MyCareNet eAgreement v2
Cookbook
Version 1.0

This document is provided to you free of charge by the

eHealth platform

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

1. Document management

1.1 Document history

Version	Date	Author	Description of changes / remarks
1.0	14/06/2024	eHealth platform	First version

2. Introduction

2.1 Goal of the service

Some treatments require a medical agreement in order to claim reimbursement from the insurance organizations (IO). The "eAgreement" service will allow an authorized healthcare provider to send these requests for medical agreement electronically and also to consult them. The goal is to cdevelopa global solution so this service can be reused for any type of agreement. The healthcare provider needs requesting a SAML token from the eHealth Secure Token Service (STS) prior to calling the eAgreement services.

2.2 Goal of the document

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

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

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

2.3 eHealth platform document references

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

ID	Title	Version	Date	Author
1	SOA – Error guide	1.0	10/06/2021	eHealth platform
2	Request test case template	3.0	22/02/2018	eHealth platform
4	eAgreement_V2_SSO.pdf	1.0	Ult	eHealth platform

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

2.4 External document references.

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

All the MyCareNet documentation can be found within their Sharepoint[2]. The documentation referenced in this section may evolve in time.

If some external documentation has been modified, please notify the eHealth service management[3] who manages the maintenance of this document.

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

[2] In order to have access to the Sharepoint, you need to create an account which can be requested at : ***https://fra.mycarenet.be/contact*** or ***https://ned.mycarenet.be/contact***

[3] ***ehealth_service_management@ehealth.fgov.be***

3. Support

3.1 Helpdesk eHealth platform

3.1.1 Certificates

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

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

For technical issues regarding eHealth platform certificates

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

3.1.2 For issues in production

eHealth platform contact centre:

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

3.1.3 For issues in acceptance

Integration-support@ehealth.fgov.be

3.1.4 For business issues

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

3.2 Status

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

3.3 Service desk CIN/NIC

3.3.1 eAgreement business support

For business questions related to eAgreement: MyCareNet Helpdesk (first support line)

3.3.2 MyCareNet Helpdesk

Telephone: 02 891 72 00

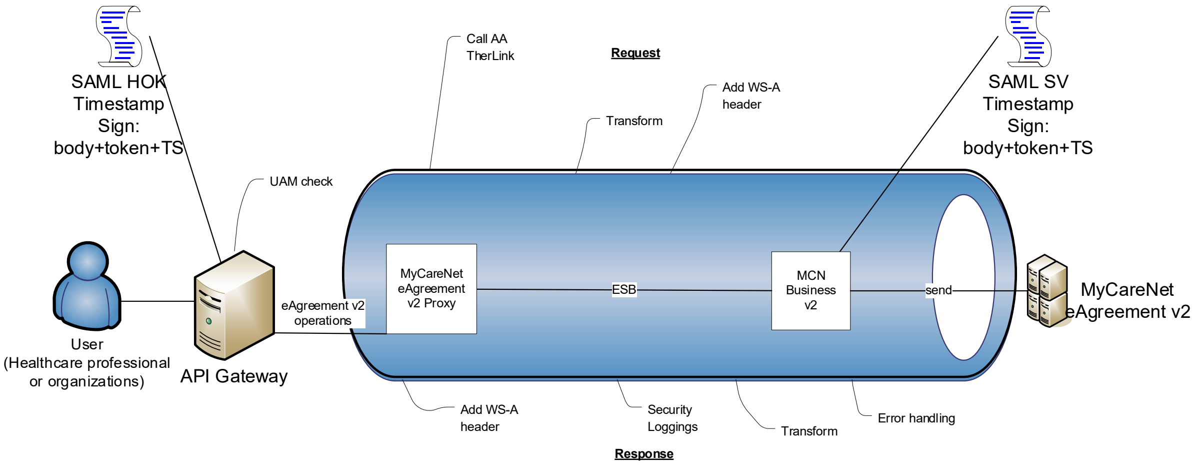
Mail: ***support@intermut.be***

3.3.3 Technical contact center MyCareNet

Telephone: 02 431 47 71

Mail: ***ServiceDesk@MyCareNet.be***

4. Global overview



The eAgreement WS is secured with the SAML HOK policy. Therefore, prior to calling the services, a SAML token must be obtained at the eHealth STS. The obtained token must be then included in the header of the request message, where the timestamp and the body must be signed with the certificate as used in the HOK profile of the SAML token (more detailed technical description can be found further in the chapter 5 of this cookbook). The body contains the eAgreement request (Ask or Consult). The eHealth ESB verifies the security (authentication, authorization, etc.) and forwards the request to MyCareNet. Then, the service returns the response delivered by the MyCareNet backend.

Note:

If the operation is “ConsultAgreement” AND the user is a healthcare professional, the eHealth ESB executes a call out to AttributeAuthority service to verify the therapeutic link between the healthcare professional and the patient. This is described in more details in section 5.3.

5. Step-by-step

5.1 Technical requirements

To test the service, the eHealth development team first has to create a test case. The rules to access the eAgreement are the same in acceptation as in production.

Access rules:

- authentication with a care providers certificate;
- authentication with the certificate of a mandate holder.

The eHealth development team has to configure all test cases.

So, before doing any test, request your test cases from the eHealth development team (***info@ehealth.fgov.be***).

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

- ***https://www.ehealth.fgov.be/nl/support/connectors***
- ***https://www.ehealth.fgov.be/fr/support/connectors***

Alternatively, you can write your own implementation. The usage of the STS and the structure of the exchanged xml-messages are described in the eHealth STS cookbook.

- ***https://www.ehealth.fgov.be/nl/support/sts-secure-token-service***
- ***https://www.ehealth.fgov.be/fr/support/sts-secure-token-service***

5.1.1 Use of the eHealth SSO solution

This section specifies how to call the STS in order to have access to the WS. You must precise several attributes in the request. The details on the identification attributes and the certification attributes can be found in the separate document eAgreement_V2_SSO.

To access the eAgreement WS, the response token must contain “true” for all of the ‘boolean’ certification attributes and a non-empty value for other certification attributes.

If you obtain “false” or empty values, contact the eHealth platform to verify that they correctly configured the requested test case.

5.1.2 Encryption

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 on the portal of the eHealth platform.

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

Environment	Type	Value	Application ID
Integration Test Environment	CBE	0820563481	MYCARENET
Acceptance Environment	CBE	0820563481	MYCARENET
Production Environment	CBE	0820563481	MYCARENET

5.1.3 Security policies to apply

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

As web service security policy, we expect:

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

  This will allow eHealth 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 eHealth.

The STS cookbook can be found on the eHealth portal.

https://www.ehealth.fgov.be/ehealthplatform/STS-cookbook.pdf

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.
   a. Pattern: {minimal software information}/{version} {minimal connector information}/{connector-package-version}
   b. Regular expression for each subset (separated by a space) of the pattern: [[a-zA-Z0-9-\/]*\/[0-9azA-Z-_.]*
   c. Examples:
      User-Agent: myProduct/62.310.4 Technical/3.19.0
      User-Agent: Topaz-XXXX/123.23.X freeconnector/XXXXX.XXX
2. From: email-address that can be used for emergency contact in case of an operational problem.
   Example:
   From: ***info@mycompany.be***

5.2 Therapeutic link verification

As explained previously, a healthcare actor can consult the agreement of a patient if and only if it exists a therapeutic link between them.

This verification is made in the ESB eHealth.

If there is no existing therapeutic link, the WSC receives an error SOA-01002 (see section 8 for more details about the SOA errors)

5.3 Web service

The eAgreement WS has two operations available:

- AskAgreement
- ConsultAgreement

The eAgreement WS has the following endpoints:

- Acceptation environment: ***https://services-acpt.ehealth.fgov.be/MyCareNet/eAgreement/v2***
- Production environment: ***https://services.ehealth.fgov.be/MyCareNet/eAgreement/v2***

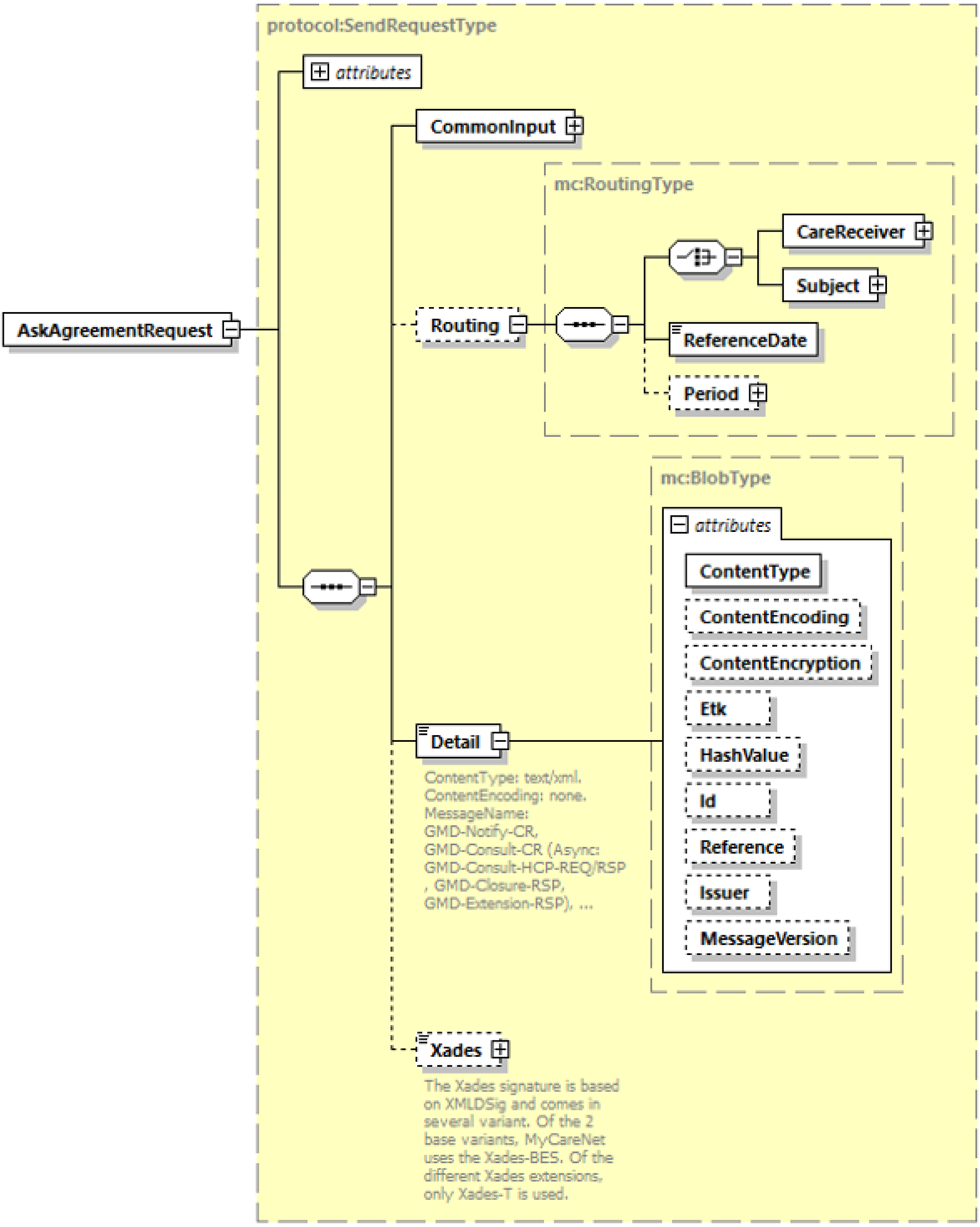
The remainder of this section describes the structure of the request and the response messages. Section 5.3.1 describes the request and response messages for the AskAgreement operation, section 5.3.2 describes the request and response messages for the ConsultAgreement operation, and section 5.3.3 describes the common element types used in the structures of the request and response types. For more details on the specific elements and the concepts behind them, see the documentation as provided by the CIN/NIC on their Sharepoint.

5.3.1 Method AskAgreement

This method allows

- requesting a new agreement to the insurance institutions
  OR
- arguing a request being processed
  OR
- extending an existing agreement (paper or electronic)
  OR
- cancelling a request in the event of an error (as long as it is not already processed)

5.3.1.1 Input arguments in AskAgreementRequest


protocol:SendRequestType
attributes
CommonInput
mc:RoutingType
CareReceiver
Subject
AskAgreementRequest
Routing
ReferenceDate
Period
mc:BlobType
attributes
ContentType
ContentEncoding
ContentEncryption
Etk
HashValue
Id
Reference
Issuer
MessageVersion
Detail
ContentType: text/xml. ContentEncoding: none. MessageName: GMD-Notify-CR, GMD-Consult-CR (Async: GMD-Consult-HCP-REQ/RSP , GMD-Closure-RSP, GMD-Extension-RSP), ...
Xades
The Xades signature is based on XMLDSig and comes in several variant. Of the 2 base variants, MyCareNet uses the Xades-BES. Of the different Xades extensions, only Xades-T is used.

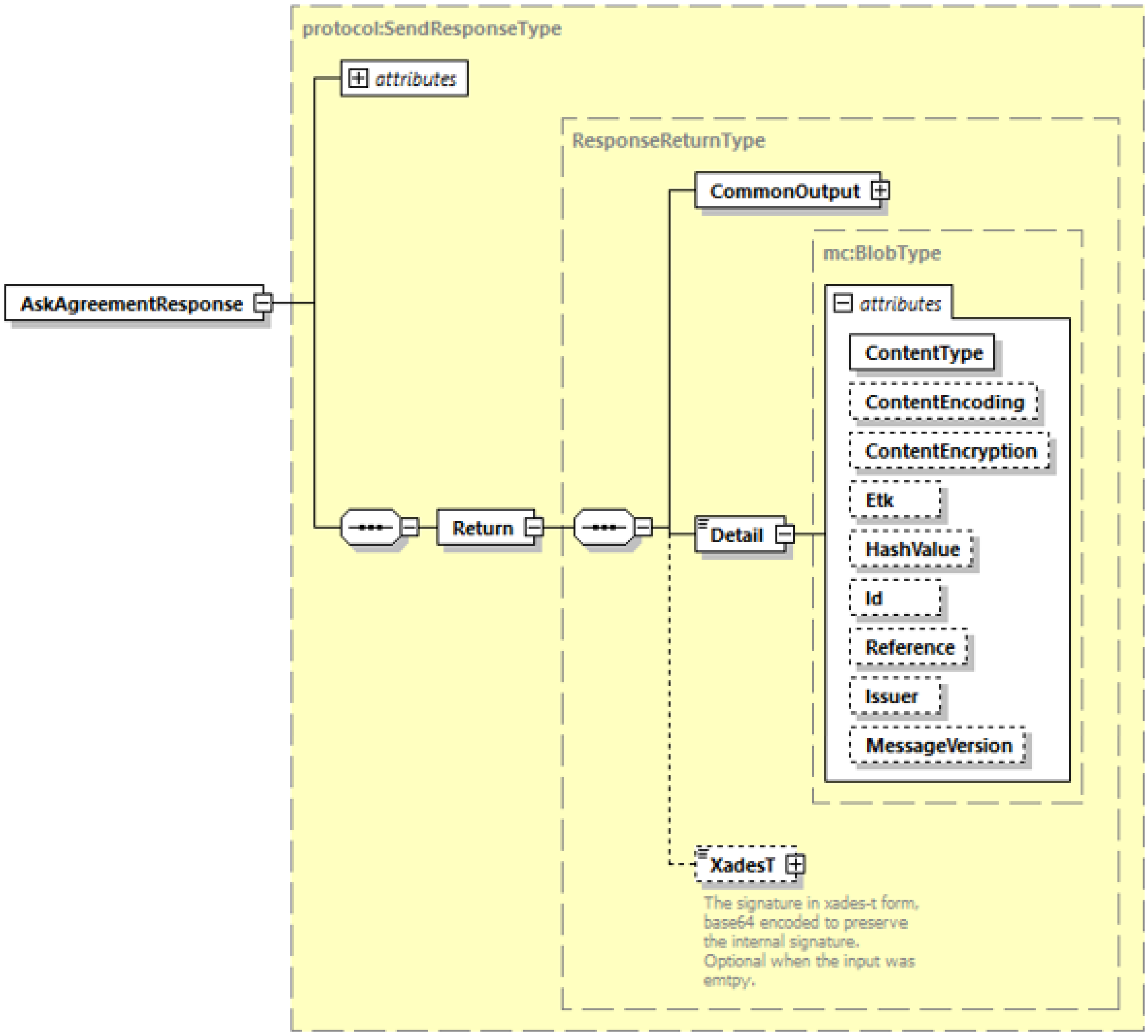
Field name	Description
CommonInput	See section 5.3.3.1 : CommonInputType

Routing	Optional element containing a choice : - CareReceiver : the data should contain either the SSIN of the care receiver or the combination health insurance organization/identification number of the care receiver within this organization. - Subject : the data should represent a well-identified subject in the context of the request. Subject should not be used for eAgreement v2. You should only use CareReceiver. See the documentation “Service_Catalogue_iSocial_Commons” provided by the CIN/NIC.
Detail	Encrypted detail of the request. The content of the encrypted message should respect some standard format to allow additional information exchange: - The identity of the Key to be used to encrypt the response. - The XAdES as probative force of the message. See the documentation provided by the CIN/NIC for more details about the structure “EncryptedKnownContent” : “Service_Catalogue_iSocial_GenSync“. Attribute values : - ContentType : value must be “text/xml” - ContentEncoding : value must be “none” - ContentEncryption : value must be “encryptedForKnownBED” - ETK the encryption token that has been used for the encryption of the body. Mentioning this information helps the recipient to identify the private key to be used for decryption. When not provided, the recipient may choose to reject the message or try to decrypt using the several existing private keys. - HashValue : pre-calculated hash of the uncompressed and decoded content. Is always provided to the care provider. - Id : The ID of the blob for usage in the XAdES signature. It is an “NCName” instead of an “ID” in order to be able to have different blobs with the same (fixed) id without causing an XSD validation. - Reference : Reference of the exchanged blob. This may be used as correlation identifier with other messages (e.g. while confirming the reception of a message in genericAsync). Reference should not be used for eAgreement v2. - Issuer : identification of the sender of the information. This information is provided only when relevant. - MessageVersion : version of the message used in the body. This can be used when different version of the message schema exists. The list of supported versions is documented with the definition of the message Note that the attribute “MessageName” in the Detail element is not present in the interface as provided by eHealth. This attribute value is then filled out by the eHealth platform according to the called operation (for the AskAgreement message it is “eAgreement-ask”).
Xades	For the method AskAgreement of eAgreement, the Xades must be inserted in the “EncryptedKnownContent” structure. See the documentation provided by the CIN/NIC for more details about the structure “EncryptedKnownContent” : “Service_Catalogue_iSocial_GenSync”.

5.3.1.2 Request example

Business example can be retrieved in the documentation provided by the CIN/NIC on their SharePoint

5.3.1.3 Output arguments in AskAgreementResponse



Field name	Description
“Response”	@Id: Unique Id for tracing @InResponseTo: ‘Id’ attribute of the request if available @IssueInstant: Generation response moment
CommonOutput	See section 5.3.3.2 : CommonOutputType
Detail	See the documentation provided by the CIN/NIC for more details : - “Service_Catalogue_iSocial_GenSync”. NB: In this case, the attribute *@ContentEncryption* can only have the value “encryptedForKnownRecipient” (the content of the body is encrypted with the public key of the health-care provider).

XadesT	XAdES-T extends XAdES-BES with a timestamp of the signature. That way it is known without any doubt when the message was created and when the signer committed to it. For encrypted flows, the Xades is located in the Detail body See the documentation provided by the CIN/NIC for more details : "Service_Catalogue_iSocial_Commons".

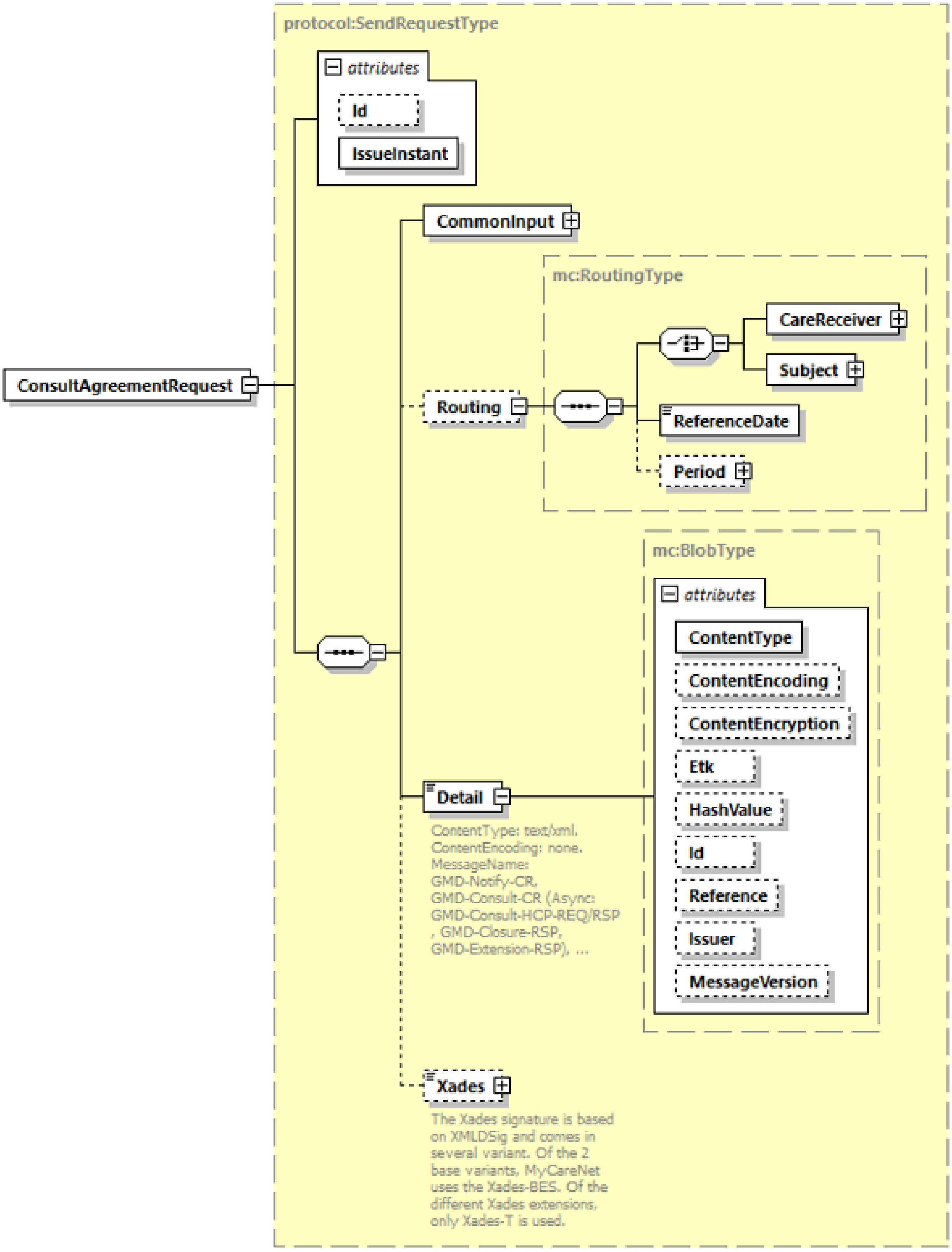
5.3.1.4 Response example

Business example can be retrieved in the documentation provided by the CIN/NIC on their SharePoint.

5.3.2 Method ConsultAgreement

The goal of this method is to consult the requests for agreement from a patient.

5.3.2.1 Input arguments in ConsultAgreementRequest



ContentType: text/xml. ContentEncoding: none. MessageName: GMD-Notify-CR, GMD-Consult-CR (Async: GMD-Consult-HCP-REQ/RSP , GMD-Closure-RSP, GMD-Extension-RSP), ...

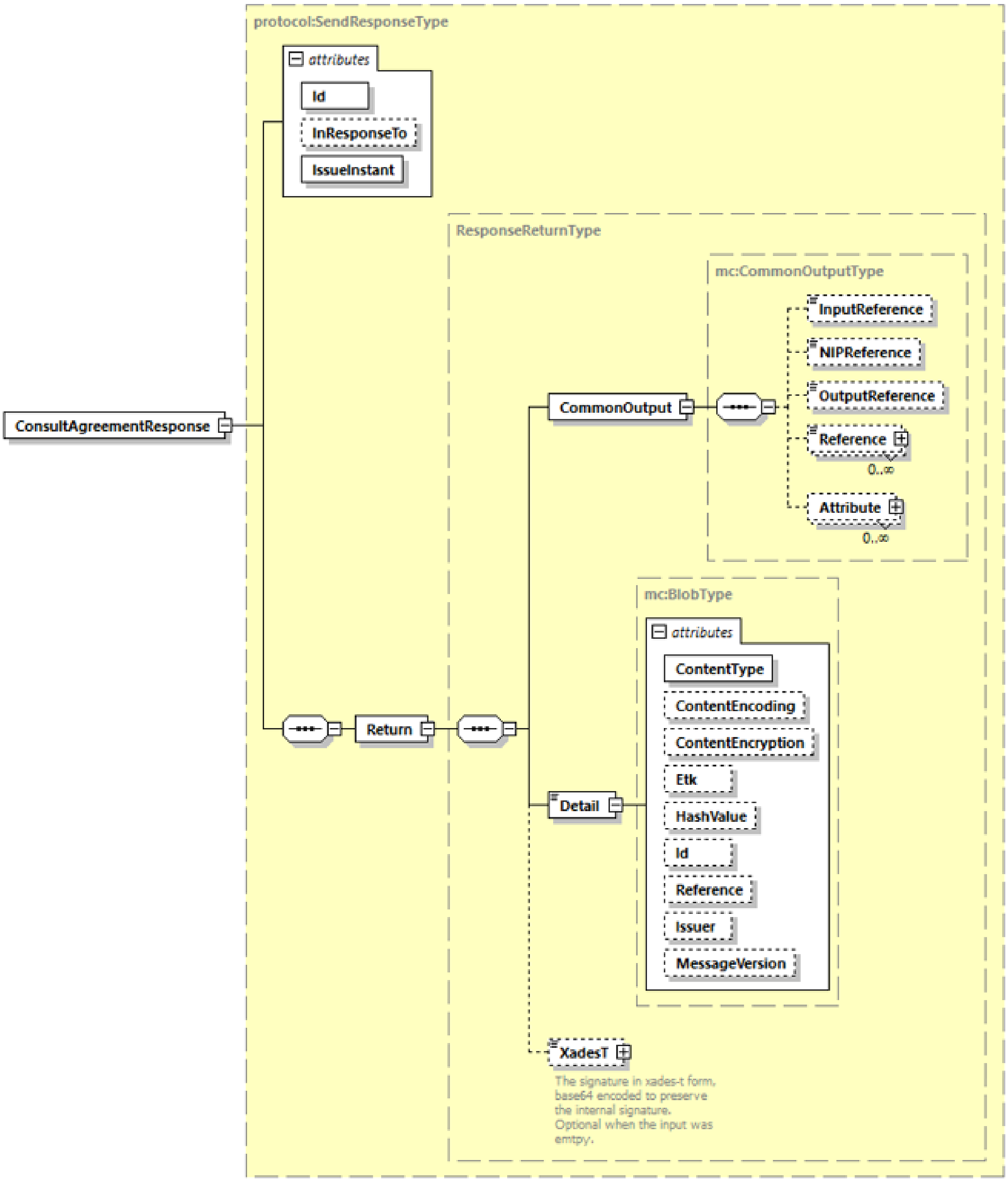
The Xades signature is based on XMLDSig and comes in several variant. Of the 2 base variants, MyCareNet uses the Xades-BES. Of the different Xades extensions, only Xades-T is used.

Field name	Description
CommonInput	See section 5.3.3.1 : CommonInputType
Routing	Optional element containing a choice : - CareReceiver : the data should contain either the SSIN of the care receiver either the combination health insurance organization/identification number of the care receiver within this organization. - Subject : the data should represent a well-identified subject in the context of the request. Subject should not be used for eAgreement v2. You should only use CareReceiver. See the documentation “Service_Catalogue_iSocial_Commons” provided by the CIN/NIC.
Detail	Attribute values : - ContentType: “text/xml” - ContentEncoding: “none” - ContentEncryption : value must be “encryptedForKnownBED” - ETK the encryption token that has been used for the encryption of the body. Mentioning this information helps the recipient to identify the private key to be used for decryption. When not provided, the recipient may choose to reject the message or try to decrypt using the several existing private keys. - HashValue : pre-calculated hash of the uncompressed and decoded content. Is always provided to the care provider. - Id : The ID of the blob for usage in the XAdES signature. It is an “NCName” instead of an “ID” in order to be able to have different blobs with the same (fixed) id without causing an XSD validation. - Reference : Reference of the exchanged blob. This may be used as correlation identifier with other messages (e.g. while confirming the reception of a message in genericAsync). Reference should not be used for eAgreement v2. - Issuer : identification of the sender of the information. This information is provided only when relevant. - MessageVersion : version of the message used in the body. This can be used when different version of the message schema exists. The list of supported versions is documented with the definition of the message Note that the attribute “MessageName” in the Detail element is not present in the interface as provided by eHealth. This attribute value is then filled out by the eHealth platform according to the called operation (for ConsultAgreement it is “eAgreement-consult”).
Xades	For the method ConsultAgreement of eAgreement, the Xades must be inserted in the “EncryptedKnownContent” structure. See the documentation provided by the CIN/NIC for more details about the structure “EncryptedKnownContent” : “Service_Catalogue_iSocial_GenSync”.

5.3.2.2 *Request example*

Business example can be retrieved in the documentation provided by the CIN/NIC on their SharePoint.

5.3.2.3 Output arguments in ConsultAgreementResponse



Field name	Description
“Response”	@Id: Unique Id for tracing @InResponseTo: ‘Id’ attribute of the request if available @IssueInstant: Generation response moment
CommonOutput	See section 5.3.3.2 : CommonOutputType
Detail	See the documentation provided by the CIN/NIC for more details : - ‘Service_Catalogue_iSocial_GenSync’

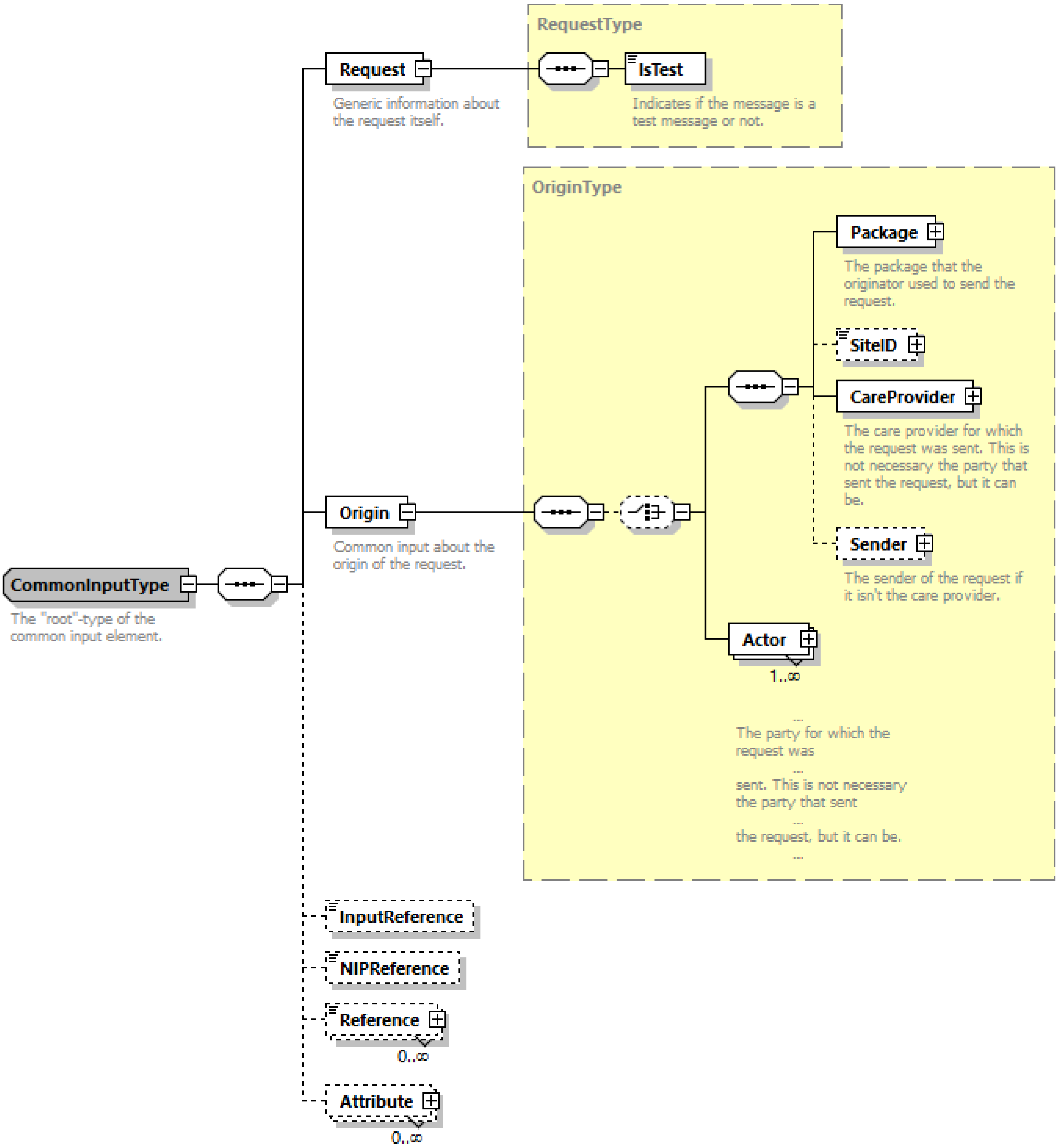
XadesT	XAdES-T extends XAdES-BES with a timestamp of the signature. That way it is known without any doubt when the message was created and when the signer committed to it. For encrypted flows, the Xades is located in the Detail body See the documentation provided by the CIN/NIC for more details : “Service_Catalogue_iSocial_Commons”.

5.3.2.4 Response example

Business example can be retrieved in the documentation provided by the CIN/NIC on their SharePoint.

5.3.3 Used Types

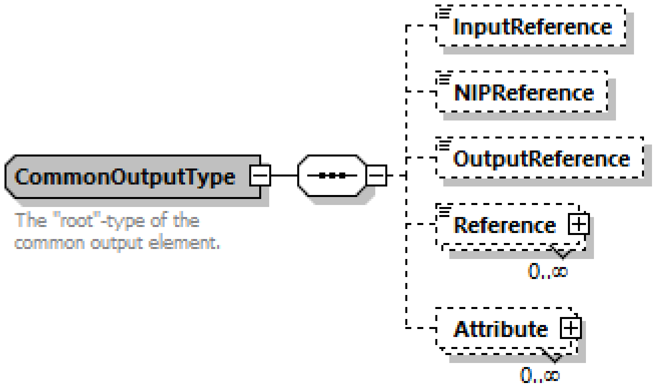
5.3.3.1 CommonInputType


RequestType
Request
IsTest
Generic information about the request itself.
Indicates if the message is a test message or not.
OriginType
Package
The package that the originator used to send the request.
SiteID
CareProvider
The care provider for which the request was sent. This is not necessary the party that sent the request, but it can be.
Origin
Common input about the origin of the request.
Sender
The sender of the request if it isn't the care provider.
CommonInputType
The "root"-type of the common input element.
Actor
1..∞
The party for which the request was
sent. This is not necessary the party that sent
the request, but it can be.
InputReference
NIPReference
Reference
0..∞
Attribute
0..∞

Field name	Description
Request	Indicates the type of request, currently only debug or not.
Origin	Indicates where the message originates from. For the semantics of the particular elements and other information about the service see the documentation Service_Catalogue_iSocial_Commons provided by the CIN/NIC. Actor should not be used in eAgreement v2.

InputReference	Reference filled by the requester. This value can be returned in the corresponding response for correlation purposes. This reference is a features of the message as a whole; a message may contain many records all sharing the same InputReference.
NipReference	NIPReference is a reference filled by the iSocial platform and should therefore never be filled in.
Reference	Additional reference, typed, that can be used for different business cases. Reference should not be used in eAgreement v2.
Attribute	Additional metadata on the request. Specific message description may also define business-specific metadata. Attribute should not be used in eAgreement v2.

5.3.3.2 CommonOutputType



Field name	Description
InputReference	Reference filled by the requester. This value can be returned in the corresponding response for correlation purposes. This reference is a features of the message as a whole; a message may contain many records all sharing the same InputReference.
OutputReference	Reference filled by the requester. This value can be returned in the corresponding response for correlation purposes. This reference is a features of the message as a whole; a message may contain many records all sharing the same OutputReference.
NipReference	NIPReference is a reference filled by the iSocial platform and should therefore never be filled in.
Reference	Additional reference, typed, that can be used for different business cases. Reference should not be used in eAgreement v2.
Attribute	Additional metadata on the request. Specific message description may also define business-specific metadata Attribute should not be used in eAgreement v2.

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 contact center (see Chap 3)

In case the eHealth platform finds a bug or vulnerability in its software, we advise the partner to update his application within 10 business days with the newest version of the software.

In case the partner finds a bug or vulnerability in the software or web service that the eHealth platform makes available, he is obliged to contact and inform us immediately. He is not allowed under any circumstances to publish this bug or vulnerability.

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.
- Signature of the timestamp, body and binary security token. This will allow the eHealth platform to verify the integrity of the message and the identity of the message author.
- Encryption of the business part of the message with the MyCareNet ETK.

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 platform 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 information needed to integrate is published on the portal of the eHealth platform.

Upon request and depending on the case, the eHealth platform provides you with a **test case** in order for you to test your client before releasing it in the acceptance environment.

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 the integration and acceptance tests. The eHealth platform suggests testing during minimum one month.

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

Once a release date has been agreed on, the eHealth platform prepares the connection to the production environment and provides the partner with the necessary information. During the release day, the partner provides the eHealth platform with feedback on the test and performance tests.

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

7.1.4 Operational follow-up

Once in production, the partner using the eHealth platform service for one of his applications will always test in the acceptance environment first before releasing any adaptations of his 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 for all of the following cases:

- AskAgreement (contact NIC/CIN for test data of the patients)
- ConsultAgreement

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

8. Error and failure messages

There are different possible types of response:

- If there are no technical errors, responses as described in section 5 are returned.
- In the case of a technical error, a SOAP fault exception is returned (see table below –more explanation on these codes can be found in SOA – Error guide document).

If an error occurs, first please verify your request. Following table contains a list of common system error codes for the eHealth Service Bus/Gateway. For possible business errors, refer to the documentation “GenericSync Error codes” and “Service_Catalogue_iSocial_Commons” provided by the CIN/NIC.

Error code	Component	Description	Solution
SOA-00001		Service error	This is the default error sent to the consumer in case more details are unknown.
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 the default error for content related errors in case more details are unknown.
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.

If the cause is a business error, please contact MyCareNet at ServiceDesk@MyCareNet.be.

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

```
<soapenv:Header>
      <add:MessageID
xmlns:add="http://www.w3.org/2005/08/addressing">6f23cd40-09d2-4d86-b674-
b311f6bdf4a3</add:MessageID>
</soapenv:Header>
```

This message ID is important for tracking of the errors so when available, please provide it when requesting support.