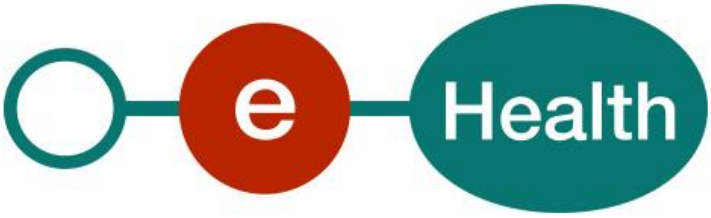

# Service Level Agreement
# Basic Service: Pseudonymisation WS Rest
# Version 2.0

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**eHealth platform**

**Willebroekkaai 38 – 1000 Brussel**

**38, Quai de Willebroeck – 1000 Bruxelles**

# Service Level Agreement

## *Pseudonymisation WS*

**Between**

**Service provider**

eHealth Platform

Quai de Willebroeck, 38

1000 BRUSSELS

**Service customer**

User Community

**To the attention of: the user community**


Author: Service Management
Date: 25/07/2024
*Version:* *2.0*
Type: Public
Confidentiality: /
Language: English
Exhibit of: MSA

# 1. Table of content

# 2. Document management

## 2.1. Document history

| Version | Date | Author | Description of changes / remarks |
|---|---|---|---|
| 1.0 | 26/02/2024 | eHealth | Initial version |
| 2.0 | 25/07/2024 | eHealth | Modification KPI |

## Document references

| ID | Title | Version | Date | Author |
|---|---|---|---|---|
| | Master Service Agreement | 2022.1 | 12/04/2022 | eHealth |

## 2.2. Purpose of the document

The objective of this document is to define the Service Level Agreement for the set of services included in the ***Pseudonymisation service*** proposed by the eHealth-platform. 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.

The purpose of the portal eHealth is to offer a central entry point for dedicated information and access to healthcare related applications.

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 Web Services are dependent,
- measurements and KPIs intended to account for a certain number of performance indicators.

## 2.3. Features

The REST ***Pseudonymisation service*** have the following features:

- Pseudonymise: get a pseudonym for an identifier for a given domain

- Identify: get the identifier from a pseudonym for a given domain

- Convert: convert a pseudonym from a source domain to another pseudonym for a target domain

- Domain information: get information about the list of domains or the configuration of a given domain

## 2.4. Validity of the agreement

This document is valid as long as the ***Pseudonymisation service*** is part of the eHealth-platform offering services.

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

## 2.5. Service and maintenance window

### 2.5.1. Service window

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 window.

| 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 – 20:00 | | | | | | | |
| | 20:00 – 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. |

### 2.5.2. Support Window

| Support 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 – 20:00 | | | | | | | |
| | 20:00 – 24:00 | | | | | | | |

| Legend | |
|---|---|
| | Timeslots for which the eHealth Call Center is available for the End-Users with a second line support for Infrastructure (HW, OS, Middleware and DB) |
| | Timeslots for which the eHealth Call Center is available for the End-Users with a second line support, including Application Support |
| | Timeslots for which the eHealth Call 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. |

### 2.5.3. Maintenance Windows & Planned Interventions

During the Major Releases, a downtime of maximum 30 minutes is authorised. This downtime will not be taken into account when calculating the Availability of the different Services. Other periods can be agreed between the Constituent and the Service Provider

Interventions authorized on the Active environment are Corrective actions intended to enhance the availability or stability of the Service. Unavailability caused by these interventions will be recorded as downtime.

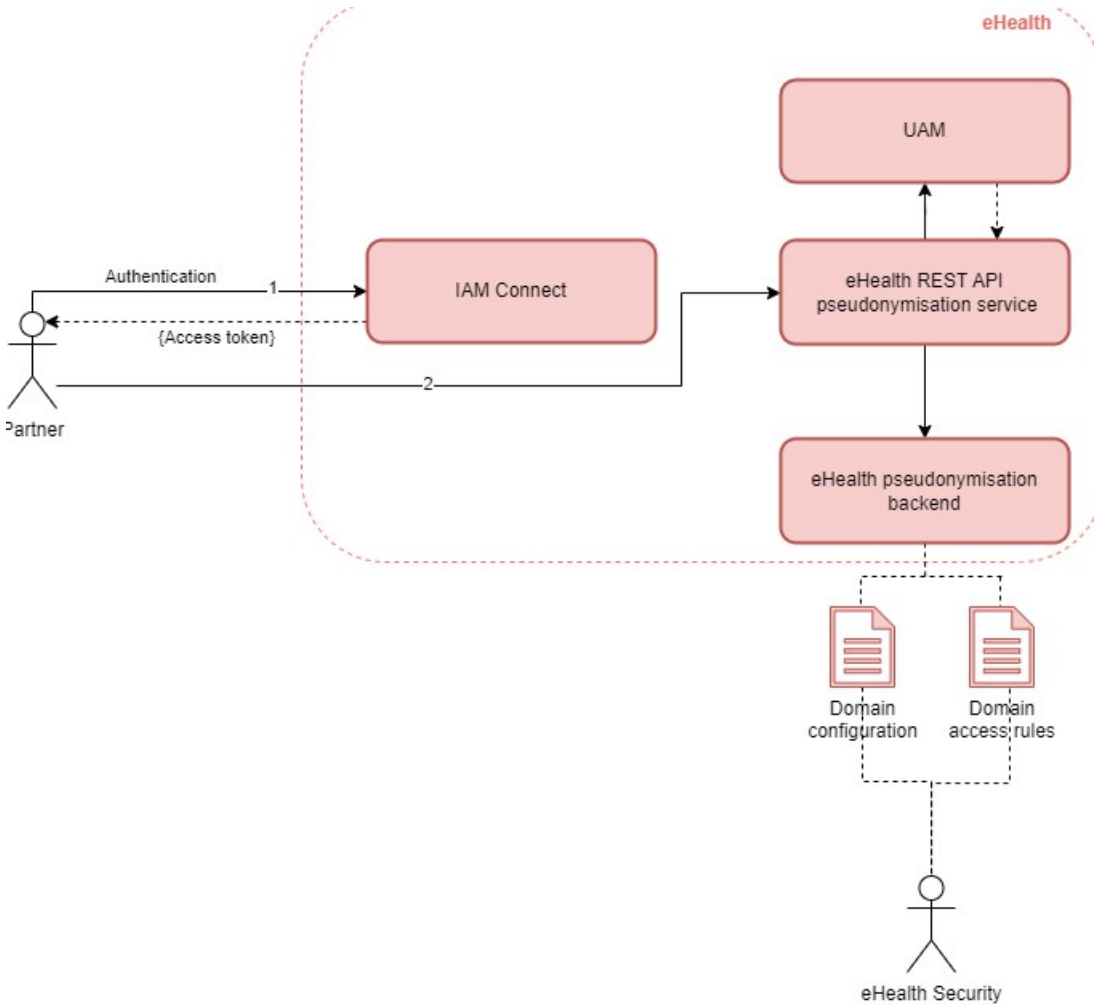
### 2.5.4. Unplanned Interventions

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

# 3. Service scope

## 3.1. eHealth service

### 3.1.1. General




### 3.1.2. Functionality

In the context of a project handling medical data, it is crucial to maintain the confidentiality of information.

This is where the Pseudonymisation REST service plays a role in preventing the link between personal and medical data, whether at rest in the database, in transit during network transport, or in use during processing.

The main goal of this service is to generate a unique pseudonym for the patient identity, ensuring that identity remains private and secure. Each pseudonym is associated with a business domain to further enhance data security. The business domain will be the responsibility of the domain owner.

Description:

1. A client sends an authentication request to IAM CONNECT and, if successful, receives an access token.
2. The client then sends a request to the REST pseudonymization service with the access token obtained earlier.

When the pseudonymization service receives a request from a client, the latter will verify that the request is valid and the client has the scope(s) required to call the pseudonymisation operation(s) :

· Pseudonymise to call the operation Pseudonymyze & PseudonymyzeMultiple

· Identify to call the operation Identify & IdentifyMultiple

· Convert to call the operation Convert & ConvertMultiple operation

To be able to access to operations get domains and get domain, one the above scope will suffice.

In the backend, eHealth will verify that the client has the right to access to the operation for a specific domain following access rules configured by eHealth Security. There is a call to eHealth UAM service. The scope is assigned to the OAuth client by an authorized manager (within the authorization server - IAM Connect) during the client onboarding process.

From a technical point of view, the pseudonymisation services is comprised of:

- Pseudonymisation REST service
- Database Pseudo that contains technical information about the configured domain and the access matrix for each domain
- Hardware Security Module (HSM) which is used to performed the various mathematical operations required to ensure a high level of security

## 3.2. Business criticality

The business criticality of the service is **PLATINUM** as it supports mandatory business processes that should be processed synchronously and within some legal periods.

# 4. List of service levels

*Table 1:* List of key performance indicators (KPI) per service

| Service | KPI | SL ID | Condition | Measure based on | Limit | Service Window | Objective Committed | Objective Target |
|---|---|---|---|---|---|---|---|---|
| WS Pseudonymisation | Availability<br>WS Pseudonymisation | | Transaction passes | Fictitious request | | Mo – Su<br>0:00 – 24:00 | 99,5% | 99,9% |
| Fast operations | Performance<br>WS Pseudonymisation – get the list of domains - *getDomains* | | Response time ≤ 1 sec | Real transactions | | Mo – Su<br>0:00 – 24:00 | 98% | 99% |
| | Performance<br>WS Pseudonymisation - get information about a defined domain - *getDomain* | | Response time ≤ 1 sec | Real transactions | | Mo – Su<br>0:00 – 24:00 | 98% | 99% |
| | Performance<br>WS Pseudonymisation - pseudonymise an input domain - *pseudonymise* | | Response time ≤ 1 sec | Real transactions | | Mo – Su<br>0:00 – 24:00 | 98% | 99% |
| | Performance<br>WS Pseudonymisation – identify an input – *identify* | | Response time ≤ 1 sec | Real transactions | | Mo – Su<br>0:00 – 24:00 | 98% | 99% |
| | Performance<br>WS Pseudonymisation - Convert an input to another domain - *convert* | | Response time ≤ 1 sec | Real transactions | | Mo – Su<br>0:00 – 24:00 | 98% | 99% |
| Slow operations | Performance<br>WS Pseudonymisation - pseudonymise multiple inputs - *pseudonymizeMultiple* | | Response time ≤ 2 sec | Real transactions | | Mo – Su<br>0:00 – 24:00 | 98% | 99% |
| | Performance<br>WS Pseudonymisation – identify multiple inputs - *identifyMultiple* | | Response time ≤ 2 sec | Real transactions | | Mo – Su<br>0:00 – 24:00 | 98% | 99% |
| | Performance<br>WS Pseudonymisation – Convert multiple inputs to another domain - *convertMultiple* | | Response time ≤ 2 sec | Real transactions | | Mo – Su<br>0:00 – 24:00 | 98% | 99% |

# 5. Detailed service level per service

## 5.1. Availability Pseudonymisation WebService

<table>
<tr><th colspan="3">Objectives</th></tr>
<tr><td>Definition</td><td colspan="2">
<ul>
<li>The eHealth REST Pseudonymisation service is considered to be available when the following sequence ends successfully (Alive Check):
<ul>
<li>Send a request to /heath</li>
<li>The monitoring asserts that the service is OK when the “status” is UP</li>
</ul>
</li>
</ul>
<pre>
{
    "status": "UP",
    "components":    {
       "db":       {
          "status": "UP",
          "details":          {
             "database": "Oracle",
             "validationQuery": "isValid()"
          }
       },
       "livenessState": {"status": "UP"}
    }
}
</pre>
Remark: In the course of the year 2024, the service status will include the status of the HSM in addition to the oracle database
<ul>
<li>Planned interventions executed within the Maintenance Window are not recorded as unavailable time.</li>
</ul>
</td></tr>
<tr><td>Measuring method</td><td colspan="2">
<ul>
<li>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”</li>
<li>Measuring is always done on test scenarios</li>
</ul>
</td></tr>
<tr><td>Calculation</td><td colspan="2">
$$Availability = \frac{\sum Passed\ Tests\ x\ 100}{\sum Total\ Tests}\%$$
<ul>
<li>Total Tests = Total number of tests launched within corrected timeframe</li>
<li>Passed Tests = Total number of tests that resulted in a status “OK” within the same timeframe</li>
<li>Corrections are applicable on tests that are not taken into account because they were caused:
<ul>
<li>by a Validated Authentic Source or partner application out of scope of this SLA</li>
<li>by a failing monitoring tool</li>
</ul>
</li>
</ul>
</td></tr>
<tr><td>Reporting and evaluation period</td><td colspan="2">
<ul>
<li>The availability is calculated and reported monthly. Corrective interventions are initiated when appropriate.</li>
<li>The formal evaluation however is done on a yearly basis.</li>
</ul>
</td></tr>
<tr><td>Service Level Objectives</td><td colspan="2">
<table>
<tr><th rowspan="2">Functionality</th><th rowspan="2">Service Window</th><th colspan="2">Service Level Objective</th></tr>
<tr><th>Committed</th><th>Target</th></tr>
<tr><td>Availability Pseudonymisation WS</td><td>Mo – Su 0:00 – 24:00</td><td>99,5%</td><td>99,9%</td></tr>
</table>
</td></tr>
</table>

## 5.2. Performance Pseudonymisation WebService

<table>
<tr><th colspan="5">Objectives</th></tr>
<tr><td>Definition</td><td colspan="4">
<ul>
<li>The performance of the eHealth Pseudonymisation webservice refers to its response time. Response time meaning the time needed to execute a request. This ressource can be:
<ul>
<li>getDomains</li>
<li>getDomain</li>
<li>pseudonymize</li>
<li>pseudonymizeMultiple</li>
<li>identify</li>
<li>identifyMultiple</li>
<li>convert</li>
<li>convertMultiple</li>
</ul>
the endoint is /pseudo/v1</li>
<li>Attention: The response time does not include:
<ul>
<li>The time needed to deliver the information over the Internet</li>
<li>The time needed to process the information at the End Users premises.</li>
</ul></li>
</ul>
</td></tr>
<tr><td>Measuring method</td><td colspan="4">
<ul>
<li>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.</li>
<li>Measuring is done on real transactions, and only on those having a “stop time” within the measuring period.</li>
</ul>
</td></tr>
<tr><td>Calculation</td><td colspan="4">
<ul>
<li>All response times are calculated: Stop time – Start time for every request.</li>
<li>The percentage that meets the target is calculated based on following formula:</li>
</ul>
$$Performanœ = \frac{\sum Tests\ meeting\ the\ target\ x\ 100}{\sum Total\ Tests}\%$$
</td></tr>
<tr><td>Reporting and evaluation period</td><td colspan="4">
<ul>
<li>The performance is calculated and reported monthly. Corrective interventions are initiated when appropriate.</li>
<li>The formal evaluation however is done on a yearly basis.</li>
</ul>
</td></tr>
<tr><td rowspan="2">Service Level Objectives</td><th rowspan="2">Functionality</th><th rowspan="2">Target</th><th colspan="2">Service Level Objective</th></tr>
<tr><th>Committed</th><th>Target</th></tr>
<tr><td rowspan="5">Fast operations</td><td>WS Pseudonymisation – get the list of domains - getDomains</td><td>Response time ≤ 1 sec</td><td>98%</td><td>99%</td></tr>
<tr><td>WS Pseudonymisation - get information about a defined domain - getDomain</td><td>Response time ≤ 1 sec</td><td>98%</td><td>99%</td></tr>
<tr><td>WS Pseudonymisation - Pseudonymise an input domain - pseudonymise</td><td>Response time ≤ 1 sec</td><td>98%</td><td>99%</td></tr>
<tr><td>WS Pseudonymisation – Identify an input - identify</td><td>Response time ≤ 1 sec</td><td>98%</td><td>99%</td></tr>
<tr><td>WS Pseudonymisation - Convert an input to another domain - Convert</td><td>Response time ≤ 1 sec</td><td>98%</td><td>99%</td></tr>
<tr><td rowspan="3">Slow operations</td><td>WS Pseudonymisation - Pseudonymise multiple inputs - pseudonymizeMultiple</td><td>Response time ≤ 2 sec</td><td>98%</td><td>99%</td></tr>
<tr><td>WS Pseudonymisation – Identify multiple inputs - identifyMultiple</td><td>Response time ≤ 2 sec</td><td>98%</td><td>99%</td></tr>
<tr><td>WS Pseudonymisation – Convert multiple inputs to another domain - convertMultiple</td><td>Response time ≤ 2 sec</td><td>98%</td><td>99%</td></tr>
</table>