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Electronic Signatures and Infrastructures (ESI); General Policy Requirements for Trust Service Providers

Reference

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Foreword

This draft European Standard (EN) has been produced by ETSI Technical Committee Electronic Signatures and Infrastructures (ESI), and is now submitted for the combined Public Enquiry and Vote phase of the ETSI standards EN Approval Procedure.

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Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

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Introduction

Building trust in the online environment is key to economic and social development. Lack of trust, in particular because of a perceived lack of security, makes consumers, businesses and administrations hesitate to carry out transactions electronically and to adopt new services. Trust service providers are often an essential element to establish trust between parties transacting electronically, particularly in open public networks, and can be used, for example, to provide trusted identity information and help establish secure communications between transacting parties. Examples of such trust service providers are issuers of public key certificates, time-stamping service providers, providers of remote electronic signature generation or validation services.

For participants of electronic commerce to have confidence in the security of these trust services they need to have confidence that the trust service providers (TSPs) have established a set of procedures, processes and security measures in order to minimize the operational and financial threats and risks associated.

The present document specifies baseline policy requirements on the operation and management practices of TSP regardless the service they provide. Other standards, addressing particular type of trust service, can build on the present document to identify supplement requirements for particular type of trust service.

The present document is aiming to meet the general requirements to provide trust and confidence in electronic transactions including, amongst others, applicable requirements from Regulation (EU) No 910/2014 [i.2] and those from CA/Browser Forum [i.4].

EXAMPLE: ETSI EN 319 411-2 [i.11] annex A describes the application of the present document to the requirements of Regulation No 910/2014 [i.2] requirements for TSPs issuing EU qualified certificates.

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1 Scope

The present document specifies general policy requirements relating to trust service providers (TSPs) that are independent of the type of TSP. It defines policy requirements on the operation and management practices of TSPs.

Other specifications refine and extend these requirements as applicable to particular forms of TSP. The present document does not specify how the requirements identified can be assessed by an independent party, including requirements for information to be made available to such independent assessors, or requirements on such assessors.

NOTE: See ETSI EN 319 403 [i.6]: "Electronic Signatures and Infrastructures (ESI); Requirements for conformity assessment bodies assessing Trust Service Providers".

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at https://docbox.etsi.org/Reference.

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2.2 Informative references

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data.

[i.2] 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 and repealing Directive 1999/93/EC.

[i.3] ISO/IEC 27002:2013: "Information technology - Security techniques - Code of practice for information security management".

[i.4] CA/Browser Forum: "Baseline Requirements for the Issuance and Management of Publicly-Trusted Certificates".

[i.5] ISO/IEC 27005:2011: "Information technology - Security techniques - Information security risk management".

[i.6] ETSI EN 319 403: "Electronic Signatures and Infrastructures (ESI); Trust Service Provider Conformity Assessment - Requirements for conformity assessment bodies assessing Trust Service Providers".

[i.7] CA/Browser Forum: "Network and certificate system security requirements".

[i.8] Recommendation ITU-R TF.460-6 (2002): "Standard-frequency and time-signal emissions".

[i.9] ETSI EN 319 411-1: "Electronic Signatures and Infrastructures (ESI); Policy and Security Requirements for Trust Service Providers issuing certificates; Part 1: General requirements".

[i.10] ETSI EN 301 549: "Accessibility requirements suitable for public procurement of ICT products and services in Europe".

[i.11] ETSI EN 319 411-2: "Electronic Signatures and Infrastructures (ESI); Policy and Security Requirements for Trust Service Providers issuing certificates; Part 2: Requirements for trust service providers issuing EU qualified certificates".

[i.12] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC

3 Definitions, abbreviations and notation

3.1 Definitions

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For the purposes of the present document, the following terms and definitions apply:

Coordinated Universal Time (UTC): time scale based on the second as defined in Recommendation ITU-R TF.460-6 [i.8]

relying party: natural or legal person that relies upon an electronic identification or a trust service

NOTE: Relying parties include parties verifying a digital signature using a public key certificate.

subscriber: legal or natural person bound by agreement with a trust service provider to any subscriber obligations

trust service: electronic service for:

- creation, verification, and validation of digital signatures and related certificates;
- creation, verification, and validation of time-stamps and related certificates;
- registered delivery and related certificates;
- creation, verification and validation of certificates for website authentication; or
- preservation of digital signatures or certificates related to those services.

trust service policy: set of rules that indicates the applicability of a trust service to a particular community and/or class of application with common security requirements

NOTE: See clause 6 for further information on TSP's policy.

trust service practice statement: statement of the practices that a TSP employs in providing a trust service

NOTE: See clause 6.2 for further information on practice statement.

trust service provider: entity which provides one or more trust services

trust service token: physical or binary (logical) object generated or issued as a result of the use of a trust service

NOTE: Examples of trust service tokens are: certificates, CRLs, time-stamp tokens, OCSP responses.

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

CA	Certification Authority
IP	Internet Protocol
IT	Information Technology
TSP	Trust Service Provider
UTC	Coordinated Universal Time

3.3 Notation

The requirements in the present document are identified as follows:

<the 3 letters REQ> **-** < the clause number> **-** <2 digit number - incremental>

The management of the requirement identifiers throughout subsequent editions of the present document is as follows:

- When a requirement is inserted at the end of a clause, the 2 digit number above is incremented to the next available digit.
- When a requirement is inserted between two existing requirements, capital letters appended to the previous requirement identifier are used to distinguish a new requirement.
- The requirement identifier for deleted requirements are left and completed with "VOID".
- The requirement identifier for modified requirement are left void and the modified requirement is identified by capital letter(s) appended to the initial requirement number.

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4 Overview

Trust services can encompass but is not limited to the issuance of public key certificates, provision of registration services, time-stamping services, long term preservation services, e-delivery services and/or signature validation services.

These policy requirements are not meant to imply any restrictions on charging for TSP's services.

The requirements are indicated in terms of the security objectives followed by more specific requirements for controls to meet those objectives where considered necessary to provide the necessary confidence that those objectives will be met.

When implementing controls of clause 7, ISO/IEC 27002:2013 [i.3] should be applied.

NOTE: The details of controls required to meet an objective is a balance between achieving the necessary confidence whilst minimizing the restrictions on the techniques that a TSP can employ in providing services.

5 Risk Assesment

REQ-5-01: The TSP shall carry out a risk assessment to identify, analyse and evaluate trust service risks taking into account business and technical issues.

REQ-5-02: The TSP shall select the appropriate risk treatment measures, taking account of the risk assessment results. The risk treatment measures shall ensure that the level of security is commensurate to the degree of risk.

NOTE: See ISO/IEC 27005 [i.5] for guidance on information security risk management as part of an information security management system.

REQ-5-03: The TSP shall determine all security requirements and operational procedures that are necessary to implement the risk treatment measures chosen, as documented in the information security policy and the trust service practice statement (see clause 6).

REQ-5-04: The risk assessment shall be regularly reviewed and revised.

REQ-5-05: The TSP's management shall approve the risk assessment and accept the residual risk identified.

6 Policies and practices

6.1 Trust Service Practice statement

REQ-6.1-01: The TSP shall specify the set of policies and practices appropriate for the trust services it is providing.

REQ-6.1-02: The set of policies and practices shall be approved by management, published and communicated to employees and external parties as relevant.

REQ-6.1-03: The TSP shall have a statement of the practices and procedures for the trust service provided.

NOTE: The present document makes no requirement as to the structure of the trust service practice statement.

In particular:

- **REQ-6.1-04:** The TSP shall have a statement of the practices and procedures used to address all the requirements identified for the applicable TSP's policy.
- **REQ-6.1-05:** The TSP's trust service practice statement shall identify the obligations of all external organizations supporting the TSP's services including the applicable policies and practices.
- **REQ-6.1-06:** The TSP shall make available to subscribers and relying parties its practice statement, and other relevant documentation, as necessary to assess conformance to the service policy.
- **REQ-6.1-07:** The TSP shall have a management body with overall responsibility for the TSP with final authority for approving the TSP's practice statement.
- **REQ-6.1-08:** The TSP's management shall implement the practices.
- **REQ-6.1-09:** The TSP shall define a review process for the practices including responsibilities for maintaining the TSP's practice statement.
- **REQ-6.1-10:** The TSP shall notify notice of changes it intends to make in its practice statement.
- **REQ-6.1-11:** The TSP shall, following approval as in **REQ-6.1-07** above, make the revised TSP's practice statement immediately available as required under **REQ-6.1-06** above.
- **REQ-6.1-12:** The TSP shall state in its practices the provisions made for termination of service (see clause 7.12).

6.2 Terms and Conditions

REQ-6.2-01: TSP shall make the terms and conditions regarding its services available to all subscribers and relying parties.

REQ-6.2-02: The terms and conditions shall at least specify for each trust service policy supported by the TSP the following:

a) the trust service policy being applied;

b) any limitations on the use of the service;

EXAMPLE 1: The expected life-time of public key certificates.

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c) the subscriber's obligations, if any;

d) information for parties relying on the trust service;

EXAMPLE 2: How to verify the trust service token, any possible limitations on the validity period associated with the trust service token.

e) the period of time during which TSP's event logs are retained;

f) limitations of liability;

g) limitations on the use of the services provided including the limitation for damages arising from the use of services exceeding such limitations;

h) the applicable legal system;

i) procedures for complaints and dispute settlement;

j) whether the TSP's trust service has been assessed to be conformant with the trust service policy, and if so through which conformity assessment scheme;

k) the TSP's contact information; and

l) any undertaking regarding availability.

REQ-6.2-03: Subscribers and parties relying on the trust service shall be informed of precise terms and conditions, including the items listed above, before entering into a contractual relationship.

REQ-6.2-04: Terms and conditions shall be made available through a durable means of communication.

REQ-6.2-05: Terms and conditions shall be available in a readily understandable language.

REQ-6.2-06: Terms and conditions may be transmitted electronically.

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6.3 Information security policy

REQ-6.3-01: The TSP shall define an information security policy which is approved by management and which sets out the organization's approach to managing its information security.

REQ-6.3-02: Changes to the information security policy shall be communicated to third parties, where applicable. This includes subscribers, relying parties, assessment bodies, supervisory or other regulatory bodies.

In particular:

- **REQ-6.3-03:** A TSP's information security policy shall be documented, implemented and maintained including the security controls and operating procedures for TSP's facilities, systems and information assets providing the services.
- **REQ-6.3-04:** The TSP shall publish and communicate the information security policy to all employees who are impacted by it.

NOTE 1: See clause 5.1.1 of ISO/IEC 27002:2013 [i.3] for guidance.

- **REQ-6.3-05:** The TSP shall retain overall responsibility for conformance with the procedures prescribed in its information security policy, even when the TSP's functionality is undertaken by outsourcers.
- **REQ-6.3-06:** TSP shall define the outsourcers' liability and ensure that outsourcer are bound to implement any controls required by the TSP.
- **REQ-6.3-07:** The TSP's information security policy and inventory of assets for information security (see clause 7.3) shall be reviewed at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.
- **REQ-6.3-08:** Any changes that will impact on the level of security provided shall be approved by the management body referred to in **REQ-6.1-07**.