Service Level Agreement
Base Service: Coding
Version 4.2 dd 23/07/2018

This document is provided to you free of charge by the

eHealth platform

Willebroekkaai 38

38, Quai de Willebroeck

1000 BRUSSELS

Service Level Agreement

Base Service CODING

Between

Service provider	**Service customer**
eHealth Platform	User Community
Quai de Willebroeck, 38	
1000 BRUXELLES	

To the attention of: the user community

<u>Author:</u>	Service Management
<u>Date:</u>	July 23rd, 2018
<u>Version:</u>	*4.2*
<u>Status:</u>	Final
<u>Type:</u>	Public
<u>Confidentiality</u>:	
<u>Language:</u>	English
<u>Exhibit of</u>:	MSA

Table of Content

1. Document management

1.1. Document history

Version	Date	Author	Description of changes / remarks
1	October 3rd, 2011	eHealth platform	First approved version
2	April 2nd, 2013	eHealth platform	Version approved
3	June 28th, 2016	eHealth platform	Third approved version
3.1	June 30th, 2017	eHealth platform	Modification of the description of the secured table containing the encryption keys
4	February 28th, 2018	eHealth platform	Fourth approved version
4.1	April 25th, 2018	eHealth platform	Update
4.2	July 23rd, 2018	eHealth platform	Correction

1.2. Document references

ID	Title	Version	Date	Remark
	Bestuur overeenkomst			
	Master Service Agreement	2.0	22/11/2012	This SLA is a complement to the Master Service Agreement

1.3. Purpose of the document

The objective of this document is to define the Service Level Agreement (SLA) for the set of *Base Service Coding* proposed by the eHealth platform in order to ensure that information related to healthcare can be coded so that no link – direct nor indirect – with the patient nor the care provider can be established. It defines the minimum level of service offered on the eHealth platform, and provides eHealth's own understanding of service level offering, its measurement methods and its objectives in the long run.

This document contains a short description of the set of services offered by the common base registry for healthcare actors. These services should be distinguished into batch services and webservices[1] for which the SLA will be different. Batch services essentially correspond to file exchange for which results will be asynchronous while consultation and publication webservices will be synchronous.

In addition, this document contains a short description of, or a link to a location where such a description can be found:

- some of the dependencies on technical and/or functional components needed and used by the web services,
- some technical and/or functional components on which the services are dependent,
- Measurements and KPIs intended to account for a certain number of performance indicators.

---

[1] *In order to use those web services, an interface needs to be built, operated and maintained by the client application supplier as described in the cookbooks.*

This document is a complement to the *Master Service Agreement (MSA)*. The information given in this document version takes precedence over the data regarding the same subjects given in former versions and in the MSA. Items described in the MSA include, for instance:

- a broad description of the business services offered by the eHealth platform to the applications which may want to make use of them,

- description of cross-sectional services offered on the eHealth platform,

- description of support services, including registering, managing and solving possible incidents with the Coding suite of services, managing changes,

- performance indicators related to those services.

1.4. Validity of the Agreement

This document is valid as long as the *Base Service Coding* is part of the eHealth offering.

Once a year, the levels of service proposed will be reviewed and confirmed for the next year.

1.5. Service and Maintenance Windows

1.5.1. Service Windows

The time frame during which the eHealth services are offered to the client applications, is defined in terms of days and hours. Standard working days are all days of the year, except during the biannual maintenance periods.

The following table summarises the eHealth Service Windows.

Service Window							
		Day of the week (closing days of Service Provider = Sunday)					
		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Day period	00:00 – 07:00							
	07:00 – 08:00							
	08:00 – 16:30							
	16:30 – 19:00							
	19:00 – 24:00							

Legend	
	Timeslots where the Service must be available according to the SLA and where corrective actions will be taken to resolve detected Incidents.
	Timeslots where the Service will be available provided there are no blocking Incidents. If these incidents do appear, no corrective action will be taken.
	Timeslots where unavailability can occur.

1.5.2. Support Window

Support Window							
		Day of the week (Closing day of the eHealth platform = Sunday)					
		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Day period	00:00 – 07:00							
	07:00 – 08:00							
	08:00 – 16:30							
	16:30 – 19:00							
	19:00 – 20:00							
	20:00 – 24:00							

Legend	
	Timeslots during which the eHealth Contact Center is available for the End-Users with a second line support for Infrastructure (HW, OS, Middleware and DB)
	Timeslots during which the eHealth Contact Center is available for the End-Users with a second line support, including the Application Support
	Timeslots during which the eHealth Contact Center is unavailable for the End-Users. The End-User will have the possibility to record a voice message that will be treated on the next Workday.

1.5.3. Maintenance Windows & Planned Interventions

The eHealth platform will strive for limiting as much as possible the impact and duration of the planned interventions. Today, the eHealth platform is committed to make efforts so planned unavailability's do not exceed one to a few hours per year.

- Portal, Network interventions and application release: 2 times a year.

1.5.4. Unplanned Interventions

In exceptional circumstances, unplanned interventions may be needed in order to restore the service.

2. Service scope

2.1. eHealth Service

2.1.1. General

This Service Level Agreement is concerned with the Basic Service eHealth Coding, i.e. the services offered by the eHealth platform to perform the following functions on behalf of eHealth partner applications:

- Coding pieces of text (messages, significant data, documents …), following security checks (authentication, authorisation) and in accordance to well-defined rules for the submitting application;
- Decoding previously coded pieces of text (messages, significant data, documents …), following security checks (authentication, authorisation) and in accordance to well-defined rules for the submitting application;
- Recoding previously coded pieces of text (messages, significant data, documents …), following security checks (authentication, authorisation) and in accordance to well-defined rules for the submitting application.

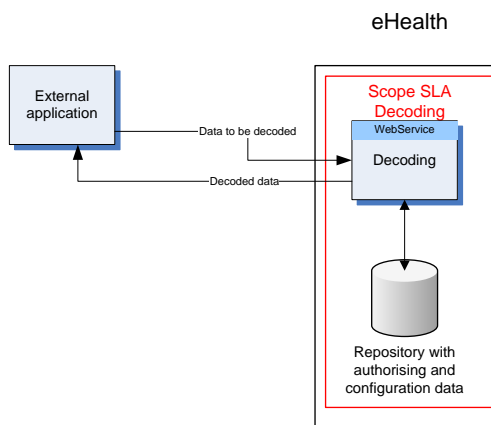This SLA covers the second version of the Basic Service:

Seals: This version requires authentication and authorisation for each function proposed by the web service (Encode / Decode). Furthermore, the table containing the encryption keys is secured by Thales nShield HSMs

2.1.2. Architecture overview
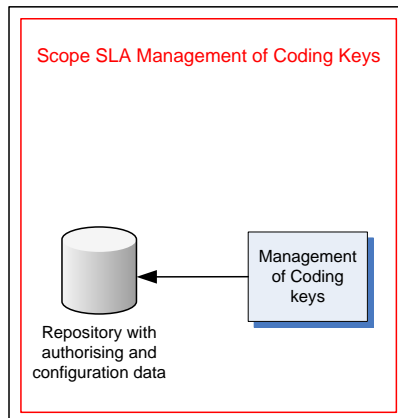
2.1.2.1. Coding process
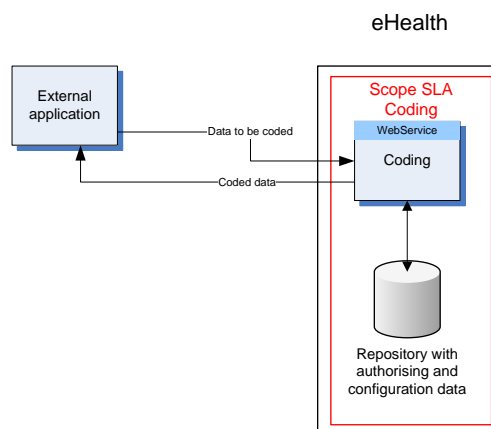
2.1.2.2. Decoding process

2.1.2.3.   Management of coding keys

eHealth

2.1.3.   Functionality

Consumers of these services may only be health care providers, following a due integration path of the application they use. Health care providers have access to these services through their eHealth partner applications, on the premise that both the user and the application have been granted proper access. Further processing of coded and/or decoded data is fully the responsibility of the partner application, including archiving the coded or decoded data, as coded or decoded data is never archived on the eHealth platform.

From a business point of view, eHealth Coding services are comprised of several components:

- A coding service for coding the input data, as submitted by the partner application;
- A decoding service for decoding the input data, as submitted by the partner application;
- A component for authenticating and authorising the requestor and her / his request for coding and/or decoding some data.

From a technical point of view, eHealth Coding service is comprised of:

- A coding web service with 2 methods, one for coding, one for decoding;
- A data Repository (database) to:
  - store the coding keys, thus providing a security mechanism whereby the coding keys are kept separately from the coded data;
  - manage the set of authorisation rules and parameters (such as which coding algorithm to use for a given combination of parameters).

Remark:

This SLA is related to the online use of the coding basic service. In this framework, each request to the coding service is a single request.

2.2.   Business criticality

The Service Level Criticality (as described in the MSA) for this on-line Basic Service is "GOLD". The service provider will support the management of the coding keys and the offline basic service based on a "BEST EFFORT" basis.

2.3.   Interdependencies

The services covered by this SLA are functionally dependent upon

o   Authentic sources data update frequencies and data qualities

o   Services offered by CBSS and CBE for data respectively concerning Belgian physical person recognised by Belgian National register and Belgian companies recognised by CBE,

The coding services depend on the Certification eHealth base service to ensure that only authorised entities can have access to these services either web application or web services.

3. List of Service Levels

Service	KPI	SL ID	Condition	Measure based on	Limit	Service Window	Objective Committed	Objective Target
Seals Coding / Decoding	Availability	COD3	Test script passes	Fictitious request		Mo – Su 0:00 – 24:00	99,5%	99,5%
	Performance – Response time	COD4	Response time ≤ 1 sec	Real transactions	Encrypt a list of elements for a size of max 10 KB (min 100 connections)	Mo – Su 0:00 – 24:00	98%	99%

4. Detailed Service Level

4.1. Availability Seals Coding/Decoding

Objectives	

Definition	• The Coding/Decoding service is considered to be available when the following test is correctly executed:
	   o Coding of data
	   o Decoding of coded data (see previous step)
	   o Compare the end result with the initial data (should be the same)
	 • Planned interventions executed within the maintenance window are not recorded as unavailable time.

Measuring method	• The availability of the different functionalities is measured by executing the test scripts every 5 minutes. When the script is executed with as result a Status "OK", the test "passed". • When the script is executed with another result, the test "failed"

Calculation	$$Availability = \frac{\sum Passed\ Tests\ x\ 100}{\sum Total\ Tests}\%$$
	
	 o Total Tests = Total number of tests launched within corrected timeframe
	 o Passed Tests = Total number of tests that resulted in a status "OK" within the same timeframe
	 o Corrections are applicable on tests that are not taken into account because they were caused :
	   ▪ by a Validated Authentic Source or partner application out of scope of this SLA
	   ▪ by a failing monitoring tool

Reporting and evaluation period	• The availability is calculated and reported monthly. Corrective actions are initiated when appropriate. • The formal evaluation however is done on a yearly basis.
Comment regarding Coding Keys	• The generation of coding keys is not included in the monitoring script. Failures in this area will not be detected by the monitoring in place. Incidents regarding these functionalities reported by the users, will be handled on a Best Effort basis and within the working hours (Mo – Fr 8:00 – 16:30)

Service Level Objectives	Functionality	Service Window	Service Level Objective	
			Committed	Target
	Seals Coding / Decoding	Mon – Sun 0:00 – 24:00	99,5%	99,9%

4.2. Performance Seals Coding/Decoding

Objectives	

Definition	• The performance of the Coding/Decoding Basic Service refers to its response time. Response time meaning the time needed to execute a request. This request can be
	
	    ○ Coding of data (max 10 kB2)
	    ○ Decoding of data (max 10 kB1)
	
	• Attention: The response time does not include:
	
	    ○ The time needed to deliver the information over the Internet
	    ○ The time needed to process the information at the end users premises.

Measuring method	• This response time is measured on the reverse proxies. .Both start time (request received) and stop time (answer sent to the end user) are measured and stored in a database. • Measuring is done on real transactions, and only on those having a "stop time" within the measuring period.
Calculation	• All response times are calculated: Stop time – Start time for every request. • The percentage that meets the target is calculated based on following formula: $$Performance = \frac{\sum Tests\ meeting\ the\ target\ x\ 100}{\sum Total\ Tests}\%$$
Reporting and evaluation period	• The performance is calculated and reported monthly. Corrective actions are initiated when appropriate. • Performance is only reported when there are at least 100 connections • The formal evaluation however is done on a yearly basis.

Service Level Objectives	Functionality	Target	Service Level Objective	
			Committed	**Target**
	Seals Coding or Decoding (max 10 kB)	1 sec	98%	99%

---

[2] *This limit is not implemented yet. This means that all the transactions are eligible for measurement and reporting.*