Kennisnet

Servicebeschrijvingen ECK-ID

SchoolID Services

Laat ict werken **voor het onderwijs**

Inhoud

Kennisnet

Document informatie

Status

Auteur	Kennisnet, Marc Fleischeuers
Versie	1.0.11
Versiedatum	2 juni 2017
Status	concept

Versiehistorie

Versie	Datum	Auteur	Beschrijving
0.9	6 april 2016	Marc Fleischeuers	Assembled from project service descriptions
0.91	18 april 2016	Marc Fleischeuers	Naar aanleiding van KAT Edu-K overleg
0.92	27 mei 2016	Marc Fleischeuers	Exceptions in lijn met realisatie; hpgn format; sample SOAP messages
1.0	12 juli 2017	Marc Fleischeuers	
1.0.9	23 januari 2017	Marc Fleischeuers	Wijzigingen wetgeving (introductie stampseudoniem)
1.0.10	6 april 2017	Marc Fleischeuers	Substitutie van stampseudoniem ipv ECK ID
1.0.11	2 juni 2016	Marc Fleischeuers	Voorbeeldberichten

Betrokken/geraadpleegd

Betrokken	Rol

Distributie en goedkeuring

Versie	Datum	Goedgekeurd (indien van toepassing)
1.0.9	21-3-2017	Tactisch overleg Toegang tot leermateriaal
1.0.11		

1. Samenvatting

2. Services

Some of these services are illustrated with sample requests and responses. These were obtained using synthetic input in SOAPUI. De IDs in these samples are not associated with actual people and in the production environment, the obtained values will be different. The structure of request and response however is correct.

2.1. Create Stem Pseudonym

SERVICE DESCRIPTION	retrieveStempseudonym
CONTEXT	This service is called by allowed LAS systems to obtain a stem pseudonym for, for instance, a just enrolled student. This function is called during the process of enrollment, and its availability is business critical.
INPUT	• hpgn: HPgn, oblig, hashed PGN;
VALIDATIONS	• The calling system, identified by its OIN in the SerialNumber field of the Certificate, is checked against the list of allowed callers (NotAllowedCallerException on failure) • The calling school is identified from the OIN in the wsa:from SOAP header. If the school is not in the list of allowed schools, a NotAllowedCallerException will be thrown • hashed PGN: format validations (InvalidHPgnException on failure)
OPERATION	The service derives a stem pseudonym from the input. The derivation of a valid stem pseudonym is performed by a component that is specified in software configuration.
OUTPUT	stempseudonym: The generated stem pseudonym
EXCEPTIONS	• NotAllowedCallerException • HashOperationException (indicates server configuration error)
REMARKS	•

2.1.1. Sample request

```
POST https://service.id.school/eck/ws/201703/ HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: text/xml;charset=UTF-8
SOAPAction: "http://id.school/eck/schemas/v1_0/retrieveStampseudonym"
Content-Length: 768
Host: service.id.school
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

<soapenv:Envelope
  xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:v1="http://id.school/eck/schemas/v1_0">
  <soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:Action>http://id.school/eck/schemas/v1_0/retrieveStampseudonym</wsa:Action>
    <wsa:From>
      <wsa:Address>
        http://www.w3.org/2005/08/addressing/anonymous?oin=0000000700019HY34567
      </wsa:Address>
    </wsa:From>
    <wsa:MessageID>uuid:0d9fd98e-7544-4836-bca1-2c57f6503556</wsa:MessageID>
    <wsa:To>https://service.id.school/eck/ws/201703/</wsa:To>
  </soapenv:Header>
  <soapenv:Body>
    <v1:retrieveStampseudonymRequest>
      <v1:hpgn>
        fa4c1c6d8df86b3d41848b81becb2630b611bc7eb99ed98473b7628e2d848f83
      </v1:hpgn>
    </v1:retrieveStampseudonymRequest>
  </soapenv:Body>
```

Kennisnet

```
  </soapenv:Envelope>
```

2.1.2. Sample response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing">
      http://id.school/eck/schemas/v1_0/SchoolID/retrieveStampseudonymResponse
    </Action>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">
      urn:uuid:73fa8de1-f094-40bc-b56f-8a3b74c70249
    </MessageID>
    <To xmlns="http://www.w3.org/2005/08/addressing">
      http://www.w3.org/2005/08/addressing/anonymous?oin=0000000700019HY34567
    </To>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">
      uuid:0d9fd98e-7544-4836-bca1-2c57f6503556</RelatesTo>
    <From xmlns="http://www.w3.org/2005/08/addressing">
      <Address>
        http://www.w3.org/2005/08/addressing/anonymous?oin=00000003272448340000
      </Address>
    </From>
  </soap:Header>
  <soap:Body>
    <retrieveStampseudonymResponse xmlns="http://id.school/eck/schemas/v1_0">
      <stampseudonym>

https://id.school/sppilot/83f4980640a326a76d4aa0b66529759fb8642174677e2957ef252f23437a65533aaa0a4bb
ad22e461b727b69b6fb832c366227a64097637ca3481db00fb034f8
      </stampseudonym>
    </retrieveStampseudonymResponse>
  </soap:Body>
</soap:Envelope>
```

2.2. Create ECK ID

SERVICE DESCRIPTION	retrieveEckId
CONTEXT	This service is called by allowed LAS systems to obtain a ECK ID for, for instance, a just enrolled student. This function is called during the process of enrollment, and its availability is business critical.
INPUT	• Stempseudonym: Stem pseudonym, obtained with 'retrieveStempseudonym' • chainID: xsd:string, oblig, Identifier for ECK chain • sectorID: xsd:string, oblig, Identifier for educational sector
VALIDATIONS	• The calling system, identified by its OIN in the SerialNumber field of the Certificate, is checked against the list of allowed callers (NotAllowedCallerException on failure) • The calling school is identified from the OIN in the wsa:from SOAP header. If the school is not in the list of allowed schools, a NotAllowedCallerException will be thrown • Stem pseudonym, SectorID, ChainID: format validations (Format Exception specific for argument on failure, e.g. InvalidStemPseudonymException, InvalidChainIdException and InvalidSectorIdException). • SectorID is one of the IDs of educational sectors (InvalidSectorIdException on failure).

	• ChainID is one of the IDs in chains (InvalidChainIdException on failure) • Hashed PGN is not in substitutionList.old (BlockedHPgnException on failure)
OPERATION	The service combines the three inputs and from the result derives a valid ECK ID. The derivation of a valid ECK ID is performed by a component that is specified in software configuration. If the provided stem pseudonymis in substitutionList.new and sectorID is equal to the substitutionlist.sectorID and today is later than substitutiontable.effectivedate, the previous stem pseudonym is used to derive the ECK ID from.
OUTPUT	eckID: EckID, The derived ECK ID
EXCEPTIONS	• InvalidSectorIdException InvalidChainIdException InvalidHPgnException • BlockedStempseudonymException • NotAllowedCallerException • HashOperationException (indicates server configuration error)
REMARKS	• chainID, sectorID are in the form of OBK URN's. Retrieve these values using the retrieveChains, retrieveSectors operations respectively. • eckID is in the form of a URL: https://id.school/201703/[128-char hex string]. Currently this url resolves to a static page containing general information about the ECK ID.

2.2.1. Sample request

POST https://service.id.school/eck/ws/201703/ HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: text/xml;charset=UTF-8
SOAPAction: "http://id.school/eck/schemas/v1_0/retrieveEckId"
Content-Length: 1082
Host: service.id.school
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

```
<soapenv:Envelope
 xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
 xmlns:v1="http://id.school/eck/schemas/v1_0">
 <soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
  <wsa:Action>
    http://id.school/eck/schemas/v1_0/retrieveEckId
  </wsa:Action>
  <wsa:From>
   <wsa:Address>
     http://www.w3.org/2005/08/addressing/anonymous?oin=0000000700019HY34567
   </wsa:Address>
  </wsa:From>
  <wsa:MessageID>uuid:692d9bd9-8a14-487d-9461-1606b57fbbe6</wsa:MessageID>
  <wsa:To>
    https://service.id.school/eck/ws/201703/
  </wsa:To>
 </soapenv:Header>
 <soapenv:Body>
   <v1:retrieveEckIdRequest>
     <v1:stampseudonym>

https://id.school/sppilot/83f4980640a326a76d4aa0b66529759fb8642174677e2957ef252f23437a65533aaa0a4bb
ad22e461b727b69b6fb832c366227a64097637ca3481db00fb034f8
     </v1:stampseudonym>
```

Kennisnet

```
      <v1:chainId>
        http://purl.edustandaard.nl/begrippenkader/e7ec7d3c-c235-4513-bfb6-e54e66854795
      </v1:chainId>
      <v1:sectorId>
        http://purl.edustandaard.nl/begrippenkader/2a1401e9-c223-493b-9b86-78f6993b1a8d
      < /v1:sectorId>
    </v1:retrieveEckIdRequest>
  </soapenv:Body>
</soapenv:Envelope>
```

2.2.2.   Sample response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing">
      http://id.school/eck/schemas/v1_0/SchoolID/retrieveEckIdResponse
    </Action>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">
      urn:uuid:18137f40-e7af-4e07-9d7c-8787ac273e21
    </MessageID>
    <To xmlns="http://www.w3.org/2005/08/addressing">
      http://www.w3.org/2005/08/addressing/anonymous?oin=0000000700019HY34567
    </To>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">
      uuid:692d9bd9-8a14-487d-9461-1606b57fbbe6
    </RelatesTo>
    <From xmlns="http://www.w3.org/2005/08/addressing">
      <Address>
        http://www.w3.org/2005/08/addressing/anonymous?oin=00000003272448340000
      </Address>
    </From>
  </soap:Header>
  <soap:Body>
    <retrieveEckIdResponse xmlns="http://id.school/eck/schemas/v1_0">
      <eckId>

https://id.school/pilot/7d5bc8a34baf86928eebdb739cd823f7f4682793a446ee11946aaa91097314cd609eb0cffd81
265876b48896bb4614e0f047e78d1ab395066d1fde624902fb7e
      </eckId>
    </retrieveEckIdResponse>
  </soap:Body>
</soap:Envelope>
```

2.3.   Change stem pseudonym (subsitution)

SERVICE DESCRIPTION	replaceStempseudonym
CONTEXT	This service is called when a school administration needs to indicate that a student is assigned a new PGN by the authorities. A change of PGN number is handled as follows: the old and the new stem hashed PGN are recorded in the database; subsequent requests for the old hashed PGN are rejected, and for requests with the new stem hashed PGN, the old hashed PGN is used to derive the stem pseudonym from. See also service description Create stempseudonym.
INPUT	• hPGNOld, hPGNNew: oblig, resp. previous hashed PGN and new hashed PGN

	• effectiveDate: xsd:date, optional, 'now' if not given, date and time that the change should take effect
VALIDATIONS	• The calling system identified by its OIN in the Certificate is checked against the list of allowed callers (NotAllowedCallerException on failure) • The calling school is identified from the OIN in the wsa:from header. If the school is not in the list of allowed schools, a NotAllowedCallerException will be thrown • Format validations on input arguments (format Exception specific for argument on failure). • Old hPGN is not already in the substitution table (old and new) (BlockedPGNException otherwise) • New hPGN is not already in the substitution table (old and new) (BlockedPGNException otherwise) • Old and new hPGN are different (substitutionOperationException otherwise) • Effective date: if given, is valid and in the future (xml parse error in case of invalid date format)
OPERATION	Old hPGN, new hPGN are recorded in the substitution table, and a stem pseudonym for the new hPGN is derived using function 'Create stem pseudonym'.
OUTPUT	stem pseudonym: The stem pseudonym for the new hpgn
EXCEPTIONS	• InvalidhPGNException with information on which stem pseudonym is invalid, and why • SubstitutionOperationException • NotAllowedCallerException • HashOperationException (indicates server configuration error)
REMARKS	• Stem pseudonym is in the form of a URL: https://id.school/spv1/[128-char hex string].

2.3.1. Sample request

```
POST https://service.id.school/eck/ws/201703/ HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: text/xml;charset=UTF-8
SOAPAction: "http://id.school/eck/schemas/v1_0/replaceStampseudonym"
Content-Length: 870
Host: service.id.school
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

<soapenv:Envelope
      xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
      xmlns:v1="http://id.school/eck/schemas/v1_0">
   <soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
      <wsa:Action>
            http://id.school/eck/schemas/v1_0/replaceStampseudonym
      </wsa:Action>
      wsa:From>
      <wsa:Address>
            http://www.w3.org/2005/08/addressing/anonymous?oin=0000000700019HY34567
      </wsa:Address>
   </wsa:From>
   <wsa:MessageID>uuid:95013a44-1583-49bc-8ffb-fce6eafb0840</wsa:MessageID>
   <wsa:To>https://service.id.school/eck/ws/201703/</wsa:To>
   </soapenv:Header>
   <soapenv:Body>
```

```
      <v1:replaceStampseudonymRequest>
<v1:hpgnOld>1f600cb5a432a31f6f877528324f4eca08b2006d50bb8d6374591be4ea995828</v1:hpgnOld>
<v1:hpgnNew>8a333608fc1c31ff37618d12f76be459078ddddd227fa8031458a72b662b6f93</v1:hpgnNew>
          <v1:effectiveDate>2017-06-01T13:26:30.806+01:00</v1:effectiveDate>
       </v1:replaceStampseudonymRequest>
    </soapenv:Body>
  </soapenv:Envelope>
```

2.3.2. Sample response

The stempseudonym that is returned by this function (marked line the response) is the stempseudonym that is associated to the new hashed PGN, starting at effectiveDate if given or now. This stempseudonym used to be associated with hpgnOld in the request. Starting effectiveDate or the moment the request is submitted, the hashed PGN hpgnOld can no longer be used (see below).

```
  <soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Header>
      <Action xmlns="http://www.w3.org/2005/08/addressing">
        http://id.school/eck/schemas/v1_0/SchoolID/replaceStampseudonymResponse
      </Action>
      <MessageID xmlns="http://www.w3.org/2005/08/addressing">
        urn:uuid:2544795a-729a-4887-bbbf-ac0fba5ab08c
      </MessageID>
      <To xmlns="http://www.w3.org/2005/08/addressing">
        http://www.w3.org/2005/08/addressing/anonymous?oin=0000000700019HY34567
      </To>
      <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">
        uuid:95013a44-1583-49bc-8ffb-fce6eafb0840
      </RelatesTo>
      <From xmlns="http://www.w3.org/2005/08/addressing">
        <Address>http://www.w3.org/2005/08/addressing/anonymous?oin=00000003272448340000</Address>
      </From>
    </soap:Header>
    <soap:Body>
      <replaceStampseudonymResponse xmlns="http://id.school/eck/schemas/v1_0">
        <stampseudonym>
https://id.school/sppilot/b87d57ea2b40fe0cfb7cf29b3d162dc1e5cb8ca5e040a3208fec5220c0d65a5cfbe627afe67
c8e779e045a5049c8e61caf592da5f17d4c872017fa5352498436
        </stampseudonym>
      </replaceStampseudonymResponse>
    </soap:Body>
  </soap:Envelope>
```

2.3.3. Followup request

This is a request that uses a previously substituted hashed PGN

```
  POST https://service.id.school/eck/ws/201703/ HTTP/1.1
  Accept-Encoding: gzip,deflate
  Content-Type: text/xml;charset=UTF-8
  SOAPAction: "http://id.school/eck/schemas/v1_0/retrieveStampseudonym"
  Content-Length: 768
```

Host: service.id.school
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

```xml
<soapenv:Envelope
 xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
 xmlns:v1="http://id.school/eck/schemas/v1_0">
 <soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
  <wsa:Action>http://id.school/eck/schemas/v1_0/retrieveStampseudonym</wsa:Action>
  <wsa:From>
   <wsa:Address>
    http://www.w3.org/2005/08/addressing/anonymous?oin=0000000700019HY34567
   </wsa:Address>
  </wsa:From>
  <wsa:MessageID>uuid:8d9076aa-6b39-437b-91a9-e6d250ff8eeb</wsa:MessageID>
  <wsa:To>https://service.id.school/eck/ws/201703/</wsa:To>
 </soapenv:Header>
 <soapenv:Body>
  <v1:retrieveStampseudonymRequest>
   <v1:hpgn>1f600cb5a432a31f6f877528324f4eca08b2006d50bb8d6374591be4ea995828</v1:hpgn>
  </v1:retrieveStampseudonymRequest>
 </soapenv:Body>
</soapevn:Envelope>
```

2.3.4. Followup response

```xml
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
 <soap:Header>
  <Action xmlns="http://www.w3.org/2005/08/addressing">
   http://id.school/eck/schemas/v1_0/SchoolID/retrieveStampseudonym/Fault/SOAPFaultException
  </Action>
  <MessageID xmlns="http://www.w3.org/2005/08/addressing">
   urn:uuid:7fe9e263-2e25-443a-8ee0-2c3f4d4560be
  </MessageID>
  <To xmlns="http://www.w3.org/2005/08/addressing">
   http://www.w3.org/2005/08/addressing/anonymous?oin=0000000700019HY34567
  </To>
  <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">
   uuid:8d9076aa-6b39-437b-91a9-e6d250ff8eeb
  </RelatesTo>
  <From xmlns="http://www.w3.org/2005/08/addressing">
   <Address>http://www.w3.org/2005/08/addressing/anonymous?oin=00000003272448340000</Address>
  </From>
 </soap:Header>
 <soap:Body>
  <soap:Fault>
   <faultcode>soap:SERVER</faultcode>
   <faultstring>Fout geconstateerd bij het verwerken van een aanroep van 'retrieveStampseudonym': Het aangeleverde HPgn is geblokkeerd</faultstring>
   <faultactor>BlockedHPgnException</faultactor>
   <detail>
    <message>Het aangeleverde HPgn is geblokkeerd</message>
   </detail>
```

Kennisnet

```
        </soap:Fault>
      </soap:Body>
    </soap:Envelope>
```

2.4.   Batch creation of stem pseudonyms

SERVICE DESCRIPTION	submitStempseudonymBatch
CONTEXT	This service is called by allowed LAS systems to submit a list of stem pseudonyms, for a single Sector and a single Chain. The system processes the list and makes a corresponding list of stem pseudonyms available for retrieval (see retrieveEckBatch).

INPUT	• stempseudonymList: a list of 1..20.000[1]
	   ○ int: xsd:int, oblig, sequence number
	   ○ hPgn: HPgn hashed PGNs

VALIDATIONS	• The calling system identified by its OIN in the Certificate is checked against the list of allowed callers (NotAllowedCaller Exception on failure) • The calling school is identified from the OIN in the wsa:from header. If the school is not in the list of allowed schools, a NotAllowedCallerException will be thrown • The system validates the size of the input (TemporaryBannedException if too many hPgns are submitted) • All indexes are unique (DuplicateIndexHPgnListException otherwise)
OPERATION	The service creates a stem pseudonym for each hashed PGN in the input list and adds it to the list of generated stem pseudonyms for output. If the list does not contain a hashed PGN or if the hashed PGN was previously indicated as changed, no stem pseudnym will be created and a message to indicate the nature of the failure will be added to the list of failed items for output.
OUTPUT	• batchIdentifier: xsd:string, identifier of the batch request. This identifier can be used to obtain the result, using retrieveEckBatch
EXCEPTIONS	• InvalidSectorIdException InvalidChainIdException InvalidHPgnException • NotAllowedCallerException • HashOperationException (indicates server configuration error) • DuplicateIndexHPgnListException
REMARKS	The use of this service is limited to prevent abuse: • A batch may contain at most 20.000 hashed PGNs • A batch operation may be submitted at most 3 times per 24 hours These limits are configured in the software and can be modified. Schools that exceed these limits are temporarily banned from submitting batch requests. Schools may contact Kennisnet servicedesk for information and for lifting of the bans. Schools may submit multiple batch requests, as long as the limits are observed. Batches are processed in the order in which they occur. A batch result is available within one hour after submission of the request. Batch results are removed after successful retrieval. The system may remove batch results that are not retrieved within 24 hours.

2.4.1.   Sample request

POST https://service.id.school/eck/ws/201703/ HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: text/xml;charset=UTF-8
SOAPAction: "http://id.school/eck/schemas/v1_0/submitStampseudonymBatch"
Content-Length: 3327

---

[1] The size of the array is comfigured in software. Actual limit may differ.

Host: servic.eid.school

Connection: Keep-Alive

User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

```
<soapenv:Envelope
   xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
   xmlns:v1="http://id.school/eck/schemas/v1_0">
   <soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
     <wsa:Action>http://id.school/eck/schemas/v1_0/submitStampseudonymBatch</wsa:Action>
     <wsa:From>
       <wsa:Address>
          http://www.w3.org/2005/08/addressing/anonymous?oin=0000000700019HY34567
       </wsa:Address>
     </wsa:From>
     <wsa:MessageID>uuid:b5231b6a-7eba-4bd9-9a83-42b393c4963c</wsa:MessageID>
     <wsa:To>https://service.id.school/eck/ws/201703/</wsa:To>
   </soapenv:Header>
   <soapenv:Body>
    <v1:submitStampseudonymBatchRequest>
     <!--1 or more repetitions:-->
     <v1:hpgnList>
       <v1:index>1</v1:index>
       <v1:hPgn>afa4c1c6d8df86b3d41848b81becb2630b611bc7eb99ed98473b7628e2d848f83</v1:hPgn>
     </v1:hpgnList>
     <v1:hpgnList>
       <v1:index>3</v1:index>
       <v1:hPgn>x789e4a591ccbde784f7b390e6edd6a16f42b77996de5a31c7e27b8358d44720</v1:hPgn>
     </v1:hpgnList>
     <v1:hpgnList>
       <v1:index>5</v1:index>
       <v1:hPgn>38c238660fdbfc405f4bed067ab0404e594c49d858419adc2136e5f5afb7edb</v1:hPgn>
     </v1:hpgnList>
    </v1:submitStampseudonymBatchRequest>
   </soapenv:Body>
</soapenv:Envelope>
```

2.4.2. Sample response
```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing">
      http://id.school/eck/schemas/v1_0/SchoolID/submitStampseudonymBatchResponse
    </Action>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">
      urn:uuid:5b128845-0563-4c39-9c88-0b96c842483e
    </MessageID>
    <To xmlns="http://www.w3.org/2005/08/addressing">
      http://www.w3.org/2005/08/addressing/anonymous?oin=0000000700019HY34567
    </To>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">
      uuid:b5231b6a-7eba-4bd9-9a83-42b393c4963c
    </RelatesTo>
    <From xmlns="http://www.w3.org/2005/08/addressing">
```

```
            <Address>
                http://www.w3.org/2005/08/addressing/anonymous?oin=00000003272448340000
            </Address>
        </From>
    </soap:Header>
    <soap:Body>
        <submitBatchResponse xmlns="http://id.school/eck/schemas/v1_0">
            <batchIdentifier>201706010833593f213288901043daa0beb6576d0345f5</batchIdentifier>
        </submitBatchResponse>
    </soap:Body>
</soap:Envelope>
```

2.5.   Batch creation of ECK IDs

SERVICE DESCRIPTION	submitEckIdBatch
CONTEXT	This service is called by allowed LAS systems to submit a list of stem pseudnyms, for a single Sector and a single Chain. The system processes the list and makes a corresponding list of ECK IDs available for retrieval (see retrieveEckBatch).
INPUT	- stempseudonymList: a list of 1..20.000[2] - int: xsd:int, oblig, sequence number - stempseudonym: Stem pseudonym - chainID: xsd:string, oblig, Identifier for ECK chain - sectorID: xsd:string, oblig, Identifier for educational sector
VALIDATIONS	- The calling system identified by its OIN in the Certificate is checked against the list of allowed callers (NotAllowedCaller Exception on failure) - The calling school is identified from the OIN in the wsa:from header. If the school is not in the list of allowed schools, a NotAllowedCallerException will be thrown - The system validates the size of the input (TemporaryBannedException if too many stem pseudonyms are submitted) - All indexes are unique (DuplicateIndexHPgnListException otherwise) - SectorID is one of the IDs of educational sectors (InvalidSectorIdException on failure). - ChainID is one of the IDs in chains (InvalidChainIdException on failure) - Stempseudonyms is not in substitutionList.old (offending stem pseudonym is added to the failed list for output)
OPERATION	The service creates a ECK ID for each hashed PGN in the input list and adds it to the list of generated ECK IDs for output. If the list does not contain a hashed PGN or if the hashed PGN was previously indicated as changed, no ECK ID will be created and a message to indicate the nature of the failure will be added to the list of failed PGNs for output. If the provided hashed PGN is in substitutionList.new and sectorID is equal to the substitutionlist.sectorID and today is later than substitutiontable.effectivedate, the previous hashed PGN is used to derive the ECK ID from.
OUTPUT	batchIdentifier: xsd:string, identifier of the batch request. This identifier can be used to obtain the result, using retrieveEckBatch
EXCEPTIONS	- InvalidSectorIdException InvalidChainIdException InvalidHPgnException - BlockedHPgnException - NotAllowedCallerException - HashOperationException (indicates server configuration error) - DuplicateIndexHPgnListException
REMARKS	The use of this service is limited to prevent abuse: A batch may contain at most 20.000 hashed PGNs

---

[2] The size of the array is comfigured in software. Actual limit may differ.

Kennisnet

- A batch operation may be submitted at most 3 times per 24 hours

These limits are configured in the software and can be modified. Schools that exceed these limits are temporarily banned from submitting batch requests. Schools may contact Kennisnet servicedesk for information and for lifting of the bans. Schools may submit multiple batch requests, as long as the limits are observed. Batches are processed in the order in which they occur.

A batch result is available within one hour after submission of the request. Batch results are removed after successful retrieval. The system may remove batch results that are not retrieved within 24 hours.

2.5.1. Sample request

This request intentionally contains some faulty stampseudonym values, to demonstrate the effects of erroneous input. See 2.6 Retrieval of batch results.

```
POST https://service.id.school/eck/ws/201703/ HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: text/xml;charset=UTF-8
SOAPAction: "http://id.school/eck/schemas/v1_0/submitEckIdBatch"
Content-Length: 2006
Host: service.id.school
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)
```

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:v1="http://id.school/eck/schemas/v1_0">
  <soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:Action>http://id.school/eck/schemas/v1_0/submitEckIdBatch</wsa:Action>
    <wsa:From>

<wsa:Address>http://www.w3.org/2005/08/addressing/anonymous?oin=0000000700019HY34567</wsa:Address>
    </wsa:From>
    <wsa:MessageID>uuid:e8df13ec-37ee-418c-b3a7-b86e2763e5de</wsa:MessageID>
    <wsa:To>https://service.id.school/eck/ws/201703/</wsa:To>
  </soapenv:Header>
  <soapenv:Body>
    <v1:submitEckIdBatchRequest>
      <!--1 or more repetitions:-->
      <v1:stampseudonymList>
        <v1:index>1</v1:index>

<v1:stampseudonym>https://id.school/sppilot/11b7285596590e3448c18407db59139c59689b19835a9fa82410800
0f8e221ed1e478e9dcfd00897dcd689ede17cb6a6ae8a6a069383ac8eea3d951a05a802e12f</v1:stampseudonym
>
      </v1:stampseudonymList>
      <v1:stampseudonymList>
        <v1:index>2</v1:index>
        <v1:stampseudonym>foutpseudoniem</v1:stampseudonym>
      </v1:stampseudonymList>
      <v1:stampseudonymList>
        <v1:index>4</v1:index>
```

```
<v1:stampseudonym>https://id.school/sppilot/x7fdcb0610fd7bd59a9c515e618838ebfa8ec5bbdfe7a5173dd45449
e2697544d748e36ca163f549924727b5d596b45a90739ba3753f6539511ff8a1e3d0b71f</v1:stampseudonym>
        </v1:stampseudonymList>
        <v1:stampseudonymList>
          <v1:index>8</v1:index>

<v1:stampseudonym>https://id.school/sppilot/6f7f47bc0f5b1c4247a2c630195eab85318004de74b6d831e0d0aa45
aeb2de12e469e9864664a0ce385ac6bc9d805343b5afd554f1d8b2f10d3ec20fb1d62dc9</v1:stampseudonym>
        </v1:stampseudonymList>
        <v1:chainId>http://purl.edustandaard.nl/begrippenkader/e7ec7d3c-c235-4513-bfb6-
e54e66854795</v1:chainId>
        <v1:sectorId>http://purl.edustandaard.nl/begrippenkader/2a1401e9-c223-493b-9b86-
78f6993b1a8d</v1:sectorId>
      </v1:submitEckIdBatchRequest>
    </soapenv:Body>
</soapenv:Envelope>
```

2.5.2. Sample response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header>
    <Action
xmlns="http://www.w3.org/2005/08/addressing">http://id.school/eck/schemas/v1_0/SchoolID/submitEckIdBatchR
esponse</Action>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">urn:uuid:4cd8e96d-3a89-4dd0-ad97-
5a9d098a43a0</MessageID>
    <To
xmlns="http://www.w3.org/2005/08/addressing">http://www.w3.org/2005/08/addressing/anonymous?oin=0000000
700019HY34567</To>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">uuid:e8df13ec-37ee-418c-b3a7-
b86e2763e5de</RelatesTo>
    <From xmlns="http://www.w3.org/2005/08/addressing">
      <Address>http://www.w3.org/2005/08/addressing/anonymous?oin=00000003272448340000</Address>
    </From>
  </soap:Header>
  <soap:Body>
    <submitBatchResponse xmlns="http://id.school/eck/schemas/v1_0">
      <batchIdentifier>2017060112552627cb1432728b4f6489b4dbc5c18a4e09</batchIdentifier>
    </submitBatchResponse>
  </soap:Body>
</soap:Envelope>
```

2.6. Retrieval of batch results

SERVICE DESCRIPTION	retrieveEckIdBatch
CONTEXT	This service is called by allowed LAS systems to retrieve the status and result of a batch request.
INPUT	• batchIdentifier: xsd:string, oblig, the batch identifier obtained in the response from a batch submission (see submitEckIdBatch)
VALIDATIONS	• The calling system identified by its OIN in the Certificate is checked against the list of allowed callers (NotAllowedCallerException on failure)

	• The calling school is identified from the OIN in the wsa:from header. If the school is not in the list of allowed schools, a NotAllowedCallerException will be thrown • The system validates the frequency of calls (SchoolTemporaryBlockedException or BatchTemporaryBlockedException if there are too many calls registered) • The batch result can be retrieved at most once; ContentAlreadyRetrievedException is returned if the batch was retrieved earlier • If the batch indicated by the input is purged, already retrieved, or not ready yet, a NotFinishedException is returned
OPERATION	The service retrieves the batch result (either StempseudonymBatch or EckIdBatch), if available, and returns it to the caller. If an error during check or processing occurs, the error is returned.

OUTPUT	• Success: an optional list of 1..20000[3]:
	   ○ Index: int, the sequence number of the corresponding entry from the input
	   ○ EckId: EckId, the ECK ID of the entry indicated by the sequence number from the input
	• Failed: an optional list of 1..20000[4]:
	   ○ Index: int, the sequence number of the corresponding entry from the input
	   ○ errorMessage: string, indication of the error that occurred when computing the ECK ID

EXCEPTIONS	• InvalidSectorIdException • InvalidChainIdException • InvalidHPgnException • BlockedHPgnException • NotAllowedCallerException • HashOperationException (indicates server configuration error) • SchoolTemporaryBlockedException, BatchTemporaryBlockedException • ContentAlreadyRetrievedException • NotFinishedException •
REMARKS	The use of this service is limited to prevent abuse: a batch retrieval may be attempted at most once per 15 minutes (software configurable; actual limit may differ). In case this limit is exceeded, the offending school is temporarily banned from using this service. Schools may contact Kennisnet servicedesk for more information and to lift the ban. A batch result is available within one hour after submission of the request. Batch results are removed after successful retrieval. Batch results that are not retrieved can be removed after 24 hours. In the output of this function, both success and failure are optional arrays. If none of the input fail, the response will contain only 'success' values. If none of the input succeed, the response will contain only 'failure'.

2.6.1. Sample request

This request retrieves the result produced by the ECK ID Batch request above.

POST https://service.id.school/eck/ws/201703/ HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: text/xml;charset=UTF-8

---

[3] Limit is set in in software configuration; actual values may differ
[4] Idem

SOAPAction: "http://id.school/eck/schemas/v1_0/retrieveBatch"
Content-Length: 748
Host: service.id.school
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

```
<soapenv:Envelope
 xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
 xmlns:v1="http://id.school/eck/schemas/v1_0">
  <soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
   <wsa:Action>
     http://id.school/eck/schemas/v1_0/retrieveBatch
   </wsa:Action>
   <wsa:From>
    <wsa:Address>
      http://www.w3.org/2005/08/addressing/anonymous?oin=0000000700019HY34567
    </wsa:Address>
   </wsa:From>
   <wsa:MessageID>uuid:b69c9bac-3d1c-44f9-b57e-c9c3595f5c4e</wsa:MessageID>
   <wsa:To>https://service.id.school/eck/ws/201703/</wsa:To>
  </soapenv:Header>
  <soapenv:Body>
    <v1:retrieveBatchRequest>
      <v1:batchIdentifier>2017060112552627cb1432728b4f6489b4dbc5c18a4e09</v1:batchIdentifier>
    </v1:retrieveBatchRequest>
  </soapenv:Body>
</soapenv:Envelope>
```

2.6.2.   Sample response
The response contains several generic errorMessage elements "Genereren niet succesvol". These messages will be replaced by specific error messages that indicate the type of error that occurred.

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header>
    <Action
xmlns="http://www.w3.org/2005/08/addressing">http://id.school/eck/schemas/v1_0/SchoolID/retrieveBatchResponse</Action>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">urn:uuid:a281bd18-c241-426b-9dfe-3cbc3127b60b</MessageID>
    <To
xmlns="http://www.w3.org/2005/08/addressing">http://www.w3.org/2005/08/addressing/anonymous?oin=0000000700019HY34567</To>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">urn:uuid:a61d7a7d-cd0c-4b41-9b14-fa86a5391e08</RelatesTo>
    <From xmlns="http://www.w3.org/2005/08/addressing">
      <Address>http://www.w3.org/2005/08/addressing/anonymous?oin=00000003272448340000</Address>
    </From>
  </soap:Header>
  <soap:Body>
    <retrieveBatchResponse xmlns="http://id.school/eck/schemas/v1_0">
      <success>
        <index>8</index>
```

```xml
<value>https://id.school/pilot/d9077719252c8046d0936b07025aed696753dbf3d57ad427bae81daf6cc7bfc930f52
3570a541472d1ab03fa349551df7ff65e32af57aa95bf36a24ec6065fb6</value>
        </success>
        <failed>
            <index>1</index>
            <errorMessage>Genereren niet succesvol</errorMessage>
        </failed>
        <failed>
            <index>2</index>
            <errorMessage>Genereren niet succesvol</errorMessage>
        </failed>
        <failed>
            <index>4</index>
            <errorMessage>Genereren niet succesvol</errorMessage>
        </failed>
    </retrieveBatchResponse>
  </soap:Body>
</soap:Envelope>
```

2.7. Retrieving chains and sectors

SERVICE DESCRIPTION	retrieveChains
CONTEXT	This service is called by allowed LAS systems to obtain the list of chain parties for which an ECK ID can be derived. As this list changes rarely, this service will not be called often, probably not more than once per day per LAS.
INPUT	none
VALIDATIONS	• The calling system identified by its OIN in the Certificate is checked against the list of allowed callers (NotAllowedCallerException on failure) • The calling school is identified from the OIN in the wsa:from header. If the school is not in the list of allowed schools, a NotAllowedCallerException will be thrown
OPERATION	The service retrieves the list of active Chain Parties
OUTPUT	List of 1 or more : • Id: xsd:string, Identifier of chain that can be used to create ECK IDs for this chain • Name: xsd:string, unique and short name for this chain • Description: xsd:string, human-readable description for this chain • lastEdited: xsd:date, last time this entry was modified
EXCEPTIONS	NotAllowedCallerException
REMARKS	• Currently, only one chain is available in the system, the ECK chain. It's value is http://purl.edustandaard.nl/begrippenkader/e7ec7d3c-c235-4513-bfb6-e54e66854795

SERVICE DESCRIPTION	retrieveSectors
CONTEXT	This service is called by allowed LAS systems to obtain the list of school types for which an ECK ID can be derived. As this list changes rarely, this service will not be called often, probably not more than once per day per LAS.
INPUT	none
VALIDATIONS	• The calling system identified by its OIN in the Certificate is checked against the list of allowed callers (NotAllowedCallerException on failure)

	• The calling school is identified from the OIN in the wsa:from header. If the school is not in the list of allowed schools, a NotAllowedCallerException will be thrown
OPERATION	Retrieve the list of active SectorIDs from the database.
OUTPUT	List of 1 or more : • Id: xsd:string, Identifier of sector that can be used to create ECK IDs for this sector • Name: xsd:string, unique and short name for this sector • Description: xsd:string, human-readable description for this sector • lastEdited: xsd:date, last time this entry was modified
EXCEPTIONS	NotAllowedCallerException

REMARKS	• Currently, thee educational sectors are available in the system:
	    ○ Primair onderwijs: http://purl.edustandaard.nl/begrippenkader/512e4729-03a4-43a2-95ba-758071d1b725
	    ○ VO: http://purl.edustandaard.nl/begrippenkader/2a1401e9-c223-493b-9b86-78f6993b1a8d
	    ○ MBO: http://purl.edustandaard.nl/begrippenkader/f3ac3fbb-5eae-49e0-8494-0a44855fff25
	The names, descriptions and values are taken from OBK.

2.8. Ping operation

SERVICE DESCRIPTION	**pingRequest**
CONTEXT	This service is called by allowed LAS systems to verify the service is alive.
INPUT	none
VALIDATIONS	• The calling system identified by its OIN in the Certificate is checked against the list of allowed callers (NotAllowedCallerException on failure) • The calling school is identified from the OIN in the wsa:from header. If the school is not in the list of allowed schools, a NotAllowedCallerException will be thrown
OPERATION	Verify the database is available for operation
OUTPUT	• Available: Boolean, the system is available (true) or not (false) • applicationVersion: string, identifier for the implementation version • systemTime: xsd:dateTime, timestamp of the current system time
EXCEPTIONS	NotAllowedCallerException
REMARKS	•

Kennisnet

3. Common types

Name	HPgn
Fields	xsd:string
Constraints	• Consists of 64 hex characters ([0-9][A-Z][[a-z]){64}
Remarks	Contains the result of the prescribed hash function SCrypt

Name	EckId
Fields	xsd:string
Constraints	• Is not empty
Remarks	

4. Exceptions

Exceptions will be presented by the Nummervoorziening Service as Soap faults. To distinguish the cause Exception of an operation at the client, the element faultactor will hold the specific Exception. In the detail node, a message node is added with additional information regarding the Exception.

Example of a Soap fault as a response from the Nummervoorziening Service (omitting the Soap Headers):

```xml
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
   <soap:Body>
      <soap:Fault>
         <faultcode>soap:SERVER</faultcode>
         <faultstring>RetrieveEckIdBatch has thrown an exception while
building the response</faultstring>
         <faultactor>InvalidBatchIdentifierException</faultactor>
         <detail>
            <message>Batch with specified identifier does not
exist</message>
         </detail>
      </soap:Fault>
   </soap:Body>
</soap:Envelope>
```

The reference clients will contain code in Java and C# to handle these faults and distinguish root causes.