



**Electronic Signatures and Infrastructures (ESI);  
Certificate Profiles;  
Part 5: QCStatements**

*iTeh STANDARDS PREVIEW  
(standards.iteh.ai)  
Full standard: https://standards.iteh.ai/catalog/standards/sis/44351604-7e40-4439-88b8-529ef2c2e162/etsi-en-319-412-5-v2-2-0-17-11*

---

Reference

REN/ESI-0019412-5v221

---

Keywords

e-commerce, electronic signature, security, trust services

**ETSI**

650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° 7803/88

---

**Important notice**

The present document can be downloaded from:

<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:

<https://portal.etsi.org/People/CommiteeSupportStaff.aspx>

---

**Copyright Notification**

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2017.  
All rights reserved.

DECT™, PLUGTESTS™, UMTS™ and the ETSI logo are trademarks of ETSI registered for the benefit of its Members.  
3GPP™ and LTE™ are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

oneM2M logo is protected for the benefit of its Members.

GSM® and the GSM logo are trademarks registered and owned by the GSM Association.

# Contents

|  |           |
|--|-----------|
| Intellectual Property Rights .....   | 4         |
| Foreword.....  | 4         |
| Modal verbs terminology.....   | 4         |
| Introduction .....   | 5         |
| 1 Scope.....   | 6         |
| 2 References .....   | 6         |
| 2.1 Normative references .....   | 6         |
| 2.2 Informative references.....  | 6         |
| 3 Definitions and abbreviations.....   | 7         |
| 3.1 Definitions.....   | 7         |
| 3.2 Abbreviations .....  | 7         |
| 4 Qualified certificate statements.....  | 8         |
| 4.1 General requirements .....   | 8         |
| 4.2 QCStatements claiming compliance with the EU legislation .....   | 8         |
| 4.2.1 QCStatement claiming that the certificate is a EU qualified certificate.....                         | 8         |
| 4.2.2 QCStatement claiming that the private key related to the certified public key resides in a QSCD..... | 8         |
| 4.2.3 QCStatement claiming that the certificate is a EU qualified certificate of a particular type.....    | 9         |
| 4.3 Generic QCStatements.....  | 9         |
| 4.3.1 Introduction.....  | 9         |
| 4.3.2 QCStatement regarding limits on the value of transactions.....                                       | 9         |
| 4.3.3 QCStatement indicating the duration of the retention period of material information.....             | 10        |
| 4.3.4 QCStatement regarding location of PKI Disclosure Statements (PDS).....                               | 10        |
| 5 Requirements on QCStatements in EU qualified certificates.....   | 11        |
| <b>Annex A (informative): Relationship with the Regulation (EU) No 910/2014 .....</b>                      | <b>12</b> |
| A.1 EU qualified certificates for electronic signatures .....  | 12        |
| A.2 EU qualified certificates for electronic seals.....  | 13        |
| A.3 EU qualified certificates for website authentication .....   | 14        |
| <b>Annex B (normative): ASN.1 declarations.....</b>  | <b>15</b> |
| <b>Annex C (informative): Change History .....</b>   | <b>17</b> |
| History .....  | 18        |

---

## Intellectual Property Rights

### Essential patents

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org/>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

### Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

---

## 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.

The present document is part 5 of multi-part deliverable covering the Certificates Profiles. Full details of the entire series can be found in part 1 [i.1].

The present document was previously published as ETSI TS 101 862 [i.4].

| 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).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

---

## Introduction

ITU and ISO issued standards for certification of public keys in Recommendation ITU-T X.509 | ISO/IEC 9594-8 [i.7] which are used for the security of communications and data for a wide range of electronic applications.

The IETF qualified certificate profile, IETF RFC 3739 [2] defines an extension to X.509 certificates, the `qcStatements` extension, which can include statements relevant for qualified certificates. IETF RFC 3739 [2] defines qualified certificates in a general context as "a certificate whose primary purpose is to identify a person with a high level of assurance, where the certificate meets some qualification requirements defined by an applicable legal framework". The use of IETF RFC 3739 [2] `qcStatements` in the present document goes beyond the scope of the RFC which is directed at natural persons only.

The `qcStatements` certificate extension can contain any statement by the certificate issuer that can be useful to the relying party in determining the applicability of the certificate for an intended usage. Such statement can be a declaration that the certificate fulfils specific legal requirements for qualified certificates according to a defined legal framework.

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.8] Annexes I, III and IV.

**iTeh STANDARD PREVIEW**  
(standards.iteh.ai)  
Full standard:  
<https://standards.iteh.ai/catalog/standards/sist/445bf604-7e40-4439-88b8-529e72c2e162/etsi-en-319-412-5-v2.2.1-2017-11>

---

# 1 Scope

The present document defines specific `QCStatement` for the `qcStatements` extension as defined in IETF RFC 3739 [2], clause 3.2.6, including requirements for their use in EU qualified certificates. Some of these `QCStatements` can be used for other forms of certificate.

The `QCStatements` defined in the present document can be used in combination with any certificate profile, either defined in ETSI EN 319 412-2 [i.2], ETSI EN 319 412-3 [i.5] and ETSI EN 319 412-4 [i.6], or defined elsewhere.

The `QCStatements` defined in clause 4.3 may be applied to regulatory environments outside the EU. Other requirements specified in clause 4 are specific to Regulation (EU) No 910/2014 [i.8] but may be adapted for other regulatory environments.

---

## 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>.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

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

- [1] ISO 639-1:2002: "Codes for the representation of names of languages -- Part 1: Alpha-2 code".
- [2] IETF RFC 3739: "Internet X.509 Public Key Infrastructure: Qualified Certificates Profile".
- [3] Recommendation ITU-T X.680-X.699: "Information technology - Abstract Syntax Notation One (ASN.1)".
- [4] ISO 4217: "Codes for the representation of currencies and funds".
- [5] IETF RFC 2818: "HTTP Over TLS".

### 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.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

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 EN 319 412-1: "Electronic Signatures and Infrastructures (ESI); Certificate Profiles; Part 1: Overview and common data structures".
- [i.2] ETSI EN 319 412-2: "Electronic Signatures and Infrastructures (ESI); Certificate Profiles; Part 2: Certificate Profile for certificates issued to natural persons".
- [i.3] Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures.

- [i.4] ETSI TS 101 862: "Qualified Certificate profile".
- [i.5] ETSI EN 319 412-3: "Electronic Signatures and Infrastructures (ESI); Certificate Profiles; Part 3: Certificate Profile for certificates issued to legal persons".
- [i.6] ETSI EN 319 412-4: "Electronic Signatures and Infrastructures (ESI); Certificate Profiles; Part 4: Certificate profile for web site certificates".
- [i.7] Recommendation ITU-T X.509 | ISO/IEC 9594-8: "Information technology - Open systems interconnection - The Directory: Public-key and attribute certificate frameworks".
- [i.8] 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.9] IETF RFC 5280: "Internet X.509 Public Key Infrastructure Certificate and Certificate Revocation List (CRL) Profile".
- [i.10] 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.11] CA/Browser Forum: "Baseline Requirements for the Issuance and Management of Publicly-Trusted Certificates".
- [i.12] CA/Browser Forum: "Guidelines for The Issuance and Management of Extended Validation Certificates".

---

## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the terms and definitions given in ETSI EN 319 412-1 [i.1] and the following apply:

**EU qualified certificate:** qualified certificate that is stated to be in accordance with Annex I, III or IV of the Regulation (EU) No 910/2014 [i.8] or Annex I of the Directive 1999/93/EC [i.3] whichever is in force at the time of issuance

**QCStatement:** statement for inclusion in a qcStatements certificates extension as specified in IETF RFC 3739 [2]

**qualified electronic signature/seal creation device:** As specified in Regulation (EU) No 910/2014 [i.8].

**secure signature creation device:** As specified in Directive 1999/93 [i.3].

### 3.2 Abbreviations

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

|       |   |
|-------|---|
| ASN.1 | Abstract Syntax Notation One                        |
| CA    | Certification Authority                             |
| CRL   | Certificate Revocation List                         |
| EC    | European Commission                                 |
| EU    | European Union                                      |
| IETF  | Internet Engineering Task Force                     |
| ISO   | International Organization for Standardization      |
| PDS   | PKI Disclosure Statements                           |
| PKI   | Public Key Infrastructure                           |
| QC    | Qualified Certificate                               |
| QSCD  | Qualified electronic Signature/Seal Creation Device |
| RFC   | Request For Comments                                |
| URL   | Uniform Resource Locator                            |

## 4 Qualified certificate statements

### 4.1 General requirements

The `qcStatements` extension shall be as specified in clause 3.2.6 of IETF RFC 3739 [2]. The `qcStatements` extension shall not be marked as critical.

The following clauses define a number of individual `QCStatements` to be included in the `qcStatements` extension.

The syntax of the defined statements shall comply with ASN.1 [3]. The complete ASN.1 module for all defined statements shall be as provided in Annex B; it takes precedence over the ASN.1 definitions provided in the body of the present document, in case of discrepancy.

NOTE: This extension is not processed as part of IETF RFC 5280 [i.9] path validation and there are no security implications with accepting a certificate in a system that cannot parse this extension.

### 4.2 `QCStatements` claiming compliance with the EU legislation

#### 4.2.1 `QCStatement` claiming that the certificate is a EU qualified certificate

This `QCstatement` claims that the certificate is an EU qualified certificate that is issued according to Directive 1999/93/EC [i.3] or the Annex I, III or IV of the Regulation (EU) No 910/2014 [i.8] whichever is in force at the time of issuance.

Syntax:

```
esi4-qcStatement-1 QC-STATEMENT ::= { IDENTIFIED BY id-etsi-qcs-QcCompliance }
id-etsi-qcs-QcCompliance OBJECT IDENTIFIER ::= { id-etsi-qcs 1 }
```

The precise meaning of this statement is enhanced by the QC type statement defined in clause 4.2.3 according to the table 1.

**Table 1: esi4-qcStatement-1 meaning**

| QC type statement (clause 4.2.3) | Meaning of this statement ( <code>esi4-qcStatement-1</code> )   |
|----------------------------------|---|
| Absent                           | The certificate is issued according to Directive 1999/93/EC [i.3] or Annex I of the Regulation (EU) No 910/2014 [i.8] (for electronic signatures).                                |
| Present                          | The certificate is issued according to Annex I, III or IV of Regulation (EU) No 910/2014 [i.8] as of the types declared by the QC type statement in accordance with clause 4.2.3. |

A certificate that includes this statement shall comply with all requirements defined in clause 5.

#### 4.2.2 `QCStatement` claiming that the private key related to the certified public key resides in a QSCD

This `QCstatement` declares that the private key related to the certified public key resides in a Qualified Signature/Seal Creation Device (QSCD) according to the Regulation (EU) No 910/2014 [i.8] or a secure signature creation device as defined in the Directive 1999/93/EC [i.3].

Syntax:

```
esi4-qcStatement-4 QC-STATEMENT ::= { IDENTIFIED BY id-etsi-qcs-QcSSCD }
```



```
id-etsi-qcs-QcSSCD OBJECT IDENTIFIER ::= { id-etsi-qcs 4 }
```

### 4.2.3 QCStatement claiming that the certificate is a EU qualified certificate of a particular type

This QCStatement declares that a certificate is issued as one and only one of the purposes of electronic signature, electronic seal or web site authentication.

This QCStatements states that an EU qualified certificate is issued as one specific types according to Annexes I, III or IV of the Regulation (EU) No 910/2014 [i.8] when used in combination with the qcStatement as defined in clause 4.2.1. When used on its own it indicates that it is used for the purposes of electronic signatures, seals or web sites for "non-qualified certificates" within the context of Regulation (EU) No 910/2014 [i.8].

NOTE: This statement, without the one defined in clause 4.2.1, can be potentially used in other regulatory environments which use electronic signature, electronic seal or web site with the same meaning.

Syntax:

```
esi4-qcStatement-6 QC-STATEMENT ::= { SYNTAX QcType IDENTIFIED
  BY id-etsi-qcs-QcType }

Id-etsi-qcs-QcType OBJECT IDENTIFIER ::= { id-etsi-qcs 6 }

QcType ::= SEQUENCE OF OBJECT IDENTIFIER (id-etsi-qct-esign | id-etsi-qct-eseal |
  id-etsi-qct-web, ...)

-- QC type identifiers
id-etsi-qct-esign OBJECT IDENTIFIER ::= { id-etsi-qcs-QcType 1 }
-- Certificate for electronic signatures as defined in Regulation (EU) No 910/2014
id-etsi-qct-eseal OBJECT IDENTIFIER ::= { id-etsi-qcs-QcType 2 }
-- Certificate for electronic seals as defined in Regulation (EU) No 910/2014
id-etsi-qct-web OBJECT IDENTIFIER ::= { id-etsi-qcs-QcType 3 }
-- Certificate for website authentication as defined in Regulation (EU) No 910/2014
```

## 4.3 Generic QCStatements

### 4.3.1 Introduction

QCStatements defined in the following clauses may be used with any applicable regulatory framework.

### 4.3.2 QCStatement regarding limits on the value of transactions

This QCStatement declares a limitation on the value of transaction for which a certificate can be used.

Syntax:

```
esi4-qcStatement-2 QC-STATEMENT ::= { SYNTAX QcEuLimitValue IDENTIFIED
  BY id-etsi-qcs-QcLimitValue }

QcEuLimitValue ::= MonetaryValue

MonetaryValue ::= SEQUENCE {
  currency      Iso4217CurrencyCode,
  amount        INTEGER,
  exponent      INTEGER }
-- value = amount * 10^exponent

Iso4217CurrencyCode ::= CHOICE {
  alphabetic   PrintableString (SIZE (3)), -- Recommended
  numeric      INTEGER (1..999) }
-- Alphabetic or numeric currency code as defined in ISO 4217
-- It is recommended that the Alphabetic form is used

id-etsi-qcs-QcLimitValue OBJECT IDENTIFIER ::= { id-etsi-qcs 2 }
```

The currency codes shall be as defined in ISO 4217 [4]. The alphabetic form should be used.