

TIME STAMPING PRACTICES AND POLICIES

Trust Service Provider



Information Systems Service

May 29th, 2017

DOCUMENTAL CONTROL

DOCUMENT / FILE

Title: CORPME Time Stamping Practices and Policies	File/s name: REG-PKI-DPC04v.1.0.2 CORPME Time Stamping Practices and Policies.pdf
Code: REG-PKI-DPC04	Logical Support: MS-DOCX y PDF
Date: 29/05/2017	Physical location: http://pki.registradores.org/normativa/index.htm
Version: 1.0.2	

CHANGE RETENTION

Version	Date	Reason for change
1.0.0	20/06/2016	Document creation
1.0.1	19/09/2016	Modification LFE/2016/0071
1.0.2	29/05/2017	Adaptation to eIDAS Regulation

DOCUMENT DISTRIBUTION

Name	Area
Public	Public / Internet

DOCUMENT CONTROL

DRAFTED	INSPECTED	APPROVED	ADMITTED
PwC	Oscar Yagüe	Raúl Avedillo	Luis Alberto Lahoz
29/05/2017	29/05/2017	29/05/2017	29/05/2017

INDEX

1	INTRODUCTION	6
1.1	OVERVIEW	6
1.2	TIME STAMPING SERVICE	6
1.3	DEFINITIONS AND ABBREVIATIONS.....	7
1.3.1	<i>Definitions.....</i>	7
1.3.2	<i>Abbreviations.....</i>	7
1.3.3	<i>References</i>	8
2	TIME STAMPING PRACTICES AND POLICIES	9
2.1	INITIAL VIEW	9
2.2	TIME STAMPING PRACTICES AND POLICIES IDENTIFICATION	9
2.3	PARTICIPANT ENTITIES	10
2.3.1	<i>Trust Service Provider (TSP)</i>	10
2.3.2	<i>Time Stamping Authority (TSA).....</i>	10
2.3.3	<i>Client.....</i>	10
2.3.4	<i>Third party who trust in time stamps</i>	10
3	OPERATIONAL REQUIREMENTS.....	11
3.1	OBTAINING RELIABLE TIME.....	11
3.2	TSA CERTIFICATE.....	11
3.2.1	<i>TSA Certificate Generation</i>	11
3.2.2	<i>TSA Certificate Publication.....</i>	13
3.2.3	<i>Changing TSA Certificate</i>	13
3.3	APPLYING FOR TIME STAMPS	14
3.4	RESPONSE TO TIME STAMPS REQUEST	14
4	PHYSICAL SECURITY CONTROLS.....	17
4.1	PHYSICAL CONTROLS	17
4.1.1	<i>CORPME Facilities.....</i>	17
4.1.2	<i>Physical access.....</i>	17
4.1.3	<i>CORPME Facilities.....</i>	17
4.1.4	<i>Exposure to water.....</i>	17
4.1.5	<i>Measures against fires and floods.....</i>	17
4.1.6	<i>Storage system</i>	17
4.1.7	<i>Waste Disposal</i>	17
4.1.8	<i>Information Backup Policy.....</i>	17
4.2	PROCEDURAL CONTROLS	17
4.2.1	<i>Responsible Roles for CORPME PKI control and management</i>	18
4.2.2	<i>Number of persons required per task</i>	18
4.2.3	<i>Roles requiring segregation of functions.....</i>	18
4.3	PERSONNEL CONTROLS	18
4.3.1	<i>Requirement for professional qualifications, knowledge and experience</i>	18
4.3.2	<i>Background Check Procedures.....</i>	18
4.3.3	<i>Training requirements</i>	18
4.3.4	<i>Requirements and Frequency of Training Update</i>	18
4.3.5	<i>Frequency and rotation sequence of tasks</i>	18
4.3.6	<i>Penalties for unauthorized actions</i>	18

4.3.7	<i>Requirements for contracting third parties</i>	18
4.3.8	<i>Documentation provided to staff</i>	19
4.4	SECURITY AUDIT PROCEDURES	19
4.4.1	<i>Registered event types</i>	19
4.4.2	<i>Frequency of processing audit record</i>	19
4.4.3	<i>Audit records Retention period</i>	19
4.4.4	<i>Audit records protection</i>	19
4.4.5	<i>Procedures for supporting audit record</i>	19
4.4.6	<i>Notification to subject causing the event</i>	19
4.4.7	<i>Vulnerability Analysis</i>	19
4.5	ARCHIVING RECORDS	19
4.5.1	<i>Archived events Types</i>	19
4.5.2	<i>Record retention period</i>	20
4.5.3	<i>File protection</i>	20
4.5.4	<i>File Backup Procedures</i>	20
4.5.5	<i>Requirements for time stamping of records</i>	20
4.5.6	<i>File information system (internal vs. external)</i>	20
4.5.7	<i>Procedures for obtaining and verifying archived information</i>	20
4.6	CHANGE OF KEYS	20
4.7	RECOVERY FROM KEY OR CATASTROPHIC COMMITMENT	20
4.7.1	<i>Incident and commitment management procedures</i>	20
4.7.2	<i>Alteration of Hardware, software and / or data resources</i>	20
4.7.3	<i>Procedures of action against the commitment of the authority private key</i>	21
4.7.4	<i>Installation after natural disaster or other catastrophe</i>	21
4.8	TSA TERMINATION	21
5	TECHNICAL SECURITY CONTROLS	22
5.1	COMPUTER SECURITY CONTROLS	22
5.1.1	<i>Specific technical security requirements</i>	22
5.1.2	<i>Computer security assessment</i>	22
5.2	LIFECYCLE SECURITY CONTROLS	22
5.2.1	<i>System Development Controls</i>	22
5.2.2	<i>Security Management Controls</i>	22
5.2.3	<i>Lifecycle security controls</i>	22
5.3	NETWORK SECURITY CONTROLS	22
6	COMPLIANCE AUDITS AND OTHER CONTROLS	23
6.1	FREQUENCY OR CIRCUMSTANCES OF CONTROLS FOR EACH AUTHORITY	23
6.2	AUDITOR IDENTIFICATION / QUALIFICATION	23
6.3	RELATIONSHIP BETWEEN AUDITOR AND AUDITED AUTHORITY	23
6.4	ASPECTS COVERED BY CONTROLS	23
6.5	ACTIONS TO BE TAKEN BECAUSE OF DEFICIENCIES DETECTION	23
6.6	RESULTS COMMUNICATION	23
7	OTHER LEGAL AND ACTIVITY ISSUES	24
7.1	RATES	24
7.1.1	<i>Time Stamping services rates</i>	24
7.1.2	<i>Refund Policy</i>	24
7.2	ECONOMIC RESPONSIBILITIES	24
7.3	CONFIDENTIALITY INFORMATION	24
7.3.1	<i>Confidential information scopes</i>	24
7.3.2	<i>No confidential information</i>	24

7.3.3	<i>Professional Secrecy Duty</i>	24
7.4	PERSONAL INFORMATION PROTECTION.....	24
7.5	INTELLECTUAL PROPERTY RIGHTS.....	25
7.6	REPRESENTATION AND WARRANTIES.....	25
7.6.1	<i>TSA Obligations</i>	25
7.6.2	<i>Obligation of time stamp clients</i>	25
7.6.3	<i>Obligations of third parties who trust in time stamps</i>	26
7.6.4	<i>Other participant obligations</i>	26
7.7	DISCLAIMER.....	26
7.8	LIMITATIONS OF RESPONSIBILITIES.....	26
7.9	INDEMNIFICATION.....	26
7.10	VALIDITY PERIOD.....	26
7.10.1	<i>Time Limit</i>	26
7.10.2	<i>Time Stamping Policy Replacement and repeal</i>	27
7.10.3	<i>Completion Effects</i>	27
7.11	INDIVIDUAL NOTIFICATIONS AND COMMUNICATIONS WITH PARTICIPANTS.....	27
7.12	SPECIFICATIONS CHANGES PROCEDURES.....	27
7.12.1	<i>Changes Procedures</i>	27
7.12.2	<i>Circumstances in which OID must be changed</i>	27
7.13	CLAIMS.....	27
7.14	APPLICABLE REGULATIONS.....	27
7.15	COMPLIANCE WITH APPLICABLE REGULATIONS.....	28
7.16	VARIOUS STIPULATIONS.....	28
7.16.1	<i>Full Acceptance Clause</i>	28
7.16.2	<i>Independence</i>	28
7.16.3	<i>Judicial resolution</i>	28
7.17	OTHER STIPULATIONS.....	28

1 INTRODUCTION

1.1 Overview

The Trust Service Provider (TSP) from the Public Corporation of Land and Business Registers of Spain, Colegio de Registradores de la Propiedad, Mercantiles y de Bienes Muebles de España (hereinafter CORPME), issues certificates qualified according to EU regulations 910/2014 related to electronic identification and trust services, according to Ley 59/2003, de 19 de diciembre, de firma electrónica, and also offers Time Stamping services.

This document aims to describe Time Stamping services operation offered by CORPME and to establish the use conditions, obligations and responsibilities for the different entities involved.

Ley 59/2003, de 19 de diciembre, de firma electrónica, does not collect or regulate the issuance of time stamps. However, it is CORPME's intention to provide issued time stamps with the status of "Qualified Time Stamps" equivalent to the status of "Qualified Electronic Signatures complying with the applicable legislation in each case.

These Time Stamping Practices and Policies are subject to compliance with the General Conditions included in the CORPME Certification Practice Statement (CPS).

1.2 Time Stamping Service

Time Stamping is an online mechanism that allows to demonstrate that a data series have existed and have not been altered from a specific time.

The CORPME is a Time Stamping Authority (TSA or Time Stamping Authority) that acts as a trusted third party testifying existence of such electronic data at a specific date and time.

The Time Stamping services are not free, so it will be necessary to contract the service previously with the CORPME. Time Stamping services may be sell under the temporary limitation agreed upon and / or number of Time Stamping requests. In any case, the TSA's billing conditions are reviewed, guaranteeing that no additional charges are applied to those established in the contracts.

CORPME offers Time Stamping service as follows:

- **Time Stamping Service:** Client performs a Time Stamping request according to RFC 3161 to a CORPME URL, obtaining in response a digital evidence signed by CORPME TSA.

Time Stamping Practices and Policies implementation must comply with protocol defined in **RFC 3161 "Internet X.509 Public Key Infrastructure Time-Stamp Protocol (TSP)"**.

The CORPME's TSA allows the generation of time stamps on any type of document or object, with or without electronic signature of any kind.

The steps to generate a time stamp are as follows:

- The client calculates the hash of the document or object to be stamped.
- The client sends a time stamp request to a specific CORPME URL following the protocol RFC 3161, including the hash of the document to be stamped.
- CORPME receives the request, checks whether the request is complete and correct and performs an access control based on the client's IP.
- If the result is correct, the TSA signs the request by generating a time stamp (including the hash of the document, the date and time obtained from a reliable source and the electronic signature of the TSA).
- The time stamp is sent back to the client.

- The client must validate the signature of the stamp and properly guard it.
- The TSA will maintain a record of the issued stamps for future verification for at least 5 years.

The CORPME records the following information regarding the Time Stamping Service:

- Relevant events of the TSU key life cycle.
- Relevant events in the life cycle of TSU certificates.
- TSU clock synchronization events with UTC, including clock recalibration information.
- Events related to synchronization loss detection.

1.3 Definitions and abbreviations

1.3.1 Definitions

- **Electronic signature qualified certificate:** Electronic signature certificate issued by a qualified provider of trusted services meeting the requirements of the Regulation (EU) 910/2014, Annex I.
- **Hardware Security Cryptographic Module (HSM):** Hardware module used to perform cryptographic functions and storing keys in safe mode.
- **Hash:** Fixed-size result obtained after applying a hash function to a message fulfilling the property of being uniquely associated with the initial data.
- **Qualified Certificate:** Certificate issued by a Trust Services Provider in compliance with the Law in terms applicant's identity and other circumstances verification as well as reliability and guarantees of the services they provide.
- **Revoked Certificate Lists:** List of revoked or suspended certificates.
- **Time stamp:** Special type of electronic signature issued by a trusted third party who guarantees the integrity of a document at a certain date and time.
- **Time Stamping Authority:** A trusted entity who emits time stamps.
- **Trust Service Provider:** Natural or Legal person, who, in accordance with the legislation on Electronic Signature, issues Electronic Certificates, is also able to provide other services in relation to the Electronic Signature.

1.3.2 Abbreviations

CEN: European Committee for Standardization.

CRL: Certificate Revocation List.

CWA CEN: Workshop Agreement.

FIPS: Federal Information Processing Standards.

HSM: Hardware Security Module.

RFC: Request for comment.

ROA: Real Instituto y Observatorio de la Armada en San Fernando.

TSA: Time Stamping Authority.

TSC: Time Stamping Certificate.

TSP: Time Stamping Protocol.

TST: Time Stamp Token.

TSU: Time Stamping Unit IETF Internet Engineering Task Force.

UTC: Universal Time Coordinated.

1.3.3 References

- **ETSI TS 101 456** – Policy Requirements for Certification Authorities Issuing Qualified Certificates.
- **ETSI TS 102 023** – Policy Requirements for Time-Stamping Authorities.
- **ETSI TS 101 861** – Time stamping profile.
- **ETSI TS 102 042** – Policy Requirements for Certification Authorities issuing Public Key Certificates.
- **ETSI TS 102 176** – Algorithms and Parameters for Secure Electronic Signatures.
- **RFC 3161** – Internet x.509 Public Key Infrastructure – Time Stamp Protocol (TSP).
- **RFC 3628** – Policy Requirements for Time Stamping Authorities (TSAs).
- **ETSI EN 319 421** – Policy and Security Requirements for Trust Service Providers issuing Time-Stamps.
- **ETSI EN 319 422** – Time-stamping protocol and time-stamp token profiles.

2 TIME STAMPING PRACTICES AND POLICIES

2.1 Initial view

The Time Stamping services are not free, so it will be necessary to contract service previously with the CORPME. Time Stamping services may be sell under the temporary limitation and / or time-stamping number requests to be agreed upon.

The CORPME offers the Time Stamping Service as follows:

- **Time Stamping Service:** Client performs a Time Stamping request according to RFC 3161 to a CORPME URL (<http://tsa.registradores.org> or <https://tsa.registradores.org>) obtaining in response a digital evidence signed by CORPME TSA.

CORPME Time Stamping Practices and Policies are based on standards:

- RFC 3161 "Internet X.509 Public Key Infrastructure Time-Stamp Protocol (TSP)".
- ETSI TS 101 862, Qualified Certificate Profile.
- CWA 14167 Security Requirements for Trustworthy Systems Managing Certificates for Electronic Signatures - Part 1: System Security Requirements.
- ETSI TS 102 023, Policy Requirements for Time-Stamping Authorities.
- RFC 3628, Policy Requirements for Time Stamping Authorities (TSAs).

2.2 Time Stamping Practices and Policies Identification

Document's name	CORPME Time Stamping Practices and Policies
Document's version	1.0.2
Document status	Version
Emission Date	29/05/2017
Expiration date	Not applicable
OID (Object Identifier)	1.3.6.1.4.1.17276.0.3.0.1.0.2
CP Location	http://pki.registradores.org/normativa/index.htm
Related CPS	Certification Practice Statement

The TSA is composed of a single Time Stamping Unit (TSU) that issues the time stamps under the policy with OID 1.3.6.1.4.1.17276.0.3.1.1.

2.3 Participant entities

2.3.1 Trust Service Provider (TSP)

According to Ley 59/2003, de 19 de diciembre, de firma electrónica, Natural or Legal person who, in accordance with the legislation on Electronic Signature, issues Electronic Certificates, is able to also provide other services in relation to the Electronic Signature.

2.3.2 Time Stamping Authority (TSA)

The CORPME acts as a Time Stamping Authority (TSA). The CORPME will offer the certification services only through the TSP, without delegating them to any other entity.

TSA provides certainty about pre-existence of certain electronic documents at any given time.

CORPME will use different systems to generate time stamps, providing high availability to the service.

2.3.3 Client

The CORPME Time Stamping services are not public or free. To be able to access the Time Stamping services, the Client must contract previously with the CORPME.

The CORPME will perform access control to the service based on IP addresses, therefore, the Client must inform on which IP addresses requests will be made.

The client must adapt their systems to the TSP protocol in order to make time-stamping requests. The time-stamping service offered by CORPME does not provide any software or customer integration libraries. To adapt systems, there are public libraries that implement TSP protocol in various programming languages:

- **BouncyCastle** (<http://www.bouncycastle.org>): Set of cryptographic libraries that implement the TSP protocol in Java and C #
- **OpenTSA** (<http://www.opentsa.org>): OpenSSL cryptographic library extension implements TSP protocol in C language.
- **Digistamp** (<http://digistamp.com/toolkitDoc/MSToolKit.htm>): Toolkit based on the Microsoft CryptoAPI cryptographic library those implements the TSP protocol in Visual Basic.
- **IAIK**: Includes cryptographic libraries in Java that implement the TSP protocol. These libraries are free for non-commercial purposes only.
- **Adobe Reader**: The Adobe Reader 8 application allows the validation of time stamps included in PDF documents.

2.3.4 Third party who trust in time stamps

Neither Electronic Identification, EU 910/2014 nor Law 59/2003 collect nor regulate time stamps issuance. However, it is CORPME's intention to endow the issued time stamps with the status of "Qualified Time Stamps" equivalent to the status of "Qualified Electronic Signatures", complying with the applicable legislation in each case.

Therefore, any user may validate the time stamps freely based on trust in the CORPME as a TSP who issues qualified certificates.

3 OPERATIONAL REQUIREMENTS

3.1 Obtaining Reliable Time

The CORPME performs time synchronization with the ROA through the Internet Protocol NTP (*RFC 1305 Network Time Protocol*). The ROA has as main mission the time basic unit maintenance, declared for legal purposes as National Pattern, as well as the maintenance and official dissemination of The Coordinated Universal Time (UTC) scale, considered for all purposes as the basis of the legal time throughout the national territory (RD 23 October 1992, No. 1308/1992).

To perform this time synchronization, a research project is established by means of the constitution of a Time Laboratory at the headquarters of the ROA where the quality of time is obtained, processed and controlled by electronic means and sent through a channel of exclusive communication to the Information Systems Service of the CORPME, and from where it is distributed.

3.2 TSA Certificate

3.2.1 TSA Certificate Generation

The process of issuing a Certificate of Time Stamping Certificate (TSC) will be carried out manually following the maximum security guarantees.

Time Stamp Certificate (TSC) is issued and revoked by Central Processing Unit, by a Steering Committee request.

The CORPME Internal Subordinate CA must issue the TSA certificate, following the certification policy.

The structure of the certificate, referring to certificate subject extension, is the one described in the following table:

Field	Value	Description
C	ES	Country
organizationIdentifier	VATES-Q2863012G	CIF (Required by ETSI 319 412-2)
O	Colegio de Registradores de la Propiedad y Mercantiles	Organisation
CN	Autoridad de Certificación de los Registradores - TSA	Common Name

The most relevant fields rest description of the certificate profile for the time stamp certificate for CORPME TSA:

Field	Proposed content	Review	Observations
Version	V3		
Serial number			
Signature Algorithm	sha256WithRSAEncryption		OID: 1.2.840.113549.1.1.11 Standard PKCS#1 v2.1 y RFC 3447.
Signature hash Algorithm	sha256		
Issuer	C=ES, organizationIdentifier=VATES-Q2863012G, O=Colegio de Registradores de la Propiedad y Mercantiles, CN=Autoridad de Certificación de los Registradores - AC Interna		All <i>DirectoryString</i> coded in UTF8. Attribute "C" (<i>countryName</i>) is coded according "ISO 3166-1-alpha-2 code elements", in <i>PrintableString</i> .
Valid to			Validity period Start date
Valid from			End date of the validity period (Internal CA validity period)
Subject	C=ES, organizationIdentifier=VATES-Q2863012G, O=Colegio de Registradores de la Propiedad y Mercantiles, CN=Autoridad de Certificación de los Registradores - TSA		All <i>DirectoryString</i> coded in UTF8. Attribute "C" (<i>countryName</i>) is coded according "ISO 3166-1-alpha-2 code elements", in <i>PrintableString</i> .
Public Key	Algorithm: RSA Encryption Length: 2048 bits		
Subject Key Identifier			
Authority Key Identifier			
Certificate Policies	It will be used	NO	RFC 5280: "PolicyInformation SHOULD only contain an OID." RFC 3739 requires existence of at least one value.
Policy Identifier	1.3.6.1.4.1.17276.0.1.10.1		
Policy Qualifier info			
Policy Qualifier Id (CPS)	http://pki.registradores.org/normativa/ind ex.htm		

Policy Qualifier Id (User Notice)	Certificado sujeto a las Prácticas y Políticas de Sellado de Tiempo del Colegio de Registradores de la Propiedad y Mercantiles de España (© 2016)		Electronic Signature Law says for qualified: "The identification of the certification service provider issuing the certificate and its address". It is sufficient to specify address in CPS published by SCR.
Subject Alternative Names	No utilizado	NO	
CRL Distribution Points	(1) HTTP: http://pki.registradores.org/crls/crl_int_psc_corpme.crl (2) LDAP: ldap://ldap.registradores.org/ CN=AC%20INTERNA, O=Colegio%20de%20Registradores%20-%20Q2863012G, C=ES?certificateRevocationList?base?objectclass=cRLDistributionPoint	NO	The latest versions of Microsoft CryptoAPI do not support either HTTPS or LDAPS. Therefore, the HTTP and LDAP protocols will be used.
Authority Information Access (AIA)	Access Method: id-ad-ocsp Alternative Name (Access Location): http://ocsp.registradores.org/ Access Method: id-ad-calssuers Alternative Name (Access Location) (AC Raíz): http://pki.registradores.org/certificados/ac_raiz_psc_corpme.crt	NO	The latest versions of Microsoft CryptoAPI do not support either HTTPS or LDAPS. Therefore, the HTTP and LDAP protocols will be used.
Key Usage	Digital Signature Non Repudiation	YES	
Enhanced Key Usage	Time Stamping (1.3.6.1.5.5.7.3.8)	YES	
Thumbprint algorithm	sha1		
Thumbprint			

The TSA private keys are generated and guarded in a secure cryptographic device meeting requirements detailed in FIPS 140-3 level 3 and FIPS 140-2 level 3 where applicable, ensuring compliance with the requirements of the EAL4 + in accordance with ISO / IEC 15408. The cryptographic device is not handled during transport or when stored.

The CORPME has several TSUs to guarantee the high time-stamping service availability. It also reserves the right to establish as many time-stamping units as deemed appropriate and their management according to the particular procedures established to guarantee at all times the adequate provision of the service.

At the end of the validity period, TSUs private keys and their backups are safely destroyed when they are removed from the device, so that they cannot be recovered, in order to avoid their inappropriate use

3.2.2 TSA Certificate Publication

The TSA certificate is attached to the response of each Time Stamp that is issued.

3.2.3 Changing TSA Certificate

The TSA certificate may be changed at any time by another TSA certificate equally valid under the CORPME Certification Policies.

This change will not be communicated to the users of the service, who should trust all the stamps issued by CORPME and signed with valid TSC certificates within the certification hierarchy.

Therefore, a user only needs to rely on the CA Root certificate and the CORPME CAs to validate the signatures.

3.3 Applying for time stamps

Stamp applications will adhere to the syntax of "RFC3161 Time Stamp Protocol (TSP)" specification described in Section 2.3. "Time-Stamp Protocol" of the specification, with ETSI TS 101 862. Restrictions.

According to CORPME, the URLs of the Time Stamping Service may be: <http://tsa.registradores.org> or <https://tsa.registradores.org>.

The supported HASH algorithms are: SHA-1 (not recommended), SHA-224, SHA-256, SHA-384 and SHA-512.

The format for sending the requests follows the following scheme:

```
TimeStampReq ::= SEQUENCE {
    Version INTEGER { v1(1) },
    messageImprint      MessageImprint,
    reqPolicy           TSAPolicyId      OPTIONAL,
    nonce               INTEGER          OPTIONAL,
    certReq             BOOLEAN          DEFAULT FALSE,
    extensions          [0]IMPLICIT Extensions OPTIONAL }
```

```
MessageImprint ::= SEQUENCE {
    hashAlgorithm      AlgorithmIdentifier,
    hashedMessage      OCTET STRING }
```

3.4 Response to time stamps request

The response format is as follows:

```
TimeStampResp ::= SEQUENCE {
    Status           PKIStatusInfo,
    timeStampToken   TimeStampToken  OPTIONAL }
```

```
PKIStatusInfo ::= SEQUENCE {
    status           PKIStatus,
    statusString     PKIFreeText  OPTIONAL,
    failInfo         PKIFailureInfo OPTIONAL }
```

```

}
PKIStatus ::= INTEGER {
    granted (0),
    grantedWithMods (1)
    rejection (2),
    waiting (3),
    revocationWarning (4),
    revocationNotification (5)
}
PKIFailureInfo ::= BIT STRING {
    badAlg (0),
    badRequest (2),
    badDataFormat (5),
    timeNotAvailable (14),
    unacceptedPolicy (15),
    unacceptedExtension (16),
    ddInfoNotAvailable (17)
    ystemFailure (25)
}
TimeStampToken ::= ContentInfo
    -- contentType is id-signedData as defined in [CMS]
    -- content is SignedData as defined in([CMS])
    -- eContentType within SignedData is id-ct-TSTInfo
    -- eContent within SignedData is TSTInfo

id-ct-TSTInfo OBJECT IDENTIFIER ::= { iso(1) member-body(2)
    us(840) rsadsi(113549) pkcs(1) pkcs-9(9) smime(16) ct(1) 4}

TSTInfo ::= SEQUENCE {
    Version                INTEGER { v1(1) },
    policy                  TSAPolicyId,
    messageImprint          MessageImprint,
    serialNumber            INTEGER,
    genTime                 GeneralizedTime,
    accuracy                Accuracy                OPTIONAL,
    ordering                BOOLEAN                DEFAULT FALSE,

```

nonce	INTEGER	OPTIONAL,
tsa	0]GeneralName	OPTIONAL,
extensions	[1]IMPLICIT Extensions	OPTIONAL }

4 PHYSICAL SECURITY CONTROLS

4.1 Physical controls

As specified in CORPME Certification Practice Statement (CPS).

4.1.1 CORPME Facilities

As specified in CORPME Certification Practice Statement (CPS).

4.1.2 Physical access

As specified in CORPME Certification Practice Statement (CPS).

4.1.3 CORPME Facilities

As specified in CORPME Certification Practice Statement (CPS).

4.1.4 Exposure to water

As specified in CORPME Certification Practice Statement (CPS).

4.1.5 Measures against fires and floods

As specified in CORPME Certification Practice Statement (CPS).

4.1.6 Storage system

As specified in CORPME Certification Practice Statement (CPS).

4.1.7 Waste Disposal

As specified in CORPME Certification Practice Statement (CPS).

4.1.8 Information Backup Policy

As specified in CORPME Certification Practice Statement (CPS).

4.2 Procedural controls

As specified in CORPME Certification Practice Statement (CPS).

4.2.1 Responsible Roles for CORPME PKI control and management

As specified in CORPME Certification Practice Statement (CPS).

4.2.2 Number of persons required per task

As specified in CORPME Certification Practice Statement (CPS).

4.2.3 Roles requiring segregation of functions

As specified in CORPME Certification Practice Statement (CPS).

4.3 Personnel controls

As specified in CORPME Certification Practice Statement (CPS).

4.3.1 Requirement for professional qualifications, knowledge and experience

As specified in CORPME Certification Practice Statement (CPS).

4.3.2 Background Check Procedures

As specified in CORPME Certification Practice Statement (CPS).

4.3.3 Training requirements

As specified in CORPME Certification Practice Statement (CPS).

4.3.4 Requirements and Frequency of Training Update

As specified in CORPME Certification Practice Statement (CPS).

4.3.5 Frequency and rotation sequence of tasks

As specified in CORPME Certification Practice Statement (CPS).

4.3.6 Penalties for unauthorized actions

As specified in CORPME Certification Practice Statement (CPS).

4.3.7 Requirements for contracting third parties

As specified in CORPME Certification Practice Statement (CPS).

4.3.8 Documentation provided to staff

As specified in CORPME Certification Practice Statement (CPS).

4.4 Security Audit Procedures

As specified in CORPME Certification Practice Statement (CPS).

4.4.1 Registered event types

As specified in CORPME Certification Practice Statement (CPS).

4.4.2 Frequency of processing audit record

As specified in CORPME Certification Practice Statement (CPS).

4.4.3 Audit records Retention period

As specified in CORPME Certification Practice Statement (CPS).

4.4.4 Audit records protection

As specified in CORPME Certification Practice Statement (CPS).

4.4.5 Procedures for supporting audit record

As specified in CORPME Certification Practice Statement (CPS).

4.4.6 Notification to subject causing the event

As specified in CORPME Certification Practice Statement (CPS).

4.4.7 Vulnerability Analysis

As specified in CORPME Certification Practice Statement (CPS).

4.5 Archiving records

As specified in CORPME Certification Practice Statement (CPS).

4.5.1 Archived events Types

As specified in CORPME Certification Practice Statement (CPS).

4.5.2 Record retention period

As specified in CORPME Certification Practice Statement (CPS).

4.5.3 File protection

As specified in CORPME Certification Practice Statement (CPS).

4.5.4 File Backup Procedures

As specified in CORPME Certification Practice Statement (CPS).

4.5.5 Requirements for time stamping of records

As specified in CORPME Certification Practice Statement (CPS).

4.5.6 File information system (internal vs. external)

As specified in CORPME Certification Practice Statement (CPS).

4.5.7 Procedures for obtaining and verifying archived information

As specified in CORPME Certification Practice Statement (CPS).

4.6 Change of keys

The procedures for providing a new TSA public key in the event of a key change are the same as providing the current public key.

4.7 Recovery from key or catastrophic commitment

As specified in CORPME Certification Practice Statement (CPS).

4.7.1 Incident and commitment management procedures

As specified in CORPME Certification Practice Statement (CPS).

4.7.2 Alteration of Hardware, software and / or data resources

As specified in CORPME Certification Practice Statement (CPS).

4.7.3 Procedures of action against the commitment of the authority private key

In the event of compromise of private key of the TSA, it will proceed to immediate revocation. Next, the corresponding CRL will be generated and published, ceasing the operation of the TSA activity and proceeding to the generation, certification and start-up of a new Authority with the same name as the one eliminated and with a new key pair.

4.7.4 Installation after natural disaster or other catastrophe

As specified in CORPME Certification Practice Statement (CPS).

4.8 TSA Termination

Before the TSA ceases its activity, the following actions will be carried out:

- Inform all subscribers, users or entities with whom it has agreements or other type of relation, of the cessation with the minimum anticipation of 2 months, or the period established by the current legislation.
- Revoke any authorization to subcontractors to act on behalf of the TSA in the time stamp issuance procedure.
- Inform the competent administration, in advanced, of the cessation of its activity and the destination to be given to the time stamps issued to date, specifying, if applicable, if the management is to be transferred and to whom.

5 TECHNICAL SECURITY CONTROLS

5.1 Computer security controls

5.1.1 Specific technical security requirements

As specified in CORPME Certification Practice Statement (CPS).

5.1.2 Computer security assessment

As specified in CORPME Certification Practice Statement (CPS).

5.2 Lifecycle security controls

5.2.1 System Development Controls

As specified in CORPME Certification Practice Statement (CPS).

5.2.2 Security Management Controls

As specified in CORPME Certification Practice Statement (CPS).

5.2.3 Lifecycle security controls

As specified in CORPME Certification Practice Statement (CPS).

5.3 Network Security Controls

As specified in CORPME Certification Practice Statement (CPS).

6 COMPLIANCE AUDITS AND OTHER CONTOLS

6.1 Frequency or circumstances of controls for each Authority

As specified in CORPME Certification Practice Statement (CPS).

6.2 Auditor Identification / Qualification

As specified in CORPME Certification Practice Statement (CPS).

6.3 Relationship between auditor and audited authority

As specified in CORPME Certification Practice Statement (CPS).

6.4 Aspects covered by controls

As specified in CORPME Certification Practice Statement (CPS)..

6.5 Actions to be taken because of deficiencies detection

As specified in CORPME Certification Practice Statement (CPS).

6.6 Results Communication

As specified in CORPME Certification Practice Statement (CPS).

7 OTHER LEGAL AND ACTIVITY ISSUES

7.1 Rates

7.1.1 Time Stamping services rates

Time Stamping services are not free, so it will be necessary to contract the service previously with CORPME. Time Stamping services may be marketed under the temporary limitation agreed upon and/or number of time stamping requests. In any case, the TSA's billing conditions are reviewed, guaranteeing that no additional charges are applied to those established in the contracts.

7.1.2 Refund Policy

The Time Stamping Service will be reimbursed under the conditions established in each type of contract.

7.2 Economic Responsibilities

Not applicable because it is not a qualified certificates issuance service according to the stipulated in the Ley 59/2003, de 19 de diciembre, de firma electrónica. The TSA is not liable in case of transaction losses.

7.3 Confidentiality information

As specified in CORPME Certification Practice Statement (CPS).

7.3.1 Confidential information scopes

As specified in CORPME Certification Practice Statement (CPS).

7.3.2 No confidential information

As specified in CORPME Certification Practice Statement (CPS).

7.3.3 Professional Secrecy Duty

As specified in CORPME Certification Practice Statement (CPS).

7.4 Personal Information Protection

As specified in CORPME Certification Practice Statement (CPS).

7.5 Intellectual Property Rights

As specified in CORPME Certification Practice Statement (CPS).

7.6 Representation and Warranties

7.6.1 TSA Obligations

The CORPME, acting as Time Stamping Authority (TSA) is obliged to:

- Respect the provisions of these Time Stamping Practices and Policies.
- Protect private keys securely.
- Issuance of time stamps in accordance with these Practices and Policies and the application standards.
- Ensure the time and date included in the stamps are kept within the precision margins of the temporary reference provided by ROA, not exceeding a maximum of 1 (one) second deviation.
- Issuance of time stamps according the information sent by the customer without data entry errors.
- Issuance of time stamps including the minimum content defined by current legislation, when applicable.
- Publishing these Time Stamping Practices and Policies.
- Report on changes to these Time Stamping Practices and Policies to customers and third parties who rely on time stamps.
- Establish mechanisms for the relevant information generation and custody in the activities described, protecting them from loss, destruction or falsification.
- Guard the time stamps issued for the clients who contract the service during 5 years.
- Do not issue time stamps in the event of a compromise of service operations, including key compromise, loss of calibration or timing accuracy, and timing failure of watches.

The CORPME, in the provision of certification services, will be responsible for non-compliance with the provisions of these Time Stamping Practices and Policies and, where applicable, pursuant to Ley 59/2003, de 19 de diciembre, de firma electrónica or related normative.

Notwithstanding the foregoing, the CORPME will neither guarantee the cryptographic algorithms and standards used nor be liable for damages caused by external attacks, provided that it has applied due diligence according to the state of the art at any time, and acted in accordance with TSA Practices and Policies and current legislation, where applicable.

7.6.2 Obligation of time stamp clients

The client shall be bound to comply with the provisions of the regulations and in addition to:

- Respect the contractual documents signed with TSA.
- Verify time stamp the digital signature correctness and validity of the TSA certificate at the time of signing it.
- Verify that hash contained in the time stamp matches the one that was sent.
- Storage and conservation of time stamps delivered by the TSA. It is the Client's responsibility to store the time stamps, if he/she anticipates they will be necessary in the future.

7.6.3 Obligations of third parties who trust in time stamps

It shall be the obligation of the users to comply with the provisions of current regulations and:

- Verify time stamp signature correctness and TSA certificate validity at the time of signing it.

7.6.4 Other participant obligations

As specified in CORPME Certification Practice Statement (CPS).

7.7 Disclaimer

The CORPME will not be responsible in any case in any of these circumstances:

- State of War, natural disasters, malfunction of electrical services, telematics and / or telephone networks or computer equipment used by the client or third parties, or any other case of force majeure.
- For improper or fraudulent use of time stamps.
- For the improper use of the information contained in the Certificate or in the CRL.
- For the content of stamped messages or documents.
- In relation to actions or omissions of the client.
- Information veracity lack in information provided to issue the stamp.
- Negligence in the preservation of access data to the Time Stamp Service, in the assurance of the confidentiality and in the protection of all access or disclosures.
- Excessive use of the time stamp, as provided in current regulations and in these TSA Practices and Policies.
- In relation to actions or omissions of the user, third party who relies on the certificate.
- Failure to check the suspension or loss of validity of the TSA electronic certificate published in consultation service regarding the validity of the certificates or lack of verification of the electronic signature.

7.8 Limitations of Responsibilities

As specified in CORPME Certification Practice Statement (CPS).

7.9 Indemnification

As specified in CORPME Certification Practice Statement (CPS).

7.10 Validity Period

7.10.1 Time Limit

This Practices and Policies document will come into effect from the moment of its publication in the CORPME's web directory and will be in force as long as it is not expressly revoked by the issuance of a new version.

7.10.2 Time Stamping Policy Replacement and repeal

These Practices and Policies will be replaced by a new version regardless of the significance of the changes made in it, so that it will always be fully applicable.

When these Practices and Policies is revoked, it will be removed from the CORPME web directory, although it will be kept for fifteen (15) years.

7.10.3 Completion Effects

The obligations and restrictions established by these Practices and Policies, in reference to audits, confidential information, obligations and responsibilities of the CORPME TSP, born under its validity, will survive after its replacement or repeal by a new version in everything in which it does not oppose this one.

7.11 Individual notifications and communications with participants

As specified in CORPME Certification Practice Statement (CPS).

7.12 Specifications Changes Procedures

7.12.1 Changes Procedures

As specified in CORPME Certification Practice Statement (CPS).

7.12.2 Circumstances in which OID must be changed

As specified in CORPME Certification Practice Statement (CPS).

7.13 Claims

As specified in CORPME Certification Practice Statement (CPS).

7.14 Applicable regulations

The operations of the CORPME TSP, as well as Time Stamping Practices and Policies, will be subject to the applicable regulations, specially:

- Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures.
- Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market.
- LEY 59/2003, de 19 de diciembre, de firma electrónica.
- Ley 11/2007, de 22 de junio, de acceso electrónico de los ciudadanos a los Servicios Públicos.

7.15 Compliance with applicable regulations

The Policy Approval Authority has the responsibility to ensure compliance with the applicable legislation contained in the previous section

7.16 Various Stipulations

7.16.1 Full Acceptance Clause

All Third Parties that Trust fully assume the content of the latest version of these Practices and Policies.

7.16.2 Independence

In the event that any of the sections contained in these Practices and Policies are declared, partially or totally, void or illegal, it will not affect this circumstance to the rest of the document.

7.16.3 Judicial resolution

The disputing party to CORPME shall communicate all claims between users and CORPME, in order to attempt to resolve it between the same parties.

For the resolution of any conflict that may arise in relation to these Practices and Policies, the parties, with waiver of any other jurisdiction that may correspond, are submitted to the Spanish Courts and Tribunals, regardless of where they were used the certificates issued.

7.17 Other Stipulations

As specified in CORPME Certification Practice Statement (CPS).