Certificates as enabler for innovation in FinTech

EEM A’s 32nd Annual Conference June 2019
Buypass

- Norwegian QTSP according to eIDAS
- Provider of eID, eSignature and payment services
  - 2.8 million users
  - 36 billion mediated turnover (2018)
  - More than 45 million transactions per month (2018)
  - Issuer of digital certificates for natural and legal persons
  - Major provider in national public projects
- TLS/SSL
  - RootCA and issuer of publicly trusted TLS/SSL certificates
  - Member of CA/Browser Forum
- Certifications
  - ISO/IEC 27001 and ISO/IEC 9001
  - PCI DSS
  - ETSI EN 319 411-1 and -2
PSD2 - payment services and roles

PISP: Payment Initiation Service Provider

AISP: Account Information Service Provider

PIISP: Payment service providers issuing card-based payment instruments

ASPSP: Account Servicing Payment Service Provider

Third Party Provider - TPP (Payment Service Provider - PSP)

Payment Service User - PSU
1. For the purpose of identification, as referred to in Article 30(1)(c), payment service providers shall rely on qualified certificates for electronic seals as referred to in Article 3(30) of Regulation (EU) No 910/2014 or for website authentication as referred to in Article 3(39) of that Regulation.

2. For the purpose of this Regulation, the registration number as referred to in the official records in accordance with Annex III (c) or Annex IV (c) to Regulation (EU) No 910/2014 shall be the authorisation number of the payment service provider issuing card-based payment instruments, the account information service provider and payment initiation service providers, including account servicing payment service providers providing such services, available in the public register of the home Member State pursuant to Article 14 of Directive (EU) 2015/2366 or resulting from the notifications of every authorisation granted under Article 8 of Directive 2013/36/EU of the European Parliament and of the Council (1) in accordance with Article 20 of that Directive.

3. For the purposes of this Regulation, qualified certificates for electronic seals or for website authentication referred to in paragraph 1 shall include, in a language customary in the sphere of international finance, additional specific attributes in relation to each of the following:

(a) the role of the payment service provider, which may be one or more of the following:
   (i) account servicing;
   (ii) payment initiation;
   (iii) account information;
   (iv) issuing of card-based payment instruments;
(b) the name of the competent authorities where the payment service provider is registered.

4. The attributes referred to in paragraph 3 shall not affect the interoperability and recognition of qualified certificates for electronic seals or website authentication.
eIDAS Regulation

eIDAS Regulation

Qualified Certificate for electronic signature (QC eSignature)

Qualified Certificate for electronic seal (QC eSeal)

Qualified Website Authentication Certificate (QW AC)
Buypass CA – QTSP according to eIDAS

Buypass CA

QUALIFIED TRUST SERVICE PROVIDER compliant with eIDAS

QC eSignature  QC eSeal  QWAC

Buypass
PSD 2 Qualified Certificates

- PSD 2 QW AC
- PSD 2 QC eSeal
- QW AC
- QC eSeal

Extended Validation (EV) Certificates

Enterprise Certificates
PSD2 Qualified Certificates

ETSI TS 119 495 V1.3.1 (2019-03)

4 General concepts .................................................................
  4.1 Use of Qualified Certificates ..............................................
  4.2 Roles ........................................................................
  4.3 Payment Service Provider Authorizations and Services Passporting ................................................................
  4.4 PSD2 Authorization Number ..............................................
  4.5 Registration and Certificate Issuance ....................................
  4.6 Certificate Validation and Revocation ...................................

5 Certificate profile requirements ............................................
  5.1 PSD2 QC Statement ........................................................
  5.2 Encoding PSD2 specific attributes ......................................
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    5.2.2 Roles of payment service provider ................................
    5.2.3 Name and identifier of the competent authority .................................................................
  5.3 Requirements for QWAC Profile ...........................................
  5.4 Requirements for QsecAC Profile ........................................

6 Policy requirements ............................................................
  6.1 General policy requirements .............................................
  6.2 Additional policy requirements ...........................................
    6.2.1 Certificate profile ......................................................
    6.2.2 Initial identity validation .............................................
    6.2.3 Identification and authentication for revocation requests .........................................................
    6.2.4 Publication and repository responsibilities ......................
    6.2.5 Certificate renewal ....................................................
    6.2.6 Certificate revocation ..................................................

Electronic Signatures and Infrastructures
Sector Specific Requirements
Qualified Certificate Profiles and TSPs
under the payment services Directive
Two different types of certificates

**Qualified Certificate for Electronic Seal**
- **Issued to:** Payment Service Provider
- **Issued by:** Qualified Trust Service
- **Valid from:** 2018/03/20 to: 2020/03/20

**Qualified Website Certificate**
- **Issued to:** Payment Service Provider
- **Issued by:** Qualified Trust Service
- **Valid from:** 2018/03/20 to: 2020/03/20

Qualified Certificates for Seals (QCSEALs):
EU 910/2014 (eIDAS)
Annex III

Qualified Website Certificates (QWACs):
EU 910/2014 (eIDAS)
Annex IV
### Table: Comparison between QSealC and QWAC

<table>
<thead>
<tr>
<th>Feature</th>
<th>QSealC with Electronic Seal</th>
<th>QWAC with Transport Layer Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where is protection applied?</td>
<td>During communication and in storage</td>
<td>Just during communication</td>
</tr>
<tr>
<td>Is data protected when passed through intermediary?</td>
<td>Protection applies end-to-end, even if passed through intermediary</td>
<td>Only applied to direct peer-to-peer communications</td>
</tr>
<tr>
<td>What data is protected?</td>
<td>Specific data block</td>
<td>All data passing through channel</td>
</tr>
</tbody>
</table>

#### Diagram: OSI Model and eIDAS Certificates

- **TCP**
  - 5. Application
  - 4. TCP
  - 3. IP
  - 2. Network Interface
  - 1. Hardware
- **OSI**
  - 7. Application
  - 6. Presentation
  - 5. Session
  - 4. Transport
  - 3. Network
  - 2. Data Link
  - 1. Physical

**Use eIDAS Certificates**

- **Electronic Seals (QSEALCs)**
  - 7
- **Website Certificates (QWACs)**
  - 4
Using QWAC and QC eSeal
PSD2 attributes

QUALIFIED CERTIFICATE

Issued to: Payment Service Provider
Issued by: Qualified Trust Service
Valid from: 2018/03/20 to: 2020/03/20

Authorisation Number of PSP
PSD2 Role(s) of PSP
Name of Home Competent Authority
«PSD 2 identity» = Authorisation Number

- "PSD"
- 2 character country code (NCA country)
- hyphen-minus "-"
- 2-8 character NCA identifier
- hyphen-minus "-"
- PSP identifier - authorisation number

**PSDPL-PFSA-1234567890**
PSP roles and NCA

QUALIFIED CERTIFICATE

Issued to: Payment Service Provider  
Issued by: Qualified Trust Service  
Valid from: 2018/03/20 to: 2020/03/20  

Authorisation Number of PSP

PSD2 QCStatement
- PSD2 Role(s) of PSP
- Name of National Competent Authority

PSD2 QCStatement

• ROLES:
  - (i) account servicing (PSP_AS);
  - (ii) payment initiation (PSP_PI);
  - (iii) account information (PSP_AI);
  - (iv) issuing of card-based payment instruments (PSP_IC);

• NAME OF NCA (NATIONAL COMPETENT AUTHORITY)
Figure 1: PSP Registration and certificate issuance
Thank you for your attention!

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