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Electronic Signatures and Infrastructures (ESI); Time-stamping protocol and time-stamp token profiles

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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**Electronic Signatures and Infrastructures (ESI);
Time-stamping protocol and time-stamp token profiles**

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Contents

Intellectual Property Rights	4
Foreword.....	4
Modal verbs terminology.....	4
Introduction	4
1 Scope	5
2 References	5
2.1 Normative references	5
2.2 Informative references.....	5
3 Definitions and abbreviations.....	6
3.1 Definitions.....	6
3.2 Abbreviations	6
4 Requirements for a time-stamping client	6
4.1 Profile for the format of the request	6
4.1.1 Core requirement	6
4.1.2 Fields to be supported	6
4.1.3 Hash algorithms to be used.....	7
4.2 Profile for the format of the response.....	7
4.2.1 Core requirement	7
4.2.2 Fields to be supported	7
4.2.3 Algorithms to be supported.....	7
4.2.4 Key lengths to be supported.....	7
5 Requirements for a time-stamping server.....	7
5.1 Profile for the format of the request	7
5.1.1 Core requirement	7
5.1.2 Fields to be supported	7
5.1.3 Algorithms to be supported.....	8
5.2 Profile for the format of the response.....	8
5.2.1 Core requirement	8
5.2.2 Fields to be supported	8
5.2.3 Algorithms to be used	8
6 TSU certificate profile.....	8
6.1 General requirements	8
6.2 Subject name requirements.....	9
6.3 Key lengths requirements	9
6.4 Key usage requirements	9
6.5 Algorithm requirements	9
7 Profiles for the transport protocols to be supported	9
8 Object identifiers of the cryptographic algorithms.....	9
9 Additional requirements for qualified electronic time-stamps as per Regulation (EU) No 910/2014 ...	10
9.1 Regulation compliance statement.....	10
Annex A (normative): Structure for the policy field.....	11
Annex B (normative): ASN.1 declarations.....	12
Annex C (normative): Time-stamp token media type and file-extension	13
History	14

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Foreword

This European Standard (EN) has been produced by ETSI Technical Committee Electronic Signatures and Infrastructures (ESI).

The present document was previously published as ETSI TS 101 861 [i.1].

National transposition dates	
Date of adoption of this EN:	22 February 2016
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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

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

Time-stamping is critical for digital signatures in order to know whether the digital signature was affixed during the validity period of the certificate. One method of assuring the signing time is to affix a time-stamp bound to the signature as defined in IETF RFC 3161 [1].

IETF RFC 3161 [1] defines a time-stamp protocol and a time-stamp token format. The present document limits the number of options by placing some additional constraints.

1 Scope

The present document defines a profile for the time-stamping protocol and the time-stamp token defined in IETF RFC 3161 [1] including optional ESSCertIDv2 update in IETF RFC 5816 [4].

It defines what a time-stamping client supports and what a time-stamping server supports.

Time-stamp validation is out of scope and is defined in ETSI EN 319 102 [i.4].

Annex C defines media type and file-extension for time-stamp tokens.

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.

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The following referenced documents are necessary for the application of the present document.

- [1] IETF RFC 3161: "Internet X.509 Public Key Infrastructure Time-Stamp Protocol (TSP)".
- [2] ETSI EN 319 412-2: "Electronic Signatures and Infrastructures (ESI); Certificate Profiles; Part 2: Certificate profile for certificates issued to natural persons".
- [3] ETSI EN 319 412-3: "Electronic Signatures and Infrastructures (ESI); Certificate Profiles; Part 3: Certificate profile for certificates issued to legal persons".
- [4] IETF RFC 5816: "ESSCertIDV2 update to RFC 3161".
- [5] IETF RFC 7230 to RFC 7235: "Hypertext Transfer Protocol -- (HTTP/1.1)".
- [6] IETF RFC 2818: "HTTP Over TLS".
- [7] ETSI EN 319 421: "Electronic Signatures and Infrastructures (ESI); Policy and Security Requirements for Trust Service Providers issuing Time-Stamps".

2.2 Informative 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.

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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] ETSI TS 101 861: "Electronic Signatures and Infrastructures (ESI); Time stamping profile".
- [i.2] Regulation (EU) No 910/2014 of the European Parliament and of the Council on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC.
- [i.3] IETF RFC 3739: "Internet X.509 Public Key Infrastructure: Qualified Certificates Profile".

- [i.4] ETSI EN 319 102-1: "Electronic Signatures and Infrastructures (ESI); Procedures for Creation and Validation of AdES Digital Signatures; Part 1: Creation and Validation".
 - [i.5] ETSI TS 119 312: "Electronic Signatures and Infrastructures (ESI); Cryptographic Suites".
 - [i.6] IETF RFC 6838: "Media Type Specifications and Registration Procedures".
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