, or Legal Entity identified in a Certificate as the Subject and holder of a private key corresponding to a public key. The Subject is either the Subscriber or a device under the control and operation of the Subscriber. The term "Subject" can, in the case of an organizational Certificate, refer to the equipment or device that holds a private key. A Subject is assigned an unambiguous name, which is bound to the public key contained in the Subject's Certificate.
Subject Identity Information	Information that identifies the Certificate Subject. Subject Identity Information does not include a domain name listed in the subjectAltName extension or the Subject commonName field.
Subordinate CA	A Certification Authority whose Certificate is signed by the Root CA, or another Subordinate CA.
Subscriber	In the case of an individual Certificate, a person who is the Subject of, and has been issued, a Certificate. In the case of an organizational Certificate, an organization that owns the equipment or device that is the Subject of, and that has been issued, a Certificate. A Subscriber is capable of using, and is authorized to use, the private key that corresponds to the public key listed in the Certificate.
Subscriber Agreement	An agreement used by a CA or RA setting forth the terms and conditions under which an individual or organization acts as a Subscriber.
Subsidiary Company	A subsidiary company is defined as a company that is majority owned by Applicant as verified by referencing a QIS or from financial statement supplied by a registered Chartered Professional Accountant (CPA) or equivalent outside of the USA.
Superior Entity	An entity above a certain entity within a STN hierarchy (the Class 1, 2, or 3 hierarchy).
Supplemental Risk Management Review	A review of an entity by Symantec following incomplete or exceptional findings in a Compliance Audit of the entity or as part of the overall risk management process in the ordinary course of business.
Symantec	Means, with respect to each pertinent portion of this CPS, Symantec Corporation and/or any wholly owned Symantec subsidiary responsible for the specific operations at issue.
Symantec Digital Notarization Service	A service offered to Managed PKI Customers that provides a digitally signed assertion (a Digital Receipt) that a particular document or set of data existed at a particular point in time.
Terms of Use	Provisions regarding the safekeeping and acceptable uses of a Certificate issued in accordance with these Requirements when the Applicant/Subscriber is an Affiliate of the CA.
Trusted Person	An employee, contractor, or consultant of an entity within the STN responsible for managing infrastructural trustworthiness of the entity, its products, its services, its facilities, and/or its practices as further defined in CP § 5.2.1.
Trusted Position	The positions within a STN entity that must be held by a Trusted Person.
Trustworthy System	Computer hardware, software, and procedures that are reasonably secure from intrusion and misuse; provide a reasonable level of availability, reliability, and correct operation; are reasonably suited to performing their intended functions; and enforce the applicable security policy. A trustworthy system is not necessarily a "trusted system" as recognized in classified government nomenclature.
Symantec Repository	Symantec's database of Certificates and other relevant Symantec Trust Network information accessible on-line.
Symantec Trust Network (STN)	The Certificate-based Public Key Infrastructure governed by the Symantec Trust Network Certificate Policies, which enables the worldwide deployment and use of Certificates by Symantec and its Affiliates, and their respective Customers, Subscribers, and Relying Parties.
STN Participant	An individual or organization that is one or more of the following within the STN: Symantec, an Affiliate, a Customer, a Universal Service Center, a Reseller, a Subscriber, or a Relying Party.
STN Standards	The business, legal, and technical requirements for issuing, managing, revoking, renewing, and using Certificates within the STN.
Unregistered Domain Name	A Domain Name that is not a Registered Domain Name.
Valid Certificate	A Certificate that passes the validation procedure specified in RFC 5280.
Validation Specialists	Someone who performs the information verification duties specified by these Requirements.
Validity Period	The period of time measured from the date when the Certificate is issued until the Expiry Date.
Wildcard Certificate	A Certificate containing an asterisk (*) in the left-most position of any of the Subject Fully-Qualified Domain Names contained in the Certificate.

Appendix B1: Supplemental Validation Procedures for Extended Validation (EV) SSL Certificates

The current version of the CA/Browser Forum Guidelines for the Issuance and Management of Extended Validation (EV) SSL Certificates can be accessed at <https://cabforum.org/extended-validation/>

Appendix B2: Minimum Cryptographic Algorithm and Key Sizes for EV Certificates

1. Root CA Certificates

	Minimum strength of algorithm
Digest algorithm	SHA-1*, SHA-256, SHA-384 or SHA-512
RSA	2048 bit
ECC	256 or 384 bits

2. Subordinate CA Certificates

	Minimum strength of algorithm
Digest algorithm	SHA-1*, SHA-256, SHA-384 or SHA-512
RSA	2048 bit
ECC	256 or 384 bits

3. Subscriber Certificates

	Minimum strength of algorithm
Digest algorithm	SHA1*, SHA-256, SHA-384 or SHA-512
RSA	2048 bit
ECC	256 or 384 bits

* SHA-1 MAY be used with RSA keys in accordance with the criteria defined in Section 7.1.3 of the CA/Browser Forum Baseline Requirements for the Issuance and Management of Publicly-Trusted Certificates.

Appendix B3: EV Certificates Required Certificate Extensions

1. Root CA Certificate

Root certificates generated after October 2006 MUST be X.509 v3.

(a) **basicConstraints**

If the certificate is v3 and is created after October 2006, this extension MUST appear as a critical extension in all CA certificates that contain Public Keys used to validate digital signatures on certificates. The CA field MUST be set true. The *pathLenConstraint* field SHOULD NOT be present.

(b) **keyUsage**

If the certificate is v3 and is created after October 2006, this extension MUST be present and MUST be marked critical. Bit positions for *CertSign* and *cRLSign* MUST be set. All other bit positions SHOULD NOT be set.

(c) **certificatePolicies**

This extension SHOULD NOT be present.

(d) **extendedKeyUsage**

This extension is not present.

All other fields and extensions are set in accordance to RFC 5280.

2. Subordinate CA Certificate

(a) **certificatePolicies**

MUST be present and SHOULD NOT be marked critical. The set of policy identifiers MUST include the identifier for Symantec's EV policy.

certificatePolicies:policyIdentifier (Required)

- the **anyPolicy** identifier if subordinate CA is controlled by Symantec

(b) **cRLDistributionPoint**

is always present and NOT marked critical. It contains the HTTP URL of Symantec's CRL service.

(c) **authorityInformationAccess**

MUST be present and MUST NOT be marked critical.

SHALL contain the HTTP URL of the Issuing CA's OCSP responder (accessMethod = 1.3.6.1.5.5.7.48.1). An HTTP accessMethod SHOULD be included for Symantec's certificate (accessMethod = 1.3.6.1.5.5.7.48.2).

(d) **basicConstraints**

This extension MUST be present and MUST be marked critical in all CA certificates that contain Public Keys used to validate digital signatures on certificates. The CA field MUST be set true. The *pathLenConstraint* field MAY be present.

(e) **keyUsage**

This extension MUST be present and MUST be marked critical. Bit positions for *CertSign* and *cRLSign* MUST be set. All other bit positions MUST NOT be set.

All other fields and extensions MUST be set in accordance to RFC 5280.

3. Subscriber Certificate

(a) *certificatePolicies*

MUST be present and SHOULD NOT be marked critical. The set of policyIdentifiers MUST include the identifier for Symantec's EV policy.

certificatePolicies:policyIdentifier (Required)

- EV policy OID

certificatePolicies:policyQualifiers:policyQualifierId (Required)

- id-qt 2 [RFC 5280]

certificatePolicies:policyQualifiers:qualifier (Required)

- URI to the Certificate Practice Statement

(b) *cRLDistributionPoint*

is always present and NOT marked critical. It contains the HTTP URL of Symantec's CRL service.

(c) *authorityInformationAccess*

is always present and NOT marked critical. SHALL contain the HTTP URL of Symantec's OCSP responder (accessMethod = 1.3.6.1.5.5.7.48.1). An HTTP accessMethod MAY be included for Symantec's certificate (accessMethod = 1.3.6.1.5.5.7.48.2).

(d) *basicConstraints* (optional)

If present, the CA field MUST be set false.

(e) *keyUsage* (optional)

If present, bit positions for *CertSign* and *cRLSign* MUST NOT be set.

(f) *extKeyUsage*

Either the value *id-kp-serverAuth* [RFC5280] or *id-kp-clientAuth* [RFC5280] or both values MUST be present. Other values SHOULD NOT be present.

(f) *SubjectAltName*

populated in accordance with RFC5280 and criticality is set to FALSE.

All other fields and extensions set in accordance to RFC 5280.

Appendix B4: Foreign Organization Name Guidelines

NOTE: This appendix is only relevant to EV applications from countries that do not have Latin character organization name registrations. More specific information for particular countries may be added to this appendix in the future.

Where an EV Applicant's organization name is not registered with a QGIS in Latin characters and the applicant's foreign character organization name and registration have been verified with a QGIS in accordance with these Guidelines, Symantec MAY include a Latin character organization name in the EV certificate. In such a case, Symantec will follow the procedures laid down in this appendix.

Romanized Names

In order to include a transliteration/Romanization of the registered name, the Romanization will be verified by Symantec using a system officially recognized by the Government in the Applicant's jurisdiction of incorporation.

If Symantec cannot rely on a transliteration/Romanization of the registered name using a system officially recognized by the Government in the Applicant's jurisdiction of incorporation, then it MUST rely on one of the options below, in order of preference:

- A system recognized by the International Standards Organization (ISO),
- A system recognized by the United Nations or
- A Lawyers Opinion confirming the Romanization of the registered name.

English Name

In order to include a Latin character name that is not a Romanization of the registered name in the EV certificate, Symantec will verify that the Latin character name is:

- Included in the Articles of Incorporation (or equivalent document) filed as part of the organization registration, or
- Recognized by a QGTIS in the Applicant's Jurisdiction of Incorporation as the applicant's recognized name for tax filings, or
- Confirmed with a QIIS to be the name associated with the registered organization, or
- Confirmed by a lawyer's opinion letter to be the trading name associated with the registered organization.

Country Specific Procedures

F-1. Japan

In addition to the procedures set out above:

- The Hepburn method of Romanization is acceptable for Japanese Romanizations.
- Symantec MAY verify the Romanized transliteration of Applicant's formal legal name with either a QIIS or a lawyer's opinion letter.
- Symantec MAY use the Financial Services Agency to verify an English Name. When used, Symantec will verify that the English name is recorded in the audited Financial Statements filed with the Financial Services Agency.
- When relying on Articles of Incorporation to verify an English Name, the Articles of Incorporation MUST be accompanied either: by a document, signed with the original Japanese Corporate Stamp, that proves that the Articles of Incorporation are authentic and current, or by a lawyer's opinion letter. Symantec will verify the authenticity of the Corporate Stamp.

Appendix C: Supplemental Validation Procedures for Extended Validation (EV) Code-Signing Certificates

The current version of the CA/Browser Forum Guidelines for the Issuance and Management of Extended Validation (EV) Code Signing Certificates can be accessed at <https://cabforum.org/ev-code-signing-certificate-guidelines/>

Appendix D: Supplemental Baseline Requirements for Issuance and Management of Publicly-Trusted Certificates

The current version of the CA/Browser Forum Baseline Requirements for the Issuance and Management of Publicly-Trusted Certificates can be accessed at <https://cabforum.org/baseline-requirements-documents/>

Appendix E: History of Changes

History of changes: version 3.8.27 (Dec 2016)

Section	Changes made
Various	Miscellaneous clerical and administrative changes
1. INTRODUCTION	<p>Added: Management may make exceptions to this policy on a case by case basis to mitigate material, imminent impacts to customers, partners, relying parties, and/or others within the certificate ecosystem where practical workarounds do not exist. Any such management exceptions are documented, tracked, and reported as part of the audit process.</p> <p>The Symantec Trust Network is managed within a dedicated business unit within Symantec and operates separately from the business units responsible for the Company's other security offerings. The STN shall not issue SSL inspection intermediate CAs from roots that are part of the Network. Only roots with no current or previous trust in Application Software Supplier products (private roots) may be used to create intermediate CAs used for SSL inspection.</p>
1.4.2 Prohibited Certificate Uses	<p>Added: The STN and its Participants do not issue any certificate that can be used for man-in-the-middle (MITM) or traffic management of domain names or IP addresses that the certificate holder does not legitimately own or control. Such certificate usage is expressly prohibited.</p>
3.1.1 Type of Names	<p>Removed from Organizational Unit:</p> <ul style="list-style-type: none"> • "Persona Not Validated" for Class 1 Individual Certificates (footnote related to this point) <p>Added to Common Name: Class 1 Individual Certificates may omit this attribute</p> <p>Modified E-Mail Address: E-mail address may appear in Class 1 individual Certificates and MPKI Subscriber Certificates.</p> <p>Added below Table 5: The Common Name is either omitted or, historically, may contain "Persona Not Validated" for Class 1 Certificates.</p>
4.9.2 Who Can Request Revocation	<p>Added: Any person claiming to have witnessed certificate misuse, inappropriate conduct related to certificates, fraud or key compromise may submit a Certificate Problem Report using the online form available at the Symantec website, https://www.symantec.com/contact/authentication/ssl-certificate-complaint.jsp. Symantec will investigate all Certificate Problem Reports and take action within the prescribed timing stated in the CABF Baseline Requirements.</p>
Change Summary for 3.8.26	<p>Removed: 4.9 Certificate Revocation and Suspension: (Added: If an STN Participant (Affiliate, Processing Center, Service Center) issues code signing certificates and has independent authority to revoke certificates, practices for revocation and status checking of Code Signing Certificates shall be documented in an STN participant's CPS and shall comply with section 13 of the applicable governing Microsoft Minimum Requirements published at aka.ms/csbr.)</p>

History of changes: version 3.8.26 (Sep 2016)

Section	Changes made
Various	Miscellaneous clerical and administrative changes throughout document
1. INTRODUCTION	<p>Added: Effective February 1, 2017 and after, the STN adopts the current version of the Minimum Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates published at https://aka.ms/csbr. If there is any inconsistency between this document and those Requirements, those Requirements take precedence over this document.</p> <p>Code signing certificates issued on or after February 1st, 2017 and intended for use in Microsoft Authenticode and subsequent technologies will include the applicable certificate policy</p>

Section	Changes made
	identifier, 2.23.140.1.4.1, to indicate compliance with the Minimum Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates.
1.5.2Contact Person	Added: Contact information for the CA/Browser Forum is available here: https://cabforum.org/leadership/
2.4 Access Controls on Repositories	Added: Symantec and Affiliates make their repositories publicly available in a read-only manner, and specifically at the link stated in section 1.5.4 or specified in an Affiliate's CPS.
3.2.6Criteria for Interoperation	Removed the following that is duplicated from the STN CP, replaced with No stipulation: Symantec may provide interoperation services that allow a non-STN CA to be able to interoperate with the STN by unilaterally certifying that CA. CAs enabled to interoperate in this way will comply with the STN CP as supplemented by additional policies when required. Symantec shall only allow interoperation with the STN of a non-STN CA in circumstances where the CA, at a minimum: <ul style="list-style-type: none"> • Enters into a contractual agreement with Symantec • Operates under a CPS that meets STN requirements for the classes of certificates it will issues • Passes a compliance assessment before being allowed to interoperate • Passes an annual compliance assessment for ongoing eligibility to interoperate.
4.9.1Circumstances for Revocation	Added: <ul style="list-style-type: none"> • In the case of code signing certificates, <ul style="list-style-type: none"> ○ An Application Software Supplier requests the CA revoke and an investigation indicates that the certificate is being used to sign malware or other unwanted software, ○ A report is submitted to the STN participant indicating that the certificate was used to sign malware • Effective February 1, 2017, whether the Code Signing Certificate satisfies any of the Reasons for Revoking a Subscriber Certificate in section 13.1.5 of the Minimum Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates as adopted by Microsoft
4.9.2Who Can Request Revocation	Added: Regarding code signing certificates, Symantec and Affiliates that issue code signing certificates provide Anti-Malware Organizations, Subscribers, Relying Parties, Application Software Suppliers, and other third parties with clear instructions on how they can report suspected Private Key Compromise, Certificate misuse, Certificates used to sign Suspect Code, Takeover Attacks, or other types of possible fraud, compromise, misuse, inappropriate conduct, or any other matter related to Certificates. Symantec and Affiliates publicly disclose the instructions on its website. Symantec and those Affiliates that both issue code signing certificates and are granted revocation privilege revoke a Code Signing Certificate in any of these four circumstances: (1) the Application Software Supplier requests revocation and Symantec or its Affiliate does not intend to pursue an alternative course of action, (2) the authenticated subscriber requests revocation, (3) a third party provides information that leads the CA to believe that the certificate is compromised or is being used for Suspect Code, or (4) the CA otherwise decides that the certificate should be revoked. Symantec and Affiliates that issue code signing certificates shall follow the process for handling revocation requests detailed at section 13.1.5 of the Minimum Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates.
4.9.5Time within Which CA Must Process the Revocation Request	Added: Effective February 1, 2017, Symantec complies with the revocation timeframes specified for malware in the Minimum Requirements for Issuance and Management of Publicly-Trusted Code Signing Certificates in section 13.1.5.3 for code signing certificates.
4.9.6Revocation Checking Requirements for Relying Parties	Added: Due to the numerous and varying locations for CRL repositories, relying parties are advised to access CRLs using the URL(s) embedded in a certificate's CRL Distribution Points extension. The proper OCSP responder for a given certificate is placed in its Authority Information Access extension.
4.9.7.2 Microsoft Requirements for CRL Issuance	Added: Frequency of CRL issuance for code signing and timestamp certificates is documented in this CPS and complies with section 13.2.2 of the Minimum Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates published at https://aka.ms/csbr .
4.9.9On-Line Revocation/Status Checking Availability	Added: Symantec provides OCSP responses for Code Signing Certificates and Timestamp Certificates for at least 10 years after the expiration of the certificate. Serial numbers of revoked certificates remain on the CRL for at least 10 years after the expiration of the certificate.

Section	Changes made
5.4.1 Types of Events Recorded	<p>Added:</p> <ul style="list-style-type: none"> • Changes to CA details or keys • Certificate Issuance • Changes to certificate creation policies • Trusted Employee Events, including: <ul style="list-style-type: none"> ○ Logon and logoff attempts ○ Attempts to create, remove, set passwords or change the system privileges of any privileged users ○ Personnel changes. • Start-up and shutdown of systems and applications • Possession of activation data for CA private key operations • System configuration changes and maintenance • Records destroyed
6.1.5 Key Sizes	<p>Removed SHA-1 from first sentence, added second sentence: All Classes of STN PCAs and CAs, and RAs and end entity certificates use SHA-2 for digital signature hash algorithm and certain versions of Symantec Processing Center support the use of SHA-256 and SHA-384 hash algorithms in end-entity Subscriber Certificates. SHA-1 may be used to support legacy applications and use cases other than SSL and EV Code Signing provided that such usage does not violate procedures and policies set forth by the CA/Browser Forum and related Application Software Suppliers.</p>
6.1.5.1 CABF Requirements for Key Sizes	<p>Added: * SHA-1 MAY be used with RSA keys in accordance with the criteria defined in Section 7.1.3 of the CA/Browser Forum Baseline Requirements for the Issuance and Management of Publicly-Trusted Certificates</p> <p>Removed: where applicable. SHA-1 may be used until SHA-256 is supported widely by browsers used by a substantial portion of relying parties worldwide.</p>
6.2.1 Cryptographic Module Standards and Controls	<p>Added: Symantec recommends that enterprise RA Customers perform all Automated Administration RA cryptographic operations on a cryptographic module rated at least FIPS 140-1 level 2.</p>
6.2.8.4 Administrators' Private Keys (Class 3)	<p>Changed recommends to requires, added technical controls clause, added last clause: In cases where technical controls do not constrain issuance to pre-approved domains, Symantec requires that Administrators use a smart card, biometric access device, or security of equivalent strength along with the use of a password in accordance with Section 6.4.1 to authenticate the Administrator before the activation of the private key that can cause the issuance of certificates that gain trust through distribution of root certificates by Application Software Suppliers.</p>
6.2.10 Method of Destroying Private Key	<p>Changed logged to witnessed: When performed, CA key destruction activities are witnessed</p>
6.3.2 Certificate Operational Periods and Key Pair Usage Periods	<p>Added detail in parentheses: In addition, STN CAs stop issuing new Certificates at an appropriate date (60 days plus maximum validity period of issued Certificates) prior to the expiration of the CA's Certificate such that no Certificate issued by a Subordinate CA expires after the expiration of any Superior CA Certificates</p> <p>In table 8, changed Online CA to End-user Individual Subscriber to read: Normally up to 3 years, but under the conditions described below, Certificates may be renewed once, up to 6 years³⁸. After 6 years new enrollment is required.</p> <p>In table 8, changed Online CA to End-Entity Organizational Subscriber to read: Constrained by section 6.3.2.1 below, normally up to 6 years³⁹ under the conditions described below with no option to renew or re-key. After 6 years new enrollment is required.</p> <p>Removed: In terms of Section 6.3.2 of the STN CP, the Symantec PMA has approved an exception to extend a limited number CAs beyond the specified limits, in order to ensure uninterrupted PKI services during CA key pair migration. This exception can be applied to affiliates of Symantec Corporation operating the Processing Center software capabilities for customer, infrastructure and Admin CAs only that are not associated with CAs issuing SSL certificates. This exception</p>

³⁸ If 6-year end-user subscriber certificates are issued, the online CA certificate's operational period will be 10 years with no option to renew. CA re-key will be required after 5 years.

³⁹ At a minimum, the Distinguished Name of certificates issued with a validity of more than 3 years is re-verified after three years from date of certificate issuance. With the exception of the Symantec Automated Administration certificate, Organizational end-entity certificates used solely to support the operation of a portion of the STN may be issued with a validity period of 5 years and up to a maximum of 10 years after renewal.

Section	Changes made
	may not be used to extend a CA's validity beyond a 14-year total validity to a maximum of August 31, 2014, and shall not be made available after December 31, 2013.
6.6.2 Security Management Controls	Changed periodically to daily: Upon installation and daily thereafter, Symantec validates the integrity of its CA systems
7.1 Certificate Profile	Modified text specifying serial number in table 6: Unique value per Issuer DN that contains at least 64 bits of entropy output from a CSPRNG
7.1.2.1 Key Usage	Modified text to state that key usage criticality is generally set to TRUE.
7.1.2.5 Extended Key Usage	Added: Symantec Certificates may contain the <i>ExtendedKeyUsage</i> extension, aligning to Application Software Supplier granted trust bits and private PKI use cases.
7.1.2.6 CRL Distribution Points	Added: URLs comply with Mozilla requirements to exclude the LDAP protocol, and may appear multiple times within a <i>cRLDistributionPoints</i> extension.
7.1.3 Algorithm Object Identifiers	Removed: <ul style="list-style-type: none"> md5WithRSAEncryption OBJECT IDENTIFIER ::= {iso(1) member-body(2) us(840) rsadsi(113549) pkcs(1) pkcs-1(1) 4} Modified to refer to SHA256 preferred over SHA-1, removed reference to MD5: Certificate signatures produced using these algorithms shall comply with RFC 3279. <i>sha-256WithRSAEncryption</i> is used over <i>sha-1WithRSAEncryption</i> ⁴⁰ .
7.2 CRL Profile	Added: As applicable to the Certificate type, corresponding CRLs conform to the current version of the CA/Browser Forum Baseline Requirements for the Issuance and Management of Publicly-Trusted Certificates.
7.3 OCSP Profile	Modified to reference RFC 6960: Class 2 Enterprise certificates and Class 3 organization certificates using the Symantec Trusted Global Validation (TGV) service which conforms to RFC 6960.
7.3.1 Version Number(s)	Modified to reference RFC 6960: Version 1 of the OCSP specification as defined by RFC2560, RFC 5019, and RFC 6960 are supported.
8. Compliance Audit and Other Assessments	Removed: Customer-specific CAs are not specifically audited as part of the audit of Symantec's operations unless required by the Customer. Added: <ul style="list-style-type: none"> A "Security and Practices Review" of an Affiliate before it is permitted to begin operations. A Security and Practices Review consists of a review of an Affiliate's secure facility, security documents, CPS, STN-related agreements, privacy policy, and validation plans to ensure that the Affiliate meets STN Standards. Modified to include "itself, an Affiliate" and to specify Enterprise Customer: Symantec shall be entitled, within its sole and exclusive discretion, to perform at any time an "Exigent Audit/Investigation" on itself, an Affiliate, or an Enterprise Customer in the event Symantec has reason to believe that the audited entity has failed to meet STN Standards, has experienced an incident or compromise, or has acted or failed to act,
8.4 Topics Covered by Assessment	Added: Audits of RAs (Class 1-2) Enterprise customers approving Class 1 and 2 certificates may undergo an annual compliance audit. Upon request from Symantec and/or a Superior Entity (if the Superior Entity is not Symantec), Enterprise customers may undergo an audit noting any exceptions or irregularities to STN policies and the steps taken to remedy the irregularities. Audit of an RA (Class 3) Enterprise Customers authorizing the issuance of Class 3 SSL certificates undergo an annual compliance audit of their obligations under the STN. ⁴¹ Upon request from Symantec and/or a Superior Entity (if the Superior Entity is not Symantec) Enterprise Customers undergo an audit noting any exceptions or irregularities to STN policies and the steps taken to remedy the irregularities. Audit of Symantec or an Affiliate (Class 1-3) Symantec and each Affiliate is audited pursuant to the guidelines provided in the American Institute of Certificate Public Accounts' Statement on Service Organizations Control (SOC) Reports on the risks associated with Service Organizations. Their Compliance Audits are the WebTrust for Certification Authorities audit or an equivalent audit standard approved by

⁴⁰ *sha-1WithRSAEncryption* is used only with prior approval to preserve business continuity of legacy applications.

⁴¹ Symantec and/or Affiliates perform all identification and authentication of Class 3 SSL certificates authorized for issuance by the Enterprise Customers.

Section	Changes made
	Symantec which includes: A Report of Policies and Procedures in Operation and Test of Operational Effectiveness.
9.4.4 Responsibility to Protect Private Information	Modified to read: Symantec and Affiliates secure private information from compromise and disclosure to third parties and complies with all local privacy laws in their jurisdiction.
9.12.2 Notification Mechanism and Period	Added: At a minimum Symantec and the PMA will update this CPS annually in compliance with CA/Browser Forum guidelines.
Appendix A. Table of Acronyms and Definitions	Added acronym: CSPRNG: Cryptographically Secure Pseudo-Random Number Generator Added definition: Cryptographically Secure Pseudo-Random Number Generator: A random number generator intended for use in a cryptographic system.

History of changes: version 3.8.25 (Aug 2016)

Section	Changes made
Table 2 – Organizational Certificate Usage	Added a column for “Medium” assurance level and a row for ‘Class 3 DV Certificates’ to the table.
Section 1.4.1.3 Assurance Levels	Added a paragraph to the ‘Medium Assurance’ section: Medium assurance certificates are certificates that are suitable for securing some inter- and intra-organizational, commercial, and personal e-mail requiring a medium level of assurances of the Subscriber identity, in relation to Class 1 and 3. Symantec Basic DV Certificates are issued to domains to provide encryption. Symantec validates that the person enrolling for the certificate has control of the domain by a Domain Authorization or by Having the Applicant demonstrate practical control over the FQDN. No organization authentication is performed on the owner of the domain.
Table 5 – Distinguished Name Attributes in End User Subscriber Certificates	Added an additional bullet to the O attribute list: <ul style="list-style-type: none"> • Not used for Basic DV Certificates Added an additional bullet to the OU attribute list: <ul style="list-style-type: none"> • “Domain Validated”, where appropriate
Section 3.1.1	Added Table 5A ‘Certificate Subject Details for Basic DV Distinguished Name Attributes in End User Subscriber Certificates’ preceded by the following sentence: Basic DV certificates contain an X.501 distinguished name in the Subject field which consists of the components specified in the table below.

History of changes: version 3.8.24 (May 2016)

Section	Changes made
Table 8 – Certificate Operational Periods	Changed the maximum operational period for the following type of PCA: PCA self-signed (2048 bit RSA) Up to 50 37 years

History of changes: version 3.8.23 (Jan 2016)

Section	Changes made
Table 6 – Specific Authentication Procedures	Changed the existing note in entry for “Managed PKI for Intranet SSL Certificates”: The use of Certificates with a subjectAlternativeName extension or Subject commonName field containing a Reserved IP Address or Internal Name has been deprecated by the CA / Browser Forum and will be eliminated by October 2016. Any such certificate still being issued after the effective date prior to

Section	Changes made
	October 2016 must have an expiry date of 1 November 2015 or earlier. Previously issued certificates with expiry dates after 1 October November 2016 5 will be revoked effective 1 October 2016.
Definitions	<p>Changed the existing footnote 36 (page 72):</p> <p>The use of Certificates with a subjectAlternativeName extension or Subject commonName field containing a Reserved IP Address or Internal Name has been deprecated by the CA / Browser Forum and will be eliminated by October 2016. Any such certificate still being issued after the effective date prior to October 2016 must have an expiry date of 1 November 2015 or earlier. Previously issued certificates with expiry dates after 1 October November 20165 will be revoked effective 1 October 2016.</p>
Definitions	<p>Removed definition of "Internal Server Name".</p> <p>Added definition of "Internal Name": A string of characters (not an IP address) in a Common Name or Subject Alternative Name field of a Certificate that cannot be verified as globally unique within the public DNS at the time of certificate issuance because it does not end with a Top Level Domain registered in IANA's Root Zone Database.</p>

History of changes: version 3.8.22 (Dec 2015)

Section	Changes made
1.1 Overview	<p>Changed the existing note:</p> <p>Note: As of March 27, 2015 the Symantec Class 3 Public Primary Certification Authority – G2 is excluded from the scope of this document, i.e. any references to PCAs or Class 3 PCAs no longer apply to the Symantec Class 3 PCA – G2. This root certificate has been disabled in browsers' trusted root lists and will only be used for private purposes. The Symantec Trust Network CPS and CP no longer govern the use of this root certificate and any of its subordinate services.</p> <p>Note: As of the dates indicated, the following root certificates are excluded from the scope of this document:</p> <ul style="list-style-type: none"> As of December 1, 2015: <u>VeriSign Class 3 Public Primary Certification Authority</u> Country = US Organization = VeriSign, Inc. Organizational Unit = Class 3 Public Primary Certification Authority As of March 27, 2015: <u>VeriSign Class 3 Public Primary Certification Authority – G2</u> Country = US Organization = VeriSign, Inc. Organizational Unit = Class 3 Public Primary Certification Authority - G2 Organizational Unit = (c) 1998 VeriSign, Inc. - For authorized use only Organizational Unit = VeriSign Trust Network <p>Any references to PCAs or Class 3 PCAs in this CPS no longer apply to these root certificates. These root certificates are only intended to be used for private purposes and should be disabled in browsers' trusted root lists. The Symantec Trust Network CP and CPS no longer govern the use of these root certificates and any of their subordinate services.</p>

History of changes: version 3.8.21 (Nov 2015)

Section	Changes made
Table 5 – Distinguished Name Attributes in End User Subscriber Certificates	<p>Added "or public IP address" to the bullet for web server certificates:</p> <p>This attribute includes:</p> <ul style="list-style-type: none"> The OCSP Responder Name (for OCSP Responder Certificates) Domain name or public IP address (for web server Certificates)

Section	Changes made
	<ul style="list-style-type: none"> Organization name (for code/object signing Certificates) Person's name (for individual Certificates or code-signing certificates issued to individuals). <p>"Persona Not Validated" for Class 1 individual Certificates</p>
3.1.1 Type of Names	<p>Added the last bullet to the list below Table 5 "Distinguished Name Attributes in End User Subscriber Certificates":</p> <ul style="list-style-type: none"> For all web server certificates, the subjectAltName extension is populated with the authenticated value in the Common Name field of the subject DN (domain name or public iPAddress). The subjectAltName extension may contain additional domain names or public iPAddresses which will be authenticated in the same way as the Common Name value.
7.1.2.3 Subject Alternative Names	<p>Added the last paragraph to the text below:</p> <p>The subjectAltName extension of X.509 Version 3 Certificates are populated in accordance with RFC 5280 with the exception of those issued under Public Lite accounts which may optionally exclude the email address in SubjectAltName. The criticality field of this extension shall be set to FALSE.</p> <p>For all web server certificates, the SubjectAltName extension is populated with the authenticated value in the Common Name field of the subject DN (domain name or public iPAddress). The SubjectAltName extension may contain additional authenticated domain names or public iPAddresses.</p>

History of changes: version 3.8.20 (Oct 2015)

Section	Changes made
3.2.2 Authentication of Organization identity	<p>Added the last sentence to the text below:</p> <p>Where a domain name or e-mail address is included in the certificate Symantec authenticates the Organization's right to use that domain name either as a fully qualified Domain name or an e-mail domain. For Organization Validated (OV) and Extended Validation (EV) Certificates domain validation is completed in all cases along with Organizational validation.</p>
3.2.2.2 Mozilla Verification Requirements for Organization Applicants	<p>Made the following modifications:</p> <p>A search failure result is flagged for manual review and the RA may manually rejects the Certificate Request.</p> <p>Symantec actively participates in the CA/Browser Forum providing input to the standards for IDN Certificates and fully commits to conforming to standards drafted ratified by that body.</p>
3.2.2.3 Domain Validation	<p>Added this section:</p> <p>Symantec uses the following methods of vetting a domain name, with option 1 being the primary method:</p> <ol style="list-style-type: none"> 1. Confirm the Applicant as the Domain Name Registrant directly with the Domain Name Registrar by performing a whois look up. 2. Communicate directly with the Domain Name Registrant using an address, email, or telephone number provided by the Domain Name Registrar; 3. Rely upon a Domain Authorization Document; 4. Communicate directly with the Domain Name Registrant using the contact information listed in the WHOIS record's "registrant", "technical", or "administrative" field; 5. Communicate with the Domain's administrator using an email address created by pre-pending 'admin', 'administrator', 'webmaster', 'hostmaster', or 'postmaster' in the

Section	Changes made
	<p>local part, followed by the at-sign (“@”), followed by the Domain Name, which may be formed by pruning zero or more components from the requested FQDN;</p> <p>6. Having the Applicant demonstrate practical control over the FQDN by making an agreed-upon change to information found on an online Web page identified by a uniform resource identifier containing the FQDN.</p>
3.2.3 Authentication of Individual Identity	<p>Modified the text for Class 1 in Table 7:</p> <p>No identity authentication. There is limited confirmation of the Subscriber’s e-mail address by requiring the Subscriber to be able to answer an e-mail to that address.</p> <p>Email address validation - Limited confirmation that the certificate subscriber has access to the email address. Symantec performs a challenge-response type of procedure in which Symantec sends email to the email address to be included in the certificate, containing unpredictable information such as a randomly generated PIN/Password unique to the owner of the email address. The owner of the email address (the subscriber of the certificate) demonstrates control over the email address by using the information within the email address, to then proceed with accessing a portal with the unique information sent in the email, to download and install the certificate.</p>
3.2.3 Authentication of Individual Identity	<p>Modified the text for Class 2 in Table 7:</p> <p>Authenticate identity by matching the identity provided by the Subscriber to:</p> <ul style="list-style-type: none"> ▪ Information residing in the database of a Symantec approved identity proofing service, such as a major credit bureau or other reliable source of information providing, or Manual check performed by the enterprise administrator customer for each subscriber requesting a certificate, “in which the subscriber <u>receives the certificate</u> via an email sent to the address provided during enrollment” or ▪ Information contained in the business records or databases of business information (employee or customer directories) of an RA approving certificates to its own affiliated individuals Passcode-based authentication where a randomly-generated passcode is delivered out-of-band by the enterprise administrator customer to the subscriber entitled to enroll for the certificate, and the subscriber provides this passcode at enrollment time or ▪ Comparing information provided by the subscriber to information contained in business records or databases (customer directories such as Active Directory or LDAP).
3.2.3 Authentication of Individual Identity	<p>Added the following paragraph to the text for Class 3 in Table 7:</p> <p>Email address validation – For Class 3 Organizational Email certificates, Symantec verifies that the subscriber owns the base domain using methods 1 or 3 from Section 3.2.2.4, and allows the subscriber to put in the certificate any email address from that verified domain.</p>

History of changes: version 3.8.19 (Mar 2015)

Section	Changes made
1.1 Overview	<p>Added the note below to this section:</p> <p>Note: As of March 27, 2015 the Symantec Class 3 Public Primary Certification Authority – G2 is excluded from the scope of this document, i.e. any references to PCAs or Class 3 PCAs no longer apply to the Symantec Class 3 PCA – G2. This root certificate has been disabled in browsers' trusted root lists and will only be used for private purposes. The Symantec Trust Network CPS and CP no longer govern the use of this root certificate and any of its subordinate services.</p>
6.1.5 Key Sizes	<p>Removed part of the footnote (#24):</p> <p>CA trust is extended to Symantec's first and second generation (G1 and G2) legacy Trusted Roots with 1024-bit RSA key pairs for support of customer legacy platforms and 1024-bit RSA end-entity certificates may be issued with expiration on or before January 31, 2014. Additional individual exceptions may be permitted for affiliates of Symantec Corporation operating the Processing Center software capabilities in accordance with section 6.3.2, with prior approval to preserve business continuity of legacy applications beyond 2013.</p> <p>Symantec reserves the right to issue a minimal undisclosed number of SSL server certificates intended to be used by client software other than standard web browsers. These certificates contain a critical EKU extension without the serverAuth flag and with a special flag 2.16.840.1.113733.1.8.54.1 that indicates that it should not be used with standard web browsers</p>

History of changes: version 3.8.18 (Feb 2015)

Description	Section & Changes made
Table 3 – Certificate Publication Requirements	<p>Changed URL for repository and removed reference to SSL/Code Signing repository:</p> <p>Optionally published and available to Relying Parties through query functions in the Symantec Repository at https://digitalid.verisign.com/services/client/index.html https://pki-search.symauth.com/pki-search/index.html and query of the LDAP directory server at directory.verisign.com, except for Class 3 SSL and Code Signing Certificates which are available through query functions in the Symantec Repository at https://digitalid.verisign.com/services/server/search.htm.</p>
3.1.1 Type of Names	Replaced VeriSign Japan Inc. with VeriSign Japan K.K.
Table 4 - Distinguished Name Attributes in CA Certificates	Replaced "US" with "2-letter ISO country code"
Table 6 – Specific Authentication Procedures	<p>Added note to "Managed PKI for Intranet SSL Certificate:</p> <p>Note: The use of Certificates with a subjectAlternativeName extension or Subject commonName field containing a Reserved IP Address or Internal Name has been deprecated by the CA / Browser Forum and will be eliminated by October 2016. Any such certificate issued prior to October 2016 must have an expiry date of 1 November 2015 or earlier. Previously issued certificates with expiry dates after 1 November 2015 will be revoked effective 1 October 2016.</p> <p>Added row for "Class 3 organizational e-mail signing certificates": Symantec authenticates the Organization's ownership of e-mail domain name.</p>
Section 4.9.9 On-Line Revocation/Status Checking Availability	<p>Changed URL for repository and removed reference to SSL/Code Signing repository:</p> <p>Online revocation and other Certificate status information are available via a web-based repository and, where offered, OCSP. In addition to publishing CRLs, Symantec provides Certificate status information through query functions in the Symantec Repository.</p> <p>Certificate status information for Individual Certificates is available through web-based query functions accessible through the Symantec Repository at</p>

Description	Section & Changes made
	<ul style="list-style-type: none"> • https://digitalid.verisign.com/services/client/index.html https://pki-search.symauth.com/pki-search/index.html (for Individual Certificates) and • https://digitalid.verisign.com/services/server/search.htm (for SSL and Code Signing Certificates). <p>Symantec also provides OCSP Certificate status information. Enterprise Customers who contract for OCSP services may check Certificate status through the use of OCSP. The URL for the relevant OCSP Responder is communicated to the Enterprise Customer.</p>
Appendix A – Table of Acronyms and Definitions	<p>Definition of Managed PKI: Added a footnote that the use of SSL/Code Signing Certificates with a subjectAlternativeName extension or Subject commonName field containing a Reserved IP Address or Internal Name has been deprecated by the CA / Browser Forum and will be eliminated by October 2016. Any such certificate issued prior to October 2016 must have an expiry date of 1 November 2015 or earlier. Previously issued certificates with expiry dates after 1 November 2015 will be revoked effective 1 October 2016.</p>
Appendix B – Minimum Cryptographic Algorithm and Key Sizes for EV Certificates	<p>Changed footnote to:</p> <p>*SHA-1 may be shall be used until SHA-256 is supported widely by browsers used by a majority of Relying Parties worldwide.</p>

History of changes: version 3.8.17 (January 2015)

Description	Section & Changes made
Added new: Section 4.2.4 – Certificate Authority Authorization (CAA)	<p>Section 4.2.4 Certificate Authority Authorization (CAA) As of October 1, 2015, Symantec will check Certificate Authority Authorization (CAA) records as part of its public SSL certificate authentication and verification processes. Prior to this date Symantec may not check CAA records for all public SSL certificate orders. 'Public SSL Certificates' are those that chain up to our publicly available root certificates and which meet CA/Browser Forum Baseline or Extended Validation Requirements.</p>

History of changes: version 3.8.16 (May 2014)

Description	Section & Changes made
Added language to specifically include STN CAs managed by Symantec Japan Inc. in the definition of 'Symantec's Sub-domain'	<p>1.1 Overview "More generally, the CPS also governs the use of STN services within Symantec's sub-domain of the STN by all individuals and entities within Symantec's Sub-domain (collectively, Symantec Sub-domain Participants") including STN CAs managed by Symantec Japan Inc."</p>
Added reference to legacy certificates' Organizational names	<p>3.1.1 Type of Names "Any legacy certificate that indicates the Organization (O) as "VeriSign Japan Inc." shall mean Symantec Japan Inc. Any legacy certificate that indicates the Organization (O) as "VeriSign Australia" shall mean Symantec Corporation."</p>
Incorporated the modification for Class 3 Organizational certificates recently approved for the Symantec Japan CPS (now merged with this CPS)	<p>Table 5 – Distinguished Name Attributes in End User Subscriber Certificates Added for Common Name: "Persona Not Validated" for Class 1 individual Certificates" With footnote "Existing Symantec-approved "Class1 Managed PKI" customers as of March 20, 2014 may issue Class 1 Individual Certificates with a pseudonym name in the common name field instead as long as "Persona Not Validated" is included in an OU field."</p>
Added reference to Appendix D	<p>Table 6 – Specific Authentication Procedures For OV and DV certificates: "Symantec's procedures for issuing OV and DV certificates, distinguished throughout the CPS as 'CABF requirements for OV and DV certificates' are described in Appendix D to this CPS."</p>
Removed 'Symantec-owned' and added note regarding DRF for Symantec Japan and Australia	<p>5.7.4 Business Continuity "Symantec maintains a Disaster Recovery Facility (DRF) located at a Symantec-owned facility geographically separate from the primary Production Facility."</p>

Description	Section & Changes made
	Added footnote "Symantec Japan Inc. as well as Symantec's Australia facility maintain a DRF located at a facility geographically separate from the primary Production Facility. Both DRFs are specifically equipped to meet Symantec's security standards."
Added footnote reference to LDAP directory	6.1.4 CA Public Key Delivery to Relying Parties "STN CA certificates issued by Symantec Japan Inc. or VeriSign Japan K.K. may also be downloaded from the LDAP directory at directory.verisign.co.jp ."
Added external audit scheme of Symantec Japan	8. Compliance Audit and Other Assessments "The external audit scheme of Symantec Japan Inc.'s public CAs is ISAE3402/SSAE16 instead of WebTrust for Certification Authorities."
Added URL for Japanese privacy policy	9.4.1 Privacy Plan " <i>The privacy policy in Japanese is also available at http://www.symantec.com/ja/jp/about/profile/policies/privacy.jsp.</i> "
Replaced text with reference to URL on external website	Appendix B1 " <i>The current version of the CA/Browser Forum Guidelines for the Issuance and Management of Extended Validation (EV) Certificates can be accessed at https://cabforum.org/extended-validation/</i> "
Replaced text with reference to URL on external website	Appendix C " <i>The current version of the CA/Browser Forum Guidelines for the Issuance and Management of Extended Validation (EV) Code Signing Certificates can be accessed at https://cabforum.org/ev-code-signing-certificate-guidelines/</i> "
Replaced text with reference to URL on external website	Appendix D " <i>The current version of the CA/Browser Forum Baseline Requirements for the Issuance and Management of Publicly-Trusted Certificates can be accessed at https://cabforum.org/baseline-requirements-documents/</i> "

History of changes: version 3.8.15 (Mar 2014)

Description	Section & Changes made
Change of NetSure Protection Plan liability caps	Section 9.8 – Changed NetSure Protection Plan liability caps to "from \$10,000 to \$1,750,000" (from "from \$50,000 to 250,000")

History of changes: version 3.8.14 (Dec 2013)

Description	Section & Changes made
Change of expiration date for 1024bit certificates	Section 6.1.5 – Changed date to January 31, 2014
Updated exception language for Affiliate PC CAs	Section 6.3.2 – Added Customer CAs and changed last date for exception to be applied to December 31, 2013.

History of changes: version 3.8.13 (Nov 2013)

Description	Section & Changes made
Section 1 Introduction	Identified conformity to CABF Baseline Requirements
6.1.5 Key sizes	Added clarity regarding subscriber certificates under 2048bit will have EKU without server auth flag and designated OID
7.1 Certificate Profile	Added clarity regarding subscriber certificates under 2048bit will have EKU without server auth flag and designated OID
7.1.2.1 Key Usage	Authorization of certificates 2048bit and less in length to be used within closed eco systems
Appendix B1	Updated Extended Validation Guidelines to version 1.4.3
Appendix D	Updated Baseline Requirements to version 1.1.6

History of changes: version 3.8.12 (Feb 2013)

Description	Section & Changes made
Addition of new Roots	Section 6.1.5 – Added G4, G6 & G7 PCAs
Clarification of Audit log processing procedure.	Section 5.4.2 – Clarification of Audit log processing procedure.
Addition of Mozilla IDN Verification requirements	Section 3.2.2 – Added procedure for verification of IDNs to detect cases of homographic spoofing of IDNs.

History of changes: version 3.8.11 (Jan 2013)

Description	Section & Changes made
Re-alignment with CABF EV v1.4 Guidelines	<ul style="list-style-type: none"> Updated Appendix B1 all sections to match re-structured CABF Guidelines. Updated Appendix C (EV CodeSigning) for cross-references to & from Appendix B1. Created Appendix D (Baseline for OV & DV Certs) for cross-references to & from Appendix B1. CPS updated throughout with references to Appx B1, C & D as required for CABF procedures.

History of changes: version 3.8.10

Description	Section & Changes made
Addition of 2048 DSA Roots	<p>6.1.5 Key Sizes</p> <p><u>Symantec's seventh generation (G7) PCAs have 2048 bit DSA key pairs.</u></p>
Addition of Private Class 3 Admin hierarchy	<p>1.1 Overview</p> <ul style="list-style-type: none"> Symantec Infrastructure CAs, and Symantec Administrative CAs¹ supporting the Symantec Trust Network <p><u>Unless specifically noted within this CPS,</u> Private CAs and hierarchies managed by Symantec are outside the scope of this CPS². The CAs managed by Affiliates are also outside the scope of this CPS.</p> <p>Footnote: ^[1] <u>Symantec operates both public and private/internal Class 3 hierarchies within the scope of this CPS. The Class 3 Internal CA hierarchy is distinguished by a private PCA and the specified OID value as stipulated in section 1.2 of the CP. The private PCA certificate is configured to explicitly exclude "Server Authentication" and "Code-Signing" from the certificate intended purposes.</u></p> <p>1.3.1 Certification Authorities</p> <p><u>Symantec also operates the Symantec Class 3 Internal Administrator CA hierarchy limited to Symantec for internal administrative uses.</u></p> <p>Symantec also operates the "Symantec Universal Root Certification Authority" and the "Symantec ECC Universal Root Certification Authority". The Universal Root CAs issue Class 3 and selected Class 2 Subordinate CAs.</p> <p>Symantec enterprise customers may operate their own CAs as subordinate CAs to a <u>public</u> STN PCA.</p>
CN attribute value for Class 1 individual certificates	<p>3.1.1 Naming</p> <p><u>CN = "Persona Not Validated" for Class 1 Individual Certificates</u></p>
Revocation requests for non-enterprise customers do not communicate via the Enterprise Administrator.	<p>4.9.3.1 Revocation Request</p> <p><u>Non-Enterprise customers shall communicate a revocation request in accordance with CPS § 3.4.</u></p>

History of changes: version 3.8.9

Description	Section & Changes made
All updates reflecting compliance with CABF Requirements for EV Code Signing Certificates , v1.4.	<p>Appendix C.</p> <p>Section 1.4.1.2, Table 2 – added CS certificates to Class 3 EV Certificates category</p> <p>Section 3.2.2, Table 6 – added additional procedures for EV-CS certificates & H/W protected EV-CS Certificates</p>
Routine maintenance	<p>Section 1, page 1, added footnote clarifying/defining "organizational certificates"</p> <p>Removed Secure Server CA & Secure Server ID – sections 1.3.1, 3.1.1, 6.3.2.1, Appx A definition</p> <p>Removed ASB Cert – sections 2.1, 3.1.1, 4.9.1, 4.9.3.1, Appx A definition</p> <p>Corrected TGV protocol to TGV Service – in section 7.3</p> <p>Change for Re-branded Symantec Repository URL throughout – www.symantec.com/about/profile/policies/repository.jsp</p> <p>Changed to affirmative language: "Symantec confirms" instead of "CA shall confirm" – in sections 3.2.2.1, 4.1.2.2, 4.9.3.2, 4.9.7.1, 4.9.9.1, 6.1.5.1, 6.3.2.1, 6.5.1.1, 7.1.2.2.1,</p> <p>Clarified the reference to Policy OIDs: "the corresponding policy identifier identified in section 1.2 of the STN CP" – in section 7.1.6.1</p>

History of changes: version 3.8.8

Description	Section & Changes made
All updates reflecting compliance with CABF Requirements for DV and OV certificates, Effective July 1, 2012.	Throughout document. See PWG Approval Mapping Matrix for STN CP & CPS for detailed changes.

History of changes: version 3.8.7

Description	Section & Changes made				
Clarification of Universal Root – restricted to only Class 3 and selected Class 2 certificates.	1.3.1 Symantec also operates the “Symantec Universal Root Certification Authority” and the “Symantec ECC Universal Root Certification Authority”. The Universal Root CAs are not defined under a particular certificate Class, and may issue Class 3 and selected Class 2 any class of Subordinate CAs.				
Customization requirement clarified for customer that performs their own RA services.	3.1.1 footnote added: OU= “Authenticated by Symantec ¹ ” ¹ An affiliate or customer that contracts to perform the RA services shall indicate the name of the organization performing the Subscriber authentication.				
Log processing improvement added.	5.4.2 The CA system and audit logs are <u>continuously monitored to provide real time alerts of examined-on-at least-a-weekly-basis-for</u> significant security and operational events.				
Updated BCP with migration to Symantec Corp	5.7.4 Replaced former VeriSign BCP description for the Symantec BCP description..				
Extend the validity period of s/w certs from 2 to 3 years before requiring renewal/rekey.	6.3.2 <table border="1" data-bbox="542 842 1511 953"> <thead> <tr> <th>Certificate Issued by:</th> <th>Validity Period</th> </tr> </thead> <tbody> <tr> <td>Online CA to End-user Individual Subscriber</td> <td>Normally up to 2 <u>3</u> years, but under the conditions described below, up to 6 years⁴² under the conditions described below with no option to renew or re-key. After 6 years new enrollment is required.</td> </tr> </tbody> </table> <p>Certificates issued by CAs to end-user Subscribers may have Operational Periods longer than two <u>three</u> years, up to six years, if the following requirements are met:</p> <ul style="list-style-type: none"> Protection of the Subscriber key pairs in relation to its operational environment for Organizational Certificates, operation within the enhanced protection of a data center and for Individual Certificates, the Subscribers’ key pairs reside on a hardware token, such as a smart card, 	Certificate Issued by:	Validity Period	Online CA to End-user Individual Subscriber	Normally up to 2 <u>3</u> years, but under the conditions described below, up to 6 years ⁴² under the conditions described below with no option to renew or re-key. After 6 years new enrollment is required.
Certificate Issued by:	Validity Period				
Online CA to End-user Individual Subscriber	Normally up to 2 <u>3</u> years, but under the conditions described below, up to 6 years ⁴² under the conditions described below with no option to renew or re-key. After 6 years new enrollment is required.				

History of changes: version 3.8.6

Description	Section & Changes made
The exception for extending validity of legacy 1024-bit CA keys beyond 14 yrs & limited to a maximum validity to August 31, 2012 and only available until Dec 31, 2011.	6.1.5 The Symantec Standard for minimum key sizes is the use of key pairs equivalent in strength to 2048 bit RSA for PCAs and CAs. ^[1] CA trust is extended to Symantec’s first and second generation (G1 and G2) legacy Trusted Roots with 1024 bit RSA key pairs for support of customer legacy platforms and 1024-bit RSA end-entity certificates may be issued with expiration on or before December 31, 2011. Additional individual exceptions may be permitted <u>for affiliates of Symantec Corporation operating the Processing Center software capabilities in accordance with section 6.3.2</u> with prior approval to preserve business continuity of legacy applications beyond 2011. 6.3.2 In terms of Section 6.3.2 of the STN CP, the Symantec PMA has approved an exception to extend a limited number CAs beyond the specified limits, in order to ensure uninterrupted PKI services during CA key pair migration. This exception <u>can be applied to affiliates of Symantec Corporation operating the Processing Center software capabilities for infrastructure and Admin CAs only that are not associated with CAs issuing SSL certificates.</u> This exception may not be used to extend a CA’s validity beyond a 13-14 year total validity to a maximum of April 30, 2014 <u>August 31, 2014</u> , and shall not be made available after April 30, 2014 <u>December 31, 2011</u>

History of changes: version 3.8.5

⁴² If 6-year end-user subscriber certificates are issued, the online CA certificate’s operational period will be 10 years with no option to renew. CA re-key will be required after 5 years.

Description	Section & Changes made
Transition from VeriSign to Symantec including: naming, URLs, email addresses.	Throughout document, Naming: VeriSign Inc to Symantec Corporation VeriSign Trust Network(VTN) to Symantec Trust Network (STN) URLs: from verisign.com to symauth.com Email address: from verisign.com to symantec.com
DN names within legacy certs now represent the new owner.	Section 3.1.1 <i>While the STN is now owned by Symantec Corporation (see Acquisition Notice on p ii) legacy certificates have been issued indicating the former owner name and brand. Such legacy certificates that indicate the Organization (O) as "VeriSign Inc." and Organizational Unit (OU) as "VeriSign Trust Network" now represent Symantec Corporation and the Symantec Trust Network.</i>
Changes for authentication permitting code-signing certificates for individuals	Section 3.1.1 OU = "No organization affiliation" (for code signing certificates issued to individuals) CN = Person's name (for individual Certificates or code-signing certificates issued to individuals) .
DN naming for Class 2 certificates issued for internal Symantec purposes	Section 3.1.1 added footnotes. Organization (O) = "Symantec Corporation" for OCSP Responder and optionally for individual Certificates ⁸ that do not have an organization affiliation. ⁸In the case of the Symantec Corporation organization, under certain approved cases for Class 2 certificates, the O value may additionally include a suffix containing internal information used for internal purposes. Symantec attests that the organization name in the format "Symantec Corporation – <suffix> (e.g., Symantec Corporation – Build 5315) shall accurately represent the legal entity Symantec Corporation. Organizational Unit (OU) = Text to describe the type of Certificate ⁹ ⁹Under certain approved cases, Class 2 certificates may be issued for internal purposes. Such certificates shall contain the Symantec organization name in the DN and an OU value reflecting the inherent lack of trust in the certificate for usage other than the intended internal purpose.
Discontinuing self-revocation in the Magnum release.	Section 3.4. 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.) Section 4.9.2 Individual Subscribers can request the revocation of their own individual Certificates through an authorized representative of Symantec or an RA.
Clarified the conditions for revoking the recovered key.	Section 4.12.1 Revoke the Subscriber's Key pair prior to recovering the encryption key under certain circumstances such as to discontinue the use of a lost certificate.
Removed the restriction to only "Symantec" RAs. Requirement applies to all.	Section 6.2.9 Symantec RA private keys (used for authentication to the RA application) are deactivated upon system log off. Symantec RAs are required to log off their workstations when leaving their work area. Section 6.4.2: Symantec RAs are required to store their Administrator/RA private keys in encrypted form using password protection and their browser's "high security" option.
The exception for extending CA validity beyond 13 yrs is limited to a maximum of April 30, 2014.	Section 6.3.2 the Symantec PMA has approved an exception to extend a limited number CAs beyond the specified limits, in order to ensure uninterrupted PKI services during CA key pair migration. This exception may not be used to extend a CA's validity beyond a 13 year total validity to a maximum of April 30, 2014 , and shall not be made available after April 30, 2011.
Removed statement on EAL-4 certification of the PC software.	Section 6.5.2 A version of Symantec's core Processing Center software has satisfied the EAL-4 assurance requirements of ISO/IEC 15408-3:1999, Information technology – Security techniques – Evaluation criteria for IT security – Part 3: Security assurance requirements, based on an independent laboratory's Common Criteria evaluation of the software against the Symantec Processing Center Security Target. Symantec may, from time to time, evaluate new releases of the Processing Center software under the Common Criteria. No stipulation.
Updates to EKUs and their corresponding criticality.	Section 7.1.2.1 Table 6 is removed as well as the sentence introducing the table. Section 7.1.2.5 Table 7 is removed as well as the sentence introducing the table.
Change to BasicConstraints setting for Subscriber certs.	Section 7.1.2.4. End-user Subscriber Certificates BasicConstraints extension shall have the CA field set to FALSE shall be populated with a value of an empty sequence . The criticality field of this extension shall be set to TRUE for CA Certificates, but otherwise set to false may be set to TRUE or FALSE for end-user Subscriber Certificates.

Description	Section & Changes made
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History of changes: version 3.8.4

Description	Section & Changes made												
Correction for publishing Class 3 certificates depending on usage.	<p>Section 2.2, Table 3:</p> <table border="1"> <thead> <tr> <th>Certificate Type</th> <th>Publication Requirements</th> </tr> </thead> <tbody> <tr> <td>End-User Subscriber Certificates with exceptions for certain Class 3 Certificates depending on usage.</td> <td>Optionally published and available to Relying Parties through query functions in the VeriSign® Repository at https://digitalid.verisign.com/services/client/index.html and query of the LDAP directory server at directory.symantec.com, except for Class 3 SSL and Code Signing Certificates which are available through query functions in the VeriSign® Repository at https://digitalid.verisign.com/services/server/search.htm.</td> </tr> </tbody> </table> <p>Section 4.9.9: Certificate status information is available though web-based query functions accessible through the VeriSign® Repository at</p> <ul style="list-style-type: none"> https://digitalid.verisign.com/services/client/index.html (for Individual Certificates) and https://digitalid.verisign.com/services/server/search.htm (for SSL and Code Signing Server and Developer Certificates). 	Certificate Type	Publication Requirements	End-User Subscriber Certificates with exceptions for certain Class 3 Certificates depending on usage.	Optionally published and available to Relying Parties through query functions in the VeriSign® Repository at https://digitalid.verisign.com/services/client/index.html and query of the LDAP directory server at directory.symantec.com, except for Class 3 SSL and Code Signing Certificates which are available through query functions in the VeriSign® Repository at https://digitalid.verisign.com/services/server/search.htm.								
Certificate Type	Publication Requirements												
End-User Subscriber Certificates with exceptions for certain Class 3 Certificates depending on usage.	Optionally published and available to Relying Parties through query functions in the VeriSign® Repository at https://digitalid.verisign.com/services/client/index.html and query of the LDAP directory server at directory.symantec.com, except for Class 3 SSL and Code Signing Certificates which are available through query functions in the VeriSign® Repository at https://digitalid.verisign.com/services/server/search.htm.												
Exception for excluding email address in subjAltName for Public Lite accounts	<p>Section 7.1.2.3 The subjectAltName extension of X.509 Version 3 Certificates are populated in accordance with RFC 5280 with the exception of those issued under Public Lite accounts which may optionally exclude the email address in SubjAltName. The criticality field of this extension shall be set to FALSE.</p>												
Updated policy to delete all descriptions of the planned transition on or before 31 Dec 2010. Added individual exceptions identified by footnote.	<p>6.1.5 Key Sizes The Symantec Standard for minimum key sizes is the use of key pairs equivalent in strength to 2048 bit RSA for PCAs and CAs¹⁵.</p> <p>Symantec's first and second generation (G1 and G2) PCAs and CAs have 1024 bit RSA key pairs and Symantec's third and fifth generation (G3 and G5) PCAs have 2048 bit RSA key pairs. The signing of all Classes of Symantec Certificates using RSA key pairs shall transition to roots with a minimum 2048 bit (or equivalent) key size no later than December 31, 2013.</p> <p>Symantec recommends the use of issues a minimum key size equivalent in strength to 2048 bit RSA for RAs and end entity certificates key pairs. Symantec will phase out all 1024-bit RSA by December 31, 2013.</p> <p>Footnote added for exceptions: ¹⁵ CA trust is extended to Symantec's first and second generation (G1 and G2) legacy Trusted Roots with 1024 bit RSA key pairs for support of customer legacy platforms and 1024-bit RSA end-entity certificates may be issued with expiration on or before December 31, 2011. Additional individual exceptions may be permitted with prior approval to preserve business continuity of legacy applications.</p> <p>Appendix B2 (EV Certificates) Root, Subordinate CA & Subscriber Certificates now each reflect the following:</p> <table border="1"> <thead> <tr> <th></th> <th>Certificates issued on or before 31 Dec 2010</th> <th></th> </tr> </thead> <tbody> <tr> <td>Digest algorithm</td> <td>SHA-1</td> <td>SHA-1*, SHA-256, SHA-384 or SHA-512</td> </tr> <tr> <td>RSA</td> <td>2048 bit or 2048 bit</td> <td>2048 bit</td> </tr> <tr> <td>ECC</td> <td>256 or 384 bits</td> <td>256 or 384 bits</td> </tr> </tbody> </table> <p>*SHA-1 should shall be used until SHA-256 is supported widely by browsers used by a majority of Relying Parties worldwide.</p>		Certificates issued on or before 31 Dec 2010		Digest algorithm	SHA-1	SHA-1*, SHA-256, SHA-384 or SHA-512	RSA	2048 bit or 2048 bit	2048 bit	ECC	256 or 384 bits	256 or 384 bits
	Certificates issued on or before 31 Dec 2010												
Digest algorithm	SHA-1	SHA-1*, SHA-256, SHA-384 or SHA-512											
RSA	2048 bit or 2048 bit	2048 bit											
ECC	256 or 384 bits	256 or 384 bits											
Updates for CA's identified in exceptions	<p>Section 6.3.2 Removed "CL3 Organizational VIP Device CA" that is no longer in service. Symantec operates the "Symantec® Class 3 Organizational VIP Device CA". Organizational end-entity certificates issued by this CA may have a validity period beyond 3 years and up to a maximum of 5 years in circumstances where:</p> <ul style="list-style-type: none"> • The certificate key pair is stored in hardware, and • Symantec has authenticated the Organization in terms of this CPS, and When used to protect a server using SSL/TLS, the server is only accessible via a private network or intranet. <p>Added "CL 3 Onsite Enterprise Admin CA – G2" as exception with >10 years lifetime (footnote #17)</p>												

Description	Section & Changes made				
	The VeriSign® Onsite Administrator CA-Class 3, Class 3 Secure Server Operational Administrator CA and Class 3 OnSite Enterprise Administrator CA – G2 have a validity beyond 10 years to support legacy systems and shall be revoked when appropriate				
Changes for Auto-Renew 6-year certificate lifetimes and 6-year certificate lifetimes for Enterprise & Client PKI:					
DN re-authentication occurs at intervals but without a “cert re-key” event.	Section 3.3.1 In particular, for subsequent re-key requests for retail Class 3 Organizational SSL Certificates, Symantec re-authenticates the Organization name and domain name included in the certificate at intervals described in section 6.3.2.				
DN re-authentication occurs at intervals but without a “cert renewal” event.	Section 4.6.3 In particular, for subsequent renewal requests for retail Class 3 Organizational SSL Certificates, Symantec re-authenticates the Organization name and domain name included in the certificate at intervals described in section 6.3.2.				
2 new conditions for cert revocation for Auto-Renew process.	Section 4.9.1 An end-user Subscriber Certificate is revoked if... (2 bullets added) <ul style="list-style-type: none"> • The Subscriber identity has not been successfully re-verified in accordance with section 6.3.2. • The Subscriber has not submitted payment when due. 				
The online issuing CA of 6-year certificates must have 10-yr validity period. CAs with 10-year lifetimes must be re-keyed after 5 years.	Section 6.3.2, in Table 8 & footnote #18 <table border="1" data-bbox="544 703 1323 777"> <thead> <tr> <th data-bbox="544 703 787 724">Certificate Issued By:</th> <th data-bbox="787 703 1323 724">Validity Period:</th> </tr> </thead> <tbody> <tr> <td data-bbox="544 724 787 777">Offline intermediate CA to online CA</td> <td data-bbox="787 724 1323 777">Generally 5 years but up to 10 years after renewal ¹⁸</td> </tr> </tbody> </table> ¹⁸ If 6 5 -year end-user subscriber certificates are issued, the online CA certificate’s operational period will be 10 years with no option to renew. CA re-key will be required after 5 years.	Certificate Issued By:	Validity Period:	Offline intermediate CA to online CA	Generally 5 years but up to 10 years after renewal ¹⁸
Certificate Issued By:	Validity Period:				
Offline intermediate CA to online CA	Generally 5 years but up to 10 years after renewal ¹⁸				
Re-enrollment of the End entity certificate is required at end of a 6-yr certificate validity period. CAs with 10-year lifetimes must be re-keyed after 5 years.	In Table 8 & footnote #19 <table border="1" data-bbox="544 871 1323 997"> <thead> <tr> <th data-bbox="544 871 787 892">Certificate Issued By:</th> <th data-bbox="787 871 1323 892">Validity Period:</th> </tr> </thead> <tbody> <tr> <td data-bbox="544 892 787 997">Online CA to End-user Individual Subscriber</td> <td data-bbox="787 892 1323 997">Normally up to 2 years, but under the conditions described below, up to 6 5 years¹⁹ under the conditions described below with no option to renew or re-key. After 6 years new enrollment is required.</td> </tr> </tbody> </table> ¹⁹ If 6 5 -year end-user subscriber certificates are issued, the online CA certificate’s operational period will be 10 years with no option to renew. CA re-key will be required after 5 years.	Certificate Issued By:	Validity Period:	Online CA to End-user Individual Subscriber	Normally up to 2 years, but under the conditions described below, up to 6 5 years ¹⁹ under the conditions described below with no option to renew or re-key. After 6 years new enrollment is required.
Certificate Issued By:	Validity Period:				
Online CA to End-user Individual Subscriber	Normally up to 2 years, but under the conditions described below, up to 6 5 years ¹⁹ under the conditions described below with no option to renew or re-key. After 6 years new enrollment is required.				
Certificates with 6-yr lifetime must be re-verified after 3 years.	Section 6.3.2 in Table 8 & footnote #20 <table border="1" data-bbox="544 1081 1323 1186"> <thead> <tr> <th data-bbox="544 1081 787 1102">Certificate Issued By:</th> <th data-bbox="787 1081 1323 1102">Validity Period:</th> </tr> </thead> <tbody> <tr> <td data-bbox="544 1102 787 1186">Online CA to End-user Organizational Subscriber</td> <td data-bbox="787 1102 1323 1186">Normally up to 6 5 years²⁰ under the conditions described below with no option to renew or re-key. After 6 years new enrollment is required.</td> </tr> </tbody> </table> ²⁰ At a minimum, the Distinguished Name of 4, and 5 year validity SSL certificates issued with a validity of more than 3 years is re-verified after three years from date of certificate issuance. With the exception of the VeriSign® Automated Administration certificate, Organizational end-entity certificates used solely to support the operation of a portion of the VTN may be issued with a validity period of 5 year and up to a maximum of 10 years after renewal.	Certificate Issued By:	Validity Period:	Online CA to End-user Organizational Subscriber	Normally up to 6 5 years ²⁰ under the conditions described below with no option to renew or re-key. After 6 years new enrollment is required.
Certificate Issued By:	Validity Period:				
Online CA to End-user Organizational Subscriber	Normally up to 6 5 years ²⁰ under the conditions described below with no option to renew or re-key. After 6 years new enrollment is required.				
Clarify restrictions that are applicable to Certificates issued with 6-year lifetimes	Section 6.3.2 Certificates issued by CAs to end-user Subscribers may have Operational Periods longer than two years, up to five six years, if the following requirements are met: <ul style="list-style-type: none"> • The Certificates are individual Certificates, • Protection of the Subscriber key pairs in relation to its operational environment for Organization Certificates, operation with the enhanced protection of a data center and for Individual Certificates, the Subscribers’ key pairs reside on a hardware token, such as a smart card, • Subscribers are required to undergo re-authentication at least every 3 years 25 months under Section 3.2.3, • Subscribers shall prove possession of the private key corresponding to the public key within the Certificate at least every 25 months under Section 3.2.3, • If a Subscriber is unable to complete re-authentication procedures successfully or is unable to prove possession of such private key when required by the foregoing, the CA shall revoke the Subscriber’s Certificate. 				

History of changes: version 3.8.3

Description	Section & Changes made
Updated Trademarks Notices page & added Acquisition Notice.	Page ii.
Changes to identify Symantec Corporation acquisition & ownership of the VTN CA services.	Throughout document: <ul style="list-style-type: none"> Corporate owner & contact information changed to Symantec Corporation CA names and VTN branding continues to reflect the VeriSign name until such time that re-branding can occur.
Changes to Governing law & Assets & Privacy Plan in accord with Symantec ownership.	Sections 9.2.2, 9.14, 9.13.2 & 9.4.1
Removed VeriSign Roaming Services which is EOL	Sections 6.2.8.2, 6.2.8.3 & Appendix A
Removed reference to Certificate Interoperability Service (CIS) which is EOL	Section 3.2.6 footnote
Clarification of TGV services	Section 7.3
Clarified Symantec approval required for exceptions to certificate validity periods	Section 6.3.2, footnote #16

History of changes: version 3.8.2

Description	Section & Changes made
Changes to describe CA transitions, Key Sizes & Universal Roots	1.3.1 Certificate Authorities VeriSign also operates the "VeriSign Universal Root Certification Authority" and the "VeriSign ECC Universal Root Certification Authority". The VeriSign Universal Root CAs are Certification Authority is not defined under a particular certificate Class, and may issue any class of Subordinate CA.
RSA: <ul style="list-style-type: none"> Roots & CAs are transitioning to 2048 as of 31 Dec 2013. EV certs are transitioning to 2048 as of 31 Dec 2010. RAs & EE are recommended to generate 2048 but 1024 will continue to be approved. But all 1024 RSA will phased out by 31 Dec 2013. 	6.1.5 Key Sizes Key pairs shall be of sufficient length to prevent others from determining the key pair's private key using cryptanalysis during the period of expected utilization of such key pairs. The current VeriSign Standard for minimum key sizes is the use of key pairs equivalent in strength to 1024 2048 bit RSA for PCAs and CAs, except for the legacy Secure Server CA whose key pair is 1000 bit RSA. <u>VeriSign's first and second generation (G1 and G2) PCAs and CAs have 1024 bit RSA key pairs and Symantec's third and fifth generation (G3 and G5) PCAs have 2048 bit RSA key pairs. The signing of all Classes of VeriSign Certificates using RSA key pairs shall transition to roots with a minimum 2048 (or equivalent) key size no later than December 31, 2013.</u>
ECC: <ul style="list-style-type: none"> 384 bit ECC CL3PCA-G4 is the Universal Root. 	<u>VeriSign recommends the use of a minimum key size equivalent in strength to 2048 bit RSA for RAs and end entity certificates key pairs. VeriSign will continue to approve certain end entity certificates generated with a key pair size of less than 2048 bit RSA but will phase out all 1024-bit RSA by December 31, 2013.</u> VeriSign recommends that Registration Authorities and end user Subscribers generate 1024 bit RSA key pairs. Verisign may not approve certain end entity certificates generated with a key pair size of 512 bit or less. <u>VeriSign's ECC Universal Root CA and fourth generation (G4) Class 3 PCA has 384 bit ECC.</u>
Algorithms: <ul style="list-style-type: none"> -Sha1&256 with RSA -Sha256&384 with ECC -md5 only under prior agreement -No md2 	<u>All Classes of VeriSign PCAs and CAs, and RAs and end entity certificates use either SHA-1 or SHA-2 for digital signature hash algorithm and certain versions of VeriSign Processing Center support the use of SHA-256, SHA-384 and SHA-512 encryption algorithms in end-entity Subscriber Certificates.</u> 6.3.2 Certificate Operational Periods & Key Pair Usage Periods <u>Table 4:</u> PCA self-signed (1024 bit RSA) - Up to 30 years PCA self-signed (1024 bit RSA) - Up to 30 years PCA self-signed (256 bit ECC) - Up to 30 years PCA self-signed (384 bit ECC) - Up to 30 years And: VeriSign also operates the "VeriSign Class 3 International Server CA", "Thawte SGC CA" and the "Class 3 Open Financial Exchange CA-G2" which are online CAs signed by a PCA. The validity of these CAs may exceed the validity periods described in Table 8 above to ensure continued interoperability of certificates offering SGC and OFX capability.
	7.1.3 Algorithm Object Identifiers <ul style="list-style-type: none"> sha256withRSAEncryption OBJECT IDENTIFIER ::= {iso(1) member-body(2) us(840) rsdsi(113549) pkcs(1) pkcs-1(1) 11} ecdsa-with-Sha256 OBJECT IDENTIFIER ::= {iso(1) member-body(2) us(840) ansi-X9-62(10045) signatures(4) ecdsa-with-SHA2 (3) 2}

Description	Section & Changes made
	<ul style="list-style-type: none"> • ecdsa-with-Sha384 OBJECT IDENTIFIER ::= {iso(1) member-body(2) us(840) ansi-X9-62(10045) signatures(4) ecdsa-with-SHA2 (3) 3} • sha-1WithRSAEncryption OBJECT IDENTIFIER ::= {iso(1) member-body(2) us(840) rsadsi(113549) pkcs(1) pkcs-1(1) 5} • md5WithRSAEncryption OBJECT IDENTIFIER ::= {iso(1) member-body(2) us(840) rsadsi(113549) pkcs(1) pkcs-1(1) 4} • md2WithRSAEncryption OBJECT IDENTIFIER ::= {iso(1) member-body(2) us(840) rsadsi(113549) pkcs(1) pkcs-1(1) 2} <p>Either sha-1WithRSAEncryption or sha-256WithRSAEncryption shall be given strong preference <u>is used</u> over md5WithRSAEncryption.** md2WithRSAEncryption is no longer used to sign end entity certificates, but is used to sign CRLs for certain legacy CA and End-User Subscriber Certificates.</p> <p>Footnote added: **md5WithRSAEncryption is used only with prior approval to preserve business continuity of legacy applications.</p> <p>7.2 CRL Profile Signature Algorithm - Algorithm used to sign the CRL. VeriSign CRLs are signed using the sha1WithRSAEncryption (OID: 1.2.840.113549.1.1.5) or md5WithRSAEncryption (OID: 1.2.840.113549.1.1.4) in accordance with RFC 3279. (See CP § 7.1.3)</p> <p>Appendix B2 ECC 224, 233, 256 or 283 384 bits</p>
Remote Hosted KMS KMS – provides option for customer to host the KMS & KMD on their own premises.	<p>4.12 Key Escrow and Recovery Enterprise customers using Managed PKI Key Management Service (KMS) can escrow copies of the private keys of Subscribers whose Certificate Applications they approve. <u>The enterprise customer may use KMS operated either out of the enterprise’s premises or VeriSign’s secure data center. If operated out of the enterprise’s premises, VeriSign does not store copies of Subscriber private keys but nevertheless plays an important role in the Subscriber key recovery process.</u></p> <p>4.12.2 Session Key Encapsulation and Recovery Policy Practices Private keys are stored <u>in the Key Manager database</u> on the enterprise’ premises in encrypted form. Each Subscriber’s private key is individually encrypted with its own triple-DES symmetric key. A Key Escrow Record (KER) is generated, then the triple-DES key is combined with a random session key <u>to form a session key mask (MSK) generated in hardware and destroyed. Only the resulting masked session key (MSK) together with the certificate request information is securely sent and stored in the Managed PKI database</u> at VeriSign. The KER (containing the end user’s private key) and the <u>individual random session key mask</u> are stored in the Key Manager database on the enterprise’ premises.</p> <p><u>The Managed PKI database is operated out of VeriSign’s secure data center. The enterprise customer may choose to operate the Key Manager database either on the enterprise’s premises or out of VeriSign’s secure data center.</u></p> <p>Recovery of a private key and digital certificate requires the Managed PKI administrator to securely log on to the Managed PKI Control Center, select the appropriate key pair to recover and click a “recover” hyperlink. Only after an approved administrator clicks the “recover” link is the MSK for that key pair returned from the Managed PKI database operated out of VeriSign’s secure data center. The Key Manager <u>retrieves and decrypts the session key from the KMD and combines it with the MSK</u> to combine the MSK with the random session key mask and regenerates the triple-DES key which was used to originally encrypt the private key, allowing recovery of the end user’s private key. As a final step, an encrypted PKCS#12 file is returned to the administrator and ultimately distributed to the end user.</p> <p>Removed footnote #15: In limited circumstances, and only when expressly authorized through an Enterprise Service Agreement, VeriSign may host an Enterprise’s Key Management Service and associated escrowed private keys.</p> <p>5.2.2 Number of Persons Required per Task 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. <u>Manual operations for Key Recovery may optionally require the validation of two (2) authorized Administrators.</u></p> <p>5.2.4 Roles Requiring Separation of Duties Roles requiring Separation of duties include (but are not limited to)</p> <ul style="list-style-type: none"> • the validation of information in Certificate Applications; • the acceptance, rejection, or other processing of Certificate Applications, revocation requests, <u>recovery requests</u> or renewal requests, or enrollment information;

Description	Section & Changes made
Correction to ID Proofing of Class 3 Administrator (need not be employees)	<p>3.2.3 Auth of Individual Identity Class 3 Administrator certificates shall also include authentication of the organization and a confirmation from the organization of the <u>identity</u> employment and authorization of the person to act as Administrator.</p> <p>Footnote #5: Confirmation of the <u>identity</u> employment and authorization of the person enrolling for the Administrator certificate for the service named as Administrator in the Certificate Application.</p>
Appendix B3	Explicitly added SAN to list of extensions for Subscriber certs: SubjectAltName: If present is populated in accordance with RFC5280 and criticality is set to FALSE
Section 3.2.3	Corrected the name of the Policy Authority for NF SSP CA.

History of changes: version 3.8.1

Section	Description
Section 6.3.2 footnote 20	Added: "With the exception of the VeriSign Automated Administration certificate ..."
Appendix B1 Section 8	Updated maximum validity period from one year to thirteen months
Appendix B1 Section 22(d)(3)	Created section 22(d)(3)
Appendix B1 Section 25	Deleted: "Before renewing an EV Certificate, VeriSign performs all authentication and verification tasks required by the Guidelines and this procedure to ensure that the renewal request is properly authorized by the Applicant and that the information displayed in the EV Certificate is still accurate and valid." Replaced this paragraph with content consistent with published errata to the EV Guidelines. Also included a definition of renewal consistent with the Guidelines.
Appendix B3 Section 3	Added: "(f) extKeyUsage"
Appendix B1-B4 and throughout document	Replaced all references to RFC 3280 with RFC 5280

History of changes: version 3.8

Section	Description
Section 6.3.2 – table 8	Updated validity period for Online CA to End-Entity Organizational Subscriber from 3 to 5 years. Fn 17. updated fn to include the "Class 3 Secure Server Operational Administrator CA" Fn 20. Added a footnote that "At a minimum, the Distinguished Name of four and five year validity SSL certificates is reverified after three years from date of certificate issuance"

History of changes: version 3.7

Section	Description
Section 1.3.1	Added: "VeriSign also operates the "VeriSign Universal Root Certification Authority". The "VeriSign Universal Root Certification Authority" is not defined under a particular certificate Class, and may issue any class of Subordinate CA."
Section 6.3.2	Deleted: "VeriSign also operates the VeriSign Class 3 International Server CA which is an online CA signed by a PCA. The validity of this CA may exceed the validity periods described in Table 8 above in order to meet certain contractual obligations with browser vendors regarding the use of SGC/step up technology, and ensure continued interoperability of certificates offering this capability." Added : "VeriSign also operates the "VeriSign Class 3 International Server CA" and the "Class 3 Open Financial Exchange CA - G2" which are online CAs signed by a PCA. The validity of these CAs may exceed the validity periods described in Table 8 above to ensure continued interoperability of certificates offering SGC and OFX capability."
Section 6.3.2	Deleted: "Affected CAs shall not be extended beyond December 31, 2010 in terms of this exception" Added: "This exception may not be used to extend a CA's validity beyond a 13 year total validity, and shall not be made available after April 30, 2011."

Section 6.3.2	Added Footnote: " Certificate validity periods may be extended beyond the limits set in Section 6.3.2 for certificates using stronger encryption algorithms or key lengths are used, e.g. the use of SHA 2 or ECC algorithms and/or the use of 2048 bit or larger keys."
Section 7.1.3	Added two algorithms: 1. sha256withRSAEncryption OBJECT IDENTIFIER ::= {iso(1) member-body(2) us(840) rsadsi(113549) pkcs(1) pkcs-1(1) 11} 2. ecdsa-with-Sha384 OBJECT IDENTIFIER ::= {iso(1) member-body(2) us(840) ansi-X9-62(10045) signatures(4) ecdsa-with-SHA2 (3) 3}
Appendix B1 Section 16 (a)	Updated to allow for verification of address of a or a Parent/Subsidiary Company
Appendix B1 Section 5	Added <u>Non-Commercial Entity Subjects</u>
Appendix B1 Section 6(a)3 – table 1	Added: Non-Commercial Entities: V1.0, Clause 5.(3)
Appendix B1 Section 14	Added: Government Entities and Non-Commercial Entities
Appendix B1 Section 19	Added Prior Equivalent Authority
Appendix B4	Updated Appendix A4 in line with published errata to the EV Guidelines
Definitions	Added: "Country": "Sovereign State": "International Organization": "Parent Company" Updated "Subsidiary Company" to be a majority owned and not a wholly owned company.

History of changes: version 3.6

Section	Description
Section 4.1.2.1	Changed " demonstrating possession of the private key corresponding to the public key delivered to VeriSign." to "demonstrating possession and/or exclusive control of the private key corresponding to the public key delivered to VeriSign. "
Section 6.1.1	Changed " For ACS Application IDs, VeriSign generates a key pair on behalf of the Subscriber using a random numbers seed generated on a cryptographic module that meets the requirements of FIPS 140-1 level 3. " To "For ACS Application IDs, VeriSign generates a key pair on behalf of the Subscriber using a random numbers seed generated on a cryptographic module that, at a minimum , meets the requirements of FIPS 140-1 level 3. "
Section 6.2.5	Deleted: "When VeriSign CA key pairs reach the end of their validity period, such CA key pairs will be archived for a period of at least 5 years. Archived CA key pairs will be securely stored using hardware cryptographic modules that meet the requirements of this CPS. Procedural controls prevent archived CA key pairs from being returned to production use. Upon the end of the archive period, archived CA private keys will be securely destroyed in accordance with this CPS."
Section 6.3.2	Added "In terms of Section 6.3.2 of the VTN CP, the VeriSign PMA has approved an exception to extend a limited number CAs beyond the specified limits, in order to ensure uninterrupted PKI services during CA key pair migration. Affected CAs shall not be extended beyond December 31, 2010 in terms of this exception. "
Section 7.1	Update "VeriSign Certificates conform to (a) ITU-T Recommendation X.509 (1997): Information Technology - Open Systems Interconnection - The Directory: Authentication Framework, June 1997 and (b) RFC 5280: Internet X.509 Public Key Infrastructure Certificate and CRL Profile, April 2002 ("RFC 5280")." To "VeriSign Certificates conform generally to (a) ITU-T Recommendation X.509 (1997): Information Technology - Open Systems Interconnection - The Directory: Authentication Framework, June 1997 and (b) RFC 5280: Internet X.509 Public Key Infrastructure Certificate and CRL Profile, April 2002 ("RFC 5280")."
Section 7.1.2.1	Deleted "Note: Although the nonRepudiation bit is not set in the KeyUsage extension, VeriSign nonetheless supports nonrepudiation services for these Certificates. The nonRepudiation bit is not required to be set in these Certificates because the PKI industry has not reached a consensus as to what the nonRepudiation bit means. Until such a consensus emerges, the nonRepudiation bit will not be meaningful for potential Relying Parties. Moreover, the most commonly used applications do not recognize the nonRepudiation bit. Therefore, setting the bit will not help Relying Parties make a trust decision. Consequently, this CPS requires that the nonRepudiation bit be cleared, although it may be set in the case of dual key pair signature Certificates issued through Managed PKI Key Manager" Added: "Note: The nonRepudiation bit is not required to be set in these Certificates because the PKI industry has not yet reached a consensus as to what the nonRepudiation bit means. Until such a consensus emerges, the nonRepudiation bit might not be meaningful for potential Relying Parties. Moreover, the most commonly used applications do not always respect the nonRepudiation bit. Therefore, setting the bit might not help

	<p>Relying Parties make a trust decision. Consequently, this CPS does not require that the nonRepudiation bit be set. It may be set in the case of dual key pair signature Certificates issued through Managed PKI Key Manager, or as otherwise requested. Any dispute relating to non-repudiation arising from the use of a digital certificate is a matter solely between the Subscriber and the Relying Party(s). VeriSign shall incur no liability in relation thereto."</p> <p>Added footnote: "The nonRepudiation bit may also be referred to as ContentCommitment in Digital Certificates in accordance with the X.509 standard."</p>
Section 9.13.2	Updated Jurisdiction from Santa Clara County, California to Fairfax County, Virginia
Section 9.14	Updated Governing Law from State of California to Commonwealth of Virginia

History of changes: version 3.5

Section 6.2.5	<p>Deleted: "When VeriSign CA key pairs reach the end of their validity period, such CA key pairs will be archived for a period of at least 5 years. Archived CA key pairs will be securely stored using hardware cryptographic modules that meet the requirements of this CPS. Procedural controls prevent archived CA key pairs from being returned to production use. Upon the end of the archive period, archived CA private keys will be securely destroyed in accordance with this CPS."</p> <p>Added: "Upon expiration of a VeriSign CA Certificate, the key pair associated with the certificate will be securely retained for a period of at least 5 years using hardware cryptographic modules that meet the requirements of this CPS. These CA key pairs shall not be used for any signing events after their expiration date, unless the CA Certificate has been renewed in terms of this CPS."</p>
Section 6.2.10	Deleted: "At the conclusion of a VeriSign CA's operational lifetime, one or more copies of the CA private key are archived in accordance with CPS § 6.2.5. Remaining copies of the CA private key are securely destroyed. In addition, archived CA private keys are securely destroyed at the conclusion of their archive periods. CA key destruction activities require the participation of multiple trusted individuals."
Section 6.3.2	Added: "End user Subscriber Certificates that are renewals of existing subscriber certificates may have a longer validity period (up to 3 months)."
Section 6.3.2 – table 8	Updated "Online CA to End-Entity Organizational Subscriber" to reflect a validity "Normally up to 3 years".
Section 7.1.4	Clarification added that an OU pointing to a Relying party Agreement in the Subject name is optional as long as the Relying Party Agreement is linked to from the Policyextension.
Section 9.8	Updated Liability Caps for Netsure to \$50,000 US to \$250,000 US. From \$1,000 US to \$1,000,000.00 US
Definitions	"NetSure Protection Plan": Updated definition with correct CPS Section reference. Added: "Principal Individual", "Subsidiary Company", "Registration Agency"
Appendix B1-B4	Updated EV procedures in line with Version 1.0 of the EV Guidelines issued by the CA/Browser Forum.

History of changes: version 3.4

Section 1.1	Added Footnote: "Authenticated Content Signing Certificates (ACS) are issued by a non-VTN CA. However, reference is made to these certificates in certain sections of this VeriSign CPS, for ACS customers to understand certain procedural differences used for these certificates."
Section 3.2.3 Table 7	Added Verification requirements for Shared Service Provider Certificates for non federal entities: "The identity of the Certificate Subscriber is verified substantially in compliance with the requirements of the X.509 Certificate Policy for the US Department of Homeland Security Public Key Infrastructure (PKI)"
Section 3.3.1	Added a response from a verified e-mail address for the Corporate Contact as an alternative to a challenge phrase
Section 4.6.3	Added a response from a verified e-mail address for the Corporate Contact as an alternative to a challenge phrase
Section 4.9.7	Deleted: "CRLs for CA Certificates shall be issued at least quarterly" Added: "CRLs for CA Certificates shall be issued at least annually"
Section 6.3.2	Added: "VeriSign also operates the VeriSign Class 3 International Server CA which is an online CA signed by a PCA. The validity of this CA may exceed the validity periods described in Table 8 above in order to meet certain contractual obligations with browser vendors regarding the use of SGC/step up technology, and ensure continued interoperability of certificates offering this capability."
Section 7.1.2.1	Updated to specify that: "The criticality field of the KeyUsage extension is generally set to TRUE for CA certificates and may be set to either TRUE, or FALSE for end entity Subscriber certificates."
Section 7.1.2.1- Table 10	Updated CA Criticality from "False" to "True"
Section 9.3.3	Added: "VeriSign secures private information from compromise and disclosure to third parties."
Definitions	Deleted "Affiliate Audit Program Guide"

History of changes: version 3.3

Section 1	Added: "This CPS conforms to the Internet Engineering Task Force (IETF) RFC 3647 for Certificate Policy and Certification Practice Statement construction."
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Section 1.4.1.2 - Table 2	Added: High Assurance with Extended Validation
Section 1.4.1.3	Added: " High assurance with extended validation certificates are Class 3 certificates issued by VeriSign in conformance with the Guidelines for Extended Validation Certificates."
Section 2.2 - Table 3	Added: End-User Subscriber Certificates issued by VeriSign Class 3 Organizational VIP Device CA are not available through public query.
Section 3.1.1	Added: "EV SSL certificate content and profile requirements are discussed in Section 6 of Appendix B3 to this CPS."
Section 3.2.2 – Table 6	Added: "VeriSign's procedures for issuing Extended Validation SSL Certificates are described in Appendix B1 to this CPS."
Section 3.2.6	Added footnote: "Customers of VeriSign's Certificate Interoperability Service (CIS) are encouraged, but not required, to have their own CPS under the Certificate Interoperability Service (CIS) CP Supplement, but in all cases must comply with VeriSign's Certificate Interoperability Service (CIS) CP Supplement, published in the VeriSign Repository"
Section 3.3.1	Deleted: "In particular, for subsequent renewal requests for retail Class 3 Organizational certificates, VeriSign reauthenticates the Organization name and domain name included in the certificate. In circumstances where:..." Added: "In particular, for subsequent re-key requests for retail Class 3 Organizational certificates through www.verisign.com, VeriSign reauthenticates the Organization name and domain name included in the certificate. In circumstances where:..."
Section 4.6.3	Deleted: "In particular, for subsequent renewal requests for Class 3 Organizational certificates, VeriSign reauthenticates the Organization name and domain name included in the certificate. In circumstances where:..." Added: "In particular, for subsequent renewal requests for retail Class 3 Organizational certificates through www.verisign.com, VeriSign reauthenticates the Organization name and domain name included in the certificate. In circumstances where:..."
Section 4.9.7	Added footnote: "CRLs for the "VeriSign Class 3 Organizational VIP Device CA" are only issued whenever a certificate issued by that CA is revoked."
Section 6.3.2	Added: "VeriSign operates the "VeriSign Class 3 Organizational VIP Device CA". Organizational end-entity certificates issued by this CA may have a validity period beyond 3 years and up to a maximum of 5 years in circumstances where: <ul style="list-style-type: none"> o The certificate key pair is stored in hardware, and o VeriSign has authenticated the Organization in terms of this CPS and o When used to protect a server using SSL/TLS, the server is only accessible via a private network or intranet. "
Section 6.3.2 fn - 16	Deleted: "The Distinguished name of these Certificates shall be re-authenticated by VeriSign at least every 25-months."
Section 7.1.2	Added: " EV SSL certificate extension requirements are described in Appendix B3 to this CPS."
Section 7.1.8	Deleted: "Where the Certificate Policies extension is used, Certificates contain the object identifier for the Certificate Policy corresponding to the appropriate Class of Certificate as set forth in Section 1.2 of the VTN CP. For legacy Certificates issued prior to the publication of the VTN CP which include the Certificate Policies extension Certificates refer to the VeriSign CPS and/or the Relying party Agreement." Added: "VeriSign generally populates X.509 Version 3 VTN Certificates with a policy qualifier within the Certificate Policies extension. Generally, such Certificates contain a CPS pointer qualifier that points to the applicable Relying Party Agreement or the VeriSign CPS. In addition, some Certificates contain a User Notice Qualifier which points to the applicable Relying Party Agreement."
Section 9.8	Added: "VeriSign's limitation of liability for EV certificates is further described in Section 37 of Appendix B1 to this CPS."
Section 9.8	Deleted: "They shall also include the following liability caps limiting VeriSign's and the Affiliate's damages concerning a specific Certificate..." Added: "They shall also include the following liability caps limiting VeriSign's damages concerning a specific Certificate..."
Definitions	Added definition for "Extended Validation"
Appendix B	Added Appendix B: "Supplemental Validation Procedures for Extended Validation SSL Certificates"
Appendix C	Added Appendix C: Minimum Cryptographic Algorithm and Key Sizes for EV Certificates
Appendix D	Added Appendix D: EV Certificates Required Certificate Extensions

History of changes: version 3.2 (Effective date May 01, 2006)

General	Corrected typographical errors
Section 1.4.1.2 (Table 2)	Added TLS as an appropriate use for organization certificates.
Section 3.2.3	Amended "Class 3 Administrator certificates shall also include authentication of the organization and a confirmation from the organization of the employment and authorization of the person to act as Administrator. " to say

	"The authentication of Class 3 Administrator certificates is based on authentication of the organization and a confirmation from the organization of the employment and authorization of the person to act as Administrator"
Section 3.3.1 and Section 4.6.3	Specified that it is the Corporate Contact and Technical Contact information that must remain unchanged for an automatically issued renewal.
Section 3.3.1 and section 4.6.3	Added: "In particular, for subsequent renewal requests for Class 3 Organizational certificates, VeriSign reauthenticates the Organization name and domain name included in the certificate. In circumstances where <ul style="list-style-type: none"> • The challenge phrase is correctly used for the subsequent renewal certificate and: • The certificate Distinguished Name has not been changed, and • The Corporate and Technical Contact information remains unchanged from that which was previously verified, VeriSign 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."
Section 7.2	Removed reference to RFC 5280
Section 7.2.1	Added that "Version 2 CRLs conform with the requirements of RFC 5280."
Section 9.2.1	Updated from: "Enterprise Customers shall maintain a commercially reasonable level of insurance coverage for errors and omissions, either through an errors and omissions insurance program with an insurance carrier or a self-insured retention. This insurance requirement does not apply to governmental entities. VeriSign maintains such errors and omissions insurance coverage." to: "Enterprise Customers are encouraged to maintain a commercially reasonable level of insurance coverage for errors and omissions, either through an errors and omissions insurance program with an insurance carrier or a self-insured retention. VeriSign maintains such errors and omissions insurance coverage."
Section 9.2.3	Updated Section title from "Insurance or Warranty Coverage for End-Entities" to "Extended Warranty Coverage"
Section 9.2.3	Replaced the following content: "The NetSure Protection Plan is an extended warranty program that applies within VeriSign's Subdomain of the VTN. Where it applies, the NetSure Protection Plan provides Subscribers receiving with protection against accidental occurrences such as theft, corruption, loss, or unintentional disclosure of the Subscriber's private key (corresponding to the public key in the Certificate), as well as impersonation and certain loss of use of the Subscriber's Certificate. The NetSure Protection Plan also provides protection to Relying Parties when they rely on Certificates covered by the NetSure Protection Plan. NetSure is a program provided by VeriSign and backed by insurance obtained from commercial carriers. For general information concerning the NetSure Protection Plan, and a discussion of which Certificates are covered by it, see http://www.verisign.com/netsure . The protections of the NetSure Protection Plan are also offered, for a fee, to Enterprise Customers of VeriSign. They can obtain protections under the NetSure Protection Plan subject to the terms of an appropriate agreement for this service. This service not only extends the protections of the NetSure Protection Plan to the Subscribers whose Certificate Applications are approved by the Enterprise Customer, it also extends these protections to the Enterprise Customer itself. For example, if a Managed PKI Customer approves a Certificate Application of an employee of the Managed PKI Customer, who uses the Certificate for the business purposes of the Managed PKI Customer, and if the Subscriber's actions cause a loss, the real party bearing the loss may be the Managed PKI Customer in its role as the Subscriber's employer. If covered by the NetSure Protection Plan, the Managed PKI Customer may submit a claim for the loss sustained because of the Subscriber's actions." With: "The NetSure Protection Plan is an extended warranty program that provides VeriSign SSL and code signing certificate subscribers with protection against loss or damage that is due to a defect in VeriSign's issuance of the certificate or other malfeasance caused by VeriSign's negligence or breach of its contractual obligations, provided that the subscriber of the certificate has fulfilled its obligations under the applicable service agreement. For general information concerning the NetSure Protection Plan, and a discussion of which Certificates are covered by it, see http://www.verisign.com/netsure "

History of changes: version 3.1 (Included December 01, 2005)

Section 2.3	Changed reference to Section 8 to Section 9.12
Section 4.5.2	Updated to include the following language: "Relying Party is solely responsible to investigate whether reliance on a digital signature performed by an end-user Subscriber Certificate prior to revocation of a Certificate in the Certificate chain is reasonable. Any such reliance is made solely at the risk of the Relying party."
Section 4.12.1	Made the list of requirements for key recovery a VeriSign recommendation
Section 6.2.1	Deleted "For other CAs, VeriSign uses hardware cryptographic modules that are certified at or meet the requirements of at least FIPS 140-1 Level 2"
Section 9.2.2	Updated URL to VeriSign SEC filings: http://www.verisign.com/verisign-inc/vrsn-investors/sec-filings/index.html