

**Cookbook**  
**How to call the eBirth web services and test process**  
**Version 1**

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To the attention of: "IT expert" willing to integrate the eBirth web services.



# 1 Document management

## 1.1 Document history

Version	Date	Author	Description of changes / remarks
1	23/02/2011	eHealth	First version
2	31/01/2012	eHealth	Update procedure for certificates, description test report template.
3	27/03/2012	eHealth	Update based on input from Fedict, eHealth Service Management and Qermid TuCo example.
4	14/06/2012	eHealth	Update STS URN's and ETK ApplicationID's.
5	06/08/2012	eHealth	URN's for STS have changed



## 2 Introduction

### 2.1 Goal of the document

This document describes how to test the eBirth web services.

In order to be able to test the eBirth application, you need to take the following steps (see also section 3):

- 1) **Create a test case including a hospital and a site:** If the testing is done for a real hospital, the real NIHL number of the hospital can be used (together with the real site identification numbers). Otherwise, you will receive a test NIHL and site numbers from the eHealth development team. You always need to request the configuration of the test cases at eHealth.
- 2) **Request an eHealth test certificate:** a test certificate must be requested at eHealth.
- 3) **Obtain the SAML token from the STS:** the eHealth test certificate obtained in the previous step is used for identification at the STS and as the Holder-Of-Key certificate.
- 4) **Call the eBirth web services with an already encrypted test message:** an example encrypted message can be found in 3.4
- 5) **Implement the encryption of the message:** you need to implement retrieving an ETK from the ETK depot and using it to encrypt the message before sending it.
- 6) **Call the eBirth web services including the encryption process.**
- 7) **Send the test report to ProjectEbirth@fedict.be**

The process for production is also described in the second part of this cookbook.

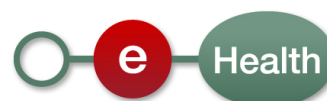
### 2.2 eHealth document references

All the document references can be found in the technical library on the eHealth portal<sup>1</sup>. These versions or any following versions can be used for the eHealth service.

ID	Title	Version	Date	Author
	<a href="#">STScookbook</a>			eHealth
	<a href="#">Howtocallawebsevicecookbook</a>			eHealth
	<a href="#">request.testcases.ebirth.webservice.xls</a>			eHealth
	<a href="#">eBirthExamples.zip</a>			Fedict
	<a href="#">End-To-EndEncryptioncookbook</a>			eHealth
	<a href="#">eb_cookbook_annexes_0.zip</a>			Fedict

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<sup>1</sup> [www.ehealth.fgov.be](http://www.ehealth.fgov.be)



## 3 Step-by-step Test process

This section describes a step-by-step process of testing the eBirth web services.

### 3.1 Create test cases

The rules to access the eBirth web services are the same in test as in production.

Access rules:

- authentication with a hospital's certificate
- a site identification-number must be specified, the correlation between the hospital and the site is verified in eHealth authentic source
- a ssin number must be provided. This person must have one of the 3 following functions: doctor, nurse or midwife. The function is verified in eHealth authentic source.

All test cases have to be configured by the eHealth development team.

**Before doing any test, request your test cases from the eHealth development team**  
(«[info@ehealth.fgov.be](mailto:info@ehealth.fgov.be) ») using the template "[request.testcases.ebirth.webservice.xls](#)".

The template must be completely filled. If you have any question about the template, you can send an e-mail to [info@ehealth.fgov.be](mailto:info@ehealth.fgov.be).

### 3.2 Request a certificate

The process to obtain test certificates is described on the eHealth Portal:

NL: <https://www.ehealth.fgov.be/nl/support/basisdiensten/ehealth-certificaten>

FR: <https://www.ehealth.fgov.be/fr/support/services-de-base/certificat-ehealth>

You will need NIHII and CBE identification numbers of the test hospital in order to request the certificate.

### 3.3 Obtain SAML token

In order to implement a web service call protected with a SAML token you can reuse the implementation as provided in the "eHealth technical connector". Nevertheless, eHealth implementations use standards and any other compatible technology (web service stack for the client implementation) can be used instead.

<https://www.ehealth.fgov.be/nl/support/connectors>

<https://www.ehealth.fgov.be/fr/support/connectors>

Alternatively, you can write your own implementation. The usage of the Secure Token Service and the structure of the exchanged xml-messages are described in the [eHealthSTScookbook](#). You will find a step-by step description of how to call the STS with JAXWS and Axis in the "[Howtocalawebbservice](#)" cookbook.

<https://www.ehealth.fgov.be/nl/support/sts-secure-token-service>

<https://www.ehealth.fgov.be/fr/support/sts-secure-token-service>

For eBirth, you will need to provide three identification attributes, and request 3 certification attributes.

The information you must provide is:

The NIHII (RIZIV/INAMI) number of the hospital



The identification number of the site

The national number of the user (doctor, midwife or nurse)

The certifications you must request are:

Recognized hospital

Recognized site

One out of following three:

- a. Valid Doctor
- b. Valid Midwife
- c. Valid Nurse

You will provide following identification attributes in the SAML Subject as described in the cookbook:

The NIHII number of the hospital

```
<saml:Attribute
  AttributeNamespace="urn:be:fgov:identification-namespace "
  AttributeName="urn:be:fgov:ehealth:1.0:certificateholder:hospital:nihi-number">
  <saml:AttributeValue xsi:type="xs:string">71099911</saml:AttributeValue>
</saml:Attribute>
```

The identification number of the site

```
<saml:Attribute
  AttributeNamespace="urn:be:fgov:identification-namespace "
  AttributeName="urn:be:fgov:ehealth:1.0:campus:site-number">
  <saml:AttributeValue xsi:type="xs:string">9999</saml:AttributeValue>
</saml:Attribute>
```

The national number of the user (doctor, midwife or nurse)

```
<saml:Attribute
  AttributeNamespace="urn:be:fgov:identification-namespace "
  AttributeName="urn:be:fgov:person:ssin">
  <saml:AttributeValue xsi:type="xs:string">99123199940</saml:AttributeValue>
</saml:Attribute>
```

You will need to specify every requested attribute in a SAMLAttributeDesignator list. In the case of eBirth, we expect the following list:

The 3 identification attributes you already provided in the subject must be repeated as requested attributes:

```
<saml:AttributeDesignator AttributeNamespace="urn:be:fgov:identification-namespace"
  AttributeName="urn:be:fgov:ehealth:1.0:certificateholder:hospital:nihi-number" />
<saml:AttributeDesignator AttributeNamespace="urn:be:fgov:identification-namespace"
  AttributeName="urn:be:fgov:ehealth:1.0:campus:site-number" />
<saml:AttributeDesignator AttributeNamespace="urn:be:fgov:identification-namespace"
  AttributeName="urn:be:fgov:person:ssin" />
```

The certification attribute for the hospital:

```
<saml:AttributeDesignator AttributeNamespace="urn:be:fgov:certified-namespace:ehealth"
  AttributeName="urn:be:fgov:ehealth:1.0:certificateholder:hospital:nihi-
  number:recognisedhospital:boolean" />
```



The certification attribute for the site:

```
<saml:AttributeDesignator AttributeNamespace="urn:be:fgov:certified-namespace:ehealth"
AttributeNames="urn:be:fgov:ehealth:1.0:campus:site-number:recognisedsite:boolean" />
```

One of this 3 certification attributes for the person's function:

```
<saml:AttributeDesignator AttributeNamespace="urn:be:fgov:certified-namespace:ehealth"
AttributeNames="urn:be:fgov:person:ssin:ehealth:1.0:fpsph:doctor:boolean" />
```

or

```
<saml:AttributeDesignator AttributeNamespace="urn:be:fgov:certified-namespace:ehealth"
AttributeNames="urn:be:fgov:person:ssin:ehealth:1.0:fpsph:nurse:boolean" />
```

or

```
<saml:AttributeDesignator AttributeNamespace="urn:be:fgov:certified-namespace:ehealth"
AttributeNames="urn:be:fgov:person:ssin:ehealth:1.0:fpsph:midwife:boolean" />
```

To access the eBirth web services, the response token must contain “true” for all of the certification attributes. If you obtain “false”, contact eHealth to verify that the requested test cases were correctly configured.

The documents [eBirth STS samlRequest.xml](#) and [eBirth STS samlResponse.xml](#) provide STS examples.



### 3.4 Call eBirth web services using an already encrypted message

The eBirth web service consists of 2 operations:

- Submission of a birth notification
- Submission of a medical form

The 2 operations require encryption.

We propose to use one of the 2 encrypted messages to call the eBirth web services:

[eBirthExamples.zip:notification\\_encrypted.xml](#) and [medicalform\\_encrypted.xml](#)

To do the first call to one of the eBirth web services:

- Use the example messages
- Add the SAML Token (see above, section 3.3), timestamp and the signature to the soap header

If your call is successful you will receive this type of response:



notificationResponse.xml



medicalformResponse.xml

If an error occurs, first please verify your request. Following table contains a list of common system error codes for the eHealth Service Bus. For possible business errors, refer to the eBirth User Guide (found in [eb\\_cookbook annexes 0.zip](#)).

Code	Description	Cause	Explication
SOA-00001	Service error		This is the default error sent to the consumer in case no more details are known.
SOA-01001	Service call not authenticated	Consumer	From the security information provided, either the consumer could not be identified or the credentials provided are not correct.
SOA-01002	Service call not authorized	Consumer	The consumer is identified and authenticated, but is not allowed to call the given service.
SOA-02001	Service not available. Please contact service desk.	Provider	An unexpected error has occurred. Retries will not work. Service desk may help with root cause analysis.
SOA-02002	Service temporarily not available. Please try later.	Provider	An unexpected error has occurred. Retries should work. If the problem persists service desk may help.
SOA-03001	Malformed message	Consumer	This is the default error for content related errors in case no more details are known.
SOA-03002	Message must be SOAP	Consumer	Message does not respect the SOAP standard.
SOA-03003	Message must contain SOAP body	Consumer	Message respects the SOAP standard, but body is missing.
SOA-03004	WS-I compliance failure	Consumer	Message does not respect the WS-I standard.
SOA-03005	WSDL compliance failure	Consumer	Message is not compliant with WSDL.





SOA-03006	XSD compliance failure	Consumer	Message is not compliant with XSD.
SOA-03007	Message content validation failure	Consumer	From the message content (conform XSD): extended checks on the element format failed or cross-checks between fields failed.

If the cause of the error is unclear, or if a technical problem exists with the web service, please contact eHealth Support either by using the contact form or directly by mailing your technical contact.

<https://www.ehealth.fgov.be/nl/contact>

<https://www.ehealth.fgov.be/fr/contact>

If the cause is a business error, please contact the eBirth Project at **ProjectEbirth@fedict.be**.

### 3.5 Develop the encryption part to call the ETK depot and encrypt a message

All the information about the use of the encryption libraries and the call to the ETK (eHealth Token Key) depot are described in [theEnd-To-EndEncryption\(ETEE\)cookbooks](#).

To encrypt your eBirth Kmehr message, you have to call the GetEtk operation to pick up the right ETK from the eHealth ETK depot. The GetEtk request is described on page 15 from the [theEnd-To-EndEncryptioncookbook](#).

The table below provides you the identifiers to use in the GetEtkRequest.

Environment	Id	Type	Application ID
<b>Submit a birth notification</b>			
Integration Test Environment	0367302178	CBE	EBIRTHTEST
<b>Submit a medical form</b>			
Integration Test Environment	0874845671	CBE	EBIRTHMEDICALFORMTEST

To test your implementation, try to encrypt the following Kmehr example messages:



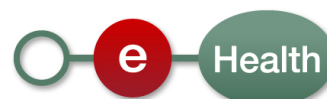
These are the clear text messages as used to create the proposed encrypted example in section 3.4.

### 3.6 Call eBirth web services using the new part for encryption

To create your own Birth Notifications and MedicalForms we refer to the documentation provided by Fedict. The zip-file [eb\\_cookbook\\_annexes\\_0.zip](#) contains:

A pdf User Guide describing the different fields

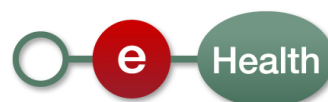
Excel Appendices translating different field codes in Dutch, French and German



### 3.7 Send test report to Fedict

In order to validate your tests, you should send a test report to Fedict by e-mail (ProjectEbirth@fedict.be). The template can be found in the file [EB\\_Medical\\_WS\\_Template\\_0.1.docx](#)

This file requires you to send one Notification and one MedicalForm. In the table, you enter the details from the responses you obtained (message identifiers, acknowledgement and timestamps). Two response examples are provided to easily identify the required fields.



## 4 Step-by-step: How to call the eBirth web services in production environment

### 4.1 Request a production certificate

To access the eBirth web services you have to ask a hospital certificate.

The process is described on the eHealth Portal:

NL: <https://www.ehealth.fgov.be/nl/support/basisdiensten/ehealth-certificaten>

FR: <https://www.ehealth.fgov.be/fr/support/services-de-base/certificat-ehealth>

### 4.2 Obtain SAML token

Do exactly the same as in the test process but using the official hospital certificate.

### 4.3 Call the ETK depot and encrypt the Kmehr message

Do exactly the same as in the test process but using the production ETKs.

The table below provides you the identifiers to use in the GetEtkRequest in production.

Environment	Id	Type	Application ID
<b>Submit a birth notification</b>			
Production Environment	0367302178	CBE	EBIRTHCENTRAL
<b>Submit a medical form</b>			
Production Environment	0874845671	CBE	EBIRTHMEDICALFORM

### 4.4 Call eBirth web services

- Add this encrypted message encapsulated in the SendCMSRequest element to the soap body
- Add the SAML Token, timestamp and the signature to the soap header of the eBirth web service

