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1 Document management

1.1 Document history

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Author</th>
<th>Description of changes / remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>19/08/2014</td>
<td>eHealth platform</td>
<td>Version 1.0</td>
</tr>
<tr>
<td>1.1</td>
<td>08/06/2018</td>
<td>eHealth platform</td>
<td>Update</td>
</tr>
</tbody>
</table>
2 Introduction

2.1 Goal of the service

The main purpose of the authentic source of notified distributors (SADN-ABGD) is to provide an authentic source of the distributors of implantable medical devices that are active on the Belgium market.

The service allows healthcare actors to access the information of a distributor (for example, the name of the distributor, the VAT number and country code, the distributor notification number).

The exposed data is fed by the SADN-ABGD web application (WA), where a distributor notifies his activities of the distribution of medical implants.

Data is consulted by two means: a secure WA and a web service (WS) (the subject of this manual).

2.2 Goal of the document

In this cookbook, we explain the structure and content aspects of the possible requests and the replies of eHealth SADN-ABGD WS. An example illustrates each of those messages, described in section 5. In addition, a list of possible errors can be found in this document.

This information should allow (the IT department of) an organization to develop and use the WS call.

Some technical and legal requirements (see sections 3 and 5) must be met in order to allow the integration of the eHealth WS in client applications.

This document is neither a development nor a programming guide for internal applications. The partners of the eHealth platform always keep a total freedom within those fields. Nevertheless, in order to interact in a smooth, homogeneous and risk controlled way with a maximum of partners, the partners must commit to comply with specifications, data format, and release processes described within this document. In addition, our partners in the health sector must also comply with the business rules of validation and integration of data within their own applications in order to minimize errors and incidents.

2.3 The access to this WS service is regulated.

Please contact the eHealth platform to have access via the mail address info@ehealth.fgov.be

2.4 eHealth document references

All the document references can be found on the eHealth portal. These versions or any following versions can be used for the services of the eHealth platform.

<table>
<thead>
<tr>
<th>ID</th>
<th>Title</th>
<th>Version</th>
<th>Date</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Glossary</td>
<td>1.0</td>
<td>01/01/2010</td>
<td>eHealth platform</td>
</tr>
<tr>
<td>2</td>
<td>Secure Token Service (STS) Cookbook</td>
<td>1.0</td>
<td>31/8/2010</td>
<td>eHealth platform</td>
</tr>
</tbody>
</table>

1 [https://www.ehealth.fgov.be/ehealthplatform](https://www.ehealth.fgov.be/ehealthplatform)
3 Support

3.1 For issues in production

eHealth platform contact center:

- Phone: 02/788 51 55
- 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)

3.2 For issues in acceptance

Integration-support@ehealth.fgov.be

3.3 For business issues

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

3.4 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
The SADN-ABGD service is secured with X509 certificates. The eHealth ESB verifies the security (authentication, authorization, etc.), validates, transforms and forwards the request to FAMHP (Federal Agency for Medicines and Health Products).
5 Step-by-step

5.1 Technical requirements

The client must have an X509 certificate to use the service (see section 3.1).

5.1.1 Security policies to apply

You must 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.

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.

5.2 Web service

The SADN-ABGD service has 2 operations:

- searchDistributor to search a distributor by various search criteria.
- searchBydistributorNotificationNumber to search distributors by their notification number (unique id).

The SADN-ABGD service has the following endpoints:

- Integration environment: https://services-int.ehealth.fgov.be/Sadn/v1
- Acceptance environment: https://services-acpt.ehealth.fgov.be/Sadn/v1
- Production environment: https://services.ehealth.fgov.be/Sadn/v1

The remainder of this section describes the structure of the request and the response messages.

eHealth SOA standard structure

This service is a ‘eHealth SOA standards-based’ WS. We thus strongly recommend the consulting of the documentation related to the eHealth SOA standards element to implement a common message structure for SOA WS.
5.2.1 Method searchDistributor

5.2.1.1 Functional description

<table>
<thead>
<tr>
<th>Service name</th>
<th>searchDistributor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Search a distributor by various criteria</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input parameters</th>
<th>1) The information about the request:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The identification of the request (unique and optional).</td>
</tr>
<tr>
<td></td>
<td>The date and time of the request (mandatory).</td>
</tr>
<tr>
<td></td>
<td>2) The search criteria:</td>
</tr>
<tr>
<td></td>
<td>Name</td>
</tr>
<tr>
<td></td>
<td>Company Identification</td>
</tr>
<tr>
<td></td>
<td>Notification Number</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output parameters</th>
<th>1) The information about the response:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Identification of the response (unique and mandatory).</td>
</tr>
<tr>
<td></td>
<td>The identification of the request, if the request contains an id.</td>
</tr>
<tr>
<td></td>
<td>The date and time of the response (mandatory).</td>
</tr>
<tr>
<td></td>
<td>2) The results of the request:</td>
</tr>
<tr>
<td></td>
<td>The results of the search, one or more distributors matching the criteria.</td>
</tr>
<tr>
<td></td>
<td>The status of the search.</td>
</tr>
<tr>
<td></td>
<td>Possible errors including the error code and its description.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Post-condition</th>
<th>The request is logged.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Possible exceptions</th>
<th>1) Technical error.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2) Business error:</td>
</tr>
<tr>
<td></td>
<td>Invalid search criteria.</td>
</tr>
<tr>
<td></td>
<td>No results found.</td>
</tr>
</tbody>
</table>

| Comments          | |
|-------------------|
5.2.1.2 Input argument ‘SearchDistributorRequest’

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Element</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Id</td>
<td></td>
<td>• Identifier of the request within the caller system.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Optional.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If the Id is provided, this information must be unique. This Id is used for tracing the request.</td>
</tr>
<tr>
<td>IssueInstant</td>
<td></td>
<td>Date and time of the request. Mandatory. Format YYYY-MM-DDThh:mm:ssZ</td>
</tr>
<tr>
<td>Name</td>
<td></td>
<td>The name of the company of the distributor</td>
</tr>
<tr>
<td>CompanyIdentification</td>
<td></td>
<td>The identification number (VAT number) (See 5.2.4)</td>
</tr>
<tr>
<td>DistributorNotificationNumber</td>
<td></td>
<td>The unique identifier of the distributor. This is the registration number of the distributor, as registered by the federal agency for medicine and health products.</td>
</tr>
</tbody>
</table>
**Example – SearchDistributorRequest.xml**

```xml
<urn:SearchDistributorRequest Id="bef4b1635-1f89-472c-b641-74f3862dd95f" IssueInstant="2014-02-27T09:18:37.607+01:00">
  <!--Optional:-->
  <urn:Name>BRT</urn:Name>
  <!--Optional:-->
  <urn:CompanyIdentification>
    <urn:CompanyNumber>U00000001</urn:CompanyNumber>
  </urn:CompanyIdentification>
  <urn:DistributorNotificationNumber>BECA01105497</urn:DistributorNotificationNumber>
</urn:SearchDistributorRequest>
```

**5.2.1.3 Output argument `SearchDistributorResponse`**
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Element</th>
<th>Descriptions</th>
</tr>
</thead>
</table>
| Id              |                  | • Identifier of the response within the responder system.  
• Mandatory.  
• The response message must contain a unique Id for tracing. The service generates this Id upon arrival of the request and uses this for all generated log records linked to that request. |
| InResponseTo    |                  | • Id attribute of the request.  
• Optional.  
• If the request does not contain an Id, InResponseTo must be left empty. |
| IssueInstant    |                  | • Date and time of the request.  
• Mandatory.  
• Format YYYY-MM-DDThh:mm:ssZ |
| Distributor     |                  | Information about the distributor (See section 5.2.4) |

Example – SearchDistributorResponse.xml

```xml
<urn:SearchDistributorResponse Id="bdeb7ef06-1644-4138-8da8-a1f767b57ea6" InResponseTo="bef4b1635-1f89-472c-b641-74f38622dd95f" IssueInstant="2014-02-27T09:18:37.607+01:00" xmlns:urn="urn:be:fgov:ehealth:sadn:protocol:v1">
  <urn1:Status xmlns:urn1="urn:be:fgov:ehealth:commons:core:v2">
    <urn1:StatusCode Value="urn:be:fgov:ehealth:2.0:status:Success"/>
    <urn1:StatusDetail>
      <urn2:ProviderInfo xmlns:urn2="urn:be:fgov:ehealth:sadn:core:v1">
        <urn2:Code>SAFDN-100</urn2:Code>
        <urn2:Message>SUCCESS</urn2:Message>
      </urn2:ProviderInfo>
    </urn1:StatusDetail>
  </urn1:Status>
  <urn1:Distributor>
    <urn1:Name xmlns:urn1="urn:be:fgov:ehealth:sadn:core:v1">BRT Orthopride</urn1:Name>
    <urn1:CompanyIdentification xmlns:urn1="urn:be:fgov:ehealth:sadn:core:v1">
      <urn1:CompanyNumber>U00000001</urn1:CompanyNumber>
    </urn1:CompanyIdentification>
    <urn1:DistributorNotificationNumber xmlns:urn1="urn:be:fgov:ehealth:sadn:core:v1">BECA01105497</urn1:DistributorNotificationNumber>
  </urn1:Distributor>
</urn:SearchDistributorResponse>
```
## 5.2.2 Method searchByDistributorNotificationNumber

### 5.2.2.1 Functional description

<table>
<thead>
<tr>
<th>Service name</th>
<th>searchDistributor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>Search one or more distributors by their unique notification number</td>
</tr>
<tr>
<td><strong>Input parameters</strong></td>
<td></td>
</tr>
<tr>
<td>1) The information about the request:</td>
<td></td>
</tr>
<tr>
<td>• The identification of the request (unique and optional).</td>
<td></td>
</tr>
<tr>
<td>• The date and time of the request (mandatory).</td>
<td></td>
</tr>
<tr>
<td>2) The search criteria:</td>
<td></td>
</tr>
<tr>
<td>• Notification Number(s)</td>
<td></td>
</tr>
<tr>
<td><strong>Output parameters</strong></td>
<td></td>
</tr>
<tr>
<td>1) The information about the response:</td>
<td></td>
</tr>
<tr>
<td>• Identification of the response (unique and mandatory).</td>
<td></td>
</tr>
<tr>
<td>• The identification of the request, if the request contains an id.</td>
<td></td>
</tr>
<tr>
<td>• The date and time of the response (mandatory).</td>
<td></td>
</tr>
<tr>
<td>2) The results of the request:</td>
<td></td>
</tr>
<tr>
<td>• The results of the search, one or more distributor(s) with the requested notification number(s).</td>
<td></td>
</tr>
<tr>
<td>• The global status of the bulk search and one status by specific notification number searched.</td>
<td></td>
</tr>
<tr>
<td>• Possible errors including the error code and its description.</td>
<td></td>
</tr>
<tr>
<td><strong>Post-condition</strong></td>
<td>The request is logged.</td>
</tr>
<tr>
<td><strong>Possible exceptions</strong></td>
<td></td>
</tr>
<tr>
<td>1) Technical error.</td>
<td></td>
</tr>
<tr>
<td>2) Business error:</td>
<td></td>
</tr>
<tr>
<td>• Invalid input.</td>
<td></td>
</tr>
<tr>
<td>• Partially invalid input (bulk search).</td>
<td></td>
</tr>
<tr>
<td>• No results found.</td>
<td></td>
</tr>
<tr>
<td><strong>Comments</strong></td>
<td></td>
</tr>
</tbody>
</table>
5.2.2.2 Input argument ‘SearchByDistributorNotificationNumber’

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Element</th>
<th>Descriptions</th>
</tr>
</thead>
</table>
| Id                 |                                              | • Identifier of the request within the caller system.  
                        • Optional.  
                        • If the Id is provided, this information must be unique. This Id is used for tracing the request.                                         |
| IssueInstant       |                                              | • Date and time of the request.  
                        • Mandatory.  
                        • Format YYYY-MM-DDThh:mm:ssZ                                                                                                                       |
| Status             |                                              | Information about the status of the request (See section 5.2.4)                                                                                         |
| DistributorNotificationNumber | The unique identifier of the distributor. This is the registration number of the distributor, as registered by the federal agency for medicine and health products. Bulk search is done by defining multiple DistributorNotificationNumber elements. |

Example – SearchByDistributorNotificationNumberRequest.xml

```xml
<urn:SearchByDistributorNotificationNumberRequest Id="b93117f27-fb18-4bf1-a7a9-4036a38b6343" IssueInstant="2014-02-27T09:18:37.306+01:00">
  <!-- 1 to 100 repetitions:-->
  <urn:DistributorNotificationNumber>BECA01105497</urn:DistributorNotificationNumber>
</urn:SearchByDistributorNotificationNumberRequest>
```
5.2.2.3 Output argument ‘SearchByDistributorNotificationNumberResponse’

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Element</th>
<th>Descriptions</th>
</tr>
</thead>
</table>
| Id                      | Id                                              | - Identifier of the response within the responder system.  
                        |                                                  | - Mandatory.  
                        |                                                  | - The response message must contain a unique Id for tracing. The service generates this Id upon arrival of the request and use this for all generated log records linked to that request. |
| InResponseTo            | InResponseTo                                    | - Id attribute of the request.  
                        |                                                  | - Optional.  
                        |                                                  | - If the request does not contain an Id, InResponseTo must be left empty.                      |
| IssueInstant            | IssueInstant                                    | Date and time of the request. Mandatory. Format YYYY-MM-DDThh:mm:ssZ                                                                |
| Status                  | Status                                          | Information about the status of the request (See section 5.2.4)  
                        |                                                  | In this case, a status element is found at 2 levels, it can be global to the bulk request or specific to each notification number searched. |
| DistributorNotificationNumber | DistributorNotificationNumber                  | The unique identifier of the distributor.                                                                                                   |
| Distributor             | Distributor                                     | Information about the distributor (See section 5.2.4)                                                                                      |
Example – SearchByDistributorNotificationNumberResponse.xml

```xml
<urn:SearchByDistributorNotificationNumberResponse
  xmlns:urn1="urn:be:fgov:ehealth:commons:core:v2"
  Id="bc12b0b2c-8f3f-43a7-999d-1b8d191c7308"
  InResponseTo="b93117f27-f018-4bf1-a7a9-4836a38b6343"
  IssueInstant="2014-02-27T09:18:37.306+01:00"
  xmlns:urn="urn:be:fgov:ehealth:sadn:protocol:v1">
  <urn1:Status
    xmlns:urn1="urn:be:fgov:ehealth:commons:core:v2">
    <urn1:StatusCode
      Value="urn:be:fgov:ehealth:2.0:status:Success"/>
    <urn1:StatusDetail>
      <urn2:ProviderInfo
        xmlns:urn2="urn:be:fgov:ehealth:sadn:core:v1">
        <urn2:Code
          Value="SADN-100"/>
        <urn2:Message
          Value="SUCCESS"/>
      </urn2:ProviderInfo>
    </urn1:StatusDetail>
  </urn1:Status>
</urn:SearchByDistributorNotificationNumberResponse>

<urn:SearchDistributorByDistributorNotificationNumberResponse
  xmlns:urn1="urn:be:fgov:ehealth:commons:core:v2">
  <urn1:Status
    xmlns:urn1="urn:be:fgov:ehealth:commons:core:v2">
    <urn1:StatusCode
      Value="urn:be:fgov:ehealth:2.0:status:Success"/>
    <urn1:StatusDetail>
      <urn2:ProviderInfo
        xmlns:urn2="urn:be:fgov:ehealth:sadn:core:v1">
        <urn2:Code
          Value="SADN-100"/>
        <urn2:Message
          Value="SUCCESS"/>
      </urn2:ProviderInfo>
    </urn1:StatusDetail>
  </urn1:Status>
</urn:SearchDistributorByDistributorNotificationNumberResponse>

<urn:SearchByDistributorNotificationNumber
  xmlns:urn1="urn:be:fgov:ehealth:sadn:core:v1">
  <urn1:DistributorNotificationNumber
    Value="BECA01105497"/>
  <urn1:Distributor
    xmlns:urn1="urn:be:fgov:ehealth:sadn:core:v1">
    <urn1:Name
      Value="BRT Orthopride"/>
    <urn1:CompanyIdentification>
      <urn1:CountryCode
        standard="ISO-3166-2"
        Value="AT"/>
      <urn1:CompanyNumber
        Value="U000000001"/>
    </urn1:CompanyIdentification>
  </urn1:Distributor>
</urn:SearchByDistributorNotificationNumberResponse>
```
5.2.3 Used types

5.2.3.1 Status

This element is a part of the standard eHealth SOA service response, used to indicate the status of the completion of the request. The status is represented by a StatusCode and optionally the message describing this status. Additional detail gives extra information on the encountered business errors returned by the target service.

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:

<table>
<thead>
<tr>
<th>URI</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘urn:be:fgov:ehealth:2.0:status:Success’</td>
<td>Completion of the request without errors.</td>
</tr>
<tr>
<td>‘urn:be:fgov:ehealth:2.0:status:Requester’</td>
<td>Completion of the request with errors caused by the WS consumer.</td>
</tr>
<tr>
<td>‘urn:be:fgov:ehealth:2.0:status:Responder’</td>
<td>Completion of the request with errors caused by the WS provider.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>URI</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘urn:be:fgov:ehealth:2.0:status:Undetermined’</td>
<td>Unknown error.</td>
</tr>
<tr>
<td>‘urn:be:fgov:ehealth:2.0:status:InvalidInput’</td>
<td>Invalid input error.</td>
</tr>
<tr>
<td>‘urn:be:fgov:ehealth:2.0:status:DataNotFound’</td>
<td>No results for the request.</td>
</tr>
<tr>
<td>‘urn:be:fgov:ehealth:2.0:status:RequestDenied’</td>
<td>Unauthorized request (business level).</td>
</tr>
<tr>
<td>‘urn:be:fgov:ehealth:2.0:status:RequestUnsupported’</td>
<td>Service does not support the request.</td>
</tr>
</tbody>
</table>
5.2.3.2 ProviderInfo

Inside the standard eHealth Status there is an element ProviderInfo used in the present case to forward the original status coming from the target service behind the bus. This element is composed of a code and a message.

5.2.3.3 Distributor

Type describing a distributor, including the name, the company identification (see below) and the distributor notification number as registered by the FAMHP.

5.2.3.4 CompanyIdentification

Type describing the structure of the VAT code identifying a Company, including the country code (i.e. BE) and CBE company number.
6 Risks and security

6.1 Security

6.1.1 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 eHealth contact center.

In case the eHealth platform finds a bug or vulnerability in its software, we advise the partner 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 delivered by the eHealth platform, he is obliged to contact and inform the eHealth platform immediately and he is not allowed to publish this bug or vulnerability in any case.

6.1.2 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. Note that the time-to-live is the time difference between the Created and Expires elements in the Timestamp and is not related to the timeout setting on the eHealth ESB, etc. This means that the eHealth platform will process the message if it is received within the time-to-live value (there is also tolerance of 5 minutes to account for the clock skew), but the actual response time may be greater than one minute in some situations (see the SLA for more details).
- Signature of the timestamp and body. 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.

6.1.3 The use of username, password and token

The username, password and token are strictly personal and are not allowed to transfer. Every user takes care of his username, password and token and is forced to confidentiality of it. Every user is also responsible of every use including the use by a third party, until the inactivation.
7 Test and release procedure

7.1 Procedure

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

7.1.1 Initiation

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

7.1.2 Development and test procedure

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

The eHealth platform recommends performing tests of the WS in acceptance environment first.

7.1.3 Release procedure

When development tests are successful, you can request to access the acceptance environment of the eHealth platform.

From this moment, you start 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 mail to the eHealth point of contact.

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@ehealth.fgov.be.

7.1.4 Operational follow-up

Once in production, the partner using the service of the eHealth platform for one of its 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.

7.2 Test cases

The eHealth platform recommends performing tests (including negative cases) for

- searchDistributor
- searchBysDistributorNotificationNumber

Basic test data may be provided on request by the eHealth platform.
8  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\(^2\), the same case as no error (see table 1, table 2).
- In the case of a technical error, a SOAP fault exception is returned (see table 3).

8.1  Business error

Business errors are forwarded and mapped to eHealth standard status message (See section 5.2.3).

Business errors are described by the status code level 1 and 2 and the status message.

In addition to this, the original error from the target service is forwarded inside the status details.

**Description of SADN-ABGD business errors**

<table>
<thead>
<tr>
<th>Status code level 1</th>
<th>Status code level 2</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>urn:be:fgov:ehealth:2.0:status:Success</td>
<td>urn:be:fgov:ehealth:2.0:status:DataNotFound</td>
<td>The search returned no results for the request.</td>
</tr>
</tbody>
</table>

8.2  Technical errors

Technical errors are errors inherent to the internal working of a WS. They are returned as SOAP Faults.

You can contact the eHealth platform in case of a technical error.

\(^2\) Please refer to the section 5.2.1.3 and 5.2.4.3
The structure is as follows:

- **ehealth-errors-schema-soa-1_1.xsd**

```
<soa:SystemErrorType>
  <attributes>
    <Origin/>
    <Code/>
    <Message>1..∞</Message>
    <Retry/>
    <Contact/>
  </attributes>
</soa:SystemErrorType>
```

- **ehealth-errors-schema-core-1_1.xsd**

```
<ErrorType>
  <attributes>
    <Origin/>
    <Code/>
    <Message>1..∞</Message>
    <Retry/>
    <Contact/>
  </attributes>
</ErrorType>
```
The SOAP Fault element has the following sub elements:

<table>
<thead>
<tr>
<th>Element name</th>
<th>Descriptions</th>
<th>Optionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faultcode</td>
<td>A code for identifying the fault.</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Faultstring</td>
<td>A textual description of the fault.</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Faultactor</td>
<td>Information about who caused the fault to happen (the origin).</td>
<td>Optional</td>
</tr>
<tr>
<td>Detail</td>
<td>Holds application specific error information related to the Body element.</td>
<td>Optional</td>
</tr>
<tr>
<td></td>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Element name</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>VersionMismatch</td>
<td>Found an invalid namespace for the SOAP Envelope element.</td>
</tr>
<tr>
<td>MustUnderstand</td>
<td>An immediate child element of the Header element, with the mustUnderstand attribute set to “1”, was not understood.</td>
</tr>
<tr>
<td>Client</td>
<td>The message was incorrectly formed or contained incorrect information.</td>
</tr>
<tr>
<td>Server</td>
<td>There was a problem with the server so the message could not proceed.</td>
</tr>
</tbody>
</table>

Description of the possible SOAP fault exceptions

<table>
<thead>
<tr>
<th>Error code</th>
<th>Component</th>
<th>Description</th>
<th>Solution/Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOA-00001</td>
<td>?</td>
<td>Service error</td>
<td>This is the default error sent to the consumer in case no more details are known.</td>
</tr>
<tr>
<td>SOA-01001</td>
<td>Consumer</td>
<td>Service call not authenticated</td>
<td>From the security information provided</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• or the consumer could not be identified</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• or the credentials provided are not correct</td>
</tr>
<tr>
<td>SOA-01002</td>
<td>Consumer</td>
<td>Service call not authorized</td>
<td>• The consumer is identified and authenticated but is not allowed to call the given service.</td>
</tr>
<tr>
<td>SOA-02001</td>
<td>Provider</td>
<td>Service not available. Please contact service desk</td>
<td>• An unexpected error has occurred.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Retries will not work.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Service desk may help with root cause analysis.</td>
</tr>
<tr>
<td>SOA-02002</td>
<td>Provider</td>
<td>Service temporarily not available. Please try later</td>
<td>• An unexpected error has occurred.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Retries should work.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• If the problem persists service desk may help.</td>
</tr>
<tr>
<td>SOA-03001</td>
<td>Consumer</td>
<td>Malformed message</td>
<td>This is default error for content related errors in case no more details are known.</td>
</tr>
<tr>
<td>SOA-03002</td>
<td>Consumer</td>
<td>Message must be SOAP</td>
<td>Message does not respect the SOAP standard.</td>
</tr>
<tr>
<td>SOA-03003</td>
<td>Consumer</td>
<td>Message must contain SOAP body</td>
<td>Message respects the SOAP standard, but body is missing.</td>
</tr>
<tr>
<td>SOA-03004</td>
<td>Consumer</td>
<td>WS-I compliance failure</td>
<td>Message does not respect the WS-I standard.</td>
</tr>
<tr>
<td>------------</td>
<td>----------</td>
<td>------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>SOA-03005</td>
<td>Consumer</td>
<td>WSDL compliance failure</td>
<td>Message is not compliant with WSDL in Registry/Repository</td>
</tr>
<tr>
<td>SOA-03006</td>
<td>Consumer</td>
<td>XSD compliance failure</td>
<td>Message is not compliant with XSD in Registry/Repository</td>
</tr>
</tbody>
</table>
| 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 |

The soap header (only when the received response is not a SOAP fault) contains a message ID, e.g.:

```xml
<soapenv:Header>
  <add:MessageID xmlns:add="http://www.w3.org/2005/08/addressing">6f23cd40-09d2-4d86-b674-b31f6bdf4a3</add:MessageID>
</soapenv:Header>
```

This message ID is important for the tracking of the errors. It should be provided (when available) when requesting support.

**Example:**

```xml
<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope>
  <soapenv:Body>
    <soapenv:Fault>
      <faultcode>soapenv:Client</faultcode>
      <faultstring>SOA-01001</faultstring>
      <detail>
        <soap:SystemError Id="48da1f13-cbc2-40e9-9907-33cc52deabf0">
          <Origin>Consumer</Origin>
          <Code>SOA-01001</Code>
          <Message xml:lang="en">Service call not authenticated.</Message>
          <soap:Environment>Acceptation</soap:Environment>
          <soap:SystemError/>
        </detail>
      </soapenv:Fault>
    </soapenv:Body>
  </soapenv:Envelope>
```