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TECHNICAL SPECIFICATION

**Electronic Signatures and Infrastructures (ESI);
AdES related Uniform Resource Identifier**

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Electronic Signatures and Infrastructures (ESI).

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

Uniform Resource Identifiers (URIs) allows to uniquely identify specific values. The ETSI framework for standardization of signatures as described in ETSI TS 119 000 [i.1] contains documents for different signatures formats (CAdES ETSI EN 319 122-1 [5], XAdES ETSI EN 319 132-1 [8] or PAdES ETSI EN 319 142-1 [11]) as well as the ASiC format for signature containers ETSI EN 319 162-1 [13]. Some concepts apply for all the signature formats and even for the signature containers. The present document allows to define corresponding URIs and describe more generally how to build URIs to describe specific elements in a signature format or container.

1 Scope

The present document describes the root Uniform Resource Identifier (URI) http://uri.etsi.org/ades and sub branches that allow to define URI applicable for more than one AdES signature formats and/or the ASiC signature container.

The present document describes how to define URIs to reference a specific version and/specific attribute/property of an AdES format.

NOTE: The present document defines URIs are not used as pointers to a specific location but are used as unique identifiers.

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] ETSI TS 103 171: "Electronic Signatures and Infrastructures (ESI); XAdES Baseline Profile".

[2] ETSI TS 103 172: "Electronic Signatures and Infrastructures (ESI); PAdES Baseline Profile".

[3] ETSI TS 103 173: "Electronic Signatures and Infrastructures (ESI); CAdES Baseline Profile".

[4] ETSI TS 103 174: "Electronic Signatures and Infrastructures (ESI); ASiC Baseline Profile".

[5] ETSI EN 319 122-1: "Electronic Signatures and Infrastructures (ESI); CAdES digital signatures; Part 1: Building blocks and CAdES baseline signatures".

[6] ETSI EN 319 122-2: "Electronic Signatures and Infrastructures (ESI); CAdES digital signatures; Part 2: Extended CAdES signatures".

[7] ETSI TS 119 122-3: "Electronic Signatures and Infrastructures (ESI); CAdES digital signatures; Part 3: Incorporation of Evidence Record Syntax (ERS) mechanisms in CAdES".

[8] ETSI EN 319 132-1: "Electronic Signatures and Infrastructures (ESI); XAdES digital signatures; Part 1: Building blocks and XAdES baseline signatures".

[9] ETSI EN 319 132-2: "Electronic Signatures and Infrastructures (ESI); XAdES digital signatures; Part 2: Extended XAdES signatures".

[10] ETSI TS 119 132-3: "Electronic Signatures and Infrastructures (ESI); XAdES digital signatures; Part 3: Incorporation of Evidence Record Syntax (ERS) mechanisms in XAdES".

[11] ETSI EN 319 142-1: "Electronic Signatures and Infrastructures (ESI); PAdES digital signatures; Part 1: Building blocks and PAdES baseline signatures".

[12] ETSI EN 319 142-2: "Electronic Signatures and Infrastructures (ESI); PAdES digital signatures; Part 2: Additional PAdES signatures profiles".

[13] ETSI EN 319 162-1: "Electronic Signatures and Infrastructures (ESI); Associated Signature Containers (ASiC); Part 1: Building blocks and ASiC baseline containers".

[14]   ETSI EN 319 162-2: "Electronic Signatures and Infrastructures (ESI); Associated Signature Containers (ASiC); Part 2: Additional ASiC containers".

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 TR 119 000: "Electronic Signatures and Infrastructures (ESI); The framework for standardization of signatures: overview".

[i.2]   Commission Implementing Decision (EU) 2015/1506 of 8 September 2015 laying down specifications relating to formats of advanced electronic signatures and advanced seals to be recognised by public sector bodies pursuant to Articles 27(5) and 37(5) of 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 (Text with EEA relevance).

3   Definition of terms, symbols and abbreviations

3.1   Terms

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

AdES (digital) signature: digital signature that is either a CAdES signature, or a PAdES signature or a XAdES signature

signature class: set of signatures achieving a given functionality

signature level: format specific definition of a set of data incorporated into a digital signature, which allows to implement a signature class

3.2   Symbols

Void.

3.3   Abbreviations

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

URI   Uniform Resource Identifier

4   URI namespaces

4.1   The main branch

Any URI under the root http://uri.etsi.org/ades shall be used to describe URIs applicable for all types of AdES signatures.

4.2   URIs used to describe signature levels

4.2.1   Baseline signature and container levels as defined in the standardization framework for signatures ETSI TR 119 000

A URI describing a baseline signature level which is defined in ETSI EN 319 122-1 [5] (CAdES), ETSI EN 319 132-1 [8] (XAdES) and ETSI EN 319 142-1 [11] (PAdES) or a baseline container level which is defined in ETSI EN 319 162-1 [13] (ASiC) shall be built in the following way:

`http://uri.etsi.org/ades/191x2/level/baseline/<name-of-the-baselinelevel>#`

where:

- **191x2:** states that the level is defined in all the signature format documents with a number x19 1x2:

    - **level:** states that this URI defines a signature level:

        - **baseline:** states that this URI define a baseline signature level.

The following URIs are defined:

- http://uri.etsi.org/ades/191x2/level/baseline/B-B# shall denote a **B-B** level as defined in ETSI EN 319 122-1 [5] (CAdES), ETSI EN 319 132-1 [8] (XAdES) ETSI EN 319 142-1 [11] (PAdES) or ETSI EN 319 162-1 [13] (ASiC);

- http://uri.etsi.org/ades/191x2/level/baseline/B-T# shall denote a **B-T** level as defined in ETSI EN 319 122-1 [5] (CAdES), ETSI EN 319 132-1 [8] (XAdES) ETSI EN 319 142-1 [11] (PAdES) or ETSI EN 319 162-1 [13] (ASiC);

- http://uri.etsi.org/ades/191x2/level/baseline/B-LT# shall denote a **B-LT** level as defined in ETSI EN 319 122-1 [5] (CAdES), ETSI EN 319 132-1 [8] (XAdES) ETSI EN 319 142-1 [11] (PAdES) or ETSI EN 319 162-1 [13] (ASiC);

- http://uri.etsi.org/ades/191x2/level/baseline/B-LTA# shall denote a **B-LTA** level as defined in ETSI EN 319 122-1 [5] (CAdES), ETSI EN 319 132-1 [8] (XAdES) ETSI EN 319 142-1 [11] (PAdES) or ETSI EN 319 162-1 [13] (ASiC).

NOTE: for the specification of ASiC levels see ETSI EN 319 162-1 [13], clause 5.1.

4.2.2   Baseline signature and container levels as defined in the CID 2015/1506

A URI describing a baseline signature level which is defined in ETSI TS 103 171 [1] (XAdES), ETSI TS 103 172 [2] (PAdES) and ETSI TS 103 173 [3] (CAdES)) or a baseline container level which is defined in ETSI TS 103 174 [4] (ASiC) as referenced in the CID 2015/1506 [i.2]) shall be built in the following way:

`http://uri.etsi.org/ades/etsits/level/baseline/<name-of-the-baselinelevel>#`

where:

- **etsits:** states that the level is defined in all the signature format documents with a number x19 1x2:

    - **level:** states that this URI defines a signature level:

        - **baseline**: states that this URI define a baseline signature level.

The following URIs are defined:

- http://uri.etsi.org/ades/etsits/level/baseline/B-B# shall denote a **B** level as defined in ETSI TS 103 171 [1] (XAdES), ETSI TS 103 172 [2] (PAdES) ETSI TS 103 173 [3] (CAdES) or ETSI TS 103 174 [4] (ASiC);

- http://uri.etsi.org/ades/etsits/level/baseline/B-T# shall denote a **T** level as defined in ETSI TS 103 171 [1] (XAdES), ETSI TS 103 172 [2] (PAdES) ETSI TS 103 173 [3] (CAdES) or ETSI TS 103 174 [4] (ASiC);

- http://uri.etsi.org/ades/etsits/level/baseline/B-LT# shall denote an **LT** level as defined in ETSI TS 103 171 [1] (XAdES), ETSI TS 103 172 [2] (PAdES) ETSI TS 103 173 [3] (CAdES) or ETSI TS 103 174 [4] (ASiC);

- http://uri.etsi.org/ades/etsits/level/baseline/B-LTA# shall denote an **LTA** level as defined in ETSI TS 103 171 [1] (XAdES), ETSI TS 103 172 [2] (PAdES) or ETSI TS 103 173 [3] (CAdES).

NOTE 1: For the specification of ASiC levels see ETSI TS 103 174 [4], clause 4.

NOTE 2: No LTA level for ASiC is defined in ETSI TS 103 174 [4].

4.2.3 Extended signature levels as defined in the standardization framework for signatures ETSI TR 119 000

A URI describing an extended signature level which is defined in more than one of the documents ETSI EN 319 122-2 [6] (CAdES), ETSI EN 319 132-2 [9] (XAdES) or ETSI EN 319 162-2 [14] (PAdES) shall be built in the following way:

`http://uri.etsi.org/ades/191x2/level/extended/<name-of-the-extendedlevel>#`

where

- **191x2:** states that the level is defined in more than one of the signature format documents with a number x19 1x2:

  - **level:** states that this URI defines a signature level:

    - **extended:** states that this URI define an extended signature level.

The following URIs are defined:

- http://uri.etsi.org/ades/191x2/level/extended/E-BES# shall denote an E-BES level as defined in ETSI EN 319 122-2 [6] (CAdES), ETSI EN 319 132-2 [9] (XAdES) or ETSI EN 319 162-2 [14] (PAdES)

- http://uri.etsi.org/ades/191x2etsits/level/extended/E-EPES# shall denote an E-EPES level as defined in ETSI EN 319 122-2 [6] (CAdES), ETSI EN 319 132-2 [9] (XAdES) or ETSI EN 319 162-2 [14] (PAdES)

- http://uri.etsi.org/ades/191x2/level/extended/E-T# shall denote an E-T level as defined in ETSI EN 319 122-2 [6] (CAdES) or ETSI EN 319 132-2 [9] (XAdES)

- http://uri.etsi.org/ades/191x2/level/extended/E-A# shall denote an E-A level as defined in ETSI EN 319 122-2 [6] (CAdES) or ETSI EN 319 132-2 [9] (XAdES)

- http://uri.etsi.org/ades/191x2/level/extended/E-ERS# shall denote an E-ERS level as defined in ETSI TS 119 122-3 [7] (CAdES) or ETSI TS 119 132-3 [10] (XAdES)

4.3 How to reference specific signature format version

To reference a specific version of a signature format or an ASiC container the URI shall have the following structure:

http://uri.etsi.org/<number_of_the_document >/<specific_version>

The `number_of_the_document` shall be the five-digit number obtained by removing the first digit of the ETSI document number, and any part or sub-part numbers.

The `specific version` shall be of format vx.y.z where x.y.z are the three digit used to identify an ETSI document version.

EXAMPLE: Version V1.1.1 of ETSI EN 319 122-1 [5] is referenced as http//www.etsi.org/19122/v1.1.1.

4.4   How to reference specific attribute/properties in an AdES signature

To reference a specific attribute/property of a signature format or of an ASiC container, the URI shall have the following structure:

```
http://uri.etsi.org/<number_of_the_document>/<specific_version>
<name_of_the_attribute_or_property>
```

The `number_of_the_document` and `specific_version` shall be as defined in clause 4.3.

The `name_of_the_attribute_or_property` shall be the name of the attribute or property as used within the specific ETSI document.

EXAMPLE: The `signature-time-stamp` as defined in ETSI EN 319 122-1 [5] is referenced as
                http://uri.etsi.org/19122/v1.1.1/signature-time-stamp.

NOTE1:   A signature attribute or property is always specified together with the version of the ETSI document in which it is defined.

NOTE 2:   In case the URI references as attribute a signature included in an ASiC container, a specific attribute/property of a signature format can be referenced as specified in the present clause.

History

Document history		
V1.1.1	May 2021	Publication