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Electronic Signatures and Infrastructures (ESI); Certificate Profiles; Part 1: Overview and common data structures Reference REN/ESI-0019412-1v151

Keywords

e-commerce, electronic signature, security, trust services

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## Foreword

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

The present document is part 1 of a multi-part deliverable covering the Certificate Profiles, as identified below:

#### Part 1: "Overview and common data structures";

- Part 2: "Certificate profile for certificates issued to natural persons";
- Part 3: "Certificate profile for certificates issued to legal persons";
- Part 4: "Certificate profile for web site certificates";
- Part 5: "QCStatements".

The present document was previously published as ETSI TS 119 412-1 [i.14].

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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).

"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 X.509 | ISO/IEC 9594-8 [i.3] which are used for the security of communications and data for a wide range of electronic applications.

Regulation (EU) No 910/2014 [i.9] 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 defines requirements on specific types of certificates named "qualified certificates". Implementation of Directive 1999/93/EC [i.1], superseded by the Regulation (EU) No 910/2014 [i.9], and deployment of certificate infrastructures throughout Europe as well as in countries outside of Europe, have resulted in a variety of certificate implementations for use in public and closed environments, where some are declared as qualified certificates while others are not.

Applications need support from standardized and interoperable identity certificate profiles, in particular when applications are used for electronic signatures, authentication and secure electronic exchange in open environments and international trust scenarios, but also when certificates are used in local application contexts.

This multi-part deliverable aims to maximize the interoperability of systems issuing and using certificates both in the European context under the Regulation (EU) No 910/2014 [i.9] and in the wider international environment.

## 1 Scope

The present document provides an overview of the Recommendation ITU-T X.509 | ISO/IEC 9594-8 [i.3] based certificate profiles and the statements for EU Qualified Certificates specified in other parts of ETSI EN 319 412 ([i.4] to [i.7]). It specifies common data structures that are referenced from other parts of ETSI EN 319 412 ([i.4] to [i.7]).

The profiles specified in this multi-part deliverable aim to support both the Regulation (EU) No 910/2014 [i.9] and use of certificates in a wider international context. Within the European context, it aims to support both EU Qualified Certificates and other forms of certificate.

## 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 <a href="https://docbox.etsi.org/Reference">https://docbox.etsi.org/Reference</a>.

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] <u>IETF RFC 3739</u>: "Internet X.509 Public Key Infrastructure: Qualified Certificates Profile".
- [2] <u>ISO 3166-1</u>: "Codes for the representation of names of countries and their subdivisions--Part 1: Country code".
- [3] <u>ETSI TS 119 495</u>: "Electronic Signatures and Infrastructures (ESI); Sector Specific Requirements; Certificate Profiles and TSP Policy Requirements for Open Banking".
- [4] <u>ISO 17442</u>: "Financial services -- Legal Entity Identifier (LEI)".
- [5] <u>eIDAS: "SAML Attribute Profile", v1.2, 31 August 2019</u>.
- [6] <u>IETF RFC 5912</u>: "New ASN.1 Modules for the Public Key Infrastructure Using X.509 (PKIX)".

## 2.2 Informative references

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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] <u>Directive 1999/93/EC</u> of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures.
- [i.2] ETSI EN 319 401: "Electronic Signatures and Infrastructures (ESI); General Policy Requirements for Trust Service Providers".
- [i.3] Recommendation ITU-T X.509 | ISO/IEC 9594-8: "Information technology Open Systems Interconnection - The Directory: Public-key and attribute certificate frameworks".

- [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] ETSI EN 319 412-5: "Electronic Signatures and Infrastructures (ESI) ; Certificate Profiles; Part 5: QCStatements".
- [i.8] IETF RFC 5246: "The Transport Layer Security (TLS) Protocol Version 1.2".
- [i.9] <u>Regulation (EU) No 910/2014</u> 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.10] Recommendation ITU-T X.520 (10/2012): "Information technology Open Systems Interconnection - The Directory: Selected attribute types".
- [i.11] IETF RFC 5280: "Internet X.509 Public Key Infrastructure Certificate and Certificate Revocation List (CRL) Profile".
- [i.12] <u>Council Directive 2006/112/EC</u> of 28 November 2006 on the common system of value added tax.
- [i.13]Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on<br/>payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and<br/>2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC.
- [i.14] ETSI TS 119 412-1: "Electronic Signatures and Infrastructures (ESI); Certificate Profiles; Part 1: Overview and common data structures".

# 3 Definition of terms, symbols, abbreviations and notations

## 3.1 Terms

For the purposes of the present document, the terms given in ETSI EN 319 401 [i.2] 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.9] or Annex I of the Directive 1999/93/EC [i.1] whichever is in force at the time of issuance

**short-term certificate:** certificate whose validity period, i.e. the period of time from notBefore through notAfter, inclusive, is shorter than the maximum time to process a revocation request as specified in the certificate practice statement

## 3.2 Symbols

Void.

## 3.3 Abbreviations

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

ASN.1	Abstract Syntax Notation 1
CA	Certification Authority
CRL	Certificate Revocation List

eID	electronic IDentity
NOTE:	In line with eIDAS SAML Attribute Profile [5].
eIDAS	electronic IDentification, Authentication and trust Services
LEI	Legal Entity Identifier
OCSP	Online Certificate Status Protocol
OID	Object Identifier
SAML	Security Assertion Markup Language
TLS	Transport Layer Security protocol
NOTE:	As specified in IETF RFC 5246 [i.8].
TSP	Trust Service Provider
UN	United Nations
UI	United Nations

## 3.4 Notations

The requirements identified in the present document are preceded by a 3-letter prefix to denote the applicability to specific profiles as covered by the present multi-part deliverable.

Each requirement is identified as follows:

<3 letters profile> - < the clause number> - <2 digit number - incremental>.

The profile is identified as follows:

- **GEN:** Requirements generally applicable to certificate profiles.
- NAT: Requirements specifically applicable to profiles for certificates issued to natural persons.
- LEG: Requirements specifically applicable to profiles for certificates issued to legal persons.
- **WEB:** Requirements specifically applicable to profiles for certificates issued for specifically for website authentication.

NOTE: Such requirements can override requirements for the above classes of profiles.

• **QCS:** Requirements specifically applicable to profiles for certificates using qualified certificates statements and EU Qualified Certificates.

The management of the requirement identifiers for 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 new requirements.
- The requirement identifier for a deleted requirement is left and completed with "Void".
- The requirement identifier for a modified requirement is left void and the modified requirement is identified by capital letter(s) appended to the initial requirement number.

## 4 ETSI EN 319 412 certificate profiles

## 4.1 General approach

All the certificate profiles specified in ETSI EN 319 412 (parts 2 [i.4], 3 [i.5], 4 [i.6], 5 [i.7] and the present document) are based upon IETF RFC 5280 [i.11] for generic profiling of Recommendation ITU-T X.509 | ISO/IEC 9594-8 [i.3].

The certificate profiles specify profiles for both EU Qualified Certificates and non-qualified certificates as relevant. Reference is made to ETSI EN 319 412-5 [i.7] for requirements relating to QCStatements.

## 4.2 Overview of other parts of ETSI EN 319 412

## 4.2.1 ETSI EN 319 412-2

Electronic Signatures and Infrastructures (ESI); Certificate Profiles; Part 2: Certificate profile for certificates issued to natural persons.

Scope: This part specifies the requirements on certificate content for TSPs issuing certificates to natural persons. It provides a certificate profile, which facilitates interoperability of certificates issued to natural persons for the purposes of supporting digital signatures, peer entity authentication, data authentication as well as data confidentiality. It specifies a profile for both EU Qualified Certificates as specified in the Regulation (EU) No 910/2014 [i.9], and non-qualified certificates. When certificates for natural persons are issued as EU Qualified Certificates, it makes reference to ETSI EN 319 412-5 [i.7] for requirements relating to QCStatements.

## 4.2.2 ETSI EN 319 412-3

*Electronic Signatures and Infrastructures (ESI); Certificate Profiles; Part 3: Certificate profile for certificates issued to legal persons.* 

Scope: This part specifies the requirements on certificate content for TSPs issuing certificates to legal persons. It provides a certificate profile, which facilitates interoperability of certificates issued to legal persons for the purposes of supporting digital signatures, peer entity authentication, data authentication as well as data confidentiality. It specifies a profile for both EU Qualified Certificates and non-qualified certificates. When certificates for legal persons are issued as EU Qualified Certificates, it makes reference to ETSI EN 319 412-5 [i.7] for requirements relating to QCStatements.

### 4.2.3 ETSI EN 319 412-4

Electronic Signatures and Infrastructures (ESI); Certificate Profiles; Part 4: Certificate profile for web site certificates.

Scope: This part specifies the requirements on certificate content for TSPs issuing website certificates for sites that are accessed via the TLS protocol as specified in IETF RFC 5246 [i.8]. It provides a certificate profile, which enables interoperability of website certificates issued to legal or natural persons. It specifies a profile for both EU Qualified Certificates and non-qualified certificates. When certificates for web site authentication are issued as EU Qualified Certificates, it makes reference to ETSI EN 319 412-5 [i.7] for requirements relating to QCStatements.

### 4.2.4 ETSI EN 319 412-5

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

Scope: This part specifies the requirements on the QCStatements as required for qualified certificates as specified in parts 2 to 4 [i.4], [i.5] and [i.6] of ETSI EN 319 412.

The QCStatements defined in clause 4.3 of ETSI EN 319 412-5 [i.7] can be applied to regulatory environments outside the EU. Other requirements specified in clause 4 of [i.7] are specific to Regulation (EU) No 910/2014 [i.9] but may be adapted for other regulatory environments.

## 5 Common data structures

## 5.1 Semantics identifiers

#### 5.1.1 General

Subject and issuer names (Recommendation ITU-T X.509 | ISO/IEC 9594-8 [i.3]) can include attributes that do not disclose the semantics of its information content. serialNumber (Recommendation ITU-T X.509 | ISO/IEC 9594-8 [i.3]) and organizationIdentifier (Recommendation ITU-T X.520 [i.10]) are examples of such attributes. The serialNumber attribute can contain a national identification number, passport number or any type of locally defined identifier such as random or pseudo-random generated identifier. The organizationIdentifier attribute can contain several types of organizational identifiers.

IETF RFC 3739 [1], clause 3.2.6.1 defines the predefined statement "qcStatement-2" identified by the OID id-qcs-pkixQCSyntax-v2 with the SemanticsInformation syntax.

The SemanticsInformation type, when present, provides information about the semantics of data stored in attributes and/or names in the certificate.

The semantics identifiers in the following clauses use 2 character ISO 3166-1 [2] country codes (Alpha-2) to specify the country where the identifier is registered.

GEN-5.1.1-01: Trans-national country codes as specified in ISO 3166-1 [2] may be used when relevant such as EU (European Union) and UN (United Nations).

GEN-5.1.1-02: User-defined country code 'XG' may be used for identifiers allocated under a global scheme.

GEN-5.1.1-03: Identifiers using user-defined country codes shall be interpreted under the context of the certificate issuer as there is no guarantee that such identifier is unique across all issuers. Unassigned codes should not be used.

NOTE: The semantics identifiers in the following clauses define semantics information for attributes stored in the subject field. No corresponding mechanism is defined in the present document for specifying semantics information for attributes in the issuer field. IETF RFC 5280 [i.11] path validation requires the issuer field to be consistent with the subject field of the CA certificate assigned to the issuing CA. Name attributes of the issuing CA can be constructed according the semantics identifier defined in the following clauses and stored in the subject field of the CA certificate. In such case, the appropriate place to include semantics identifiers for these attributes is in the CA certificate. Consequently, a relying party will have to consult information in the issuing CA certificate to obtain semantics information about attributes in the issuer field of a certificate.

#### 5.1.2 ASN.1 module

This clause defines semantics identifiers for inclusion in qcStatement-2.

GEN-5.1.2-01: The syntax for the natural person semantics identifier and legal person semantics identifier shall be as defined by the following ASN.1 module:

```
ETSISemanticsIdentifierMod { itu-t(0) identified-organization(4) etsi(0) id-cert-
profile(194121) id-mod(0) id-mod-semantics-identifier(0) v2(1)}
DEFINITIONS EXPLICIT TAGS::=
BEGIN
-- EXPORTS All -
-- Semantics identifiers
                                       OBJECT IDENTIFIER ::= { itu-t(0) identified-
id-etsi-qcs-semantics-identifiers
organization(4) etsi(0) id-cert-profile(194121) 1 }
-- Semantics identifier for natural person identifier
id-etsi-gcs-semanticsId-Natural
                                     OBJECT IDENTIFIER ::= { id-etsi-gcs-semantics-
identifiers 1 }
-- Semantics identifier for legal person identifier
                                   OBJECT IDENTIFIER ::= { id-etsi-qcs-semantics-
id-etsi-qcs-SemanticsId-Legal
identifiers 2 }
-- Semantics identifier for eIDAS natural person identifier
id-etsi-qcs-semanticsId-eIDASNatural OBJECT IDENTIFIER ::= { id-etsi-qcs-semantics-identifiers 3 }
-- Semantics identifier for legal person identifier
id-etsi-qcs-SemanticsId-eIDASLegal OBJECT IDENTIFIER ::= { id-etsi-qcs-semantics-identifiers 4 }
```

END

The following clauses provide the semantics definitions of the natural person and legal person semantics identifiers.

#### 5.1.3 Natural person semantics identifier

NAT-5.1.3-01: The semantics of id-etsi-qcs-SemanticsId-Natural shall be as follows.

NAT-5.1.3-02: When the natural person semantics identifier is included, any present serialNumber attribute in the subject field shall contain information using the following structure in the presented order:

- 3 character natural person identity type reference;
- 2 character ISO 3166-1 [2] country code;
- hyphen-minus "-" (0x2D (ASCII), U+002D (UTF-8)); and
- identifier (according to country and identity type reference).

NAT-5.1.3-03: The three initial characters shall have one of the following defined values:

- 1) "PAS" for identification based on passport number.
- 2) "IDC" for identification based on national identity card number.
- 3) "PNO" for identification based on (national) personal number (national civic registration number).
- 4) "TAX" for identification based on a personal tax reference number issued by a national tax authority.

- 5) "TIN" Tax Identification Number according to the European Commission Tax and Customs Union (<u>https://ec.europa.eu/taxation\_customs/tin/tinByCountry.html</u>).
- 6) Two characters according to local definition within the specified country and name registration authority, identifying a national scheme that is considered appropriate for national and European level, followed by the character ":" (colon).

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Other initial character sequences are reserved for future amendments of the present document.

EXAMPLES: "PASSK-P3000180", "IDCBE-590082394654" and "EI:SE-200007292386".

NAT-5.1.3-04: The value "TAX" is deprecated. The value "TIN" should be used instead.

NAT-5.1.3-05: When a locally defined identity type reference is provided (two characters followed by ":"), the nameRegistrationAuthorities element of SemanticsInformation (IETF RFC 3739 [1]) shall be present.

NAT-5.1.3-06: The nameRegistrationAuthorities element of SemanticsInformation (IETF RFC 3739 [1]) shall contain at least a uniformResourceIdentifier generalName.

NAT-5.1.3-07: The two-letter identity type reference preceding the ":" character shall be unique within the context of the specified uniformResourceIdentifier.

#### 5.1.4 Legal person semantics identifier

LEG-5.1.4-01: The semantics of id-etsi-gcs-SemanticsId-Legal shall be as follows.

LEG-5.1.4-02: When the legal person semantics identifier is included, any present organizationIdentifier attribute in the subject field shall contain information using the following structure in the presented order:

- 3 character legal person identity type reference;
- 2 character ISO 3166-1 [2] country code;
- hyphen-minus "-" (0x2D (ASCII), U+002D (UTF-8)); and
- identifier (according to country and identity type reference).

LEG-5.1.4-03: The three initial characters shall have one of the following defined values:

- 1) "VAT" for identification based on a national value added tax identification number.
- 2) "NTR" for identification based on an identifier from a national trade register.
- "PSD" for identification based on national authorization number of a payment service provider under Payments Services Directive (EU) 2015/2366 [i.13]. This shall use the extended structure as defined in ETSI TS 119 495 [3], clause 5.2.1.
- 4) "LEI" for a global Legal Entity Identifier as specified in ISO 17442 [4]. The 2 character ISO 3166-1 [2] country code shall be set to 'XG'.
- 5) Two characters according to local definition within the specified country and name registration authority, identifying a national scheme that is considered appropriate for national and European level, followed by the character ":" (colon).

Other initial character sequences are reserved for future amendments of the present document.

LEG-5.1.4-04: In case "VAT" legal person identity type reference is used in combination with the "EU" transnational country code, the identifier value should comply with Council Directive 2006/112/EC [i.12], article 215.

EXAMPLES: "VATBE-0876866142" and "EI:SE-5567971433".

LEG-5.1.4-05: When a locally defined identity type reference is provided (two characters followed by ":"), the nameRegistrationAuthorities element of SemanticsInformation (IETF RFC 3739 [1]) shall be present and shall contain at least a uniformResourceIdentifier generalName.

LEG-5.1.4-06: The two letter identity type reference following the ":" character shall be unique within the context of the specified uniformResourceIdentifier.

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### 5.1.5 eIDAS eID Natural person semantics identifier

NAT-5.1.5-01: If using electronic identity attributes as specified in eIDAS SAML attribute profile [5] for a certificate issued to natural persons, the semantics of id-etsi-qcs-SemanticsId-eIDASNatural shall be as follows.

NAT-5.1.5-02: If the eIDAS natural person semantics identifier is included, the values of attributes in the subject field shall meet the content requirements of corresponding attributes defined by the eIDAS SAML attribute profile [5] according to the following requirements:

- NAT-5.1.5-03: Any serialNumber attribute present in the subject field of the certificate shall comply with the content requirement specified for the eIDAS PersonIdentifier attribute.
- NAT-5.1.5-04: Attributes present in subject field of the certificate are equivalent to defined attributes in accordance with table 5.1.5-1. This means that the present attribute shall hold equivalent information, even if the format used to express that information differs.

Certificate attribute	Defined by	Equivalent eIDAS eID attribute (FriendlyName)
serialNumber	Recommendation ITU-T X.520 [i.10]	PersonIdentifier
surname	Recommendation ITU-T X.520 [i.10]	FamilyName
givenName	Recommendation ITU-T X.520 [i.10]	FirstName
dateOfBirth	IETF RFC 3739 [1]	DateOfBirth

#### Table 5.1.5-1: Attribute equivalence

#### 5.1.6 eIDAS eID Legal person semantics identifier

LEG-5.1.6-01: If using electronic identity attributes as specified in eIDAS SAML attribute profile [5] for a certificate issued to legal persons, the semantics of id-etsi-qcs-SemanticsId-eIDASLegal shall be as follows.

LEG-5.1.6-02: If the eIDAS legal person semantics identifier is included, the values of attributes in the subject field shall meet the content requirements of corresponding attributes defined by the eIDAS SAML attribute profile [5] according to the following requirements:

- LEG-5.1.6-03: Any organizationIdentifier attribute present in the subject field of the certificate shall comply with the content requirement specified for the eIDAS LegalPersonIdentifier attribute.
- LEG-5.1.6-04: Attributes present in the subject field of the certificate are equivalent to defined attributes in accordance with table 5.1.6-1. This means that the present attribute shall hold equivalent information, even if the format used to express that information differs.

Certificate attribute	Defined by	Equivalent elDAS attribute (FriendlyName)
organizationIdentifier	Recommendation ITU-T X.520 [i.10]	LegalPersonIdentifier
organizationName	Recommendation ITU-T X.520 [i.10]	LegalName

#### Table 5.1.6-1: Attribute equivalence

## 5.2 Certificate Extensions regarding Validity Assured Certificate

#### 5.2.1 Validity Assured General

The following certificate extensions indicate that the certificate issuer ensures that the validity of the certificate is assured at time of use of the corresponding private key.

- NOTE 1: Upon presence of such statement in the certificate, the relying party can decide not to check the certificate revocation status, for example, when validating a digital signature.
- NOTE 2: The upper part of the certificate path is not impacted by the presence of the extension in a certain certificate; upper certificates in the chain are to be validated as expressed by the certificate and/or the certificate policy/certificate practice statement (e.g. they can be validated with OCSP or CRL).
- NOTE 3: In the present document only one extension is defined.

#### 5.2.2 Validity Assured - Short Term

This extension indicates that the validity of the certificate is assured because the certificate is a "**short-term certificate**". That is, the time as indicated in the certificate attribute from notBefore through notAfter, inclusive, is shorter than the maximum time to process a revocation request as specified by the certificate practice statement or certificate policy.

#### 5.2.3 ASN.1 Module

GEN-5.2.3-01: The ASN.1 module defined in the present clause shall import the types and structures from IETF RFC 5912 [6] as written in the import part of the module.

```
ETSIValAssuredCertMod
   { itu-t(0) identified-organization(4) etsi(0) id-cert-profile(194121) id-mod(0)
   id-mod-validity-assured(1) v1(0) }
BEGIN
-- EXPORTS All -
IMPORTS
EXTENSION
FROM PKIX-CommonTypes-2009
   { iso(1) identified-organization(3) dod(6) internet(1) security(5) mechanisms(5)
          pkix(7)
   id-mod(0) id-mod-pkixCommon-02(57) }
-- Extensions
id-etsi-ext
              OBJECT IDENTIFIER ::= { itu-t(0) identified-organization(4) etsi(0)
                                    id-cert-profile(194121) 2 }
   -- Extension for short-term certificate
                                       OBJECT IDENTIFIER ::= { id-etsi-ext 1 }
   id-etsi-ext-valassured-ST-certs
   ext-etsi-valassured-ST-certs
                                    EXTENSION ::= { SYNTAX NULL IDENTIFIED BY
                                               id-etsi-ext-valassured-ST-certs }
END
```

# Annex A (informative): Change History

Date	Version	Information about changes
February 2016	1.1.1	Publication as ETSI EN 319 412-1.
March 2018		<ol> <li>Clause 5.1.4 Legal person semantics identifier add to list of initial characters. 3)</li> <li>"PSD" for identification based on national authorization number of a payment service provider under Payment Services Directive (EU) 2015/2366. This uses the extended structure as defined in ETSI TS 119 495 [3], clause 5.2.1.</li> <li>Clause 5.1.4 change numbering of current item 3) to item 4).</li> <li>Add to 2.1 Normative references: ETSI TS 119 495 Electronic Signatures and Infrastructures (ESI); Sector Specific Requirements; Qualified Certificate Profiles and TSP Policy Requirements under the payment services Directive 2015/2366/EU.</li> </ol>
May 2018	1.2.1	Publication as ETSI TS 119 412-1 (same technical content as v1.1.2).
July 2019	1.2.2	Integration of CR ESI(18)64_017 to include LEIs.
August 2019	1.3.1	Publication as ETSI TS 119 412-1 [i.14].
December 2019	1.3.2	Aligning EN with TS text and integrating CR on eID representation in ESI(17)59_061 & CR on validity assured certificates in ESI(19)68_073r4.
January 2020	1.3.3	CR on country codes in ESI(20)69_007r1.
March 2020	1.3.4	Editorial corrections and update of reference [5]. Version approved by TC ESI for submission to EN Approval Procedure.
March 2021	1.4.2	Publication as ETSI EN 319 412-1 same technical content as ETSI TS 119 412-1.
April 2023	1.4.5	Updated to allocate reference number to each requirement in line with EN 319 411-1.

# History

Document history			
V1.0.1	July 2015	Publication as ETSI TS 119 412-1 (withdrawn)	
V1.1.1	February 2016	Publication	
V1.2.1	May 2018	Publication as ETSI TS 119 412-1	
V1.3.1	August 2019	Publication as ETSI TS 119 412-1	
V1.4.0	April 2020	Publication as ETSI TS 119 412-1	
V1.4.1	June 2020	Publication	
V1.4.1	July 2020	Publication as ETSI TS 119 412-1	
V1.4.4	May 2021	Publication	
V1.5.0	June 2023	EN Approval Procedure         AP 20230921:         2023-06-23 to 2023-09-21	
V1.5.1	September 2023	Publication	