



## Authentication-based signature creation policy for Finnish Trust Network

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**Table of Contents**

1. Policy information.....	3
2. Revisions .....	4
3. Introduction .....	5
4. Terms and acronyms.....	6
5. Versioning and backwards compatibility .....	7
6. About Signature Policies .....	8
7. Scope and structure.....	9
8. Signature creation requirements .....	10
8.1 Evidence Structure.....	10
9. Signature validation requirements.....	14
10. Limitation of liability .....	15
11. Appendix A (normative): Certificates used for e-sealing PDF documents.....	16
11.1 Certificate in PEM format: .....	18

## 1. Policy Information

<b>Name</b>	Authentication-based signature creation policy for Finnish Trust Network
<b>Document Number</b>	DKB-SP-02282022-3 v1.0
<b>Policy OID</b>	1.3.6.1.4.1.54720.2.5.1
<b>Policy Owner</b>	Dokobit, UAB
<b>Version</b>	1.0
<b>Publish date</b>	2022-02-28

## 2. Revisions

Date	Specification version	Change
2022-02-15	1.0	Initial version

### 3. Introduction

This signature policy defines requirements for authentication-based signatures using Finnish Trust Network as authentication mechanism. Authentication-based signatures are Advanced Electronic Signatures as per eIDAS regulation and are uniquely linked to signer by including required evidences to prove signing action by specified signer.

## 4. Terms And Acronyms

Term	Explanation
IdP	Identity provider.
Seal	This is the Trust Service Provider's signature on the signed document. It is commonly referred to as the <i>Seal</i> .
Signing ceremony	A sequence of activities like presenting the document, asking for the signers consent and the signing itself. The signing ceremony shall be conducted in a way that it afterwards is clear that the signer has willingly signed the document.
TSP	Trust Service Provider - the entity implementing this policy by packaging the signature.
Evidences	Collected evidences from Signing ceremony that are added as an additional metadata in PDF document.
PADES	ETSI TS 103 172 V2.2.2 (2013-04) Electronic Signatures and Infrastructures (ESI); PAdES Baseline Profile.
RFC-3161	IETF RFC 3161: "Internet X.509 Public Key Infrastructure Time Stamp Protocol (TSP)".
eIDAS	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.

## 5. Versioning And Backwards Compatibility

Signature policy version numbers consist of a major and a minor number, denoting major and minor versions.

A change of minor version is always backward compatible, and the new policy may be brought into effect without notifying relying parties.

A change of major version may introduce non-backward compatible changes.

## 6. About Signature Policies

The purpose of a signature policy is to specify requirements for the signing process including requirements for signature creation and verification process.

The primary users of this policy will be users using authentication-based signatures (relying parties). The policy will help relying parties to better understand the information contained in an authentication-based signature, and on what basis it can be trusted and used.



## 7. Scope And Structure

This signature policy defines requirements for creating and validating signature based on an arbitrary method of signer authentication.

The normative parts of the policy are:

**General process requirement** defines high-level requirements for the overall signing process.

1. **Signature creation requirements** defines requirements for the format used for the signature
2. **Validation requirements** defines the validation of authentication-based signature.

## 8. Signature Creation Requirements

Authentication-based signatures work in the following way:

1. A Trust Service Provider (TSP) arranges a signing ceremony: It presents the documents to be signed and collects the user's explicit consent/intention to sign the documents.
2. The user authenticates using Finnish Trust Network. The TSP collects authentication proof.
3. The TSP collects traces and context in audit logs.
4. The TSP adds collected evidence as a metadata in XML format to the original PDF document.
5. The TSP seals a PDF document with collected Evidences using TSP's Advanced Electronic Seal with Qualified Certificate.
6. The sealed PDF results as a document with user's signature.

### 8.1 Evidence Structure

The following information must be collected from Signing Ceremony:

Element/Attribute	Description	Example	Required
Global			
SigningIdentifier	Unique signature identifier in Dokobit system	5e00fb8febc7d2 532fce637ca560 79baaddc6780	true
SigningTime	Signing time in ISO 8601 full date and time format	2022-01-14T11:2 3:27+02:00	true
PolicyId	Policy ID that was used for creating the signature	1.3.6.1.4.1.5472 0.2.5.1	true
LiabilityTier	Liability tier for created signature	1	true
Client Environment			

UserAgent	User agent string representing client environment	Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/97.0.4692.71 Safari/537.36	true
Ip	Signer IP address	127.0.0.1	true
Server Environment			
Dns	Server DNS address	<a href="https://app.dokobit.com">app.dokobit.com</a>	true
VersionIdentifier	Codebase version identifier	202201131550-d14c26a5e210a227e24ae2f10d062653bc336fc3	true
Signer Details			
Firstname	Signer firstname detected using authentication mechanism	Firstname	true
Lastname	Signer lastname detected using authentication mechanism	Lastname	true
Identifier	Unique signer identifier specifying code type, issuing country and code	PNOFI-30101010101	true
Code	Signer code representing unique person in authentication mechanism scope	30101010101	true
CountryCode	Country code specifying in which country code was issued	fi	true
BirthDate	Signer birthdate	1990-01-14	false

User Actions			
Name	Action made by user. Possible values: user-authentication, document-view, document-sign	user-authentication	true
TimeStamp	Action time in ISO 8601 full date and time format	2022-01-14T11:23:27+02:00	true
User Action Details			
Method	Method used for authentication. Possible values: ftn.	ftn	Required only for action "user-authentication"
TransactionId	Transaction identifier in authentication system	7f22fd6a-3d46-4d5a-ae56-6de3c53e1873	Required only for action "user-authentication"

Example of evidence structure:

```
<?xml version="1.0" encoding="utf-8"?>
<DokobitAuthenticationBasedSignature xmlns="https://dokobit.com/authentication-based-signatures" Version="1">
  <SigningIdentifier>5e00fb8febc7d2532fce637ca56079baaddc6780</SigningIdentifier>
  <SigningTime>2022-01-14T11:23:27+02:00</SigningTime>
  <PolicyId>1.3.6.1.4.1.54720.2.5.1</PolicyId>
  <LiabilityTier>1</LiabilityTier>
  <Environment>
    <Client>
      <UserAgent>Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/97.0.4692.71 Safari/537.36</UserAgent>
      <Ip>127.0.0.1</Ip>
    </Client>
    <Server>
      <Dns>app.dokobit.com</Dns>
      <VersionIdentifier>202201131550-d14c26a5e210a227e24ae2f10d062653bc336fc3</VersionIdentifier>
    </Server>
  </Environment>
  <SignerDetails>
    <Firstname>Firstname</Firstname>
    <Lastname>Lastname</Lastname>
    <Identifier>PNOFI-30101010101</Identifier>
    <Code>30101010101</Code>
    <CountryCode>fi</CountryCode>
    <BirthDate>1990-01-14</BirthDate>
  </SignerDetails>
  <UserActions>
    <UserAction>
      <Name>user-authentication</Name>
      <TimeStamp>2022-01-14T11:23:27+02:00</TimeStamp>
      <Data>
        <Method>ftn</Method>
        <TransactionId>7f22fd6a-3d46-4d5a-ae56-6de3c53e1873</TransactionId>
      </Data>
    </UserAction>
    <UserAction>
      <Name>document-view</Name>
      <TimeStamp>2022-01-14T11:23:27+02:00</TimeStamp>
    </UserAction>
    <UserAction>
      <Name>document-sign</Name>
      <TimeStamp>2022-01-14T11:23:27+02:00</TimeStamp>
    </UserAction>
  </UserActions>
</DokobitAuthenticationBasedSignature>
```

## 9. Signature Validation Requirements

Authentication-based signatures should be validated in the following way:

1. If a valid seal with any certificate that is specified in Appendix A is found in document, validation of authentication-based signature should continue, otherwise signature does not meet requirements of this policy.
2. Seal dictionary contains "Metadata" element which refers to Collected Evidences in PDF document.
3. Information that resides in Collected Evidences should be treated as a trusted information.

## 10. Limitation Of Liability

TSP assumes the liability only for the execution of the Signing ceremony and provides the services with two different limitations:

- Tier 1 (Basic Liability). This tier is for the documents that don't exceed the value of EUR 100 as Dokobit will be liable up to EUR 100 per signed document.
- Tier 2 (Advanced Liability). This tier is for the documents that don't exceed the value of EUR 10 000 as Dokobit will be liable up to EUR 10 000 per signed document.

## 11. Appendix A (Normative): Certificates Used For E-Sealing PDF Documents

The following certificates are used as a trust anchor for creation and validation of authentication-based signatures using Finnish Trust Network.

1. “Finnish Trust Network Signature by Dokobit” Qualified Certificate for Seal is issued by Qualified Trust Service Provider - SK ID Solutions - in accordance with SK ID Solutions Certification Practice Statement for KLASS3-SK - SK-CPS-KLASS3-v8.0 which is available at [https://www.sk.ee/upload/files/SK-CPS-KLASS3-EN-v8\\_0\\_20190815.pdf](https://www.sk.ee/upload/files/SK-CPS-KLASS3-EN-v8_0_20190815.pdf).

Certificate details:

Key	Value
Serial number	6F 76 D0 47 09 FC 85 1F 62 16 39 B5 F0 B3 76 D6
Valid from	2022-02-23T13:35:52Z
Valid to	2025-03-24T13:35:52Z
<b>Subject information</b>	
Organization identifier	NTRLT-301549834
Serial number	301549834
Location	Vilnius
Country	LT
Organization	Dokobit, UAB
Common name	Finnish Trust Network Signature by Dokobit
<b>Issuer information</b>	



Key	Value
Organization identifier	NTREE-10747013
Organizational unit	Sertifitseerimisteenused
Organization	AS Sertifitseerimiskeskus
Country	EE
Common name	KLASS3-SK 2016

## 11.1 Certificate in PEM format:

```
-----BEGIN CERTIFICATE-----
MIIGczCCBFugAwIBAgIQb3bQRwn8hR9iFjm18LN21jANBgkqhkiG9w0BAQsFADCB
hjELMAkGA1UEBhMCRUUxIjAgBgNVBAoMGUFTIFNlcnRpZml0c2VlcmLtaXNrZXNr
dXMxITAfBgNVBAsMGFNlcnRpZml0c2VlcmLtaXN0ZWVudXNlZDEXMBUGA1UEYQW0
TLRSRUUtMTA3NDcwMTMxZmFzAVBgNVBAMMDktMQVNTMy1TSyAyMDE2MB4XDTIyMDIy
MzEzMzU1Ml0XDTI1MDMyNDEzMzU1Ml0wGAsxGDAWBgNVBGEMD05UUkxULTMwMTU0
OTgzNDESMBAGA1UEBRMJMzAxNTQ5ODM0MRAwDgYDVQIDAdWawXuaXVzMRAwDgYD
VQOHDAAdWawXuaXVzMQswCQYDVQGEwJMVDEVMBMGA1UECgwMRG9rb2JpdCwgVUFC
MTMwMQYDVQDDCpGaw5uaXNoIFRydXN0IE5ldHdvcmsgU2lnbmF0dXJlIGJ5IERv
a29iaXQwgEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQDfww/+xabGDcn4
btGyG88Ist2LaxGI7mPxWtT3cW30FG6smhcIc/oZ2kinngMzWe3CMQmQ9t5Iem3N
hQMU84/7yCQV0vi7GeP4mu3MmDUxiumfYyANbwkwoLgbWfD44T35jcwZJutTA03
Q8aS0908niclHvGcWQa7ZNPuH5SKD0Lp0ht0Is+d49GjMpBKuK0Bzy5s4toHYGZi
ZIPf7Y4r/vCA0teZqYj00FxoZALSuH5WRB2AItx0wFj1+v010P3bbJkDz2gURKo
aQUj1N4wt703WcyEX6geBoMXLbbp+OSawychostZjB1p6nIZYuxGApAKI+KXi+Y+
fMEiSVATAgMBAAwjggG0MIIBsDAJBGNVHRMEAjAAMFMGA1UdIARMMEowMAYJKwYB
BAHOHwcdMCMwIQYIKwYBBQUHAgEWFWh0dHBz0i8vd3d3LnNrLmVlL2NwczAJBgCE
AIVsQAEBMAsGCSsGAQQBz8JATAfBgNVHSMEGDAWgBSuXlj18vLZwY7Z704H23XK
UOKHADA0BGNVHQ8BAf8EBAMCBkAwHQYDVR00BBYEFFbyi1vmmoF146ANFMHZFEhD
n5dDMHsGCCsGAQUFBwEBBG8wbTAoBggrBgEFBQcwAYYcaHR0cDovL2FpYS5zay5l
ZS9rbGFzZmMjAxiNjBBBggrBgEFBQcwAoY1aHR0cHM6Ly9jLnNrLmVlL0tMQVNT
My1TS18yMDE2X0VFQ0NSQ0FFu0hBMzg0LmRlci5jcnQwgYAGCCsGAQUFBwEDBHQw
cjAIBgYEAI5GAQEwEwYGBACORgEGMAKGBwQAjkyBBGIwUQYGBACORgEFMEcwRRY/
aHR0cHM6Ly9zay5lZS9lb39yZXBvc2l0b3J5L2NvbmlRpdGlbnMtZm9yLXVzZS1v
Zi1jZXJ0awZpY2F0ZXMvEwJFTjANBgkqhkiG9w0BAQsFAA0CAgEAY0aRi0BiSu6u
Wa2DaCqSX3JZLyLWTElG7AZtuv1W3TwJkScYL99jJQAjr1unXXKA3nLaniLhQLYl
hqjWbevqJt5rPaEplttWxDNZuhlz1RGeme0+2poUUzFH/xGw8XB3v9XhFUQ6wdm1
3IYug//UMK/zP+CComVbzyzGJ8oyoX2f21I7+0JMpHLnZKfjxnFVAxJIei75ewa+
G4QY0nYV08u7RNMUb4L7RIsLth5LE8ge7xmYFy9kJSKaioKCwaW8kXlbA9TBoLbi
G0Uk8d/uL0aUzDhAQcPtp9ePWhkmucdXbc6J5L486CrjMLVxkgCiXJGPY1+Jx0B
F7+9mQTUzuWG7iw7UZ9Fv/txNed1WloYP+RWTPTegMecEB+8mavY6yl5s/4fW0ZM
ADIFIQFvudKy7slbzR0XarhIsuwQWzWwN9g2c4hMi+5BFQJW0GTqcJQk0I3kATb
ZGdsK/K2n4xpspl9HDkyc55lhhZm/0jLJgADbFCoTiS+W58WbqGlhpKs+ZMULYJe
ZeX2KmXdt34emjKxCdHWEISw2e5A/Abk+OKLTRuHwdiuusAVJU2sqyd76o1cDK1s
00NlraspxsPiQF2X1gQxy+eNuM+NhXIsXGLPWkdvY4JM/EoWgffJrn4QlXuD8r33
JzgyJUR0BjgMSZ/R4eAWobH2eAenwsI=
-----END CERTIFICATE-----
```