

Central Registry Traceability V1 Cookbook

Version 1.4

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eHealth platform

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1. Document management

1.1 Document history

Version	Date	Author	Description of changes / remarks
1.0	1/03/2014	eHealth platform	First version
1.01	07/01/2016	eHealth platform	First version – first change (Section 5.1.2)
1.02	05/07/2017	eHealth platform	Updated xsd – changed cardinality for element ReplacedNotificationNumber in NotifyExplantationRequestType and NotifyImplantationRequestType
1.3	15/05/2020	eHealth platform	WS-I Compliance
1.4	03/08/2022	eHealth platform	§ 2.3 eHealth document references (updated) § 3 Support (updated) § 5.1.5 Tracing (added)

2. Introduction

2.1 Goal of the service

The goal of the Central Registry Traceability web service (CRT WS) is to trace all implantable medical devices that are implanted in Belgium. In practice, it allows health care providers and their systems to notify and consult implantations and explantations. The notification contains the identifications of the patient, the installer of the implant, the prescriber of the implant, the pharmacist who delivered the implant and the organization where the implantation/explantation took place. The notifications can also be deleted by the health care provider. Concerning the consultations, it is possible to search the notification by patient or by implant. However, in both cases, the consultation is only possible if the health care provider has a therapeutic link with the patient.

The last functionality of the WS is that it allows the health care provider and the patient to retrieve an implant card. This is a PDF document which contains all the information about a notification and is stored by the application.

The WS is designed for specialists who have a dedicated (hospital) information system. The details of the medical information remain in the patient's file at the hospital, and the registry represents a summary of this information.

The integration with the dedicated information system will make a submission transparent for the specialist.

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 CRT WS. An example illustrates each of those messages. Also, 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 web service call. Some technical and legal requirements (see point 3 & 5 of this document) 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: eHealth partners 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, eHealth 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 Document references

All the document references can be found in the technical library on the eHealth portal¹. These versions or any following versions can be used for the eHealth service.

ID	Title	Version	Date	Author
1	Glossary	1.0	01/01/2010	eHealth platform
2	STS – HOK Cookbook	1.5	13/07/2022	eHealth platform
3	Kind Message For Electronic Healthcare Record – Belgian implementation standard	1.0		eHealth platform

¹ www.ehealth.fgov.be/ehealthplatform



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2.4 External document references

All documents can be found through the internet. They are available to the public, but not supported by eHealth.

ID	Title	Source	Date	Author
1	Cookbook Central Registry for Traceability (CRT) System to System Version 1.2	http://www.fagg-afmps.be		FAMHP
2	OASIS – Web services security – SAML Token Profile	http://www.oasis- open.org/committees/download.php /16768/wssv1.1-spec-os- SAMLTokenProfile.pdf		OASIS

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: <u>acceptance-certificates@ehealth.fgov.be</u>
- Production: <u>support@ehealth.fgov.be</u>

3.1.2 For issues in production

eHealth platform contact centre:

- Phone: 02 788 51 55 (on working days from 7 am till 8 pm)
- Mail: <u>support@ehealth.fgov.be</u>
- 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

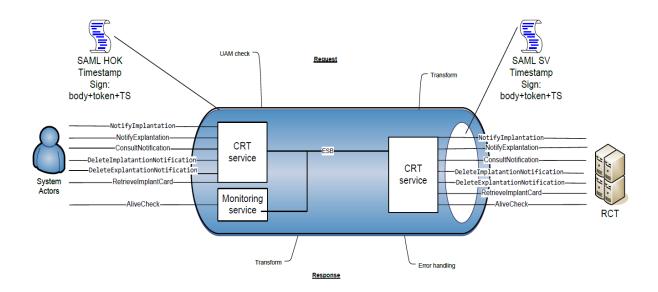
- regarding an existing project: the project manager in charge of the application or service
- regarding a new project or other business issues: info@ehealth.fgov.be

3.2 Status

The website <u>https://status.ehealth.fgov.be</u> 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



The CRT WS is secured with the SAML Holder Of Key (HOK) policy. Therefore, prior to calling the services, a SAML token must be obtained at the eHealth Secure Token Service (STS). The obtained token must be then included in the header of the request message, together with the timestamp, where the timestamp and the body must be signed with the certificate as used in the HOK profile of the SAML token (see also more detailed technical description further in the cookbook). The body contains 6 requests: NotifyImplantation, NotifyExplantation, ConsultNotification, DeleteImplantationNotification, DeleteExplantationNotification, RetrieveImplantCard and 1 operation of monitoring: AliveCheck available for Supervision Monitoring. The eHealth ESB verifies the security (authentication, authorization, etc.), validates, transforms and forwards the request to CRT.



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5. Step-by-step

5.1 Technical requirements

5.1.1 Use of the eHealth SSO solution

This section specifies how to obtain a SAML token from the STS in order to have access to the CRT WS. Currently, according to eHealth's Unique File, there is one group of users who are allowed to access the CRT WS and act as author of operation's requests. This group of users is described hereunder and in detail in chapter 5.2.2

For more details on how STS works, please refer to

https://www.ehealth.fgov.be/ehealthplatform/nl/service-iam-identity-access-management (Dutch version) https://www.ehealth.fgov.be/ehealthplatform/fr/service-iam-identity-access-management (French version)

5.1.1.1 Certified Hospital

A hospital that has an eHealth issued certificate. There is no (known) physical person.

Hospitals aren't implicitly granted access to the CRT services. The user management of eHealth defines which flows/applications are allowed.

Origin requirements:

- Care provider contains
 - NIHII with the quality "Hospital"
 - Organization, the hospital.

Ticket attributes requirements

- Must contain NIHII8 of sender organization in:
 - urn:be:fgov:ehealth:1.0:hospital:nihii-number (urn:be:fgov:identification-namespace)
 - urn:be:fgov:ehealth:1.0:certificateholder:hospital:nihii-number
 (urn:be:fgov:identification-namespace)
- Must contain "true" in:
 - urn:be:fgov:ehealth:1.0:certificateholder:hospital:nihiinumber:recognisedhospital:boolean (urn:be:fgov:certified-namespace:ehealth)

5.1.1.2 Certified Thirdparty

A special certificate for Qermid. There is no (known) physical person.

Origin requirements:

- Care provider contains
 - CBE with the quality "Enterprise"
 - Enterprise, the Third Party.

Ticket attributes requirements

- Must contain CBE number of sender enterprise in:
 - urn:be:fgov:kbo-bce:organization:cbe-number (urn:be:fgov:identification-namespace)
 - urn:be:fgov:ehealth:1.0:certificateholder:enterprise:cbe-number
 (urn:be:fgov:identification-namespace)
- Must contain "true" in:



 urn:be:fgov:kbo-bce:organization:cbenumber:ehealth:1.0:recognisedthirdparty:crt:boolean (urn:be:fgov:certifiednamespace:ehealth)

5.1.1.3 Certified Doctor Specialist

The doctor specialist authenticates himself by means of eID or eHealth issued certificate.

Origin requirements:

- Care provider contains
 - NIHII with the quality "doctor"
 - Physical person, the doctor specialist

Ticket attributes requirements

- Must contain SSIN of sender physical person in (both required):
 - urn:be:fgov:person:ssin (urn:be:fgov:identification-namespace)
 - urn:be:fgov:ehealth:1.0:certificateholder:person:ssin (urn:be:fgov:identification-namespace)
- Must contain NIHII11 of care provider in:
 - urn:be:fgov:person:ssin:ehealth:1.0:doctor:nihii11 (urn:be:fgov:certified-namespace:ehealth)
- Must contain "true" in
 - urn:be:fgov:person:ssin:ehealth:1.0:doctor:implantation-specialist:boolean
 (urn:be:fgov:certified-namespace:ehealth)

5.1.1.4 Certified Dentist Specialist

The dentist specialist authenticates himself by means of eID or eHealth issued certificate.

Origin requirements:

- Care provider contains
 - NIHII with the quality "dentist"
 - Physical person, the dentist specialist

Ticket attributes requirements

- Must contain SSIN of sender physical person in (both required):
 - urn:be:fgov:person:ssin (urn:be:fgov:identification-namespace)
 - urn:be:fgov:ehealth:1.0:certificateholder:person:ssin (urn:be:fgov:identification-namespace)
- Must contain NIHII11 of care provider in:
 - urn:be:fgov:person:ssin:ehealth:1.0:dentist:nihii11 (urn:be:fgov:certified-namespace:ehealth)
- Must contain "true" in
 - urn:be:fgov:person:ssin:ehealth:1.0:dentist:implantation-specialist:boolean (urn:be:fgov:certified-namespace:ehealth)

5.1.1.5 Certified Dentist

The dentist authenticates himself by means of eID or eHealth issued certificate.



Origin requirements:

- Care provider contains
 - NIHII with the quality "dentist"
 - Physical person, the dentist

Ticket attributes requirements

- Must contain SSIN of sender physical person in (both required):
 - urn:be:fgov:person:ssin (urn:be:fgov:identification-namespace)
 - urn:be:fgov:ehealth:1.0:certificateholder:person:ssin (urn:be:fgov:identification-namespace)
- Must contain NIHII11 of care provider in:
 - urn:be:fgov:person:ssin:ehealth:1.0:dentist:nihii11 (urn:be:fgov:certified-namespace:ehealth)
- Must contain "true" in
 - urn:be:fgov:person:ssin:ehealth:1.0:professional:dentist:boolean (urn:be:fgov:certified-namespace:ehealth)

5.1.2 Encryption

The basic structure of the requests sent to the CRT WS are non-encrypted SOAP messages. However, for some of the operations on the WS, the request will have an element which contains a block of encrypted content. This encrypted content consists of a KMEHR message which contains all personal, medical data and business logic. This content is encrypted using ETEE.

All the information about the use of the encryption libraries and the call to the eHealth Token Key (ETK) depot are described in the End-To-End Encryption (ETEE) cookbooks

(https://www.ehealth.fgov.be/fr/support/services-de-base/systeme-de-cryptage-end-to-end).

To encrypt the request parts, you have to call the GetEtk operation to pick up the right ETK from the eHealth ETK depot. The table below provides you with the identifiers to use in the GetEtkRequest.

Environment	Туре	Value	Application ID
Integration Test Environment	СВЕ	0884579424	
Acceptation Environment	СВЕ	0884579424	TARPAN
Production Environment	СВЕ	0884579424	TARPAN

More information can be found in the documentation provided by CRT, which also contains a cookbook that specifies all the details for the KMEHR messages contained in certain requests and responses for this service.

5.1.3 Security policies to apply

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

WS security used in this manner is in accordance with the common standards.

To call the CRT WS:

- Add the business message to the soap body.
- Add to the SOAP header the following elements:
 - SAML Token: The SAML Assertion received from the eHealth STS. This Assertion needs to be forwarded exactly as received in order to not to break the signature of the eHealth STS. The token needs to be added accordingly to the specifications of the OASIS SAML Token Profile (HOK). (please refer to 'List of source' chapter)



- **Timestamp** (with Time-to-live of the message: one minute).
- A **signature** that has been placed on the SOAPBody and the timestamp with the certificate of which the public key is mentioned in the SAML Assertion. The signature needs to contain:
 - SignedInfo with References to the soapBody and the Timestamp.
 - **KeyInfo** with a SecurityTokenReference pointing to the SAML Assertion.

See also the WSSP in the WSDL².

For more information on the SAML token as needed to call the CRT WS (e.g., attributes needed by different actors), please refer to STS cookbook.

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

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

The STS cookbook can be found on the eHealth portal.

5.1.4 WS-I Basic Profile 1.1

Your request must be WS-I compliant (See Chap 2.4 - External Document Ref).

5.1.5 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.
 - 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-V]*V]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 Web service

The CRT WS has 6 operations:

- NotifyImplantation
- NotifyExplantation
- ConsultNotification
- DeleteImplantationNotification
- DeleteExplantationNotification
- RetrievelmplantCard

The CRT WS has the following endpoints:

² WSDL's can be found in the eHealth Service Registry https://portal.api.ehealth.fgov.be/



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Integration environment: https://services-int.ehealth.fgov.be/rct/v1

• Acceptance environment: https://services-acpt.ehealth.fgov.be/rct/v1

• Production environment: https://services.ehealth.fgov.be/rct/v1

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

5.2.1 Method *NotifyImplantation*

5.2.1.1 Functional description

Service name	NotifyImplantation		
Purpose	This service allows healthcare actors to notify the implantation of different implants to the registry		
Input parameters	CipherValue: this element contains a KMEHR message which is encrypted using ETEE. The structure and rules for the KMEHR messages are specified in a separate cookbook provided by CRT.		
	ReplacedNotificationNumber: this optional element can be used to indicate that the current implantation notification is actually a correction for some previously deleted implantation notifications. The notification number of the old notification (which was deleted) should be passed. This number is the unique identifier for a notification within the CRT and has a format = YYYYMMDDSSSSSCC where:		
	 YYYYMMDD is the day of creation of the notification record (in case of an admin it will be the first final save (not the temporary save)) 		
	O SSSSS is the sequence for that day (max of 99999 entries/day)		
	CC is a check digit = 97 - mod97(YYYYMMDDSSSSS) a valid example = 201308260012373		
Output parameters	First the response will contain a status used to indicate the status of the completion of the request. The status is represented by a StatusCode and optionally the StatusMessage describing the status. Additional StatusDetail gives extra information on the encountered business errors returned by the target service (ErrorCode, Description, Type).		
	The possible values for the Level 1 StatusCode are:		
	urn:be:fgov:ehealth:2.0:status:Success (everything OK)		
	 urn:be:fgov:ehealth:2.0:status:Requester (error caused by client (consumer)) 		
	 urn:be:fgov:ehealth:2.0:status:Responder (error caused by server (provider)) 		
	The possible values for the Level 2 StatusCode are:		
	urn:be:fgov:ehealth:2.0:status:InvalidInput (input validation error)		
	urn:be:fgov:ehealth:2.0:status:MissingInput (input missing)		
	 urn:be:fgov:ehealth:2.0:status:DataNotFound (no results for the request) 		
	The possible values of ErrorCode, Description and Type elements contained in the StatusDetail are mapped in chapter 8.1 Business Errors		
	Note: A warning element can be returned in the StatusDetail if an implant has the status "Deleted" and not the status "Published" at the time of the notification. This warning does not block the notification.		
	In case of a successful notification, the response will also contain the notification number of the successfully registered implantation notification".		
Post-condition	The request is logged.		

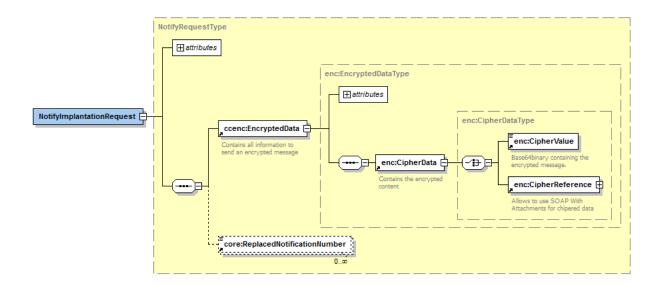


Comments	The Id used in input must begin with a letter (e.g. Id="I256634")
	The CipherReference element which appears in the input schema does not apply to this project.



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5.2.1.2 Input argument 'NotifyImplantation'

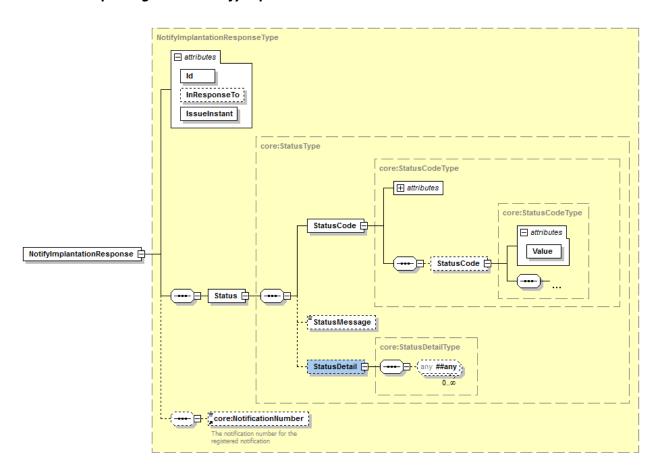


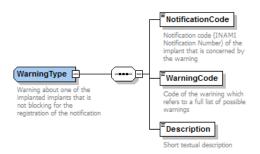
5.2.1.3 Example

</NotifyImplantationRequest>



5.2.1.4 Output argument 'NotifyImplantation'





5.2.1.5 Example



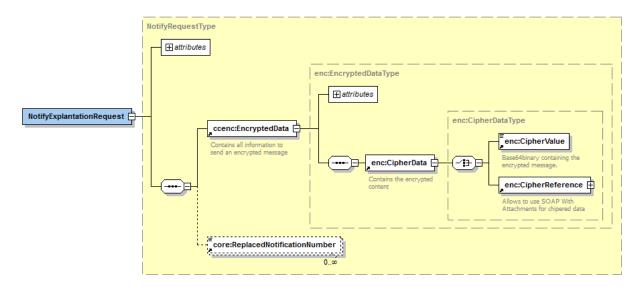
5.2.2 Method NotifyExplantation

5.2.2.1 Functional description

Service name	NotifyExplantation	
Purpose	This service allows healthcare actors to notify the explantation of different implants to the registry. Only the explantation of implants that have previously been notified as "implanted" will be accepted by the registry. Explantation of implants that are implanted but have never been notified cannot be registered.	
Input parameters	 CipherValue: this element contains a KMEHR message which is encrypted using ETEE. The structure and rules for the KMEHR messages are specified in a separate cookbook provided by CRT. ReplacedNotificationNumber: this optional element can be used to indicate that the current explantation notification is actually a correction for some previously deleted explantation notifications. The notification number of the old notification (which was deleted) should be passed. This number is the unique identifier for a notification within the CRT and has a format = YYYYMMDDSSSSSCC where: YYYYMMDD is the day of creation of the notification record SSSSS is the sequence for that day (max of 99999 entries/day) CC is a check digit = 97 - mod97(YYYYMMDDSSSSS) a valid example = 201308260012373 	
Output parameters	First the response will contain a Status which is used to indicate the status of the completion of the request. The status is represented by a StatusCode and optionally the StatusMessage describing the status. Additional StatusDetail gives extra information on the encountered business errors returned by the target service (ErrorCode, Description, Type). • The possible values for the Level 1 StatusCode are: o urn:be:fgov:ehealth:2.0:status:Success (everything OK) o urn:be:fgov:ehealth:2.0:status:Requester (error caused by client (consumer)) o urn:be:fgov:ehealth:2.0:status:Responder (error caused by server (provider)) • The possible values for the Level 2 StatusCode are: o urn:be:fgov:ehealth:2.0:status:InvalidInput (input validation error) o urn:be:fgov:ehealth:2.0:status:MissingInput (input missing) o urn:be:fgov:ehealth:2.0:status:DataNotFound (no results for the request) The possible values of ErrorCode, Description and Type elements contained in the StatusDetail are mapped in chapter 8.1 Business Errors In case of a successful notification, the response will also contain the notification number of the successfully registered explantation notification.	
Post-condition	The request is logged.	
Comments	The Id used in input must begin with a letter (e.g. Id="I256634") The CipherReference element which appears in the input schema does not apply to this project.	



5.2.2.2 Input argument 'NotifyExplantation'

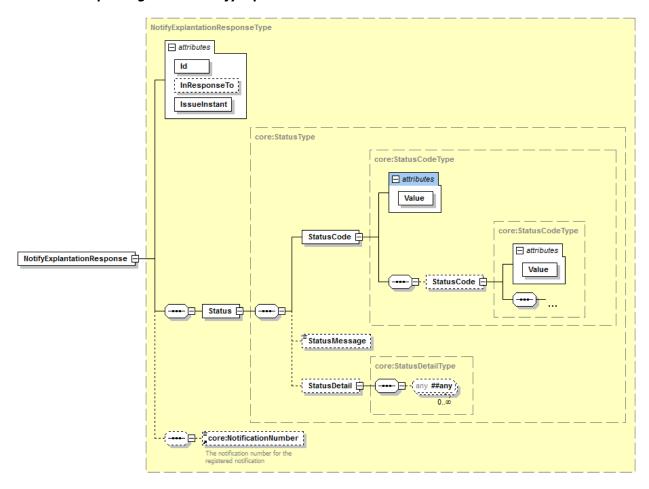


5.2.2.3 Example

```
<NotifyExplantationRequest Id="ID_1" IssueInstant="2001-12-17T09:30:47Z"
xmlns="urn:be:fgov:ehealth:rct:protocol:v1" xmlns:core="urn:be:fgov:ehealth:rct:core:v1"
xmlns:ccenc="urn:be:fgov:ehealth:commons:enc:v2">
       <ccenc:EncryptedData Id="ID 1">
              <ccenc:CipherData>
                     <ccenc:CipherValue>
              MIAGCSqGSIb3DQEHAqCAMIACAQExDzANBglghkgBZQMEAgEFADCABgkqhkiG9w0BBwGgg
              CSABIID6DCABgkqhkiG9w0BBwOggDCAAgEAMYIB8TCCAe0CAQAwgdQwgb4xFzAVBgNVBA
              MTDkNCRT0wODg0NTc5NDI0MQswCQYDVQQGEwJCRTEXMBUGA1UECxMOQ0JFPTA4ODQ1Nzk
              OMjQxPTA7BgNVBAsTNEFHRU5DRSBGRURFUkFMRSBERVMgTUVESUNBTUVOVFMgRVQgUFJP
              RFVJVFMgREUg...
                     </ccenc:CipherValue>
              </ccenc:CipherData>
       </ccenc:EncryptedData>
       <core:ReplacedNotificationNumber>201402100113253</core:ReplacedNotificationNumber>
</NotifyExplantationRequest>
```



5.2.2.4 Output argument 'NotifyExplantation'



5.2.2.5 Example

</NotifyExplantationResponse>



5.2.3 Method ConsultNotification

5.2.3.1 Functional description

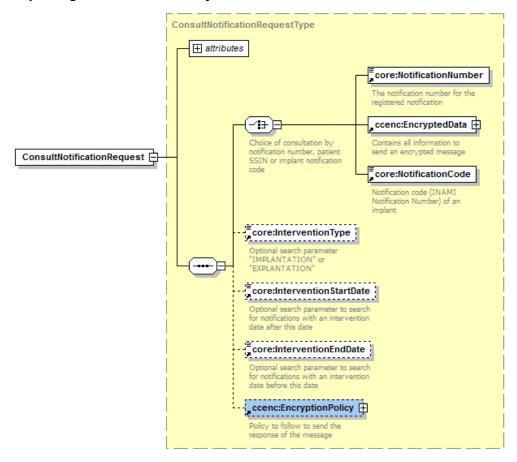
Service name	ConsultNotification		
Purpose	This service allows healthcare actors to consult a notification stored in the system.		
Input parameters	Notifications can be consulted using one of three basic search criteria:		
	The notification number of the notification (will return zero or one result)		
	A CipherValue which corresponds to the encrypted SSIN of the patient involved in the implantation or explantation. (will return all known notifications for this patient)		
	The notification code of the implant that was implanted or explanted. (will return all known notifications in which this implant was implanted or explanted)		
	Additionally, some optional search criteria can be added to the request:		
	The type of the intervention: "IMPLANTATION" or "EXPLANTATION"		
	A start date which filters out all results with an intervention date < this date		
	An end date which filters out all results with an intervention date > this date		
	 An ETKSearchCriteria which indicates the applicationID of the ETK which should be used for encrypting the response. Currently you have to specify more than 1 ETKSearchCriteria, so the first one must be the applicationID with the type "urn:be:fgov:system:certificate:applicationId" and the second one can be whatever the user wants because it will be ignored by the backend (see request example below). If the user specifies only the applicationID, the backend will return an error. 		
	Finally, some parameters for paging purposes are provided:		
	The Offset can be used to indicate the number of the first result that should be returned in the response		
	The MaxElements can be used to define the maximum number of results that should be returned.		
Output parameters	First the response will contain a Status used to indicate the status of the completion of the request. The status is represented by a StatusCode and optionally the StatusMessage describing the status. Additional StatusDetail gives extra information on the encountered business errors returned by the target service (ErrorCode, Description, Type). • The possible values for the Level 1 StatusCode are:		
	 urn:be:fgov:ehealth:2.0:status:Success (everything OK) urn:be:fgov:ehealth:2.0:status:Requester (error caused by client (consumer)) 		
	The possible value for the Level 2 StatusCode is:		
	urn:be:fgov:ehealth:2.0:status:InvalidInput (input validation error)		
	The possible values of ErrorCode, Description and Type elements contained in the StatusDetail are mapped in chapter 8.1 Business Errors		
	In case of a successful consultation, the response will also contain:		
	 A CipherValue element containing a block of encrypted content, which holds the results of the consultation. 		
Post-condition	The request is logged.		

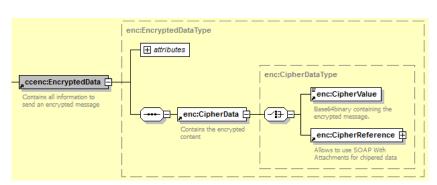


Comments

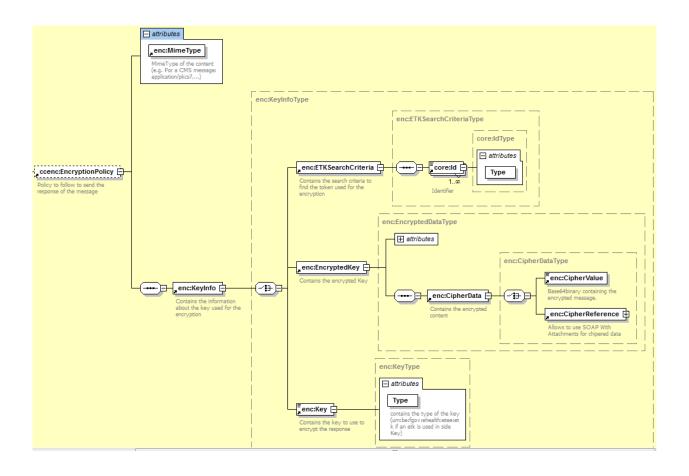
- The Id used in input must begin with a letter (e.g. Id="I256634")
- The CipherReference element which appears in the input AND output schemas does not apply to this project.
- The EncryptedKey and Key elements which appears in the input schema do not apply to this project

5.2.3.2 Input argument 'ConsultNotification'









5.2.3.3 Example

```
<ConsultNotificationRequest Id="ID 1" IssueInstant="2001-12-17T09:30:47Z"</p>
xmlns="urn:be:fgov:ehealth:rct:protocol:v1" xmlns:core="urn:be:fgov:ehealth:rct:core:v1"
xmlns:ccenc="urn:be:fgov:ehealth:commons:enc:v2" Offset="1" MaxElements="20" >
        <core:NotificationNumber> 201402100113253
       <core:InterventionType>IMPLANTATION</core:InterventionType>
       <core:InterventionStartDate>2014-02-10</core:InterventionStartDate>
        <core:InterventionEndDate>2014-02-10</core:InterventionEndDate>
       <ccenc:EncryptionPolicy >
               <ccenc:KeyInfo>
                      <ccenc:ETKSearchCriteria>
                              <core:Id Type="urn:be:fgov:system:certificate:applicationId">
                              ApplicationId_1</core:Id>
                              <core:Id Type="urn:be:fgov:system:certificate:nihii-hospital">
                              71000139</core:ld>
                      </ccenc:ETKSearchCriteria>
               </ccenc:KeyInfo>
       </ccenc:EncryptionPolicy>
</ConsultNotificationRequest>
Notes:
```

- the choice of consultation can be made by notification number but also by implant notification code (see a hereafter) or the encrypted SSIN of the patient (see b hereafter)
 - a) <core:NotificationCode>123657456</core:NotificationCode>
 - b) <ccenc:EncryptedData Id="ID_1">

<ccenc:CipherData>

<ccenc:CipherValue>

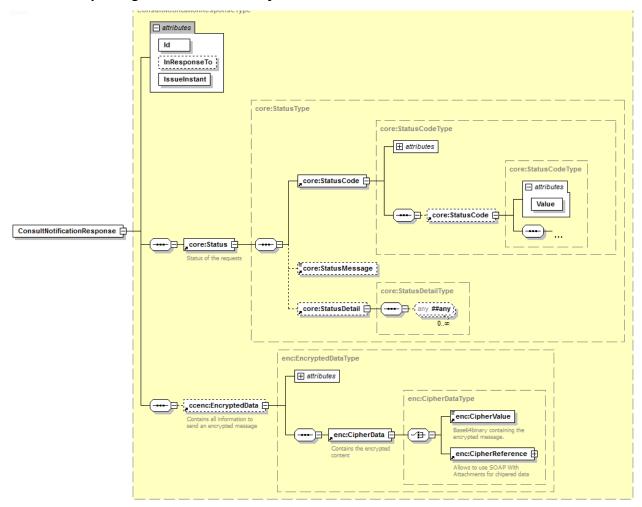
MIAGCSqGSIb3DQEHAqCAMIACAQExDzANBglghkgBZQMEAgEFADCABgkqhkiG9w0BBwGgg CSABIID6DCABgkqhkiG9w0BBwOggDCAAgEAMYIB8TCCAe0CAQAwgdQwgb4xFzAVBgNVBA MTDkNCRT0wODg0NTc5NDI0MQswCQYDVQQGEwJCRTEXMBUGA1UECxMOQ0JFPTA4ODQ1Nzk 0MjQxPTA7BgNVBAsTNEFHRU5DRSBGRURFUkFMRSBERVMgTUVESUNBTUVOVFMgRVQgUFJP RFVJVFMgREUg...

</ccenc:CipherValue>

</ccenc:CipherData>

</ccenc:EncryptedData>

5.2.3.4 Output argument 'ConsultNotification'



5.2.3.5 Example

<ConsultNotificationResponse Id="ID_2" InResponseTo="ID_1" IssueInstant="2001-12-17T09:30:47Z" xmlns:core="urn:be:fgov:ehealth:rct:core:v1" xmlns="urn:be:fgov:ehealth:rct:protocol:v1" xmlns:ccenc="urn:be:fgov:ehealth:commons:enc:v2" >

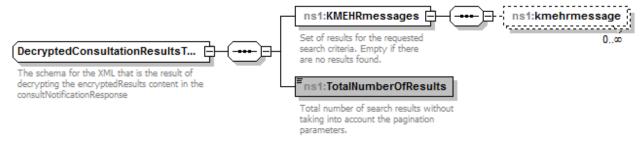


```
<core:Status>
              <core:StatusCode Value="urn:be:fgov:ehealth:2.0:status:Success"/>
              <core:StatusMessage>Success</core:StatusMessage>
              <core:StatusDetail>
                     <core:ProviderInfo/>
              </core:StatusDetail>
       </core:Status>
       <ccenc:EncryptedData Id="ID_1" MimeType="application/pkcs7 " ContentType="kmehr">
              <ccenc:CipherData>
                     <ccenc:CipherValue>
              MIAGCSqGSIb3DQEHAqCAMIACAQExDzANBg1ghkgBZQMEAgEFADCABgkqhkiG9w0BBwGgg
              CSABIID6DCABgkqhkiG9w0BBwOggDCAAgEAMYIB8TCCAe0CAQAwgdQwgb4xFzAVBgNVBA
              MTDkNCRT0wODg0NTc5NDI0MQswCQYDVQQGEwJCRTEXMBUGA1UECxMOQ0JFPTA4ODQ1Nzk
              0MjQxPTA7BgNVBAsTNEFHRU5DRSBGRURFUkFMRSBERVMgTUVESUNBTUVOVFMgRVQgUFJP
              RFVJVFMgREUg...
                      </ccenc:CipherValue>
              </ccenc:CipherData>
       </ccenc:EncryptedData>
</ConsultNotificationResponse>
```

5.2.3.6 Decrypted content of the output CipherValue

The decrypted content of the target CipherValue, that is received in output, is composed of two fields:

- KMEHRmessages: corresponds to a set of results for the requested search criteria
- TotalNumberOfResults: corresponds to the total number of search results without taking into account the pagination parameters



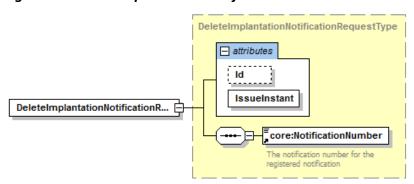
5.2.4 Method DeleteImplantationNotification

5.2.4.1 Functional description

Service name	DeleteImplantationNotification
Purpose	This service allows healthcare actors to delete an implantation notification that is stored in the system.
Input parameters	The deletion of an implantation notification can be requested using the notification number of the notification that should be deleted.

Output parameters	First the response will contain a Status which is used to indicate the status of the completion of the request. The status is represented by a StatusCode and optionally the StatusMessage describing the status. Additional StatusDetail gives extra information on the encountered business errors returned by the target service (ErrorCode, Description and Type). • The possible values for the Level 1 StatusCode are: o urn:be:fgov:ehealth:2.0:status:Success (everything OK) o urn:be:fgov:ehealth:2.0:status:Requester (error caused by client (consumer)) o urn:be:fgov:ehealth:2.0:status:Responder (error caused by server (provider)) • The possible values for the Level 2 StatusCode are: o urn:be:fgov:ehealth:2.0:status:InvalidInput (input validation error) o urn:be:fgov:ehealth:2.0:status:RequestDenied (unauthorised request) The possible values of ErrorCode, Description and Type elements contained in the StatusDetail are mapped in chapter 8.1 Business Errors In case of a successful deletion, the response will also contain: o A NotificationDeleted element with the value 'true'.	
Post-condition	The request is logged.	
Comments	The Id used in input must begin by a letter (e.g. Id="I256634")	

5.2.4.2 Input argument 'DeleteImplantationNotification'



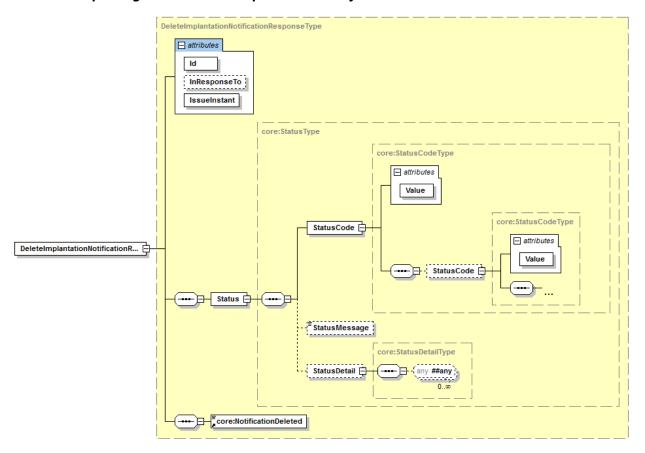
5.2.4.3 Example

</DeleteImplantationNotificationRequest>



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5.2.4.4 Output argument 'DeleteImplantationNotification'



5.2.4.5 Example

5.2.5 Method DeleteExplantationNotification

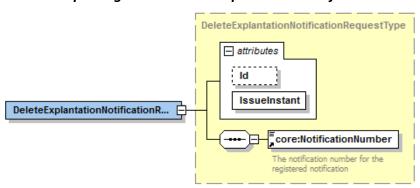
5.2.5.1 Functional description

Service name	DeleteExplantationNotification	
Purpose	This service allows healthcare actors to delete an explantation notification that is stored in the system.	



Input parameters	The deletion of an explantation notification can be requested using the notification number of the notification that should be deleted.		
Output parameters	First the response will contain a Status which is used to indicate the status of the completion of the request. The status is represented by a StatusCode and optionally the StatusMessage describing the status. Additional StatusDetail gives extra information on the encountered business errors returned by the target service (ErrorCode, Description and Type).		
	The possible values for the Level 1 StatusCode are:		
	urn:be:fgov:ehealth:2.0:status:Success (everything OK)		
	urn:be:fgov:ehealth:2.0:status:Requester (error caused by client (consumer))		
	The possible value for the Level 2 StatusCode is:		
	urn:be:fgov:ehealth:2.0:status:InvalidInput (input validation error)		
	The possible values of ErrorCode, Description and Type elements contained in the StatusDetail are mapped in chapter 8.1 Business Errors.		
	In case of a successful deletion, the response will also contain a NotificationDeleted element with the value 'true'.		
Post-condition	The request is logged.		
Comments	The Id used in input must begin with a letter (e.g. Id="I256634")		

5.2.5.2 Input argument 'DeleteExplantationNotification'



5.2.5.3 Example

<DeleteExplantationNotificationRequest Id="ID_1" IssueInstant="2001-12-17T09:30:47Z"
xmlns="urn:be:fgov:ehealth:rct:protocol:v1" xmlns:core="urn:be:fgov:ehealth:rct:core:v1">

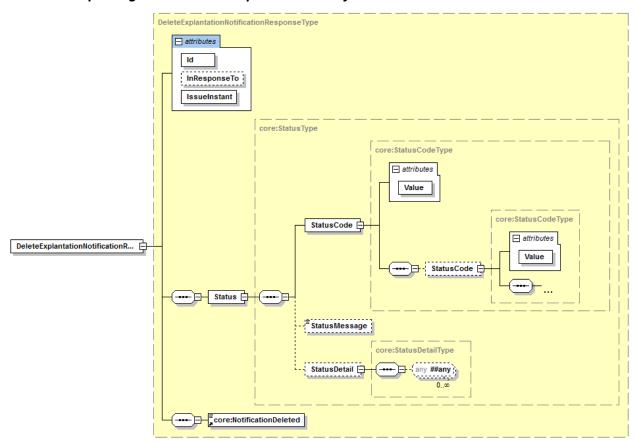
<core:NotificationNumber>201402100113253

</DeleteExplantationNotificationRequest>



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5.2.5.4 Output argument 'DeleteExplantationNotification'



5.2.5.5 Example

5.2.6. Method RetrieveImplantCard

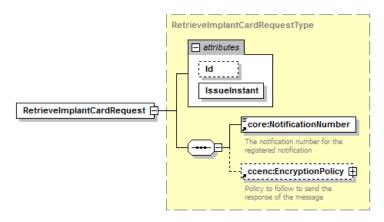
5.2.5.6 Functional description

Service name	RetrieveImplantCard	
Purpose	This service allows healthcare actors to retrieve an implant card which contains all the information about a notification and is stored by the application.	

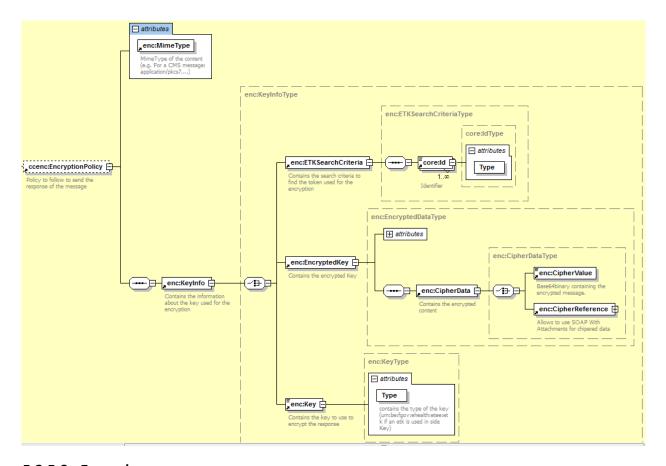


Input parameters	The implant card for a specific notification can be requested using the notification number and optionally an ETKSearchCriteria which indicates the applicationID of the ETK which should be used for encrypting the response. Currently you have to specify more than 1 ETKSearchCriteria, so the first one must be the applicationID with the type "urn:be:fgov:system:certificate:applicationId" and the second one can be whatever the user wants because it will be ignored by the backend (see request example below). If the user specifies only the applicationID, the backend will return an error.			
Output parameters				
Post-condition	and rules for the KMEHR messages are specified in a separate cookbook provided by CRT.			
	The request is logged.			
Comments	The Id used in input must begin with a letter (e.g. Id="I256634")			
	 The CipherReference element which appears in the output schemas does not apply to this project. 			
	The EncryptedKey and Key elements which appears in the input schema do not apply to this project			

5.2.5.7 Input argument 'RetrieveImplantCard

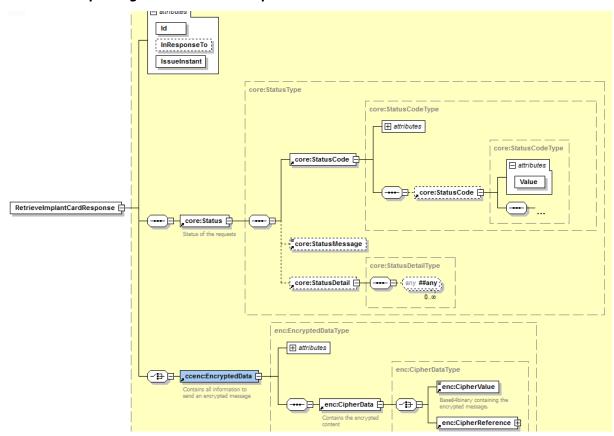






5.2.5.8 Example

5.2.5.9 Output argument 'RetrieveImplantCard'



5.2.5.10 Example

```
<RetrieveImplantCardResponse Id="ID 2" InResponseTo="ID 1" IssueInstant="2001-12-</p>
17T09:30:47Z" xmlns:core="urn:be:fgov:ehealth:rct:core:v1"
xmlns="urn:be:fgov:ehealth:rct:protocol:v1" xmlns:ccenc="urn:be:fgov:ehealth:commons:enc:v2" >
       <core:Status>
              <core:StatusCode Value="urn:be:fgov:ehealth:2.0:status:Success"/>
              <core:StatusMessage>Success</core:StatusMessage>
              <core:StatusDetail>
                      <core:ProviderInfo/>
              </core:StatusDetail>
       </core:Status>
       <ccenc:EncryptedData Id="ID_1" MimeType="application/pkcs7 " ContentType="kmehr ">
              <ccenc:CipherData>
                      <ccenc:CipherValue>
              MIAGCSqGSIb3DQEHAqCAMIACAQExDzANBglghkgBZQMEAgEFADCABgkqhkiG9w0BBwGgg
              CSABIID6DCABgkqhkiG9w0BBwOggDCAAgEAMYIB8TCCAe0CAQAwgdQwgb4xFzAVBgNVBA
              MTDkNCRT0wODg0NTc5NDI0MQswCQYDVQQGEwJCRTEXMBUGA1UECxMOQ0JFPTA4ODQ1Nzk
              0MjQxPTA7BgNVBAsTNEFHRU5DRSBGRURFUkFMRSBERVMgTUVESUNBTUVOVFMgRVQgUFJP
              RFVJVFMgREUg...
                      </ccenc:CipherValue>
              </ccenc:CipherData>
       </ccenc:EncryptedData>
</RetrieveImplantCardResponse>
```



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, eHealth 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 web service, the partner may obtain support from the corresponding contact center that is responsible for CRT.

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

6.1.2 Web service

Web service 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 eHealth 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 eHealth 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. Moreover, every user is also responsible of every use which includes the use by a third party, until the inactivation.



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7. Test and release procedure

7.1 Procedure

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

7.1.1 Initiation

If you intend to use the eHealth service, please contact <u>info@ehealth.fgov.be</u>. 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 info to integrate is published in the technical library on the eHealth portal.

eHealth recommends performing tests of the web service in Acceptance environment first.

7.1.3 Release procedure

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

From this moment, you start integration and acceptance tests. eHealth 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" to the eHealth point of contact by email.

Then eHealth and the partner agree on a release date. eHealth prepares the connection to the production environment and provides the partner with the necessary information. During the release day, the partner provides eHealth 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 eHealth service 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 eHealth on the progress and test period.



8. Error and failure messages

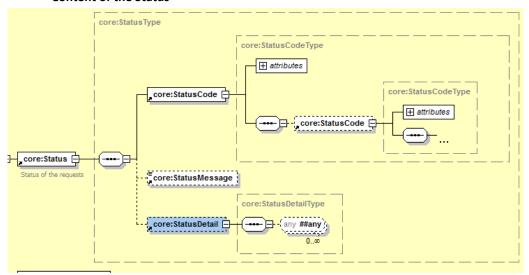
There are three different possible types of response:

- 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, the same case as no error (see table 1).
- In the case of a technical error, a SOAP fault exception is returned (see table 2).

8.1 Business errors

In case of business error, you can contact Smals Support Business errors are forwarded and transformed.

• Content of the Status



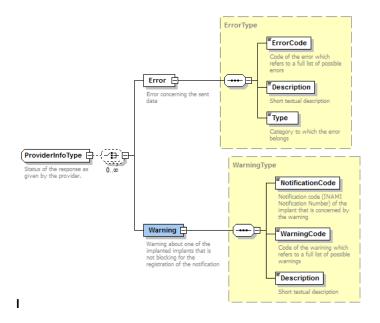
•

•

•

•





• Content of the StatusDetail

Table 1: Description of possible CRT business errors

Error Code	Error description	Error type	StatusCode			
Request No	Request NotifyImplantation					
RCT-00001	The sent message is not a valid KMEHR message.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)			
RCT-00002	The replaced notification number is not a valid notification number.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)			
RCT-00101	The KMEHR ID in the KMEHR header is not valid.	HEADER	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)			
RCT-00102	The sender in the KMEHR header does not correspond with the authentified party.	HEADER	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)			
RCT-00103	The KMEHR message does not have an intervention transaction.	FOLDER	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)			
RCT-00104	The KMEHR message does not have a prescription transaction.	FOLDER	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)			



Error Code	Error description	Error type	StatusCode
RCT-00105	The KMEHR message does not have at least one delivery transaction.	FOLDER	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)
RCT-00106	The patient SSIN is not a valid SSIN.	PATIENT	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00107	The patient SSIN was not found.	PATIENT	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00108	The NIHII number of the hospital is not a valid NIHII number.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00109	The NIHII number of the hospital was not found.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00110	The intervention must be of the type "implantation".	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00111	The intervention date cannot be in the future.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00112	The intervention date must be equal to or after the prescription and delivery date.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00113	No valid SSIN or NIHII number is specified for the specialist.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)
RCT-00114	The specialist was not found.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00115	The specialist does not have at least one of the required qualities.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00116	The intervention does not contain at least one intervention device.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00117	No valid notification code was specified for the implant.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)



Error Code	Error description	Error type	StatusCode
RCT-00118	The implant was not found.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00119	No delivery transaction was found for the implant.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00120	The delivery date cannot be in the future.	DELIVERY	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00121	The delivery date must be equal to or after the prescription date and equal to or before the intervention date.	DELIVERY	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00122	No valid SSIN or NIHII number is specified for the deliverer.	DELIVERY	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)
RCT-00123	The deliverer was not found.	DELIVERY	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00124	The deliverer does not have at least one of the required qualities.	DELIVERY	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00125	The prescription date cannot be in the future.	PRESCRIPTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00126	The prescription date must be equal to or before the delivery and intervention date.	PRESCRIPTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00127	No valid SSIN or NIHII number is specified for the prescriber.	PRESCRIPTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)
RCT-00128	The prescriber was not found.	PRESCRIPTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)

Error Code	Error description	Error type	StatusCode
RCT-00129	The prescriber does not have at least one of the required qualities.	PRESCRIPTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00141	No therapeutic link exists between the specialist and the patient.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00143	The NIHII or CBE number of the pharmacy must be provided.	DELIVERY	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)
RCT-00144	The number of the pharmacy is not a valid NIHII or CBE number.	DELIVERY	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00145	No pharmacy could be found for the given NIHII or CBE number.	DELIVERY	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00146	A notification with the same data as the entered notification already exists in the registry. The existing notification has the notification number: [insert notification number].	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:RequestDenied (level 2)
RCT-00150	The author of the intervention transaction does not correspond with the sender of the message.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:RequestDenied (level 2)
RCT-00152	The SSIN or NIHII number of the specialist must be provided.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)
RCT-00153	The SSIN or NIHII number of the deliverer must be provided.	DELIVERY	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)
RCT-00154	The SSIN or NIHII number of the prescriber must be provided.	PRESCRIPTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)



Error Code	Error description	Error type	StatusCode
RCT-00155	There are too many implants that correspond to the search criteria. Please use more specific search criteria in order to reduce the number of results.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:RequestDenied (level 2)
RCT-00301	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00302	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00303	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00304	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00305	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)



Error Code	Error description	Error type	StatusCode
RCT-00306	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00307	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00401	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00402	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00403	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00404	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00405	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)

Error Code	Error description	Error type	StatusCode
RCT-00406	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00407	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
Request No	tifyExplantation		
RCT-00001	The sent message is not a valid KMEHR message.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00002	The replaced notification number is not a valid notification number.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00101	The KMEHR ID in the KMEHR header is not valid.	HEADER	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00102	The sender in the KMEHR header does not correspond with the authentified party.	HEADER	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00103	The KMEHR message does not have an intervention transaction.	FOLDER	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)
RCT-00106	The patient SSIN is not a valid SSIN.	PATIENT	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00107	The patient SSIN was not found.	PATIENT	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00108	The NIHII number of the hospital is not a valid NIHII number.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00109	The NIHII number of the hospital was not found.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00110	The intervention must be of the type "explantation".	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)



Error Code	Error description	Error type	StatusCode
RCT-00111	The intervention date cannot be in the future.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00113	No valid SSIN or NIHII number is specified for the specialist.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)
RCT-00114	The specialist was not found.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00115	The specialist does not have at least one of the required qualities.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00116	The intervention does not contain at least one intervention device.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00117	No valid notification code was specified for the implant.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)
RCT-00118	The implant was not found.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00130	The notification number of the implantation is not a valid notification number.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00131	Not enough implants with the specified notification code could be found in the specified implantation notification.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00141	No therapeutic link exists between the specialist and the patient.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00150	The author of the intervention transaction does not correspond with the sender of the message.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:RequestDenied (level 2)



Error Code	Error description	Error type	StatusCode
RCT-00152	The SSIN or NIHII number of the specialist must be provided.	INTERVENTION	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:MissingInput (level 2)
RCT-00301	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00302	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00303	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00304	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00305	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00306	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)

Error Code	Error description	Error type	StatusCode
RCT-00307	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00401	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00402	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00403	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00404	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00405	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00406	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00407	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)



Error Code	Error description	Error type	StatusCode		
Request Cor	Request ConsultNotification				
RCT-00132	The notification number is not a valid notification number.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)		
RCT-00133	The patient SSIN is not a valid SSIN.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)		
RCT-00134	The implant notification code is not a valid notification code.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)		
RCT-00135	The intervention type is not one of the allowed values: "IMPLANTATION" or "EXPLANTATION".	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)		
RCT-00136	The intervention start date cannot be in the future.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)		
RCT-00137	The intervention start date cannot be after the intervention start date.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)		
RCT-00138	The intervention end date cannot be in the future.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)		
RCT-00139	The intervention end date cannot be before the intervention end date.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)		
RCT-00147	The requested notification has been replaced, please use the following notification number: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)		
RCT-00301	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)		



Error Code	Error description	Error type	StatusCode
RCT-00302	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00303	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00304	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00305	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00306	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00307	One or more external services that are necessary for processing the request are currently unavailable.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00401	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)



Error Code	Error description	Error type	StatusCode
RCT-00402	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00403	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00404	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00405	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00406	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
RCT-00407	One or more external services that are necessary for processing the request returned a technical error.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestUnsupported (level 2)
Request De	ete Implantation Notific	ation	
RCT-00132	The notification number is not a valid notification number.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)

Error Code	Error description	Error type	StatusCode
RCT-00140	One or more explantation notifications exist for one or more implants in this implantation notification. All these need to be deleted before the implantation notification can be deleted.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:RequestDenied (level 2)
RCT-00148	No notification found for the requested notification number.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00149	The requested notification does not have the correct type in order to delete it via this WS method.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00151	You are not authorized to delete or modify this notification.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:RequestDenied (level 2)
Request Del	eteExplantationNotific	ation	
RCT-00132	The notification number is not a valid notification number.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00148	No notification found for the requested notification number.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00149	The requested notification does not have the correct type.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00151	You are not authorized to delete or modify this notification.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:RequestDenied (level 2)
Request Ret	rieveImplantCard		



Error Code	Error description	Error type	StatusCode
RCT-00132	The notification number is not a valid notification number.	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)
RCT-00142	No notification found or no therapeutic link with the patient exists for the existing notification.	REQUEST	urn:be:fgov:ehealth:2.0:status:Responder (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)
RCT-00147	The requested notification has been replaced; please use the following notification number: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	REQUEST	urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)

A warning can be returned for the NotifyImplantation if an implant has the status "Deleted" and not the status "Published" at the time of the notification. This warning does not block the notification.

Warning Code	Warning description
RCT-00201	The current state of the notified implant is "deleted".

8.2 Technical errors

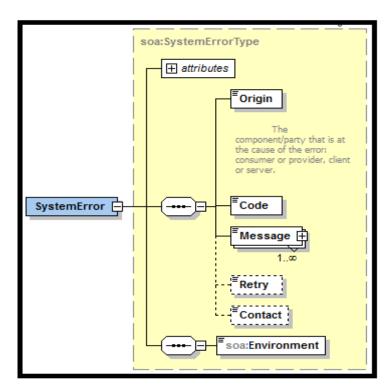
In case of technical errors, you can contact eHealth Contact Center (see Chap 3).

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

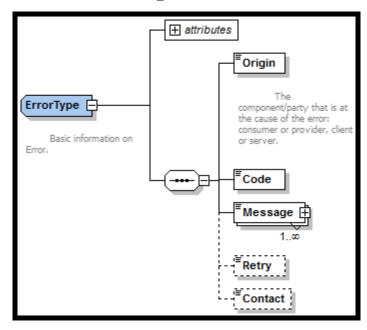
The structure is as follows:

• ehealth-errors-chema-soa-1_1.xsd





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



The SOAP Fault element has the following sub elements:

Element name	Descriptions	Optionality
Faultcode	A code for identifying the fault	Mandatory
Faultstring	A human readable explantation of the fault	Mandatory
Faultactor	Information about who caused the fault to happen (the origin)	Optional



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	Optional
	the cause of this error.	

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

Table 2: Description of the possible SOAP fault exceptions

Error code	Component	Description	Solution/Explanation
SOA-00001	?	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 authorized	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

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

 $< add: Message ID\ xmlns: add="http://www.w3.org/2005/08/addressing"> 6f23cd40-09d2-4d86-b674-b311f6bdf4a3</add: Message ID>$

</soapenv:Header>

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



Example:

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

