BANCO DE ESPAÑA
Eurosistema

07.07.2011

OID: 1.3.6.1.4.1.19484.2.2.12.1.3

Banco de España's Public Key Infrastructure

Certificate Policy for Electronic Signature Certificates

OVERVIEW This document sets out the Certificate Policy (CP) governing the electronic signature certificates issued by the Corporate Certification Authority of Banco de España's Public Key Infrastructure (PKI).

Control Sheet

Title	Certificate Policy for Qualified Signature Certificates
Author	General Secretariat Legal Department Information Systems Department
Version	1.3
Date	07.07.2011

Change Log

Version	**Date**	**Change Reason**
1.0	5.04.2006	Initial Version
1.1	25.10.2006	Elimination of Suspension Process
1.2	25.05.2010	Document review after electronic time stamping services deployment. Rename of Policy Administration Authority by Policy Administration Authority
1.3	07.07.2011	Certificate OID update Removal of QcSSCD attribute from qcStatements

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1 Introduction

1.1 Overview

This document sets out the Certificate Policy (CP) governing the personal electronic signature certificates issued by the Corporate Certification Authority of the Public Key Infrastructure (hereinafter, PKI) of Banco de España (hereinafter, PKIBDE).

The certificates regulated by this policy have the status of qualified certificates given that Banco de España fulfils the requirements demanded for the issue of such certificates pursuant to the applicable European and Spanish legislation.

- European Parliament and Council Directive 1999/93/EC of 13 December 1999 on a Community Framework for Electronic Signatures (OJ, 19/01/00).
- Spanish Law 59/2003, of 19 December, the Electronic Signature Act (Spanish Official Gazette, 20 December).

Furthermore, they comply with the qualified certificate standards, specifically:

- ETSI TS 101 862: Qualified Certificate Profile.
- RFC 3739 Internet X.509 Public Key Infrastructure: Qualified Certificates Profile

From the perspective of the X.509 v3 standard, a CP is a set of rules that define the applicability or use of a certificate within a community of users, systems or specific class of applications that have a series of security requirements in common.

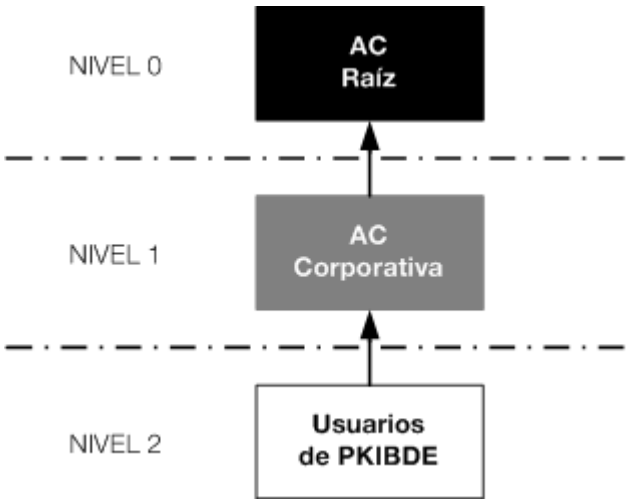
This CP details and completes the "Certification Practice Statement" (CPS) of Banco de España's PKI (PKIBDE), containing the rules to which the use of the certificates defined in this policy are subject, as well as the scope of application and the technical characteristics of this type of certificate.

This CP, with the exception of section 9, which contains a slight variation, has been structured in accordance with the guidelines of the PKIX work group in the IETF (Internet Engineering Task Force) in its reference document RFC 3647 (approved in November 2003) "Internet X.509 Public Key Infrastructure Certificate Policy and Certification Practices Framework". In order to give the document a uniform structure and facilitate its reading and analysis, all the sections established in RFC 3647 have been included. Where nothing has been established for any section the phrase “No stipulation” will appear. Additionally, apart from the headings established in RFC 3647, a new chapter has been included that deals with personal data protection in order to comply with Spanish legislation on this matter.

The CP includes all the activities for managing electronic signature certificates throughout their life cycle, and serves as a guide for the relations between Corporate CA and its users. Consequently, all the parties involved must be aware of the content of the CP and adapt their activities to the stipulations therein.

This CP assumes that the reader is conversant with the PKI, certificate and electronic signature concepts. If not, readers are recommended to obtain information on the aforementioned concepts before they continue reading this document.

The general architecture, in hierarchic terms, of Banco de España's PKI is as follows:



1.2 Document Name and Identification

Document name	Certificate Policy (PC) for Qualified Signature Certificates
Document version	1.2
Document status	Approved
Date of issue	09.09.10
OID (Object Identifier)	1.3.6.1.4.1.19484.2.2.7.1.2
CPS location	http://pki.bde.es/politicas
Related CPS	Certification Practice Statement of Banco de España's PKI OID 1.3.6.1.4.19484.2.2.1

1.3 PKI Participants

The participating entities and persons are:

- Banco de España, as owner of PKIBDE.
- The Policy Administration Authority.
- The Certification Authorities.
- The Registration Authorities.
- The Validation Authorities.
- The Keys Archive.
- The Applicants and Subscribers of the certificates issued by PKIBDE.
- The Relying Parties of the certificates issued by PKIBDE.

1.3.1 The Policy Administration Authority

The Policy Administration Authority is defined in accordance with the PKIBDE Certification Practice Statement.

1.3.2 Certification Authorities

The Certification Authorities are defined in accordance with the PKIBDE Certification Practice Statement.

The Certification Authorities that make up PKIBDE are:

- **Root CA**: First-level Certification Authority. This CA only issues certificates for itself and its Subordinate CAs. It will only be in operation whilst carrying out the operations for which it is established. Its most significant data are:

Distinguished Name	CN= BANCO DE ESPAÑA-ROOT CA, O=BANCO DE ESPAÑA, C=ES
Serial Number	F16D 7586 5D7C CF92 41AD A17A CD9A 3DE2
Distinguished Name of Issuer	CN= BANCO DE ESPAÑA-ROOT CA, O=BANCO DE ESPAÑA, C=ES
Validity Period	From 08-07-2004 11:34:12 to 08-07-2034 11:34:12
Message Digest (SHA-1)	2B60 DE7D 3337 8BF7 5B67 8B10 77BB F951 6029 D6A8

- **Corporate CA**: Certification Authority subordinate to the Root CA. Its function is to issue certificates for PKIBDE users. This CP refers to the electronic signature certificates issued by said entity. Its most significant data are:

Distinguished Name	CN= BANCO DE ESPAÑA-CORPORATE CA, O=BANCO DE ESPAÑA, C=ES
Serial Number	366A 524D A5E4 4AF8 4108 A140 9B9B 76EB
Distinguished Name of Issuer	CN= BANCO DE ESPAÑA-ROOT CA, O=BANCO DE ESPAÑA, C=ES
Validity Period	From 29-07-2004 9:03:28 to 29-07-2019 9:03:28
Message Digest (SHA-1)	ABE6 1ED2 5AF6 4253 F77B 322F 6F21 3729 B539 1BDA

1.3.3 Registration Authorities

The Registration Authorities are defined in accordance with the PKIBDE Certification Practice Statement.

Qualified Signature Certificate issuance is carried out with the intervention of the Corporate RA, with requests managed remotely.

1.3.4 Validation Authority

The Validation Authority is defined in accordance with the PKIBDE Certification Practice Statement.

1.3.5 Keys Archive

The Keys Archive, defined in the PKIBDE Certification Practice Statement, is not applicable in this Certificate Policy.

1.3.6 Certificate Subscribers

The Certificate Subscribers are defined in accordance with the PKIBDE Certification Practice Statement.

The types of persons who may be subscribers of electronic signature certificates issued by the Corporate CA are limited to those included in the following chart:

Certification Environment	Subscribers
Corporate CA	Banco de España's employees Banco de España's collaborators

1.3.7 Relying Parties

Relying parties are those that make use of the certificates to validate electronic signatures made with the subscribers of electronic signature certificates issued by the PKIBDE Corporate CA.

1.3.8 Other affected parties

Applicants: individuals who have requested issuance of a PKIBDE certificate.
User Administrators: individuals within Banco de España who process the personal certificate requests and verify that they are obtained correctly.

1.4 Certificate Usage

1.4.1 Appropriate certificate use

1 Certificates issued by Banco de España may only be used by:

a Individuals or entities that have to deal with Banco de España because of the powers and responsibilities attributed to them under Law 13/1994, of 1 June, which grant them the status of a Central Bank and member of the European System for Central Banks.

b Its employees and collaborators, both in the internal and external relations necessary for the internal, inherent or operational running of the institution.

2 Within the scope of the paragraph above, certificates issued by PKIBDE may be used for financial activities, with the constraints established in each case pursuant to Section 7.3 and Section 11, letters h) and i) of the Electronic Signature Act.

The certificates regulated by this CP will be used to generate advanced electronic signatures.

1.4.2 Certificate Usage Constraints and Restrictions

The certificates shall only be used for the purpose set forth in the previous point. The signatures must always be created using the cryptographic card provided to the certificate subscriber by PKIBDE. Exporting and using it from any other device is prohibited.

1.5 Policy Administration

1.5.1 Banco de España, as PKIBDE owner

This CP belongs to Banco de España:

Name	Banco de España		
E-mail address	pkibde@bde.es		
Address	C/Alcalá, 48. 28014 - Madrid (Spain)		
Telephone	+34913385000	**Fax**	+34915310059

1.5.2 Contact Person

This CP is managed by the Policy Administration Authority (PAA) of Banco de España's PKI:

Name	Information Systems Department Banco de España's PKI Policy Administration Authority		
E-mail address	pkibde@bde.es		
Address	C/Alcala, 522. 28027 - Madrid (Spain)		
Telephone	+34913386610	**Fax**	+34913386870

1.5.3 Establishment of the suitability of a CPS from an External CA as regards the PKIBDE Certificate Policies

As specified in PKIBDE's CPS.

1.5.4 Approval Procedures for this CP

As specified in PKIBDE's CPS.

1.6 Definitions and Acronyms

1.6.1 Definitions

Within the scope of this CP the following terms are used:

Authentication: the process of verifying the identity of an applicant or subscriber of a PKIBDE certificate.

Electronic Certificate: a document signed electronically by a certification services provider, which links signature verification data (public key) to a signatory and confirms their identity. This is the definition contained in Law 59/2003, which this document extends to cases in which the signature verification data is linked to a computer component.

Public Key and Private Key: the asymmetric cryptography on which the PKI is based employs a key pair in which what is enciphered with one of these can only be deciphered by the other, and vice versa. One of these keys is "public" and includes the electronic certificate, whilst the other is "private" and is only known by the certificate subscriber and, when appropriate, by the Keys Archive.

Session Key: key established to encipher communication between two entities. The key is established specifically for each communication, or session, and its utility expires upon termination of the session.

Computer Component (or simply, "component"): refers to any software or hardware device that may use electronic certificates, for its own use, for the purpose of its identification or for exchanging signed or enciphered data with relying parties.

Directory: data repository that is accessed though the LDAP protocol.

Identification: the process of establishing the identity of an applicant or subscriber of a PKIBDE certificate.

User Identifier: a set of characters that are used to uniquely identify the user of a system.

Public Key Infrastructure: set of individuals, policies, procedures, and computer systems necessary to provide authentication, encipherment, integrity and nonrepudiation services, by way of public and private key cryptography and electronic certificates.

Trust Hierarchy: set of certification authorities that maintain a relationship of trust by which a CA of a higher level guarantees the trustworthiness of one or several lower level CAs. In the case of

PKIBDE, the hierarchy has two levels, the Root CA at the top level guarantees the trustworthiness of its subordinate CAs, one of which is the Corporate CA.

Provider of Certification Services: individual or entity that issues electronic certificates or provides other services related to the electronic signature.

Applicants: individuals who apply for a certificate for themselves or for a computer component.

Relying Parties: individuals or entities other than subscribers that decide to accept and rely on a certificate issued by PKIBDE.

Subscribers: individuals or computer components for which an electronic certificate is issued and accepted by said individuals or, in the case of component certificates, by the component manager.

1.6.2 Acronyms

PAA: Policy Administration Authority

CA: Certification Authority

RA: Registration Authority

VA: Validation Authority

CRL: Certificate Revocation List

C: (Country). Distinguished Name (DN) attribute of an object within the X.500 directory structure

CDP: CRL Distribution Point

CEN: Comité Européen de Normalisation

CN: Common Name Distinguished Name (DN) attribute of an object within the X.500 directory structure

CSR: Certificate Signing Request: set of data that contains the public key and its electronic signature using the companion private key, sent to the Certification Authority for the issue of an electronic signature that contains said public key.

CWA: CEN Workshop Agreement

DN: Distinguished Name: unique identification of an entry within the X.500 directory structure

CPS: Certification Practice Statement

ETSI: European Telecommunications Standard Institute

FIPS: Federal Information Processing Standard

HSM: Hardware Security Module: cryptographic security module used to store keys and carry out secure cryptographic operations

IETF: Internet Engineering Task Force (internet standardisation organisation)

LDAP: Lightweight Directory Access Protocol

O: Organisation. Distinguished Name (DN) attribute of an object within the X.500 directory structure

OCSP: Online Certificate Status Protocol: this protocol enables online verification of the validity of an electronic certificate

OID: Object Identifier

OU: Organisational Unit. Distinguished Name (DN) attribute of an object within the X.500 directory structure

CP: Certificate Policy

PIN: Personal Identification Number: password that protects access to a cryptographic card.

PKCS: Public Key Infrastructure Standards: internationally accepted PKI standards developed by RSA Laboratories

PKI: Public Key Infrastructure

PKIBDE: Banco de España's PKI

PKIX: Work group within the IETF (Internet Engineering Task Group) set up for the purpose of developing PKI and internet specifications.

PCS: Provider of Certification Services.

PUK: PIN UnlocK Code: password used to unblock a cryptographic card that has been blocked after repeatedly and consecutively entering the wrong PIN.

RFC: Request For Comments (Standard issued by the IETF)

2 Repositories and Publication of Information

2.1 Repositories
As specified in PKIBDE's CPS.

2.2 Publication of Certification Data
As specified in PKIBDE's CPS.

2.3 Publication Timescale or Frequency
As specified in PKIBDE's CPS.

2.4 Repository Access Controls
As specified in PKIBDE's CPS.

3 Publication and Repository Responsibilities

3.1 Naming

3.1.1 Types of names

The certificates issued by PKIBDE contain the Distinguished Name (or DN) X.500 of the issuer and that of the certificate subject in the fields issuer name and subject name, respectively.

The CN (Common Name) attribute of the DN contains an ID that identifies it as a signature certificate, '[F]', followed by the name and the two surnames.

Additionally, the following fields are used:

- SerialNumber= <Doc. Identification> (OID: 2.5.4.5)
- PS= <User Code> (OID: 2.5.4.65)

The rest of the DN attributes shall have the following fixed values:

- OU=PERSONAS, O=BANCO DE ESPAÑA, C=ES

3.1.2 The need for names to be meaningful

In all cases the distinguished name of the certificates must be meaningful and are subject to the rules established in the previous point in this respect.

3.1.3 Rules for interpreting various name formats

The rule applied by PKIBDE for the interpretation of the distinguished names for subscribers of the certificates it issues is the ISO/IEC 9595 (X.500) Distinguished Name (DN) standard.

3.1.4 Uniqueness of names

Certificate DNs may not be repeated. The use of the user's unique code guarantees the uniqueness of the DN.

3.1.5 Name dispute resolution procedures

Any dispute concerning ownership of names shall be resolved as stipulated in point *9.13 Claims and Jurisdiction* in this document.

3.1.6 Recognition, authentication, and the role of trademarks

No stipulation.

3.2 Initial Identity Validation

3.2.1 Means of proof of possession of the private key

The key pair of the personal electronic signature certificates is generated by subscribers in their cryptographic card and will provide the Corporate CA the public key for its certification. Subscribers must first have an authentication certificate to prove their identity and access the system in the generation process and download the certificate.

3.2.2 Identity authentication for an entity

Issue of certificates for entities is not considered.

3.2.3 Identity authentication for an individual

Verification of the identity of an applicant for a electronic signature certificate will be carried out remotely by an authentication certificate issued in favour of the applicant by PKIBDE.

3.2.4 Non-verified applicant information

All the information stated in the previous section must be verified.

3.2.5 Validation of authority

No stipulation, given that the issue of certificates for entities is not considered.

3.2.6 Criteria for operating with external CAs

As specified in PKIBDE's CPS.

3.3 Identification and Authentication for Re-key Requests

3.3.1 Identification and authentication requirements for routine re-key

The individual identification process shall be the same as in the initial validation.

3.3.2 Identification and authentication requirements for re-key after certificate revocation

The individual identification process shall be the same as in the initial validation.

4 Certificate Life-Cycle Operational Requirements

This chapter contains the operational requirements for the life cycle of personal electronic signature certificates issued by the Corporate CA. Despite the fact that these certificates will be stored on cryptographic cards, it is not the purpose of the Certificate Policy to regulate the management of said cards and, therefore, it is also assumed that the certificate applicants have previously obtained their cryptographic cards.
On the other hand, in this chapter some illustrations will be provided for better understanding. In the event of any difference or discrepancy between the text and the illustrations, the text will prevail in all cases, given the necessary synthetic nature of the illustrations.

4.1 Certificate Application

4.1.1 Who can submit a certificate application?

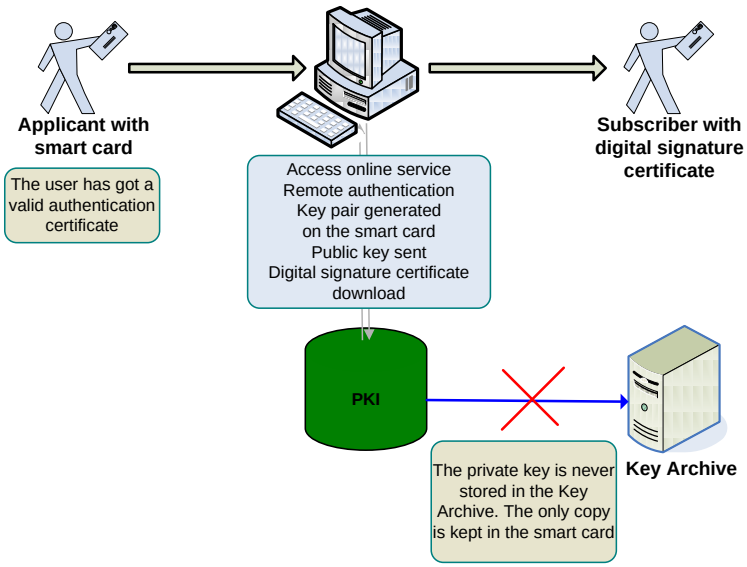
Qualified signature certificates applications can be done by any Banco de España's employee or collaborator provided they have previously obtained an authentication certificate (see Policy Certificate for Personal Authentication Certificates).
The request of a electronic signature certificate implies the acceptance of the requirements established in the CPS and in this signature certificates CP.

4.1.2 Enrolment process and applicants' responsibilities

1 Once applicants have obtained their cryptographic card with their authentication certificate incorporated, they access the established web service to obtain the electronic signature certificate.
2 Applicants identify themselves with the Registration Authority in which they have previously registered, using their authentication certificate.
3 The applicants activate the electronic signature certificate application.
4 The key pair is generated in the cryptographic card of the applicants, and the public key is sent to the Corporate CA.
5 With this public key, the Corporate CA generates the personal electronic signature certificate.
6 Applicants accept the electronic signature certificate and its terms and conditions of use and they download it to their card, thus completing the process.

The responsibilities of applicants not contained in this section are included in the PKIBDE CPS.
With this process, key pair generation is carried out to the cryptographic card and, therefore, the private key does not leave the card at any time.
The following illustration offers a summary of the process for obtaining a personal electronic signature certificate.

ONLINE PROCESS FOR DIGITAL SIGNATURE CERTIFICATE RENEWAL



4.2 Certificate Application Processing

4.2.1 Performance of identification and authentication procedures

Identification and authentication are always carried out electronically using the subscriber's valid authentication certificate.

4.2.2 Approval or rejection of certificate applications

Certificates will be issued once PKIBDE has completed the verifications necessary to validate the certificate application.

The Corporate CA may refuse to issue a certificate to any applicant based exclusively on its own criteria and without leading to any liability whatsoever for any consequences that may arise from said refusal.

Applications for certificates from Banco de España's employees and collaborators are approved automatically by their status as such.

4.2.3 Time limit for processing the certificate applications

The PKIBDE Corporate CA shall not be held liable for any delays that may arise in the period between application for the certificate, publication in the PKIBDE repository and its delivery.

Applicants have a limited period of 30 calendar days in which to activate the generation and downloading of the certificate. Once this period has elapsed, they will be cancelled.

4.3 Certificate Issuance

4.3.1 Actions performed by the CA during the issuance of the certificate

Issuance of the certificate signifies final approval of the application by the CA.

When the PKIBDE Corporate CA issues a certificate pursuant to a certificate application, it will make the notifications established under point 4.3.2. of this chapter.

All certificates will become effective upon issue, unless the certificate indicates a later date and time of entry into effect, which may not be more than 15 calendar days following issue. The period of validity is subject to possible early, temporary or permanent termination in the event of circumstances that give cause to the suspension or revocation of the certificate.

4.3.2 CA notification to the applicants of certificate issuance

Applicants will know that the electronic signature certificate has been effectively issued within the online generation and download process. The Certification Authority will notify the subscriber of the generation of the certificate by e-mail.

4.4 Certificate Acceptance

4.4.1 Form of certificate acceptance

Applicants must confirm acceptance of the electronic signature certificate, as well as its usage conditions by way of a hand-written signature in renewals in person or by way of an electronic signature when renewal is carried out online.

4.4.2 Publication of the certificate by the CA

Qualified signature certificates will not be published.

4.4.3 Notification of certificate issuance by the CA to other Authorities

Not applicable.

4.5 Key Pair and Certificate Usage

4.5.1 Subscribers' use of the private key and certificate

Subscribers may only use the private key and the certificate for the uses authorised in this CP and in accordance with the 'Key Usage' and 'Extended Key Usage' fields of the certificate. Likewise, subscribers may only use the key pair and the certificate once they have accepted the terms and conditions of use established in the CPS and CP, and only for that which is stipulated therein.

Following certificate end-of-life or revocation, subscribers must discontinue use of the private key.

The personal electronic signature certificates regulated by this CP may be used only to provide the following security services:

- Electronic signature of e-mails, files and computer transactions in which one wants to include identity control of the signatory, integrity control and non-repudiation.

4.5.2 Relying parties' use of the public key and the certificate

Relying parties may only rely on the certificates as stipulated in this CP and in accordance with the 'Key Usage' field of the certificate.

Relying parties must successfully perform public key operations as a condition for relying on a certificate and are obliged to check the status of a certificate using the mechanisms established in the CPS and this CP. Likewise, they accept the obligations regarding the conditions of use set forth in these documents.

4.6 Certificate Renewal

4.6.1 Circumstances for certificate renewal with no key changeover

All certificate renewals covered by this CP shall be carried out with change of keys. Consequently, the remaining points in section 4.6 (4.6.2 to 4.6.7) established in RFC 3647 are not included and, therefore, for the purposes of this CP, their content is "no stipulation".

4.7 Certificate Re-key

4.7.1 Circumstances for certificate renewal with key changeover

A electronic signature certificate may be renewed for the following reasons, among others:

- Expiry of the validity period.
- Modification of the data contained in the certificate.
- When the keys are compromised or are no longer fully reliable.
- Change of format.

All renewals, regardless of their cause, shall be carried out with a change of keys.

4.7.2 Who may request certificate renewal?

Renewal of a electronic signature certificate must be requested by the certificate subscriber.

4.7.3 Procedures for processing renewal requests with key changeover

During the renewal process, the CA will check that the information used to verify the identity and attributes of the subscriber is still valid. If any of the subscriber's data have changed, they must be verified and registered with the agreement of the subscriber.

Identification and authentication for the renewal of a electronic signature certificate must always be carried out in the same manner as the initial issue; that is, remotely and following renewal of the authentication certificate.

If any of the conditions established in this CP have changed, the subscriber of the certificate must be made aware of this and agree to it.

In any case, certificate renewal is subject to:

- The request being made in due time and manner, following the instructions and regulations established by PKIBDE specifically for this purpose. Renewal of a certificate may only be requested within the last 12 months of its lifetime.
- The CA not having certain knowledge of the existence of any cause for the revocation / suspension of the certificate.
- The request for the renewal of the provision of services being for the same type of certificate as the one initially issued.

4.7.4 Notification of the new certificate issuance to the subscriber

Issue of the signature recognition certificate will be carried out immediately within the online process for obtaining it. Additionally, an e-mail will be sent to subscribers informing them of the generation of the certificate in their name.

4.7.5 Manner of acceptance of certificates with changed keys

Subscribers will confirm acceptance of the certificate electronically.

4.7.6 Publication of certificates with the new keys by the CA

Qualified signature certificates are not published.

4.7.7 Notification of certificate issuance by the CA to other Authorities

No stipulation.

4.8 Certificate Modification

4.8.1 Circumstances for certificate modification

All certificate modifications carried out within the scope of this CP will be treated as certificate renewals and, therefore, the previous points in this respect shall be applicable.

Consequently, the remaining points in section 4.8 (4.8.2 to 4.8.7) established in RFC 3647 are not included, meaning that, for the purpose of this CP, they are not regulated.

4.9 Certificate Revocation and Suspension

4.9.1 Circumstances for revocation

Certificate revocation is the action that renders a certificate invalid prior to its expiry date. Certificate revocation produces the discontinuance of the certificate's validity, rendering it permanently inoperative as regards its inherent uses and, therefore, discontinuance of the provision of certification services. Revocation of a certificate prevents its legitimate use by the subscriber.

Revocation of a certificate entails its publication on the public-access Certificate Revocation Lists (CRL).

A personal electronic signature certificate may be revoked due to:

- Loss, disclosure, modification or any other circumstance that compromises the subscriber's private key or when suspicion of such compromise exists.
- Deliberate misuse of keys and certificates, or failure to observe or infringement of the operational requirements contained on the Acceptance Form for the terms and conditions of the certification services provided by Banco de España's Certification Authority, in the CPS or in this CP.
- The subscriber ceases to belong to the group, when said membership granted the subscriber the right to hold the certificate.
- Ceasing of PKIBDE activity.
- Defective issue of a certificate due to:
    1. Failure to comply with the material requirements for certificate issuance.
    2. Reasonable belief that basic information related to the certificate is or could be false.
    3. The existence of a data entry error or any other processing error.
- The key pair generated by the subscriber has been found to be "weak".
- The information contained in a certificate or used for the application becomes inaccurate.
- By order of the subscriber or an authorised third party.
- The certificate of a higher RA or CA in the certificate trust hierarchy is revoked.
- Any of the other causes specified in this CP or in the CPS.

The main effect of revocation as regards the certificate is the immediate and early termination of its term of validity, with which the certificate becomes invalid. Revocation shall not affect the underlying obligations created or notified by this CP, nor shall its effects be retroactive.

4.9.2 Who can request revocation?

PKIBDE or any of the Authorities that comprise the former may, of their own accord, request the revocation of a certificate if they become aware or suspect that the subscriber's private key has been compromised, or in the event of any other determining factor that recommends taking such action.

Likewise, certificate subscribers may also request revocation of their certificates, which they must do in accordance with the conditions established under point 4.9.3.

The identification policy for revocation requests may be the same as that of the initial registration. The authentication policy shall accept revocation requests signed electronically by the certificate subscriber, as long as it is done using a valid certificate other than the one for which the revocation is requested.

4.9.3 Procedures for requesting certificate revocation

The subscribers or individuals requesting the revocation must appear before the Users Administrator, identifying themselves and indicating the reason for the request.

The Users Administrator shall always process the revocation requests submitted by its assigned subscribers. The request is made via a transaction within the Computer Security Administration application.

Apart from this ordinary procedure, PKI Operators and Administrators may immediately revoke any certificate upon becoming aware of the existence of any of the causes for revocation.

4.9.4 Revocation request grace period

Revocation shall be carried out immediately following the processing of each request that is verified as valid. Therefore, the process will not include a grace period during which the revocation request may be cancelled.

4.9.5 Time limit for the CA to process the revocation request

Requests for revocation of electronic signature certificates must be processed as quickly as possible, and in no case may said processing take more than 1 hour.

4.9.6 Requirements for revocation verification by relying parties

Verification of revocations is mandatory for each use made of a electronic signature certificate.

Relying parties must check the validity of the CRL prior to each use and download the new CRL from the PKIBDE repository when the one they hold expires. CRLs stored in cache[1] memory, even when not expired, do not guarantee availability of updated revocation data.

For electronic signature certificates, the ordinary validity verification procedure for a certificate shall be carried out with Banco de España's Validation Authority, which shall indicate, through the OCSP protocol, the status of the certificate.

4.9.7 CRL issuance frequency

PKIBDE shall publish a new CRL in its repository whenever a new revocation takes place and ultimately (even when the CRL has not been modified), at least every 24 hours for Subordinated CAs and at least every 15 years for the Root CA.

4.9.8 Maximum latency between the generation of CRLs and their publication

The maximum time allowed between generation of the CRLs and their publication in the repository is 6 hours.

4.9.9 Online certificate revocation status checking availability

PKIBDE provides a web server on which it publishes the CRLs for verification of the status of the certificates it issues. Additionally, there is a Validation Authority that, via OCSP protocol, enables certificate status verification.

[1]Cache memory: memory that stores the necessary data for the system to operate faster, as it does not have to obtain this data from the source for every operation. Its use could entail the risk of operating with outdated data.

The web addresses for access to the CRLs and the Validation Authority are set out in point *2.1 Repositories*.

4.9.10 Online revocation checking requirements

When using the Validation Authority, relying parties must have software capable of operating with the OCSP protocol to obtain the certificate information.

4.9.11 Other forms of revocation alerts available

No stipulation.

4.9.12 Special requirements for the revocation of compromised keys

There are no variations to the aforementioned clauses for revocation due to private key compromise.

4.9.13 Causes for suspension

The personal electronic signature certificates shall not be suspended.

4.9.14 Who can request the suspension?

Not applicable.

4.9.15 Procedure for requesting certificate suspension

Not applicable.

4.9.16 Suspension period limits

Not applicable.

4.10 Certificate Status Services

4.10.1 Operational characteristics

As specified in PKIBDE's CPS.

4.10.2 Service availability

As specified in PKIBDE's CPS.

4.10.3 Additional features

As specified in PKIBDE's CPS.

4.11 End of Subscription

Certificate subscription may be ended due to the following causes:

- Early certificate revocation due to any of the causes established in point 4.9.1.
- Expiry of the certificate.

If certificate renewal is not requested, the end of the subscription will terminate the relationship between the subscriber and the CA.

4.12 Key Escrow and Recovery

4.12.1 Key escrow and recovery practices and policies

Private signature keys are not archived.

4.12.2 Session key protection and recovery policies and practices

No stipulation.

5 Facility, Management, and Operational Controls

5.1 Physical Security Controls

5.1.1 Site location and construction

As specified in PKIBDE's CPS.

5.1.2 Physical access

As specified in PKIBDE's CPS.

5.1.3 Power and air-conditioning

As specified in PKIBDE's CPS.

5.1.4 Water exposure

As specified in PKIBDE's CPS.

5.1.5 Fire prevention and protection

As specified in PKIBDE's CPS.

5.1.6 Storage system

As specified in PKIBDE's CPS.

5.1.7 Waste disposal

As specified in PKIBDE's CPS.

5.1.8 Offsite backup

Not applicable.

5.2 Procedural Controls

5.2.1 Roles responsible for PKI control and management

As specified in PKIBDE's CPS.

5.2.2 Number of individuals required to perform each task

As specified in PKIBDE's CPS.

5.2.3 Identification and authentication of each user

As specified in PKIBDE's CPS.

5.2.4 Roles that require separation of duties

As specified in PKIBDE's CPS.

5.3 Personnel Controls

5.3.1 Requirements concerning professional qualification, knowledge and experience

As specified in PKIBDE's CPS.

5.3.2 Background checks and clearance procedures

As specified in PKIBDE's CPS.

5.3.3 Training requirements

As specified in PKIBDE's CPS.

5.3.4 Retraining requirements and frequency

As specified in PKIBDE's CPS.

5.3.5 Frequency and sequence for job rotation
As specified in PKIBDE's CPS.

5.3.6 Sanctions for unauthorised actions
As specified in PKIBDE's CPS.

5.3.7 Requirements for third party contracting
As specified in PKIBDE's CPS.

5.3.8 Documentation supplied to personnel
As specified in PKIBDE's CPS.

5.4 Audit Logging Procedures

5.4.1 Types of events recorded
As specified in PKIBDE's CPS.

5.4.2 Frequency with which audit logs are processed
As specified in PKIBDE's CPS.

5.4.3 Period for which audit logs are kept
As specified in PKIBDE's CPS.

5.4.4 Audit log protection
As specified in PKIBDE's CPS.

5.4.5 Audit log back up procedures
As specified in PKIBDE's CPS.

5.4.6 Audit data collection system (internal vs. external)
As specified in PKIBDE's CPS.

5.4.7 Notification to the subject who caused the event
As specified in PKIBDE's CPS.

5.4.8 Vulnerability assessment
As specified in PKIBDE's CPS.

5.5 Records Archival

5.5.1 Types of records archived
As specified in PKIBDE's CPS.

5.5.2 Archive retention period
As specified in PKIBDE's CPS.

5.5.3 Archive protection
As specified in PKIBDE's CPS.

5.5.4 Archive backup procedures
As specified in PKIBDE's CPS.

5.5.5 Requirements for time-stamping records
As specified in PKIBDE's CPS.

5.5.6 Audit data archive system (internal vs. external)
As specified in PKIBDE's CPS.

5.5.7 Procedures to obtain and verify archived information
As specified in PKIBDE's CPS.

5.6 Key Changeover
As specified in PKIBDE's CPS.

5.7 Compromise and Disaster Recovery
5.7.1 Incident and compromise handling procedures
As specified in PKIBDE's CPS.

5.7.2 Corruption of computing resources, software, and/or data
As specified in PKIBDE's CPS.

5.7.3 Action procedures in the event of compromise of an Authority's private key
As specified in PKIBDE's CPS.

5.7.4 Installation following a natural disaster or another type of catastrophe
As specified in PKIBDE's CPS.

5.8 CA or RA Termination
5.8.1 Certification Authority
As specified in PKIBDE's CPS.

5.8.2 Registration Authority
No stipulation.

6 Technical Security Controls

Technical security controls for internal PKIBDE components, and specifically those for Root CA and Corporative CA, during certificate issue and certificate signature processes, are described in PKIBDE CPS.
In this paragraph technical security controls for the issuance of certificates under this CP are covered.

6.1 Key Pair Generation and Installation

6.1.1 Key pair generation

The keys for electronic signature certificates issued by the Corporate CA are generated on the cryptographic card of the subscriber, who must meet the Secure Signature Creation Device requirements (security level CC EAL4+).

6.1.2 Delivery of private keys to subscribers

The private key is generated by subscribers on their cryptographic cards and, therefore, no delivery is required.

6.1.3 Delivery of the public key to the certificate issuer

The public key is provided by applicants to the Corporate CA within the process to obtain the certificate.

6.1.4 Delivery of the CA's public key to relying parties

The Corporate CA's public key is included in the certificate of said CA. The Corporate CA's certificate is not included in the certificate generated by the subscriber. The Corporate CA's certificate must be obtained from the repository, specifying in this document where it is available for certificate subscribers and relying parties to carry out any type of verification.

6.1.5 Key sizes

The size of the electronic signature certificate keys is 1024 bits.

6.1.6 Public key generation parameters and quality checks

Recognises signature public keys are encoded pursuant to RFC 3280 and PKCS#1. The key generation algorithm is the RSA.

6.1.7 Key usage purposes (KeyUsage field in X.509 v3)

The key defined by this policy and, therefore, the linked certificate, will be used for electronic signature of e-mails, files and transactions.
For this purpose, the 'Key Usage' and 'Extended Key Usage' fields of the certificate include the following uses:

Key Usage:
- nonRepudiation

Extended Key Usage:
- emailProtection
- anyExtendedKeyUsage

6.2 Private Key Protection and Cryptographic Module Engineering Controls

6.2.1 Cryptographic module standards

The module used for the creation of keys used by PKIBDE's Corporate CA has FIPS 140-2 Level 3 certification.

Start-up of each one of the Certification Authorities, taking into account that a Security Cryptographic module (HSM) is used, involves the following tasks:

a HSM module status boot up.

b Creation of administration and operator cards.

c Generation of the CA keys.

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

The private key, both for Root CA as for Subordinate CA, is under multi-person control; its activation is done through CA software initialization by means of a combination of CA's operators. This is the only activation method for said private key.

There is no multi-person control established for accessing the private keys of the certificates issued under this CP.

6.2.3 Escrow of private keys

The private keys of the electronic signature certificate generated are housed on cryptographic cards, they are not exported under any circumstances, and access to operations with said cards is protected by a PIN.

6.2.4 Private key backup copy

There is no established procedure for the backup of the private keys associated with electronic signature certificates.

6.2.5 Private key archive

The Corporate CA never accesses the private key linked to the electronic signature certificate and, therefore, never archives said key.

6.2.6 Private key transfer into or from a cryptographic module

Provided that the private key is generated inside the cryptographic card there is no transmission of this key to or from any cryptographic module.

6.2.7 Private key storage in a cryptographic module

Private keys are created on the cryptographic card and are stored there.

6.2.8 Private key activation method

Once the private key has been generated and the certificate downloaded and installed on the cryptographic card, its use is controlled through the card's PIN.

6.2.9 Private key deactivation method

It can be deactivated by removing the card from the reader or once the timeout period since the PIN was entered has elapsed.

6.2.10 Private key destruction method

The destruction of the private key contained in the electronic signature certificate shall be performed by rendering the cryptographic card that contains it useless.

6.2.11 Cryptographic module classification

The cryptographic modules used by the Certification Authority comply with the FIPS 140-2 Level 3 standard.

6.3 Other Aspects of Key Pair Management

6.3.1 Public key archive

As specified in PKIBDE's CPS.

6.3.2 Operational period of certificates and usage periods for key pairs

Qualified signature certificates and their linked key pair have a lifetime of 4 years, although the Corporate CA may establish a shorter period at the time of their issue.

6.4 Activation Data

6.4.1 Generation and installation of activation data

As specified in PKIBDE's CPS.

6.4.2 Activation data protection

As specified in PKIBDE's CPS.

6.4.3 Other activation data aspects

As specified in PKIBDE's CPS.

6.5 Computer Security Controls

6.5.1 Specific security technical requirements

As specified in PKIBDE's CPS.

6.5.2 Computer security evaluation

As specified in PKIBDE's CPS.

6.6 Life Cycle Security Controls

6.6.1 System development controls

As specified in PKIBDE's CPS.

6.6.2 Security management controls

As specified in PKIBDE's CPS.

6.6.3 Life cycle security controls

As specified in PKIBDE's CPS.

6.7 Network Security Controls

As specified in PKIBDE's CPS.

6.8 Timestamping

As specified in PKIBDE's CPS.

7 Certificate, CRL, and OCSP Profiles

7.1 Certificate Profile

7.1.1 Version number

Personal electronic signature certificates issued by the Corporate CA use the X.509 version 3 (X.509 v3) standard.

7.1.2 Certificate extensions

The certificate extensions used generically are:

- *Subject Key Identifier*. Classified as non-critical.
- *Authority Key Identifier*. Classified as non-critical.
- *KeyUsage*. Classified as critical.
- *extKeyUsage*. Classified as non-critical.
- *CertificatePolicies*. Classified as non-critical.
- *SubjectAlternativeName*. Classified as non-critical.
- *BasicConstraints*. Classified as critical.
- *CRLDistributionPoint*. Classified as non-critical.
- *Auth. Information Access*. Classified as non-critical.
- *NetscapeCertType*. Classified as non-critical.
- *qcStatements (1.3.6.1.5.5.7.1.3).* Classified as non-critical.
- *bdeCertType (1.3.6.1.4.1.19484.2.3.6)*. Classified as non-critical.

FIELD	CONTENT	CRITICAL **for extensions**
Field X509v1		
1. Version	V3	
2. Serial Number	Random	
3. Signature Algorithm	SHA-1WithRSAEncryption	
4. Issuer Distinguished Name	CN= BANCO DE ESPAÑA-CORPORATE CA, O=BANCO DE ESPAÑA, C=ES	
5. Lifetime	4 years	
6. Subject	CN=[F] Name Surname 1 Surname 2 SerialNumber= Identity Document PS=User Code OU=PERSONAS O=BANCO DE ESPAÑA C=ES	
7. Subject Public Key Info	Algorithm: RSA Encryption Minimum Key Length: 1024(big string)	
Field X509v2		
1. issuerUniqueIdentifier	Not used	
2. subjectUniqueIdentifier	Not used	
X509v3 extensions		
1. Subject Key Identifier	Derived from using the SHA-1 hash on the subject's public key.	NO
2. Authority Key Identifier	Derived from using the SHA-1 hash on the issuing CA's public key.	NO

FIELD	CONTENT	CRITICAL **for extensions**
3. KeyUsage		YES
Digital Signature	0	
Non Repudiation	1	
Key Encipherment	0	
Data Encipherment	0	
Key Agreement	0	
Key Certificate Signature	0	
CRL Signature	0	
4. extKeyUsage	emailProtection, anyExtendedKeyUsage	NO
5. privateKeyUsagePeriod	Not used	
6. Certificate Policies		NO
Policy Identifier	1.3.6.1.4.1.19484.2.2.1	
URL CPS	http://pki.bde.es/politicas	
Notice Reference	Certificado Reconocido según la legislación vigente. Uso sujeto a la DPC del Banco de España. © 2004 Banco de España. Todos los derechos reservados. (C/Alcalá 48, 28014 Madrid-España)	
Policy Identifier	1.3.6.1.4.1.19484.2.2.12	
Notice Reference	Certificado personal de firma electrónica sujeto a la Declaración de Prácticas de Certificación del Banco de España. ©2004 Banco de España. Todos los derechos reservados	
7. Policy Mappings	Not used	
8. qcStatements	Id-etsi-qcs-QcCompliance (OID 0.4.0.1862.1.1)	
9. Subject Alternate Names	UPN (User's Principal Name in Windows 2000) E-mail address pursuant to RFC 822 1.3.6.1.4.1.19484.2.3.1 Name 1.3.6.1.4.1.19484.2.3.2 Surname1 1.3.6.1.4.1.19484.2.3.3 Surname2 1.3.6.1.4.1.19484.2.3.4 BDE employee no. 1.3.6.1.4.1.19484.2.3.5 BDE user code no. 1.3.6.1.4.1.19484.2.3.7 Identity Document	NO
10. Issuer Alternate Names	Not used	
11. Subject Directory Attributes	Not used	
12. Basic Constraints	CA	YES
Subject Type	End Entity	
Path Length Constraint	Not used	
13. CRLDistributionPoints	(1) Active Directory: ldap:///CN=BANCO%20 DE%20ESPA%D1A%20-%20AC%20CORPORATIVA,CN=snt0053,CN=CDP, CN=Public%20Key%20Services,CN=Services,CN=Configuration, DC=BDE, DC=ES ?certificateRevocationList?base?objectclass= cRLDistributionPoint (2) LDAP: ldap://pkildap.bde.es/CN=CRL,CN=BANCO%20DE%20ESPA%D1A-AC%20CORPORATIVA, CN=Internas, CN=PKI, CN=Configuration, DC=BDE, DC=ES ?certificateRevocationList ?base ?objectclass=cRLDistributionPoint	NO

FIELD	CONTENT	CRITICAL for extensions
	(3)HTTP http://pki.bde.es/certs/ACcorporativa.crl	
14. Auth. Information Access	OCSP http://pkiva.bde.es CA http://pki.bde.es/certs/ACraiz.crt	NO
15. netscapeCertType	SMIMEClient	
16. netscapeRevocationURL	Not applicable.	
17. netscapeCAPolicyURL	Not applicable.	
18. netscapeComment	Not applicable.	
19. bdeCertType (1.3.6.1.4.1.19484.2.3.6)	SIGNATURE	

7.1.3 Algorithm Object Identifiers (OID)

Cryptographic algorithm object identifiers (OID):
SHA-1 with RSA Encryption (1.2.840.113549.1.1.5)

7.1.4 Name formats

Certificates issued by PKIBDE contain the X.500 distinguished name of the certificate issuer and that of the subject in the issuer name and subject name fields, respectively.

7.1.5 Name constraints

The names contained in the certificates are restricted to X.500 distinguished names, which are unique and unambiguous.
The CN (Common Name), serialNumber and PS (pseudonym) attributes of the DN will be what distinguish one DN from another. The letter F between brackets in the CN identifies the electronic signature certificate. The rest of the attributes will have the following fixed values:
OU=PERSONAS, O=BANCO DE ESPAÑA, C=ES

7.1.6 Certificate Policy Object Identifiers (OID)

The OID of this CP is 1.3.6.1.4.1.19484.2.2.12 An X.Y format extension is added to indicate the version.

7.1.7 Use of the "PolicyConstraints" extension

No stipulation.

7.1.8 Syntax and semantics of the "PolicyQualifier

The Certificate Policies extension contains the following Policy Qualifiers:

- URL CPS: contains the URL to the CPS and to the CP that govern the certificate.
- Notice Reference: Text note that is displayed on the screen, upon request from an application or an individual, when a third party verifies a certificate.

The content for certificates regulated under this policy can be seen in point *7.1.2 Certificate extensions*.

7.1.9 Processing semantics for the critical "CertificatePolicy" extension

No stipulation.

7.2 CRL Profile

7.2.1 Version number

PKIBDE supports and uses X.509 version 2 (v2) CRLs.

7.2.2 CRL and extensions

As specified in PKIBDE's CPS.

7.3 OCSP Profile

7.3.1 Version number(s)

As specified in PKIBDE's CPS.

7.3.2 OCSP Extensions

As specified in PKIBDE's CPS.

8 Compliance Audit and Other Assessment

8.1 Frequency or Circumstances of Controls for each Authority
As specified in PKIBDE's CPS.

8.2 Identity/Qualifications of the Auditor
As specified in PKIBDE's CPS.

8.3 Relationship between the Assessor and the Entity being Assessed
As specified in PKIBDE's CPS.

8.4 Aspects Covered by Controls
As specified in PKIBDE's CPS.

8.5 Actions Taken as a Result of Deficiencies Found
As specified in PKIBDE's CPS.

8.6 Notification of the Results
As specified in PKIBDE's CPS.

9 Other Business and Legal Matters

9.1 Fees

9.1.1 Certificate issuance or renewal fees

No fees are applied for the issue or revocation of certificates under this Certificate Policy.

9.1.2 Certificate access fees

Access to certificates issued under this Policy is free of charge and, therefore, no fee is applicable to them.

9.1.3 Revocation or status information fees

Access to information on the status or revocation of the certificates is open and free of charge and, therefore, no fees are applicable.

9.1.4 Fees for other services, such as policy information

No fee shall be applied for information services on this policy, nor on any additional service that is known at the time of drawing up this document.

9.1.5 Refund policy

Given that there are no fees for this Certificate Policy, no refund policy is required.

9.2 Confidentiality of Business Information

9.2.1 Scope of confidential information

As specified in PKIBDE's CPS.

9.2.2 Non-confidential information

As specified in PKIBDE's CPS.

9.2.3 Duty to maintain professional secrecy

As specified in PKIBDE's CPS.

9.3 Privacy of Personal Information

9.3.1 Personal data protection policy

As specified in PKIBDE's CPS.

9.3.2 Information considered private

As specified in PKIBDE's CPS.

9.3.3 Information not classified as private

As specified in PKIBDE's CPS.

9.3.4 Responsibility to protect personal data

As specified in PKIBDE's CPS.

9.3.5 Notification of and consent to the use of personal data

As specified in PKIBDE's CPS.

9.3.6 Disclosure within legal proceedings

As specified in PKIBDE's CPS.

9.3.7 Other circumstances in which data may be made public

As specified in PKIBDE's CPS.

9.4 Intellectual Property Rights

As specified in PKIBDE's CPS.

9.5 Representations and Warranties

9.5.1 Obligations of the CA

As specified in PKIBDE's CPS.

The PKIBDE Corporate Certification Authority shall act, linking a specific public key to its subscriber by way of the issue of a electronic signature certificate, all of this in accordance with the terms of this CP and the CPS.

The services provided by the CA in the context of this CP are the services of issuance, renewal and revocation of personal electronic signature certificates.

9.5.2 Obligations of the RA

As specified in PKIBDE's CPS.

9.5.3 Obligations of certificate subscribers

As specified in PKIBDE's CPS.

9.5.4 Obligations of relying parties

As specified in PKIBDE's CPS.

9.5.5 Obligations of other participants

As specified in PKIBDE's CPS.

9.6 Disclaimers of Warranties

9.6.1 PKIBDE's liabilities

As specified in PKIBDE's CPS.

9.6.2 PKIBDE liability exemption

As specified in PKIBDE's CPS.

9.6.3 Scope of liability coverage

As specified in PKIBDE's CPS.

9.7 Limitations of Liability

As specified in PKIBDE's CPS.

9.8 Term and Termination

9.8.1 Term

This CP shall enter into force from the moment it is approved by the PAA and published in the PKIBDE repository.

This CP shall remain valid until such time as it is expressly terminated due to the issue of a new version, or upon re-key of the Corporate CA keys, at which time it is mandatory to issue a new version.

9.8.2 CP substitution and termination

This CP shall always be substituted by a new version, regardless of the importance of the changes carried out therein, meaning that it will always be applicable in its entirety.

When the CP is terminated, it will be withdrawn from the PKIBDE public repository, nevertheless it will be kept for 15 years.

9.8.3 Consequences of termination

The obligations and constraints established under this CP, referring to audits, confidential information, PKIBDE obligations and liabilities that came into being whilst it was in force shall continue to prevail following its substitution or termination with a new version in all terms which are not contrary to said new version.

9.9 Individual notices and communications with participants

As specified in PKIBDE's CPS.

9.10 Amendments

9.10.1 Amendment procedures

As specified in PKIBDE's CPS.

9.10.2 Notification period and mechanism

As specified in PKIBDE's CPS.

9.10.3 Circumstances in which the OID must be changed

As specified in PKIBDE's CPS.

9.11 Dispute Resolution Procedures

As specified in PKIBDE's CPS.

9.12 Governing Law

As specified in PKIBDE's CPS.

9.13 Compliance with Applicable Law

As specified in PKIBDE's CPS.

9.14 Miscellaneous Provisions

9.14.1 Entire agreement clause

As specified in PKIBDE's CPS.

9.14.2 Independence

Should any of the provisions of this CP be declared invalid, null or legally unenforceable, it shall be deemed as not included, unless said provisions were essential in such a way that excluding them from the CP would render the latter without legal effect.

9.14.3 Resolution through the courts

No stipulation.

9.15 Other Provisions

No stipulation.

10 Personal Data Protection

10.1 Data Protection Legal Scheme
As specified in PKIBDE's CPS.

10.2 File Creation and Registration
As specified in PKIBDE's CPS.

10.3 Personal Data Protection Act Security Document
As specified in PKIBDE's CPS.