eHealth Address book
Consultation WS v.1
Cookbook
v.1.11

This document is provided to you, free of charge, by the

eHealth platform

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To the attention of: "IT expert" willing to integrate this web service.

1. Document management

1.1 Document history

Version	Date	Author	Description of changes/remarks
1.0	21/03/2016	eHealth platform	Initial version
1.1	17/05/2016	eHealth platform	Review section 'Error and failure messages' Remove organization qualities no more supported
1.2	23/08/2016	eHealth platform	Review section 'SearchProfessionalsResponse (Output)'
1.3	06/12/2016	eHealth platform	New HealthCareAdditionalInformation
1.4	14/04/2017	eHealth platform	Improve search methods for organization/professional by municipality or name
1.5	26/04/2018	eHealth platform	Layout and updated links
1.6	20/04/2020	eHealth platform	WS-I Org compliance
1.7	20/04/2021	eHealth platform	Tracing
1.8	18/11/2021	eHealth platform	Update section: list of professional qualities and list of organization qualities
1.9	30/06/2022	eHealth platform	§ 3.2 Status (added) § 5.1.4 Tracing (updated)
1.10	20/07/2022	eHealth platform	§ 2.3 eHealth platform document references (correction)
1.11	31/08/2023	eHealth platform	Update the list of supported organizations and professions. See section 8.1 & 8.2

2. Introduction

2.1 Goal of the service

The eHealth Addressbook consultation web service (WS) has been set up for Belgian health care sector as a response to the basic need of having the most accurate, up-to-date and useful contact information for health care professionals and organizations. The system brings together information coming from various trustworthy authentic sources and acts as additional intermediate layer. The user (aka "sender", be it an individual or an organization) can use this WS to retrieve contact information (originating from CoBRHA) of various health care-related individuals or organizations. Later, the sender can use this information to decide about the preferred communication channel for further interactions with the recipient, which allows greater communication flexibility between different authorities.

Sensitive medical messages should still be encrypted prior to their expedition via the eHealthBox.

Based on the information collected from the WS, the sender can decide upon the necessity of encryption and the preferred communication channel.

Third-party developers willing to integrate this functionality in their software solutions will use this service.

2.2 Goal of the document

This document is not a development or programming guide for internal applications. Instead, it provides functional and technical information and allows an organization to integrate and use the eHealth platform service.

However, in order to interact in a smooth, homogeneous and risk controlled way with a maximum of partners, these partners must commit to comply with the requirements of specifications, data format and release processes of the eHealth platform as described in this document.

Technical and business requirements must be met in order to allow the integration and validation of the eHealth platform service in the client application.

2.3 eHealth platform document references

On the portal of the eHealth platform, you can find all the referenced documents.[1] These versions or any following versions can be used for the eHealth platform service.

ID	Title	Version	Date	Author
1	Secure Token Service – HolderofKey	1.5	13/07/2022	eHealth platform

2.4 External references

ID	Title	Source	Date	Author
	Basic Profile Version 1.1	http://www.ws-i.org/Profiles/BasicProfile-1.1-2004-08-24.html	24/08/2004	Web Services Interoperability Organization

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[1] *https://www.ehealth.fgov.be/ehealthplatform*

3. Support

3.1 Helpdesk eHealth platform

3.1.1 Certificates

In order to access the secured eHealth platform environment you have to obtain an eHealth platform certificate, used to identify the initiator of the request. In case you do not have one, please consult the chapter about the eHealth Certificates on the portal of the eHealth platform

- *https://www.ehealth.fgov.be/ehealthplatform/nl/ehealth-certificaten*

- *https://www.ehealth.fgov.be/ehealthplatform/fr/certificats-ehealth*

For technical issues regarding eHealth platform certificates

- Acceptance: *acceptance-certificates@ehealth.fgov.be*

- Production: *support@ehealth.fgov.be*

3.1.2 For issues in production

eHealth platform contact center:
- Phone: 02 788 51 55 (on working days from 7 am till 8 pm)
- Mail: *support@ehealth.fgov.be*
- *Contact Form :*
  - *https://www.ehealth.fgov.be/ehealthplatform/nl/contact* (Dutch)
  - *https://www.ehealth.fgov.be/ehealthplatform/fr/contact* (French)

3.1.3 For issues in acceptance

Integration-support@ehealth.fgov.be

3.1.4 For business issues
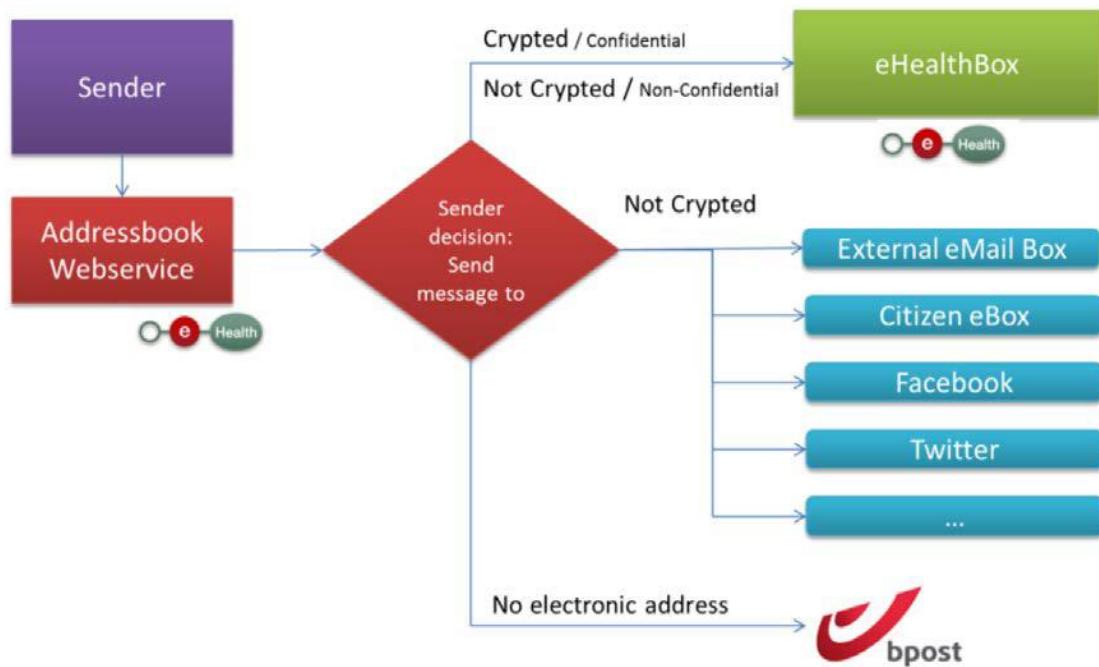
- regarding an existing project: the project manager in charge of the application or service
- regarding a new project or other business issues: *info@ehealth.fgov.be*

3.2 Status

The website *https://status.ehealth.fgov.be* is the monitoring and information tool for the ICT functioning of the eHealth services that are partners of the Belgian eHealth system.

4. Global overview

5. Step-by-step

The end user must be identified prior to be able to access the eHealth AddressBook WS.

Through a connected third-party app, the end user can perform a healthcare professional lookup or a healthcare organization reference lookup. This request will be sent to the eHealth platform via the eHealth AddressBook WS, which can process one or more search criteria as input. The WS will eventually provide one or more matching entries.

Next step is to pick one of the references you are interested in and use the second WS method that allows aforementioned reference as input and delivers a selection of communication channels available for the desired professional or organization.

Next, you will have to decide whether to use an encrypted digital channel, a non-encrypted one or even go for a physical postage.

NB: the only encrypted option currently available is eHealthBox. Other channels are not encrypted.

5.1 Technical requirements

All the xml requests, submitted to the WS must be encoded in the UTF-8 format.

5.1.1 Use of the eHealth SSO solution

This section specifies how the call to Secure Token service (STS) must be done in order to access the WS. You must precise several attributes in the request. The details on the identification attributes and the certification attributes can be found in the separate document eHealth Addressbook_SSO.pdf.

To access the eHealth Addressbook WS, the response token must contain "true" for the 'boolean' certification attribute.

If you obtain "false", contact the eHealth contact center to verify that the requested test cases were correctly configured.

5.1.2 Security policies to apply

We expect that you use SSL one way for the transport layer.

As WS security policy, we expect:

- A timestamp (the date of the request), with a time to live of one minute.(if the message does not arrive during this minute, it shall not be treated).
- The signature with the certificate of
  - the timestamp, (the one mentioned above)
  - the body (the message itself)
  - and the binary security token: an eHealth certificate or a SAML token issued by STS

  This will allow the eHealth platform to verify the integrity of the message and the identity of the message author.

A document explaining how to implement this security policy can be obtained at the eHealth platform.

The STS cookbook can be found on the eHealth portal.

5.1.3 WS-I Basic Profile 1.1

Your request must be WS-I compliant (See Chap 2.4 - External document references).

5.1.4 Tracing

To use this service, the request SHOULD contain the following two http header values (see RFC *https://datatracker.ietf.org/doc/html/rfc7231#section-5.5.3*):

1. User-Agent: information identifying the software product and underlying technical stack/platform. It MUST include the minimal identification information of the software such that the emergency contact (see below) can uniquely identify the component.
   a. Pattern: {minimal software information}/{version} {minimal connector information}/{connector-package-version}
   b. Regular expression for each subset (separated by a space) of the pattern: [[a-zA-Z0-9-\/]*\/[0-9azA-Z-_.]*
   c. Examples:
      User-Agent: myProduct/62.310.4 Technical/3.19.0
      User-Agent: Topaz-XXXX/123.23.X freeconnector/XXXXX.XXX
2. From: email-address that can be used for emergency contact in case of an operational problem. Examples: From: *info@mycompany.be*

5.2 Process overview
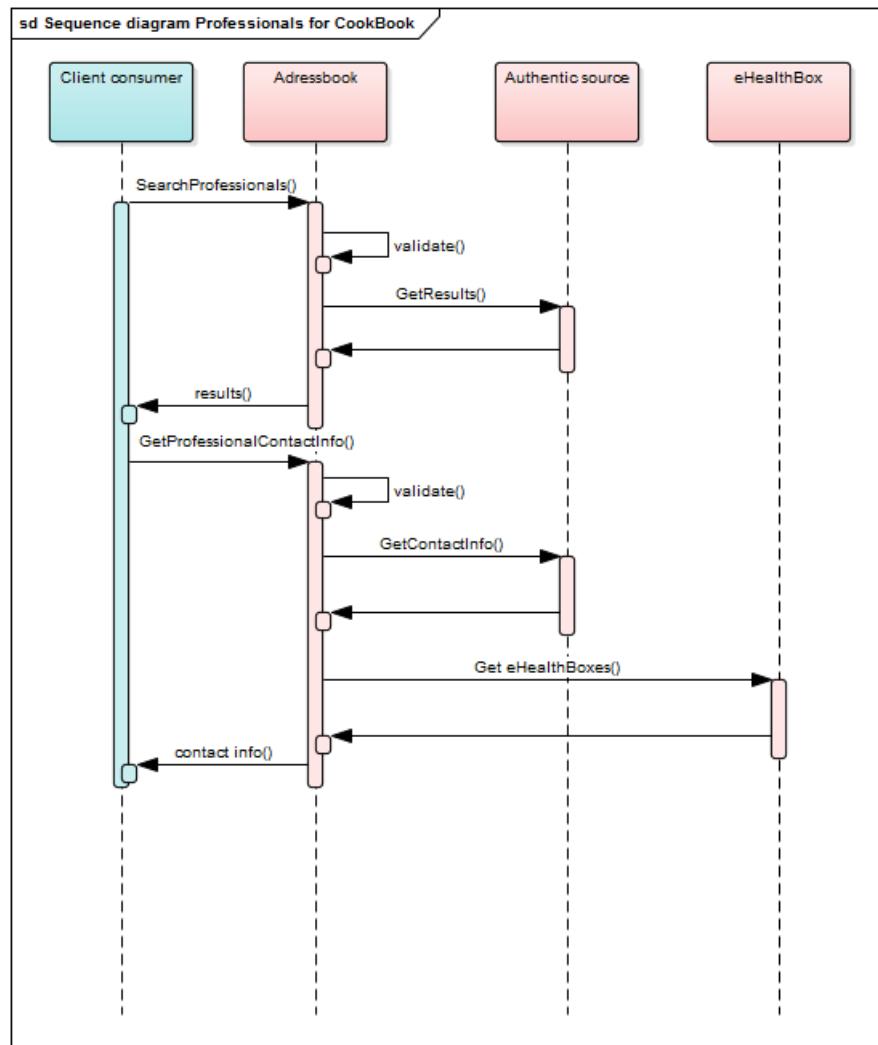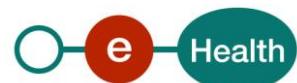

Figure 1: Process diagram for professionals
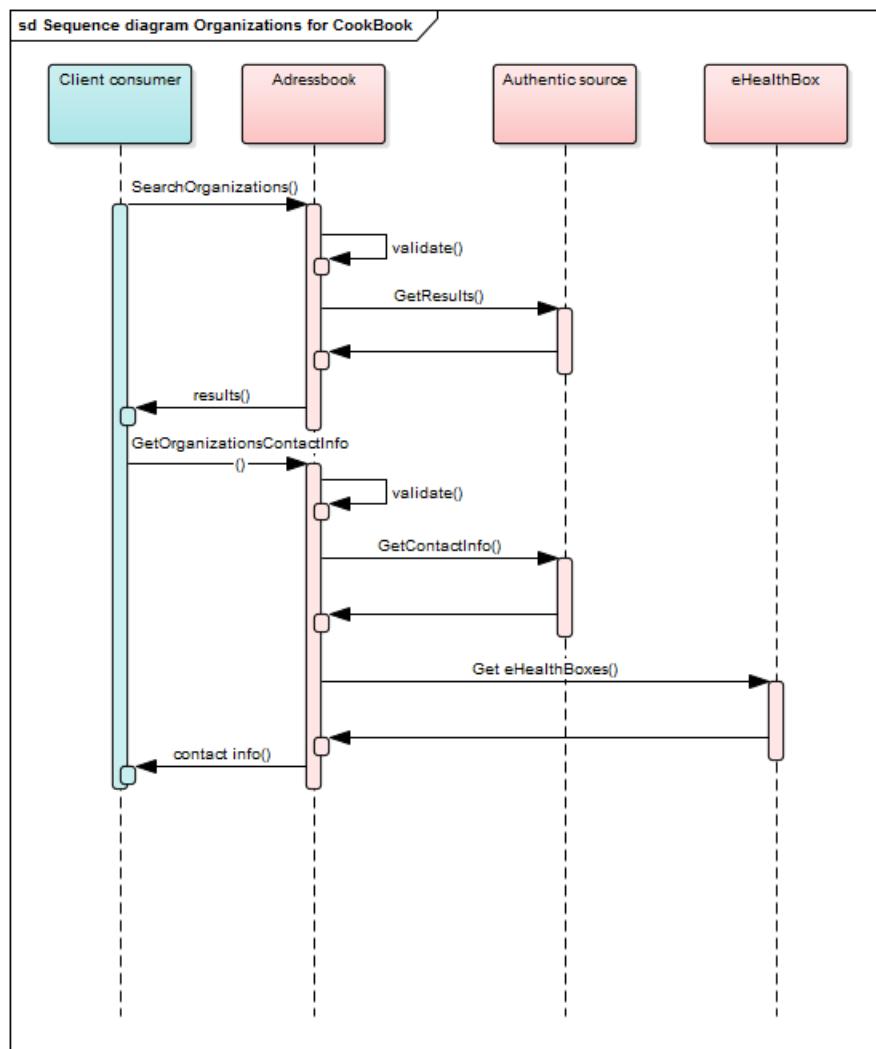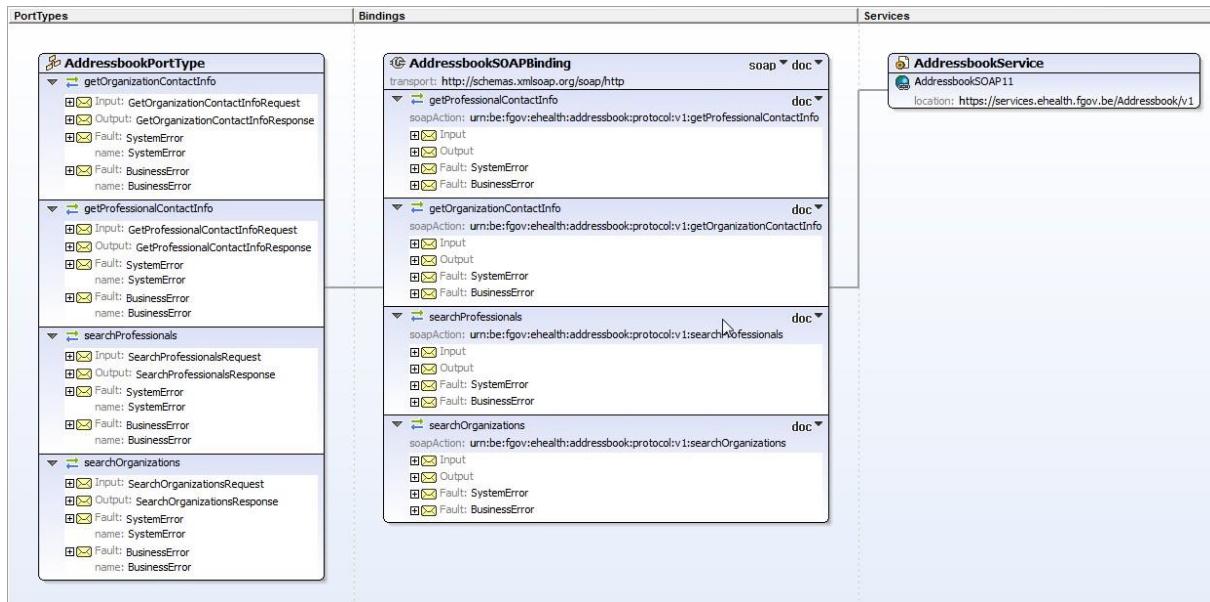
Figure 2: Process diagram for organizations

5.3 eHealth Address Book Consultation WS

5.3.1 General description

The eHealth Address book consultation WS allows identified users to perform search operations to find references to healthcare professionals (individuals) or organizations. As soon as a required reference has been collected from the search, it can further be used to extract contact information of the referenced instance.

The eHealth Addressbook WS has the following endpoints:

- Acceptation environment: *https://services-acpt.ehealth.fgov.be/AddressBook/v1*

- Production environment: *https://services.ehealth.fgov.be/AddressBook/v1*

The following sections describe currently provided operations.

5.3.2 Searching for healthcare professionals

Before one can extract detailed contact information for any given healthcare professional, an overall lookup should be performed to collect all healthcare professional references matching the search criteria. This section describes this operation (input and output) related only to professionals. Organizations lookup should be performed using a different method (described further in this document).

When optional information is specified as search criterion, it will act as a filter.

E.g. If a profession is given next to a NISS number, only information for the specified profession for that person will be returned. If unfortunately, the person does not have the specified profession, no information will be returned for there is no match (even if the person has another profession). If no profession is specified, you will receive all information for that person.

When searching by NIHII (RIZIV/INAMI) number and if the number is valid but not linked to a person no result will be returned and a StatusCode 'DataNotFound' will be present (see Section 5.3.6.1 StatusType).
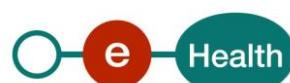
NIHII (RIZIV/INAMI) numbers can be 8 or 11 digits.

When searching by *LastName* use at least 2 characters. *FirstName* is optional. If *FirstName* is provided, it must contain at least one (1) valid character.

Special characters ('?', '%', '_', '-', '!', '=', ',', '~', '+', '-', '$', ';', '<', '>', '|', '&', '{', '}', '[', ']', '/', '\') are allowed but will be ignored.

The search is not case-sensitive. Accented characters may be used. They will be interpreted as non-accented character during the search. If you search first name with é or É, you may find result with or without accent. If you search first name with e or E, you may find result with é, É, è, ë,...

Spaces may be used.

Wildcards (*) may be used to perform search with partial words. They can be put at the beginning and/or at the end of the word. Intermediate wildcard(s) will be ignored.

No phonetic search is made on *LastName* and *FirstName*.

NB: if you perform search with wildcard(s) and with small number of characters, time responses may be high (in some cases, it may result in a technical error).

Example, you are looking for Jean-Paul:

You may find result with …	You may not find result with …
jean	jeanpaulyves
jean*	jean paul
je*an*	je an*
jean-p*	
*paul	
jean-paul	
jeanpaul	
jean?p_a-u%l	
JeAn*	

When searching by *ZIP code*, this must contain a standard Belgian 4 digit number. The valid ZIP code can be found on the BPost website.

When searching by *City*, city value must contain at least 3 characters.

Special characters ('?', '%', '_', '-', '!', '=', ',', '~', '+', '-', '$', ';', '<', '>', '|', '&', '{', '}', '[', ']', '/', '\') are allowed but will be ignored.

The search is not case-sensitive. Accented characters may be used. They will be interpreted as non-accented character during the search. If you search first name with é or É, you may find result with or without accent. If you search first name with e or E, you may find result with é, É, è, ë, …

Spaces may be used.

Wildcards (*) may be used to perform search with partial words. Wildcards can be put on the beginning and/or on the end of the word. Intermediate wildcards will be ignored.

No phonetic search is made on *City*.

NB: if you perform a search with wildcard(s) and with a small number of characters, time responses may be high (in some cases, it might result in a technical error).

Example, you are looking for "Bruxelles":

You may find result with …	You may not find result with …
bru	br*
bru*x*	*br
bru*	bru*x
*xelles	bruxellless
bruxelles	br ux*
b?r_-u%	
Bru*	

An email address must contain @ and 1 or more '.'. Email addresses must match exactly.

The results are always sorted by *LastName* and then by *FirstName*.

Pagination

In the request *Offset* and *MaxElements* attributes must be specified. Offset is set to 0, and *MaxElements* can be maximum 100. When 100 elements are returned, this could mean more results are present. A second call can be made with *Offset* set to 100 and *MaxElements* to 100 to gather other results. This could also mean that search criteria were not correctly selected.

5.3.2.1 Allowed search combinations

	NISS Number	NIHII Number	Profession	First Name	Last Name	City	ZIP Code	E-mail
Search 1	■		▨					
Search 2		■	▨					
Search 3			■	▨	■			
Search 4			■				■	
Search 5			■			■		
Search 6								■

Legend:

■	*Required information*
▨	*Optional information*

5.3.2.2 SearchProfessionalsRequest (Input)
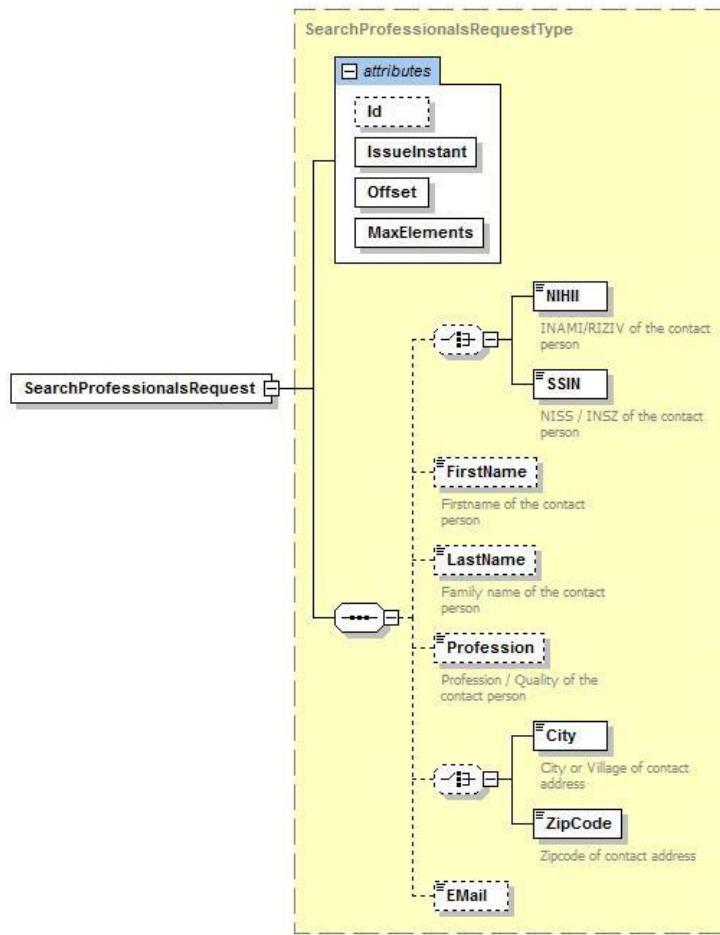
Figure 3: SearchProfessionalsRequest

Field Name	Description	Attribute	Required
Id	Identifier of the request within the caller system	Yes	No
IssueInstant	Date and time of the request	Yes	Yes
Offset	Index of first element of response	Yes	Yes
MaxElements	Number of result per request (max 100)	Yes	Yes
NIHII	NIHII (INAMI/RIZIV) of the individual (8 or 11 digits)	No	No
SSIN	NISS/INSZ of the individual (11 digits)	No	No
FirstName	First name of the individual. Special characters are converted.	No	No
LastName	Last name of the individual. Special characters are converted.	No	No

Profession	Profession/Quality of the individual (See Section 8.2 List of professional qualities)	No	No
City	City or village of contact address. Special characters are converted.	No	No
ZipCode	ZIP code of contact address. Standard Belgian 4 digit number	No	No
EMail	Valid e-mail address. Email addresses must match exactly.	No	No

5.3.2.3 *SearchProfessionalsResponse (Output)*

Note: The SSIN number will only be returned if one of the returned "*Profession > NIHII*" fields does not contain a value. If all professions have a related NIHII number, SSIN won't be returned.
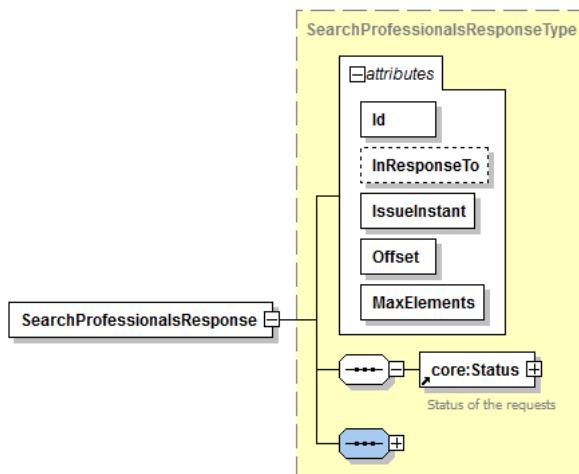
Figure 4: SearchProfessionalsResponse (Main Attributes and Status fields)

Field Name	Description	Attribute	Required
Id	Identifier of the response	Yes	Yes
InResponseTo	Id attribute of the request	Yes	No
IssueInstant	Date and time of the response	Yes	Yes
Offset	Index of first element of response	Yes	Yes
MaxElements	Number of results per request (max 100)	Yes	Yes
Status	See Section 5.3.6.1 StatusType	No	Yes
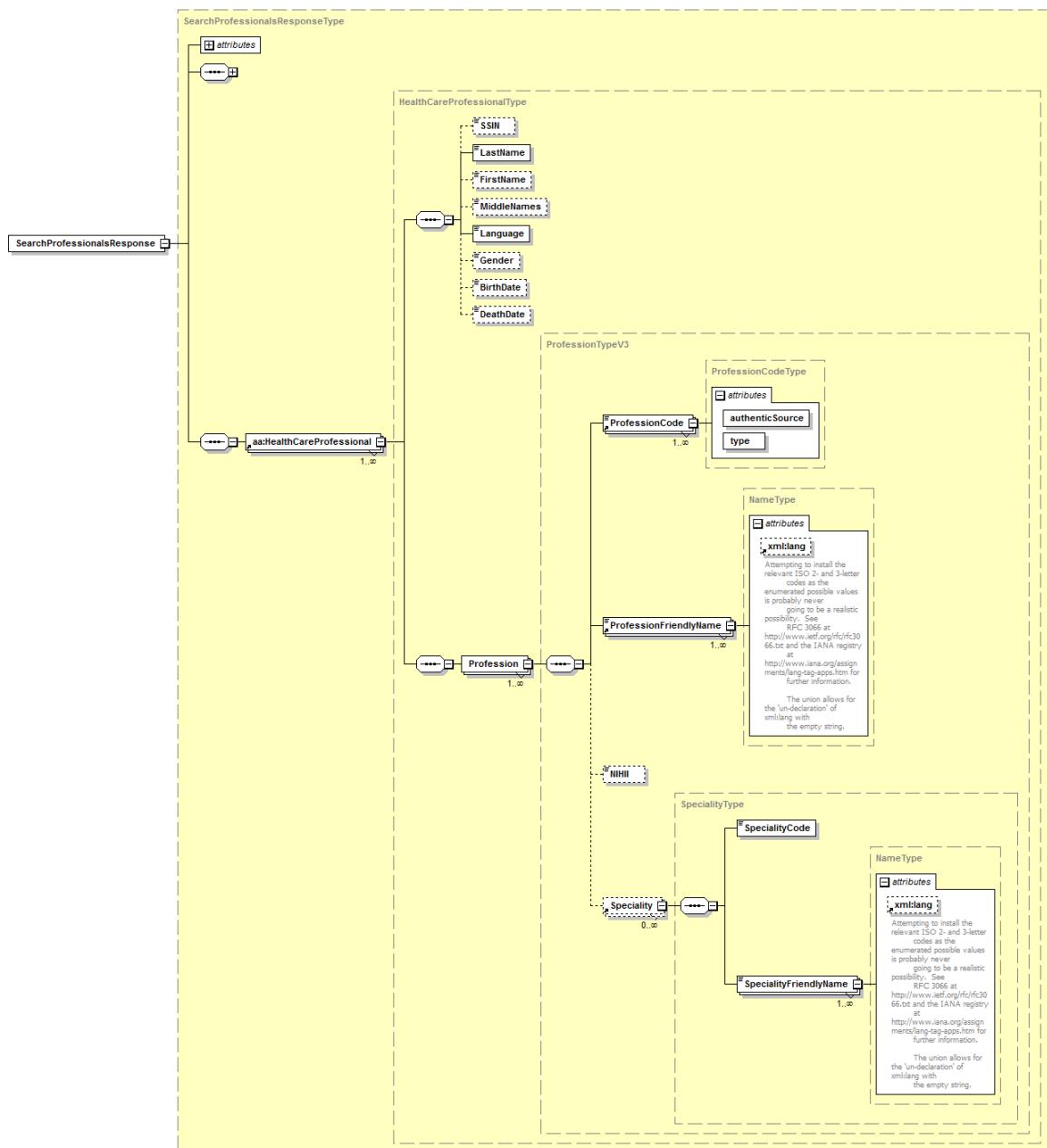
Figure 5: SearchProfessionalResponse (HealthCare professional fields)

Field Name	Description	Attribute	Required
SSIN	SSIN number will only be returned if all of the returned "profession > NIHI" fields contain values. If at least one of them is empty, SSIN will not be returned.	No	No
LastName	Last name of the individual	No	Yes
FirstName	First name of the individual	No	No
MiddleNames	Middle name of the individual	No	No
Language	Language of the individual	No	No
Gender	Gender of the individual	No	No
BirthDate	Birthdate of the individual	No	No

DeathDate	Death date of the individual	No	No
ProfessionCode	Profession code of this profession as can be found in Section 9.2	No	Yes
ProfessionFriendlyName	Description of this profession as can be found in Section 9.2 List of professional qualities	No	Yes
NIHII	NIHII number (11 digits) of the individual for this profession	No	No
SpecialityCode	Specialty of the individual for this profession. Multiple specialties by profession are possible.	No	No
SpecialityFriendlyName	Description of the specialty of the individual for this profession. Multiple items can be present: one by	No	No

5.3.2.4 Example

Request:

```xml
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" ...>
    <soapenv:Header/>
    <soapenv:Body>
        <urn:SearchProfessionalsRequest Id="bdc38ae62-3e7f-4f80-80f7-c3e745500fa3"
IssueInstant="2016-03-23T18:49:26.968+01:00" Offset="0" MaxElements="100">
            <urn:SSIN>74062423769</urn:SSIN>
        </urn:SearchProfessionalsRequest>
    </soapenv:Body>
</soapenv:Envelope>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns8:SearchProfessionalsResponse Offset="0" MaxElements="100"
        Id="_de2754ca-
83fe-41ce-9c72-9c3a7f586b38" InResponseTo="bdc38ae62-3e7f-4f80-80f7-
c3e745500fa3"
IssueInstant="2016-04-07T10:09:48.288+02:00" ...>
        <ns4:Status>
            <ns4:StatusCode Value="urn:be:fgov:ehealth:2.0:status:Success"/>
        </ns4:Status>
        <ns6:HealthCareProfessional>
            <ns6:LastName>DEBOELEKE</ns6:LastName>
            <ns6:FirstName>DOMI</ns6:FirstName>
            <ns6:MiddleNames>ANDRE</ns6:MiddleNames>
            <ns6:Language>nl</ns6:Language>
            <ns6:Gender>male</ns6:Gender>
            <ns6:BirthDate>24/06/1924</ns6:BirthDate>
            <ns6:Profession>
                <ns6:ProfessionCode authenticSource="EHP"
type="code">NURSE</ns6:ProfessionCode>
                <ns6:ProfessionFriendlyName
xml:lang="nl">Verpleegkundige</ns6:ProfessionFriendlyName>
                <ns6:ProfessionFriendlyName
xml:lang="fr">Infirmier/Infirmière</ns6:ProfessionFriendlyName>
                <ns6:NIHII>41933197575</ns6:NIHII>
            </ns6:Profession>
            <ns6:Profession>
```

```
                <ns6:ProfessionCode authenticSource="EHP"
 type="code">MIDWIFE</ns6:ProfessionCode>
                <ns6:ProfessionFriendlyName
 xml:lang="nl">Vroedvrouw</ns6:ProfessionFriendlyName>
                <ns6:ProfessionFriendlyName xml:lang="fr">Sage-
 femme</ns6:ProfessionFriendlyName>
                <ns6:NIHII>40397924006</ns6:NIHII>
              </ns6:Profession>
           </ns6:HealthCareProfessional>
        </ns8:SearchProfessionalsResponse>
    </soap:Body>
</soap:Envelope>
```

5.3.3 Searching for healthcare organizations

This section describes the method (both request and response) allowing identified users to look up according to healthcare organizations. Search criteria differ significantly from the healthcare professionals search method described above. Using this method will result in a set of organizations matching provided search criteria. Collected references are later meant to be used to get detailed contact information using separate methods described later in this document.

When optional information is specified as search criterion, it will act as a filter. E.g. If an *InstitutionType* is given next to a BCE number, only information for the specified *InstitutionType* for that organization will be returned. If the organization is from another *InstitutionType*, no information is returned because there is no match.

If no *InstitutionType* is specified in the request, you will receive:

- •   Information for *InstitutionType* __ENTERPRISE__ (if the organization has this type) for __BCE numbers__.
- •   Information for *InstitutionType* __EHP__ (if the organization has this type) for __EHP numbers__.

When searching by NIHII (RIZIV/INAMI) number and when the number is valid but not linked to an organization no result will be returned and a *StatusCode* 'DataNotFound' will be present (see Section 5.3.6.1 StatusType).

NIHII (RIZIV/INAMI) numbers can be composed of 8 or 11 digits.

When searching by *InstitutionName*, InstitutionName value must contain at least 3 characters.

Special characters ('?', '%', '_', '-', '!', '=', ',', '~', '+', '-', '$', ';', '<', '>', '|', '&', '{', '}', '[', ']', '/', '\') are allowed but will be ignored.

The search is not case-sensitive. Accented characters may be used. They will be interpreted as non-accented character during the search. If you search first name with é or É, you may find result with or without accent. If you search first name with e or E, you may find result with é, É, è, ë, …

Spaces may be used.

Wildcards (*) may be used to perform search with partial words. Wildcards can be put on the beginning and/or on the end of the word. Intermediate wildcard(s) will be ignored.

No phonetic search is made on *City*.

NB : if you perform a search with wildcard(s) and with small number of characters, time responses may be high (in some cases, it might result in a technical error).

E.g., you are looking for "Institut Bordet":

You may find result with …	You may not find result with …
bor	bordete*
institut	bordeti
instit	*bor det*
*b*or*	Bo
det	In*

ins?t_-it%ut	
BoR	

When searching by *ZIP code*, use the standard Belgian 4 digit number. You can find these codes on the Bpost website.

When searching by *City*, city value must contain at least 3 characters.

Special characters ('?', '%', '_', '-', '!', '=', ',', '~', '+', '-', '$', ';', '<', '>', '|', '&', '{', '}', '[', ']', '/', '\') are allowed but will be ignored.

The search is not case-sensitive. Accented characters may be used. They will be interpreted as non-accented character during the search. If you search first name with é or É, you may find result with or without accent. If you search first name with e or E, you may find result with é, É, è, ë, …

Spaces may be used.

Wildcards (*) may be used to perform search with partial words. Wildcards can be put at the beginning and/or at the end of the word. Intermediate wildcard(s) will be ignored.

No phonetic search is made on *City*.

NB: if you perform a search with wildcard(s) and with small number of characters, time responses may be high (in some cases, it might result in a technical error).

Example, you are looking for Bruxelles:

You may find result with …	You may not find result with …
bru	br*
bru*x*	*br
bru*	bru*x
*xelles	bruxellless
bruxelles	br ux*
b?r_-u%	
Bru*	

Searches 4, 5, 6, 7 (in Section 5.3.3.1):

- When searching a BCE organization by *InstitutionName, City*, *ZIP Code* or eMail are not supported.
- InstitutionType cannot have "ENTERPRISE", "CONSORTIUM", "or "TREAT_CENTER" as value for searches 4, 5, 6, 7. These values will be blocked and a StatusCode "RequestUnsupported" will be returned see Section 5.3.6.1 StatusType.
- Email address must contain @ and 1 or more '.'. Email addresses must match exactly.

Pagination

In the request, *Offset* and *MaxElements* attributes must be specified. *Offset* is set to 0, and *MaxElements* can be maximum 100. When 100 elements are returned, it can mean more results are present. A second call can be made with *Offset* set to 100 and *MaxElements* to 100 to gather other results. This can also mean that search criteria were not correctly selected.

5.3.3.1 Allowed search combinations

	EHP Numbe	NIHII Numbe	BCE Numbe	Institution Type	Institution Name	City	ZIP Code	E-mail
Search 1		■		▨				
Search 2	■			▨				
Search 3			■	▨				
Search 4				■	■			
Search 5				■			■	
Search 6				■		■		
Search 7								■

Legend:

▨	Required information
■	Optional information

5.3.3.2 SearchOrganizationsRequest (Input)
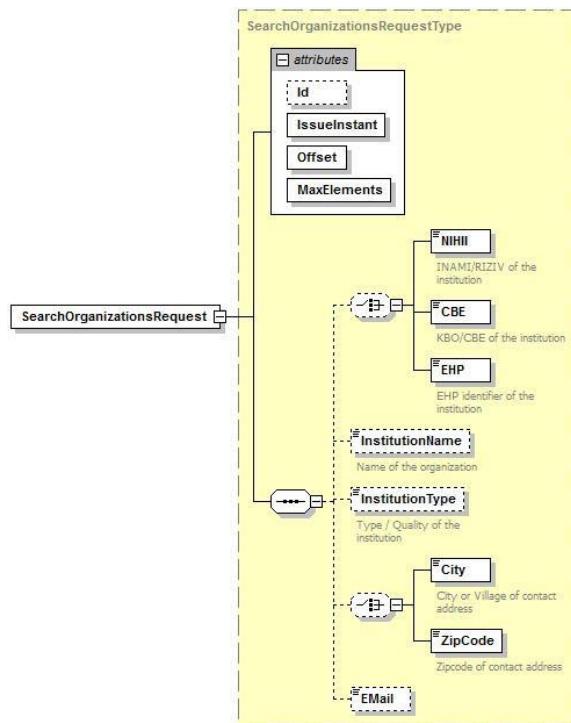
Figure 6: SearchOrganizationsRequest

Field Name	Description	Attribute	Required
Id	Identifier of the request within the caller system	Yes	No
IssueInstant	Date and time of the request	Yes	Yes
Offset	Index of first element of response	Yes	Yes

MaxElements	Number of result per request (max 100)	Yes	Yes
NIHII	NIHII (INAMI/RIZIV) of the institution (8 or 11 digits)	No	No
CBE	KBO/CBE of the institution (10 digits)	No	No
EHP	EHP identifier of the institution (10 digits)	No	No
InstitutionName	Name of the organization. Special characters are converted	No	No
InstitutionType	Type of the institution (See Section 9.1 List of organization qualities)	No	No
City	City or village of contact address. Special characters are converted.	No	No
ZipCode	ZIP code of contact address. Standard Belgian 4 digit number.	No	No
EMail	Valid e-mail address. Email addresses must match exactly.	No	No

5.3.3.3 SearchOrganizationsResponse (Output)
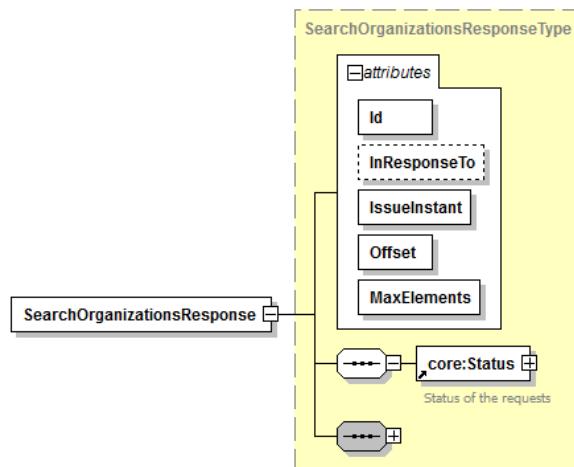
Figure 7: SearchOrganizationsResponse (Main Attributes and Status fields)

Field Name	Description	Attribute	Required
Id	Identifier of the response	Yes	Yes
InResponseTo	Id attribute of the request	Yes	No
IssueInstant	Date and time of the response	Yes	Yes
Offset	Index of first element of response	Yes	Yes
MaxElements	Number of results per request (max 100)	Yes	Yes
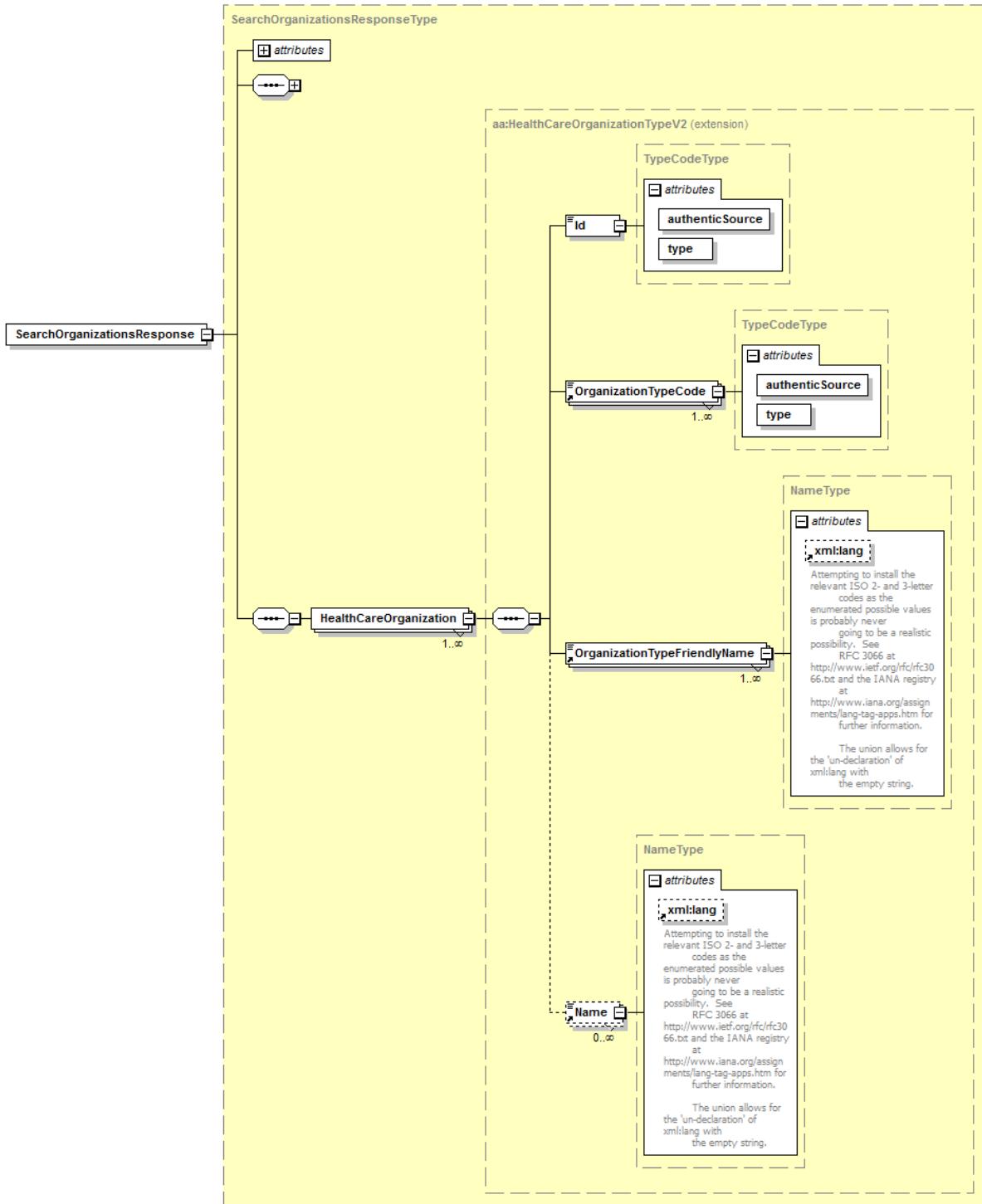
Figure 8: SearchPrganizationResponse (HealthCare Organization fields)

Field Name	Description	Attribute	Required
Id	Identification number (and type of this number) of the institution	No	Yes
OrganizationTypeCode	Type of the institution as detailed in Annex 9.1 List of organization qualities In practice, only 1 OrganizationTypeCode is returned.	No	Yes

OrganizationTypeFriendlyName	Description of the institution type as detailed in Annex 9.1 List of organization qualities.	No	Yes
Name	Name of the institution Multiple items can be present: one by language.	No	No

5.3.3.4 Example

Request:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" ...>
   <soapenv:Header/>
   <soapenv:Body>
      <urn:SearchOrganizationsRequest Id="bf39156fa-a525-4337-a960-29e76c79297c"
IssueInstant="2016-03-23T18:40:34.917+01:00" Offset="0" MaxElements="100">
         <urn:NIHII>71025852</urn:NIHII>
      </urn:SearchOrganizationsRequest>
   </soapenv:Body>
</soapenv:Envelope>
```

Response:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
   <soap:Body>
      <ns8:SearchOrganizationsResponse Offset="0" MaxElements="100"
      Id="_b4ecea79-
14a4-4e81-981d-72ae4bd2c372" InResponseTo="bf39156fa-a525-4337-a960-
29e76c79297c"
IssueInstant="2016-04-07T10:20:41.285+02:00" ...>
         <ns4:Status>
            <ns4:StatusCode Value="urn:be:fgov:ehealth:2.0:status:Success"/>
         </ns4:Status>
         <ns8:HealthCareOrganization>
            <ns6:Id authenticSource="NIHII" type="HCI">71025852</ns6:Id>
            <ns6:OrganizationTypeCode authenticSource="EHP"
type="code">HOSPITAL</ns6:OrganizationTypeCode>
            <ns6:OrganizationTypeFriendlyName
xml:lang="nl">Ziekenhuis</ns6:OrganizationTypeFriendlyName>
            <ns6:OrganizationTypeFriendlyName
xml:lang="fr">Hôpital</ns6:OrganizationTypeFriendlyName>
            <ns6:Name xml:lang="nl">KLINIEK O C M W</ns6:Name>
         </ns8:HealthCareOrganization>
      </ns8:SearchOrganizations
            Response>
   </soap:Body>
</soap:Envelope>
```

5.3.4 Getting contact information of healthcare professionals

As soon as the reference to the matching healthcare professional has been collected, it can be used to extract detailed contact information from the address book. This section provides the description of the WS method allowing identified users to achieve this consultation. As always, Get[…]Request represents the query part and the Get[…]Response represents the output feed format.

5.3.4.1 GetProfessionalContactInfoRequest (Input)
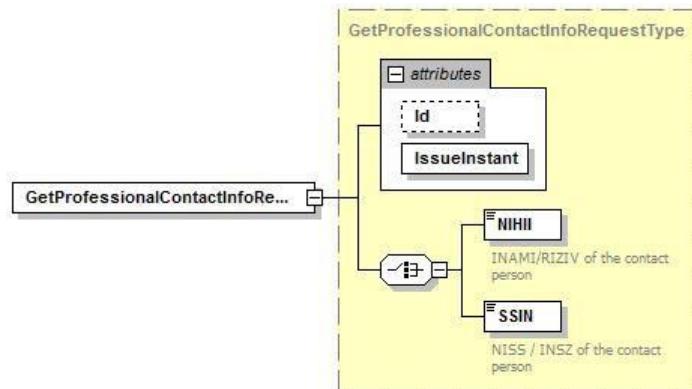
Figure 9: GetProfessionalContactInfoRequest

Field Name	Description	Attribute	Required
Id	Identifier of the request within the caller system	Yes	No
IssueInstant	Date and time of the request	Yes	Yes
NIHII	NIHII (INAMI/RIZIV) of the individual (8 or 11 digits)	No	Yes
SSIN	NISS/INSZ of the individual (11 digits)	No	Yes

5.3.4.2 GetProfessionalContactInfoResponse (Output)

Important:

eHealthBox *Quality* and *ProfessionCode* can sometimes be different. In order to send an eHealthBox message, you will need to use the "*Quality*".
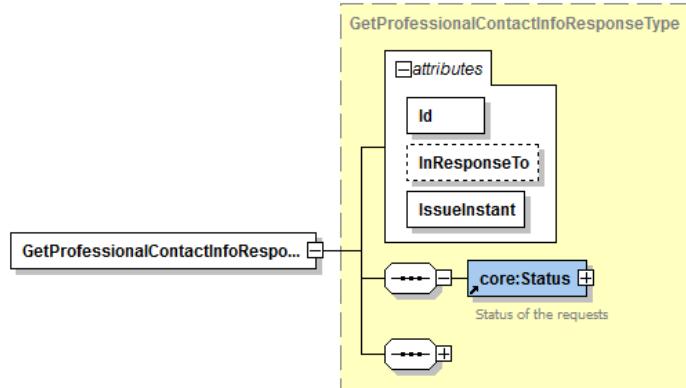
Figure 10: GetProfessionalContactInfoResponse (Main attributes and Status fields)

Field Name	Description	Attribute	Required
Id	Identifier of the response	Ye	Ye
InResponseTo	Id attribute of the request	Ye	N
IssueInstant	Date and time of the response	Ye	Ye
Status	See Section 5.3.6.1 StatusType	N	Ye
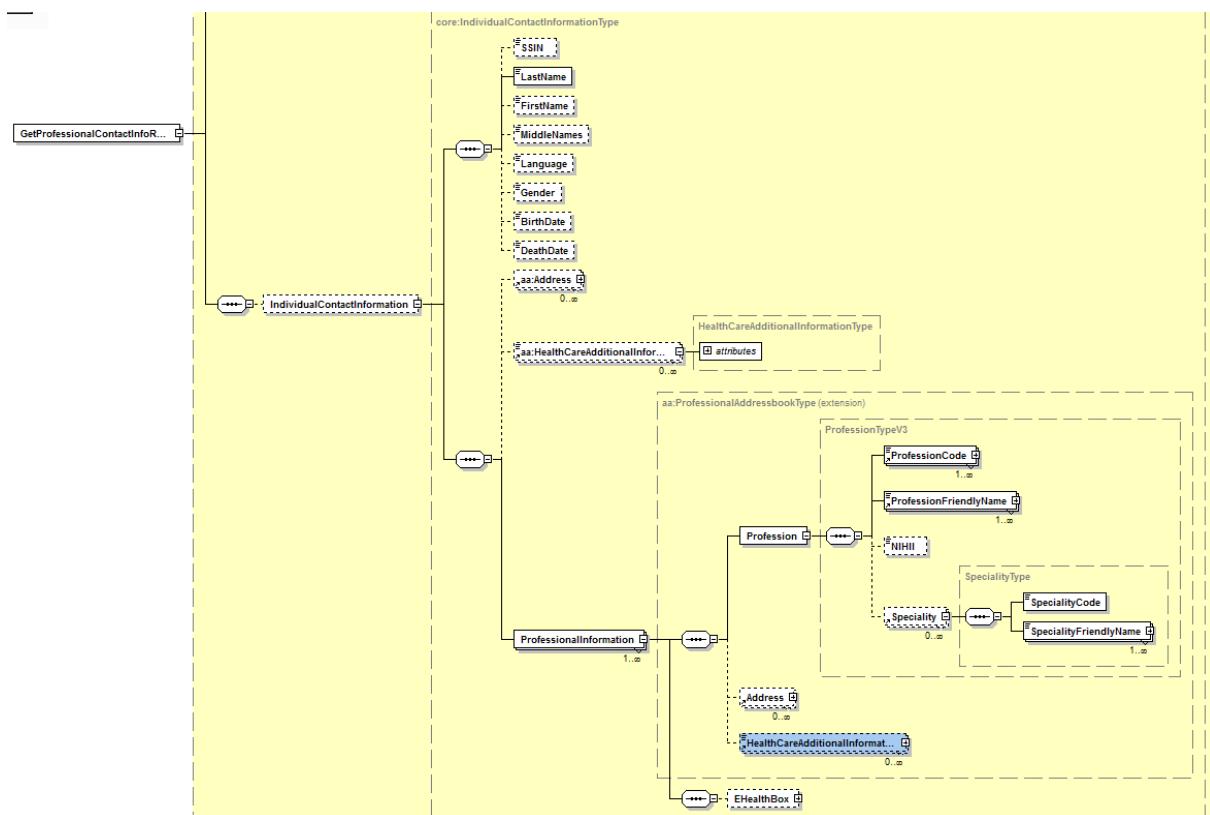
Figure 11: GetProfessionalContactInfoResponse (IndividualContactInformation fields)

| Field Name	Description	Attribute	Required
SSIN	NISS/INSZ of the individual	No	No
LastName	Last name of the individual	No	Yes
FirstName	First name of the individual	No	No
MiddleNames	Middle name of the individual	No	No
Language	Language of the individual	No	No
Gender	Gender of the individual	No	No
BirthDate	Birthdate of the individual	No	No
DeathDate	Death date of the individual	No	No
Address	See Section 5.3.6.2 AddressType.	No	No
HealthCareAdditionalInformation	Can contain (in the future) extra personal contact	No	No
ProfessionCode	Profession code of this profession as can be found in	No	Ye
ProfessionFriendlyName	Description of this profession as can be found in	No	Ye
NIHII	NIHII number (11 digits) of the individual for this	No	No
SpecialityCode	Specialty of the individual person for this	No	No
SpecialityFriendlyName	Description of the specialty of the individual person	No	No
Address (Professional)	See Section 5.3.6.2 AddressType. A professional can	No	No

HealthCareAdditionalInformation	Can contain (in the future) extra personal contact	No	No
eHealthBox	See Section 5.3.6.3 eHealthBoxType	No	No

Note: Private addresses of individuals will never be returned as information

5.3.4.3 Example

Request:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" ...>
    <soapenv:Header/>
    <soapenv:Body>
        <urn:GetProfessionalContactInfoRequest Id="b3696fe39-39a5-4e04-9317-
021c9234a47f" IssueInstant="2016-04-07T10:25:35.921+02:00">
            <urn:SSIN>65072423769</urn:SSIN>
        </urn:GetProfessionalContactInfoReques
                            t>
    </soapenv:Body>
</soapenv:Envelope>
```

Response:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns8:GetProfessionalContactInfoResponse Id="_45ef9f77-1898-438d-8ff1-
ae01c3ce6144" InResponseTo="b3696fe39-39a5-4e04-9317-021c9234a47f"
IssueInstant="2016-04-07T10:25:46.511+02:00" ...>
            <ns4:Status>
                <ns4:StatusCode Value="urn:be:fgov:ehealth:2.0:status:Success"/>
            </ns4:Status>
            <ns8:IndividualContactInformation>
                <ns6:LastName>DEBOELEKE</ns6:LastName>
                <ns6:FirstName>DOMI</ns6:FirstName>
                <ns6:MiddleNames>ANDRE</ns6:MiddleNames>
                <ns6:Language>nl</ns6:Language>
                <ns6:Gender>male</ns6:Gender>
                <ns6:BirthDate>28/04/1959</ns6:BirthDate>
                <ns6:Address Type="contact">
                    <ns6:Street>
                        <ns6:Description xml:lang="nl">Doornstraat</ns6:Description>
                    </ns6:Street>
                    <ns6:Municipality>
                        <ns6:ZipCode>8790</ns6:ZipCode>
                        <ns6:Description xml:lang="nl">Waregem</ns6:Description>
                    </ns6:Municipality>
                    <ns6:Country>
                        <ns6:ISOCode>BE</ns6:ISOCode>
                        <ns6:Description xml:lang="de">Belgien</ns6:Description>
                        <ns6:Description xml:lang="fr">Belgique</ns6:Description>
                        <ns6:Description xml:lang="nl">België</ns6:Description>
                    </ns6:Country>
                </ns6:Address>
                <ns6:HealthCareAdditionalInformation
 Type="Fax">02/894.28.17.12</ns6:HealthCareAdditionalInformation>
```

```xml
            <ns6:HealthCareAdditionalInformation
Type="Mail">DEBOELEKE@hotmail.com</ns6:HealthCareAdditionalInformation>
            <ns7:ProfessionalInformation>
                <ns6:Profession>
                    <ns6:ProfessionCode authenticSource="EHP"
type="code">MIDWIFE</ns6:ProfessionCode>
                    <ns6:ProfessionFriendlyName
xml:lang="nl">Vroedvrouw</ns6:ProfessionFriendlyNam
e>
                    <ns6:ProfessionFriendlyName
xml:lang="fr">Sage- femme</ns6:ProfessionFriendlyName>
                    <ns6:NIHII>40397924012</ns6:NIHII>
                </ns6:Profession>
                <ns6:HealthCareAdditionalInformation
Type="Mail">test@ehealth.fgov.be</ns6:HealthCareAdditionalInformation>
            </ns7:ProfessionalInformation>
            <ns7:ProfessionalInformation>
                <ns6:Profession>
                    <ns6:ProfessionCode authenticSource="EHP"
type="code">NURSE</ns6:ProfessionCode>
                    <ns6:ProfessionFriendlyName
xml:lang="nl">Verpleegkundige</ns6:ProfessionFriendlyName>
                    <ns6:ProfessionFriendlyName
xml:lang="fr">Infirmier/Infirmière</ns6:ProfessionFriendlyName>
                    <ns6:NIHII>41953197768</ns6:NIHII>
                </ns6:Profession>
                <ns6:Address Type="contact">
                    <ns6:Street>
                        <ns6:Description
                        xml:lang="nl">DRIESTSTRAAT</ns6:Description>
                    </ns6:Street>
                    <ns6:HouseNumber>85</ns6:HouseNumber>
                    <ns6:Municipality>
                        <ns6:ZipCode>9301</ns6:ZipCode>
                        <ns6:Description xml:lang="fr">Alost</ns6:Description>
                        <ns6:Description xml:lang="nl">Aalst</ns6:Description>
                        <ns6:Description xml:lang="de">Aalst</ns6:Description>
                    </ns6:Municipality>
                    <ns6:Country>
                        <ns6:ISOCode>BE</ns6:ISOCode>
                        <ns6:Description xml:lang="de">Belgien</ns6:Description>
                        <ns6:Description xml:lang="fr">Belgique</ns6:Description>
                        <ns6:Description xml:lang="nl">België</ns6:Description>
                    </ns6:Country>
                </ns6:Address>
                <ns6:HealthCareAdditionalInformation
Type="Cellphone">0495/30.42.50</ns6:HealthCareAdditionalInformation>
                <ns6:HealthCareAdditionalInformation
Type="Phone">02/842.13.42</ns6:HealthCareAdditionalInformation>
            </ns7:ProfessionalInformation>
        </ns8:IndividualContactInformation>
    </ns8:GetProfessionalContactInfoResponse>
```

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

5.3.5   Getting contact information of healthcare organizations

The GetOrganizationContactInfoRequest method allows an authenticated user to request contact information of an organization using a reference provided by the organization lookup method described earlier in this document.

5.3.5.1 *GetOrganizationContactInfoRequest (Input)*

Notes on field *InstitutionType*:

InstitutionType can be specified or not as input.

*   If *InstitutionType* is specified it acts as a filter (for EHP: EHP, or CTRL_ORGANISM; for CBE: *ENTERPRISE, CONSORTIUM or TREAT_CENTER*, for a full list see Section 9.1 List of organization qualities). If the organization is matching the specified type it will be returned, otherwise there will be no result. Only 1 eHealthBox matching the specified type will be returned.

*   If *InstitutionType* is not specified and:

    o   if you search a CBE number: search will be done by the system assuming organization is of type "*ENTERPRISE*". All eHealthBoxes will be returned for that CBE number.

    o   if you search an EHP number: search will be done by the system assuming organization is of type "*EHP*". All eHealthBoxes will be returned for that EHP number.

    o   if you search an INAMI/RIZIV organization, you can only have 1 type linked and it can have at most one eHealthBox.

*   Conclusion: we strongly recommend specifying InstitutionType in the request whenever possible, but for INAMI/RIZIV organizations, it is not required.
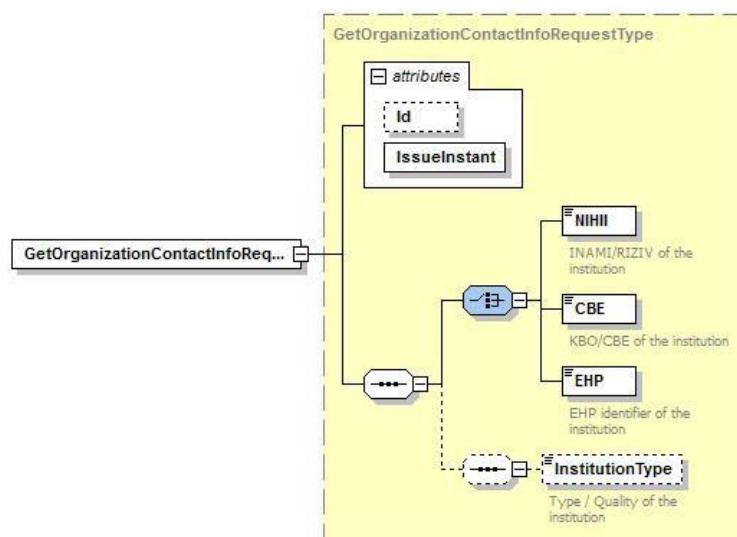
Figure 12: GetOrganizationContactInfoRequest (Input Structure)

Field Name	Description	Attribute	Required
Id	Identifier of the request within the caller system	Yes	No
IssueInstant	Date and time of the request	Yes	Yes
NIHII	NIHII (INAMI/RIZIV) of the institution (8 or 11 digits)	No	Yes
CBE	KBO/CBE of the institution (10 digits)	No	Yes
EHP	EHP identifier of the institution (10 digits)	No	Yes

InstitutionType	Type of the institution (See Section 9.1 List of organization qualities)	No	No

5.3.5.2 GetOrganizationContactInfoResponse (Output)

<u>Important</u>:

eHealthBox *Quality* and *OrganizationTypeCode* can sometimes be different. In order to send an eHealthBox message, you will need "*Quality*".
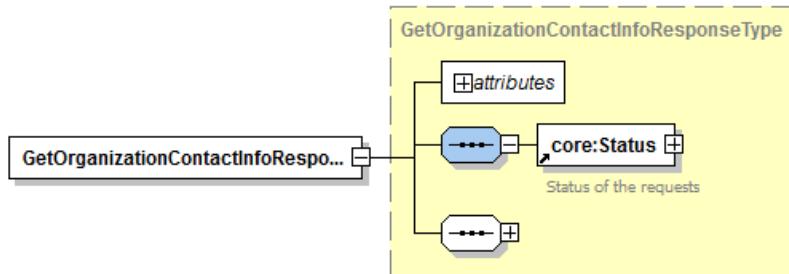
Figure 13: GetOrganizationContactInfoResponse (Main Attributes and Status fields)

Field Name	Description	Attribute	Required
Id	Identifier of the response	Yes	Yes
InResponseTo	Id attribute of the request	Yes	No
IssueInstant	Date and time of the response	Yes	Yes
Status	See Section 5.3.6.1 StatusType	No	Yes
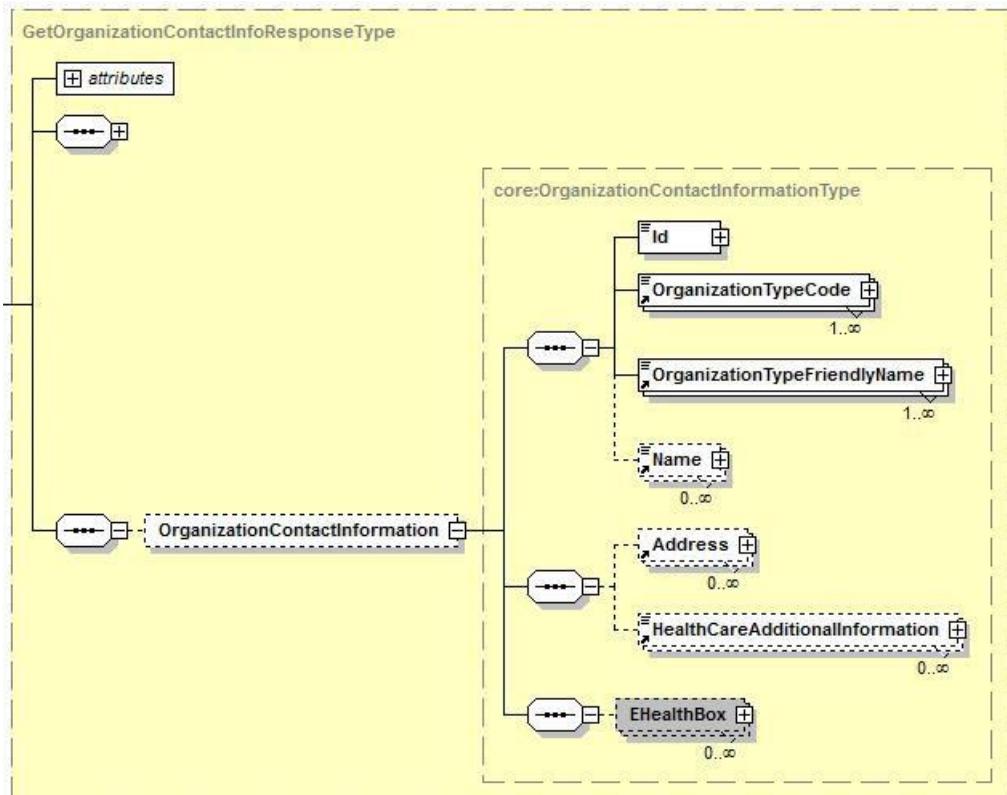


Figure 14: GetOrganizationContactInfoResponse (Organization Contact Information related fields)

Field Name	Description	Attribute	Required
Id	Identification number (and type of this number) of the institution	No	Yes
OrganizationTypeCode	Type of the institution as detailed in Section 9.1 List of organization qualities In practice only 1 OrganizationTypeCode is returned.	No	Yes
OrganizationTypeFriendlyName	Description of the institution type as detailed in Section 9.1 List of organization qualities.	No	Yes
Name	Name of the institution Multiple items can be present: one by language.	No	No
Address	See Section 5.3.6.2 AddressType. Multiple addresses can be returned for 1 organization, e.g. for each site.	No	No
HealthCareAdditionalInformation	Can contain (in the future) extra organization contact information (phone number, fax, email,) see 5.3.6.4 HealthCareAdditionalInformation	No	No
EHealthBox	See Section 5.3.6.3 eHealthBoxType	No	No

5.3.5.3 Example

Request:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" ...>
    <soapenv:Header/>
    <soapenv:Body>
        <urn:GetOrganizationContactInfoRequest Id="b240bee0e-52c7-4cfc-8f26-
3e5b268d9b16" IssueInstant="2016-04-07T10:31:47.384+02:00">
            <urn:NIHII>71000546</urn:NIHII>
        </urn:GetOrganizationContactInfoRequest>
    </soapenv:Body>
</soapenv:Envelope>
```

Response:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns8:GetOrganizationContactInfoResponse Id="_9606c418-fdf3-
4c3f-8680- bc75bc635324" InResponseTo="b240bee0e-52c7-4cfc-8f26-
3e5b268d9b16" IssueInstant="2016-04-07T10:31:54.615+02:00" ...>
            <ns4:Status>
                <ns4:StatusCode Value="urn:be:fgov:ehealth:2.0:status:Success"/>
            </ns4:Status>
            <ns8:OrganizationContactInformation>
                <ns6:Id authenticSource="NIHII" type="HCI">71000546</ns6:Id>
                <ns6:OrganizationTypeCode authenticSource="EHP"
type="code">HOSPITAL</ns6:OrganizationTypeCode>
                <ns6:OrganizationTypeFriendlyName
xml:lang="nl">Ziekenhuis</ns6:OrganizationTypeFriendlyName>
```

```xml
                    <ns6:OrganizationTypeFriendlyName
  xml:lang="fr">Hôpital</ns6:OrganizationTypeFriendlyName
                            >
                <ns6:Name xml:lang="nl">REVALIDATIECENTRUM     DE ZONNE</ns6:Name>
            <ns6:Address Type="contact">
                <ns6:Street>
                    <ns6:Description xml:lang="nl">SCHAKELWEG 47</ns6:Description>
                </ns6:Street>
                <ns6:Municipality>
                    <ns6:ZipCode>8790</ns6:ZipCode>
                    <ns6:Description xml:lang="nl">Waregem</ns6:Description>
                </ns6:Municipality>
                <ns6:Country>
                    <ns6:ISOCode>BE</ns6:ISOCode>
                    <ns6:Description xml:lang="de">Belgien</ns6:Description>
                    <ns6:Description xml:lang="fr">Belgique</ns6:Description>
                    <ns6:Description xml:lang="nl">België</ns6:Description>
                </ns6:Country>
            </ns6:Address>
        </ns8:OrganizationContactInformation>
      </ns8:GetOrganizationContactInfoResponse>
    </soap:Body>
</soap:Envelope>
```

5.3.6 Used Types

5.3.6.1 Status Type

The eHealth SOA service response is composed of a *Status* element. This element is used to indicate the status of the completion of the request. The status is represented by a *StatusCode* and optionally the message describing the status. An additional detail provides extra information on the encountered business errors returned by the target service.
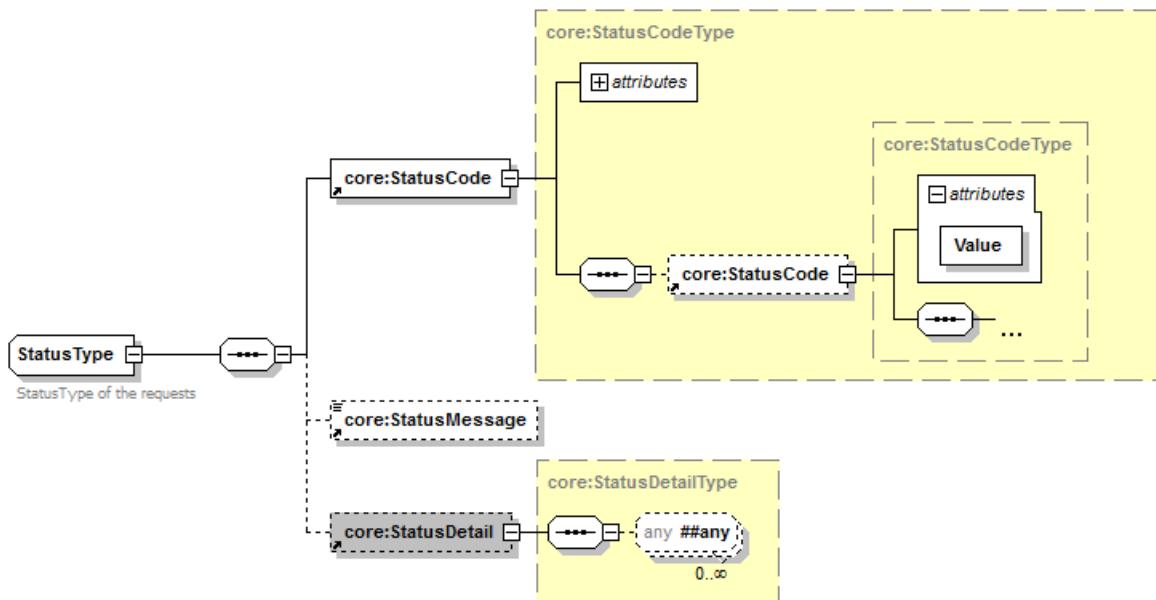

Figure 15: StatusType

Field Name	Description	Attribute	Required
StatusCode	See table further down for a list of possible values	No	Yes
StatusMessage	An optional message describing the error	No	Yes
StatusDetail	The StatusDetail is defined as a free type, available for service to put any element in it to give extra information on the encountered business errors returned by the target service.	No	No

StatusCode is recursive; therefore *StatusCode* (level 1) could be embedded by an optional sub *StatusCode* (sub level). Each *StatusCode* must have a value attribute and there must be at least a level 1 *StatusCode*.

The response returns at least Level 1 *StatusCode* with one of the following values:

URI	Description
'urn:be:fgov:ehealth:2.0:status:Success'	Completion of the request without errors
'urn:be:fgov:ehealth:2.0:status:Requester'	Completion of the request with errors caused by the WS
'urn:be:fgov:ehealth:2.0:status:Responder'	Completion of the request with errors caused by the WS

The optional Level 2 *StatusCode* if returned may have different values indicating a specific cause of the error such as invalid input, missing input, data not found etc.

URI	Description
'urn:be:fgov:ehealth:2.0:status:Intermediate'	Unknown error
'urn:be:fgov:ehealth:2.0:status:InvalidInput'	Invalid input error
'urn:be:fgov:ehealth:2.0:statusMissingInput'	Missing input
'urn:be:fgov:ehealth:2.0:status:DataNotFound'	No results for the request
'urn:be:fgov:ehealth:2.0:status:RequestDenied'	Unauthorized request (business level)
'urn:be:fgov:ehealth:2.0:status:RequestUnsupported'	Service does not support the request

Example:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns8:SearchOrganizationsResponse ... Offset="0" MaxElements="100"
Id="_14cc837e-de41-4b38-b23a-f19a91148a83" InResponseTo="bb16782e9-9cea-4af4-
8ce4-
e1abe70a9687" IssueInstant="2016-04-07T10:40:57.881+02:00">
      <ns4:Status>
        <ns4:StatusCode Value="urn:be:fgov:ehealth:2.0:status:Success">
          <ns4:StatusCode Value="urn:be:fgov:ehealth:2.0:status:DataNotFound"/>
        </ns4:StatusCode>
        <ns4:StatusMessage>No results for the request.</ns4:StatusMessage>
      </ns4:Status>
    </ns8:SearchOrganizationsResponse>
  </soap:Body>
</soap:Envelope>
```

See Section 8 Error and failure messages for further description of StatusCode used in this service.

5.3.6.2

Note:

Private addresses of individuals will never be returned as information
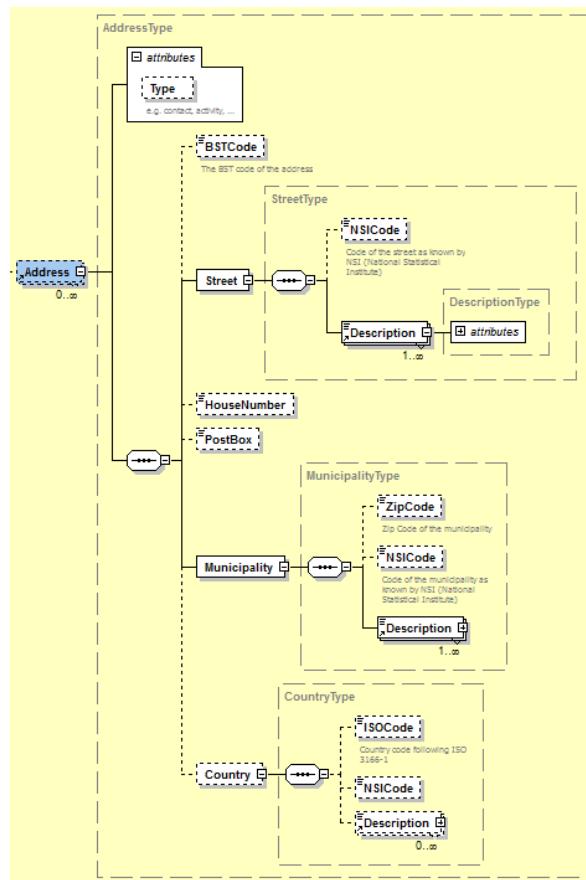
Figure 16: AddressType

Field name	Description	Attribute	Required
Type	Type of the address E.g. contact, activity, … (this list may evolve in the future)	No	No
BSTCode	BST code of the address	No	No
NSICode	Code of the street as known by NSI (National Statistical Institute)	No	No
Description	NSI Code (if found) and the name of the street (and the translation if it concerns a bilingual street)	No	Yes
HouseNumbe	This field contains the number in the street.	No	No
PostBox	This field contains the box.	No	No
ZipCode	ZIP Code of the Municipality. Standard Belgian 4 digits number.	No	No
NSICode	Code of the municipality as known by NSI (National Statistical Institute) (see http://statbel.fgov.be).	No	No
Description	ZIP code, NSI code and name of the municipality (and the translation if it concerns a bilingual municipality)	No	Yes
ISOCode	Country code following ISO 3166-1	No	No

|			
NSICode	NSI code of the country: three positions (see http://statbel.fgov.be)	No	No
Description	NSI code and name of the country	No	Yes

5.3.6.3 eHealthBoxType
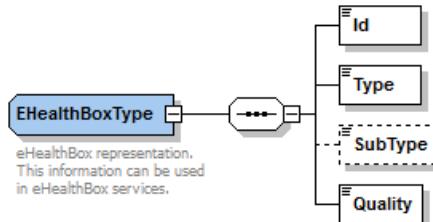
Figure 17: eHealthBoxType

Field name	Description	Attribute	Required
Id	Id number of the eHealthBox This is a digital number representing an INSS, NIHII, or CBE.	No	Yes
Type	eHealthBox's identifier type ("INSS", "NIHII", or "CBE").	No	Yes
SubType	If the recipient is an organization, the *Subtype* allows (if necessary) further specification (such as "HOSPITAL" *SubType* for a Hospital *Quality*, or "GROUP" *SubType* for a Group *Quality*).	No	No
Quality	eHealthBox's *Quality*. See Section 8.1 List of organization qualities and 8.2 List of professional qualities.	No	Yes

5.3.6.4 HealthCareAdditionalInformation
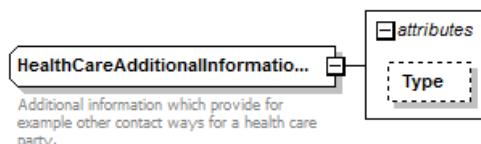
Figure 18: HealthCareAdditionalInformation

Field name	Description	Attribute	Required
HealthCareAdditionalInformation	The value will be in the element	No	No
Type	Type of the value	Yes	No

Types currently possible:
- Mail
- Fax
- Phone
- Cell phone
- Cell phone
- Mail2
- Fax2
- Phone2
- Cell phone2

- Mail3
- Fax3
- Phone3
- Cell phone3

6. Risks and security

6.1 Risks & safety

6.2 Security

6.2.1 Business security

In case the development adds an additional use case based on an existing integration, the eHealth platform must be informed at least one month in advance with a detailed estimate of the expected load. This will ensure an effective capacity management.

In case of technical issues on the WS, the partner may obtain support from the contact center (see Chap 3)

> **In case the eHealth platform finds a bug or vulnerability in its software, we advise the partner to update his application with the newest version of the software within 10 business days.**
>
> **In case the partner finds a bug or vulnerability in the software or web service that the eHealth platform delivered, he is obliged to contact and inform us immediately. He is not allowed to publish this bug or vulnerability in any case.**

6.2.2 Web service

WS security used in this manner is in accordance with the common standards. Your call will provide:

- SSL one way
- Time-to-live of the message: one minute.
- Signature of the timestamp, body and binary security token. This will allow the eHealth platform to verify the integrity of the message and the identity of the message author.
- No encryption on the message.

6.2.3 The use of username, password and token

The username, password and token are strictly personal. Partners and clients are not allowed to transfer them. Every user takes care of his username, password and token and he is forced to confidentiality of it. Moreover, every user is responsible of every use, which includes the use by a third party, until the inactivation.

6.3 Procedure

This chapter explains the procedures for testing and releasing an application in acceptation or production.

6.3.1 Initiation

If you intend to use the eHealth platform service, please contact ***info@ehealth.fgov.be***. The project department will provide you with the necessary information and mandatory documents.

6.3.2 Development and test procedure

You have to develop a client in order to connect to our WS. Most of the required integration info to integrate is published on the portal of the eHealth platform.

Upon request, the eHealth platform provides you in some cases, with a mock-up service or test cases in order for you to test your client before releasing it in the acceptance environment.

6.3.3   Release procedure

When development tests are successful, you can request to access the acceptance environment of the eHealth platform. From this moment, you start the integration and acceptance tests. The eHealth platform suggests testing during minimum one month.

After successful acceptance tests, the partner sends his test results and performance results with a sample of "eHealth request" and "eHealth answer" by email to his point of contact at the eHealth platform.

Then the eHealth platform and the partner agree on a release date. The eHealth platform prepares the connection to the production environment and provides the partner with the necessary information. During the release day, the partner provides the eHealth platform with feedback on the test and performance tests.

For further information and instructions, please contact: ***integration-support@ehealth.fgov.be***.

6.3.4   Operational follow-up

Once in production, the partner using the eHealth platform service for one of his applications will always test first in the acceptance environment before releasing any adaptations of its application in production. In addition, he will inform the eHealth platform on the progress and test period.

6.4 Test cases
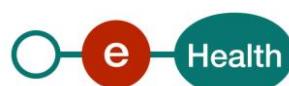
The eHealth platform recommends performing tests for all of the following cases:

- Do a SearchProfessionalsRequest with Profession = 'PHYSICIAN' and LastName = last name of your general practicionner : you should receive one result
- Do a SearchOrganizationsRequest, with InstitutionType='HOSPITAL' and ZipCode = '1000' : you should receive a list of hospitals
- Do a GetProfessionalContactInfoRequest, with a professional SSIN or professional NIHII number (found in test #1) : you should receive the corresponding professional contact information
- Do a GetOrganizationContactInfoRequest, with a hospital NIHII number and InstitutionType= 'HOSPITAL' you should have a result
- Do a GetOrganizationContactInfoRequest, with a hospital NIHII and without InstitutionType : you should have a result.

In addition, the organization should also run negative test cases:

- Impossible combination of search criteria's
- No results found
- Strings below minimum length for LastName, FirstName, InstitutionName
- Test sending of invalid NISS, NIHII, CBE or EHP and handling of this error.

Please note that loops and load tests are prohibited!

7. Error and failure messages

There are three different possible types of response:

- If there are no technical or business errors, business response is returned.
- If a business error occurred, it is contained in a business response that undergoes a regular transformation[2] (see chapter 8.1 Business errors).
- In the case of a technical error, a SOAP fault exception is returned (see chapter 8.2).

7.1 Business errors

See 5.3.6.1 StatusType for description of the StatusCode mechanism.

Business errors are forwarded without any transformation (they are treated as regular business responses). These error codes first indicate a problem in the arguments sent.

StatusC ode	Message	Solution
urn:be:fgov:ehealth:2.0:status:Success (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)	No results for the request	Change one of the search criteria. Diminish the number of search criteria.
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	One or more search criteria are invalid	Proof-read entered search criterion
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	Search criterion 'NIHII' is invalid	Make sure the entered value is composed of either 8 or 11 digits. Verify the check digit.
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	Search criterion 'SSIN' is invalid	Make sure the entered value is composed of 11 digits. Verify the check digit.
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	Search criterion 'CBE' is invalid	Make sure the entered value is exactly 10 digits long. Verify the check digit.
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	Search criterion 'EHP' is invalid	Make sure the entered value is exactly 10 digits long. Verify the check digit.
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	Search criterion 'FirstName' is invalid	Make sure you entered at least 1 character in the 'FirstName' Field
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	Search criterion 'LastName' is invalid	Make sure you entered at least 2 characters in the 'LastName' field

urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	Search criterion 'InstitutionName' is invalid	Make sure you entered at least 3 characters in the 'InstitutionName' field
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	Search criterion 'Profession' is invalid	Make sure you use a Profession as described in Section 9.2 List of professional qualities
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	Search criterion 'InstitutionType' is invalid	Make sure you use an InstitutionType as described in Section 9.1 List of organization qualities
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	Search criterion 'ZipCode' is invalid	Make sure the entered value is exactly 4 digits long
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	Search criterion 'City' is invalid	Make sure you use at least 3 character in the 'City' field
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	Search criterion 'eMail' is invalid	eMail address must contain @ and 1 or more '.'
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:RequestDenied (level 2)	Search criterion cannot be empty	Look for empty elements <> </>
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	The Offset attribute cannot be negative	Offset must be >= 0. It can be higher than MaxElements
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	The MaxElements attribute is too high	MaxElements may not exceed 100 items per request
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	The MaxElements attribute cannot be negative or zero	MaxElements must be >=0
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:RequestDenied (level 2)	This combination of search criteria is not supported	Some search criteria cannot be used simultaneously. For more information on validation rules, see Section 5.3.3.
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)	Searching on InstitutionType and InstitutionName is not supported for CBE types	Some more restrictions are imposed when searching CBE organisations. For more information on validation rules, see Section 5.3.3.
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)	Searching on InstitutionType and City is not supported for CBE types	Some more restrictions are imposed when searching CBE organisations. For information on validation rules, see Section 5.3.3.

urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)	Searching on InstitutionType and ZipCode is not supported for CBE types	Some more restrictions are imposed when searching CBE organisations. For more information on validation rules, see Section 5.3.3.

7.2 Technical errors

Technical errors are errors inherent to the internal working of a web service. They are returned as SOAP Faults. The SOA Standard for Errorhandling specifies a structure for SystemError and BusinessError, thrown as SOAP Faults.

A **SystemError** MUST be thrown when a system failure occurred. It is not related to the business of the service. The SOA system error structure is as follows:
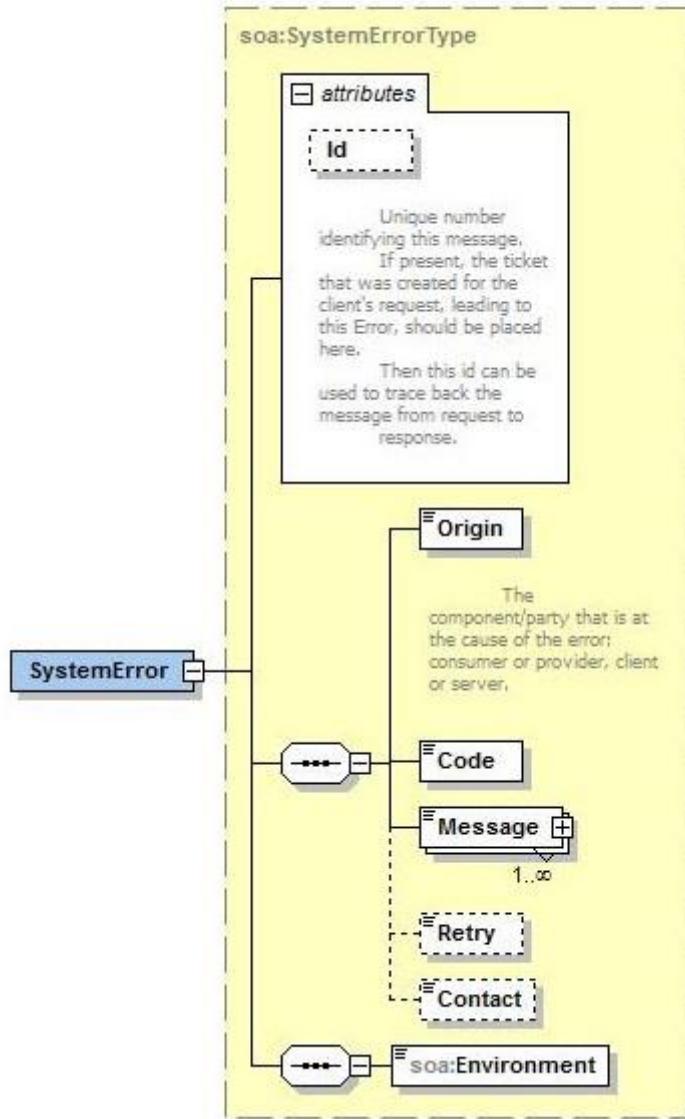

Figure 19: SystemError

The SystemError element MUST contain a unique Id attribute for tracing. The Origin MUST be set to Server or Provider.

Retry SHOULD be set to true if the consumer can try again immediately without interventions.

Example:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
   <soapenv:Body>
      <soapenv:Fault>
         <faultcode>soapenv:Server</faultcode>
         <faultstring>SOA-02002</faultstring>
         <detail>
            <soa:SystemError Id="9E0-00000P1-00-C" xmlns:soa="urn:be:fgov:ehealth:errors:soa:v1">
               <Origin>Server</Origin>
               <Code>SOA-02002</Code>
               <Message xml:lang="en">Service is temporarily not available. Please contact service
desk.</Message>
               <Retry>true</Retry>
               <soa:Environment>Test</soa:Environment>
            </soa:SystemError>
         </detail>
      </S:Fault>
   </soapenv:Body>
</soapenv:Envelope>
```

The SOAP Fault element has the following sub elements:

Element name	Descriptions	Required
faultcode	A code for identifying the fault	Yes
faultstring	A human readable explanation of the fault	Yes
faultactor	Information about who caused the fault to happen (the origin)	No
detail	Holds application specific error information related to the Body element. For example, it could include a java stack trace or any other kind of trace, used internally, to document on the cause of this error.	No

The default SOAP fault code values are defined in an extensible manner that allows for new SOAP fault code values to be defined while maintaining backwards compatibility with existing fault code values.

Element name	Descriptions
versionMismatch	Found an invalid namespace for the SOAP Envelope element.
mustUnderstand	An immediate child element of the Header element, with the mustUnderstand attribute set to "1", was not understood.
client	The message was incorrectly formed or contained incorrect information.
server	There was a problem with the server so the message could not proceed.

Description of the possible SOAP fault exceptions:

Error code	Component	Description	Solution/Explanation
SOA-00001	Undefined	Service error	This is the default error sent to the consumer in case no more details are known.
SOA-01001	Consumer	Service call not authenticated	From the security information provided • or the consumer could not be identified • or the credentials provided are not correct

SOA-01002	Consumer	Service call not	• The consumer is identified and authenticated but is not allowed to call the given service.
SOA-02001	Provider	Service not available. Please contact service desk	• An unexpected error has occurred • Retries will not work • Service desk may help with root cause analysis
SOA-02002	Provider	Service temporarily not available. Please try later	• An unexpected error has occurred • Retries should work • If the problem persists service desk may help
SOA-03001	Consumer	Malformed message	This is default error for content related errors in case no more details are known.
SOA-03002	Consumer	Message must be SOAP	Message does not respect the SOAP standard
SOA-03003	Consumer	Message must contain SOAP body	Message respects the SOAP standard, but body is missing
SOA-03004	Consumer	WS-I compliance failure	Message does not respect the WS-I standard
SOA-03005	Consumer	WSDL compliance failure	Message is not compliant with WSDL in Registry/Repository
SOA-03006	Consumer	XSD compliance failure	Message is not compliant with XSD in Registry/Repository
SOA-03007	Consumer	Message content validation failure	From the message content (conform XSD): • Extended checks on the element format failed • Cross-checks between fields failed

7.3 WS-I Basic Profile 1.1

Your request must be WS-I compliant (Cfr External Ref). If not you will receive one of the errors SOA-03001 – SOA-03003.

Error code	Component	Description	Solution
SOA-03001	*Consumer*	*This is the default error for content related errors in case no more details are known.*	*Malformed message*
SOA-03002	*Consumer*	*Message does not respect the SOAP standard.*	*Message must be SOAP*
SOA-03003	*Consumer*	*Message respects the SOAP standard, but body is missing.*	*Message must contain SOAP body*

8. Annex

8.1 List of organization qualities

The list of supported organization are the following:

Institution type	Type	Descr FR	Desc NL
AMBU_SERVICE	NIHII	Service ambulancier	Ambulancedienst
CONSORTIUM	CBE	Consortium dépistage du cancer	Consortium kankerbevolkings-onderzoek
CTRL_ORGANISM	EHP	Organisme de contrôle	Controle organisme
GROUPOFNURSES	NIHII	Groupement d'infirmiers	Groepering van verpleegkundigen
GROUPOFDOCTORS	NIHII	Groupement de médecins généralistes à différents lieux d'installation	Groepering van huisartsen op verschillende installatieplaatsen
GUARD_POST	NIHII	Poste de garde	Wachtpost
HOME_SERVICES	NIHII	Service de soins intégrés à domicile	Geïntegreerde diensten voor thuisverzorging
HOSPITAL	NIHII	Hôpital	Ziekenhuis
ICP	NIHII	Projet de soins intégrés	Geïntegreerd zorgproject
ENTERPRISE	CBE	Entreprise	Onderneming
EHP	EHP	Entité spéciale reconnue par la plate-forme eHealth	Speciale door het eHealth-platform erkende entiteit
LABO	NIHII	Laboratoire	Laboratorium
LEGAL_PSY	NIHII	Centre de psychiatrie légale	Forensisch psychiatrisch centrum
MEDICAL_HOUSE	NIHII	Maison médicale	Medisch huis
OFFICE_DOCTORS	NIHII	Groupement de médecins généralistes au même lieu d'installation	Groepering van huisartsen op dezelfde installatieplaats
OTD_PHARMACY	NIHII	Office de tarification	Tariferingsdienst
PALLIATIVE_CARE	NIHII	Soins palliatifs	Palliatieve Zorgen
PHARMACY	NIHII	Pharmacie	Apotheek
PROT_ACC	NIHII	Initiatives d'habitation protégée pour patients psychiatriques	Initiatieven van beschut wonen voor psychiatrische patiënten
PSYCH_HOUSE	NIHII	Maison de soins psychiatrique	Psychiatrische verzorgingstehuis
REEDUCATION	NIHII	Maison de reeducation	Rehabilitatiehuis
RETIREMENT	NIHII	Maison de repos	Rusthuis

SORTING_CENTER	NIHII	Centre de triage	Triagecentrum
TREATMENT_CENTER	CBE	Centre de traitement	Behandelingscentrum

8.2 List of professional qualities

The list of supported professional qualities are the following:

	Profession type	Descr FR	Descr NL
1.	AMBULANCE_RESCUER	Ambulancier	Ambulancier
2.	APPLIED_PSYCH_BACHELOR	Bachelier en psychologie appliquée	Bachelor in de toegepaste psychologie
3.	AUDICIAN	Audicien	Audicien
4.	AUDIOLOGIST	Audiologue	Audioloog
5.	BIOLOGIST_PHARMACIST	Pharmacien biologiste	Apotheker biologist
7.	CLINICAL_ORTHOPEDIC_PEDAGOGUE	Orthopédagogue clinicien	Klinisch orthopedagoog
8.	CLINICAL_PSYCHOLOGIST	Psychologue clinicien	Klinisch psycholoog
9.	DENTAL_HYGIENIST	Hygiéniste bucco-dentaire	Mondhygiënist
10.	DENTIST	Dentiste	Tandarts
11.	DIETICIAN	Diététicien	Diëtist
12.	PHYSICIAN	Médecin	Arts
13.	FAMILY_SCIENCE_BACHELOR	Bachelier en science de la famille	Bachelor in gezinwetenschappen
14.	GERONTOLOGY_MASTER	Master en gérontologie	Master in de gerontologie
15.	IMAGING_TECHNOLOGIST	Technologue en imagerie médicale	Technoloog in de medische beeldvorming
16.	IMPLANTPROVIDER	Dispensateur d'implants	Verdeler van implantaten
17.	LAB_TECHNOLOGIST	Technologue de labo	Laborant
18.	LOGOPEDIST	Logopède	Logopedist
19.	MIDWIFE	Sage-femme	Vroedvrouw
20.	NURSE	Infirmier/Infirmière	Verpleegkundige

21.	OCCUPATIONAL_THERAPIST	Ergothérapeute	Ergotherapeut
22.	OPTICIAN	Opticien	Opticien
23.	ORTHOPEDAGOGIST_MASTER	Master en orthopédagogie	Master in de orthopedagogie
24.	ORTHOPEDIST	Orthopédiste	Orthopedist
25.	ORTHOPTIST	Orthoptiste	Orthoptist
26.	PHARMACIST	Pharmacien	Apotheker
27.	PHARMACIST_ASSISTANT	Assistant pharmacien	Assistant-apotheker
28.	PHYSIOTHERAPIST	Kinésithérapeute	Kinesitherapeut
29.	PODOLOGIST	Podologue	Podoloog
30.	PRACTICAL_NURSE	Aide-soignant	Zorgkundige
31.	PSYCHOLOGIST	Psychologue	Psycholoog
32.	PSYCHOMOTOR_THERAPY	Master thérapie psychomotrice	Master in de psycho-motoriek
33.	READAPTATION_BACHELOR	Bachelier en réadaptation	Bachelor in de readaptatiewetenschappen
33.	SOCIAL_WORKER	Assistant social	Maatschappelijk werker
34.	SPECIALIZED_EDUCATOR	Educateur spécialisé	Gespecialiseerde opvoeder/begeleider
35.	TRUSS_MAKER	Bandagiste	Bandagist