

**Service Level Agreement
Base Service: Certificates
Version 1.0**

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eHealth platform

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Service Level Agreement

Base Service: Certificate

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

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2. Document management

2.1. Document history

Version	Date	Author	Description of changes / remarks
0.1	21/6/2011	eHealth Service Management	Initial version
2015.01	March 2015	eHealth Service Management	Update
2016.01	September 2016	eHealth Service Management	Update
1.0	July 2018	eHealth Service Management	Update

2.2. Document references

ID	Title	Version	Date	Author
	Master Service Agreement	2.0	22/11/2012	

2.3. Purpose of the document

The objective of this document is to define the Service Level Agreement (SLA) for the set of services included in the *Base Service eHealth Certificates* 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, the measurement methods and the objectives in the long run.

This document contains a short description of the current services offered by the certificate service. The eHealth platform provides a certificate service composed of service and tools to:

- Request certificates (Including the eHealth Token Requestor);
- Manage the revocation of certificate;
- Manage the renewal process;
- Support the access management to web service based on certificate.

In addition, two types of certificates are supported, each for a specific use and a separate private key:

- The eHealth authentication certificate
- The eHealth Encryption Token key (ETK).



This document is an appendix to the *Master Service Agreement (MSA)*. Information given in this document 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 eHealth certificate set of services, managing changes.

2.4. Validity of the agreement

This document is valid as long as the *Certificate Base 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 – 21:00							
	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.
	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.



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 working day.

2.5.3. Maintenance window & 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 releases: 2 times a year.

2.5.4. Unplanned interventions

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



3. Service scope

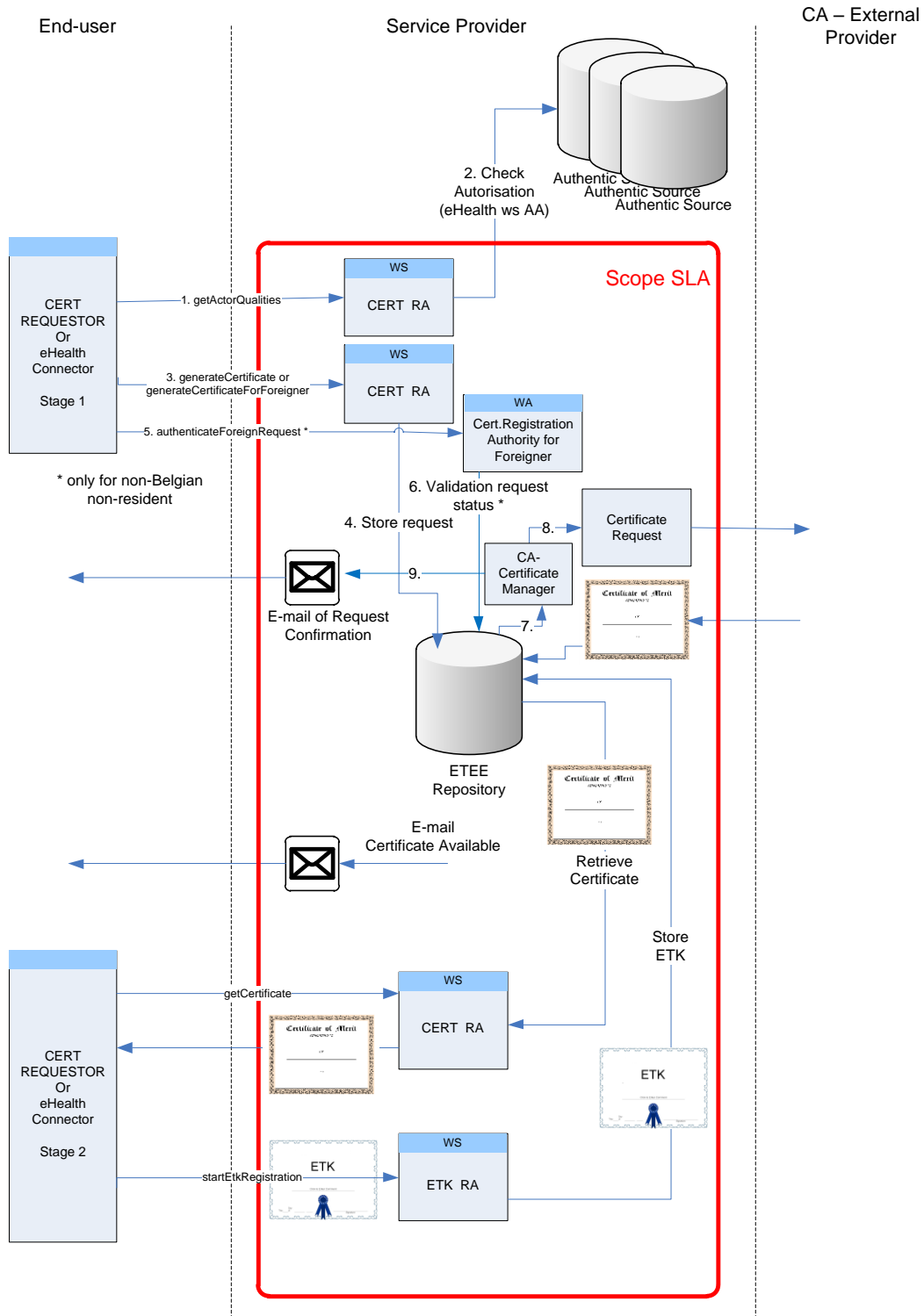
3.1. eHealth service

3.1.1. Architecture overview

- Following deliverables are automated processes:
 - Creation of a Certificate and related ETK
For non-Belgians non-resident in Belgium (no Belgian e-ID), the web application Certificate Registration Authority for Foreigner is used in addition.
The process is detailed in Fig.1
In specific situations (e.g.: Hospital not registered in User Man, Automatic procedure does not work...) this process will be executed manually.
 - For the “Renewal of Certificates”, the service provider has to inform the End-users that their certificates will come to expiration.
The process is detailed in Fig.2
The only responsibility of the service provider is to inform the end-user of the expiration date. It is the end-users responsibility to request a Certification Renewal.
The process for a renewal is the same as for the creation of a certificate.
 - The “Consult Certificate” is part of this SLA but is not measured nor reported as such. As it is measured by the end-to-end monitoring of the different Added Value Services and/or Basic Services, reference is made to these metrics to evaluate this service.
 - “Revocation of Certificate”.
The process is detailed in Fig.3
In exceptional situations (e.g.: Hospital not registered in User Man, Automatic procedure does not work...) this process will be executed manually.

3.1.1.1. Creation of Certificate

Following figure shows the flow of the automated process



3.1.1.2 Renewal of Certificate

Following figure shows the process executed by the service provider in order to inform the end user that the certificate he uses will come to expiration.

The renewal process itself is the same as the initial creation of a certificate (Fig 1) with an additional step for the activation of the renewed certificate to allow proper installation of this certificate and prevent unavailability of application's access.

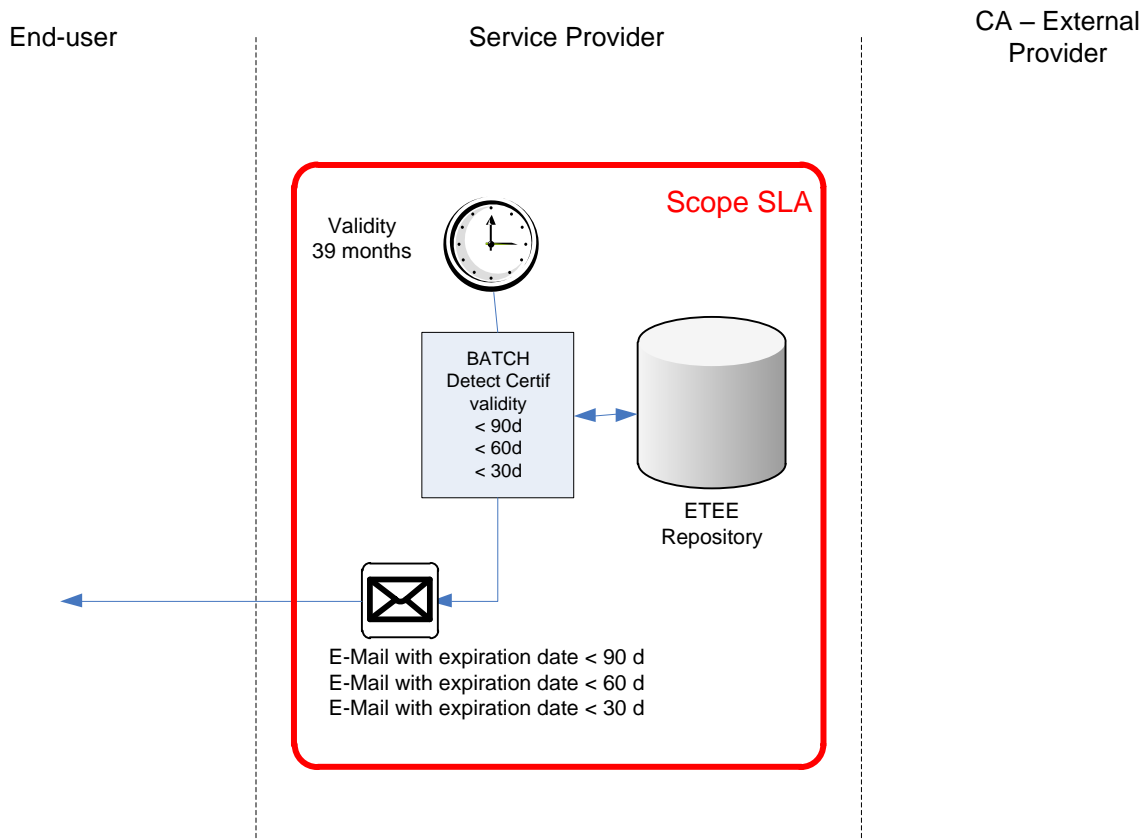


Fig 2

3.1.1.3 Revocation of Certificate

Following figure shows the flow of the automated process

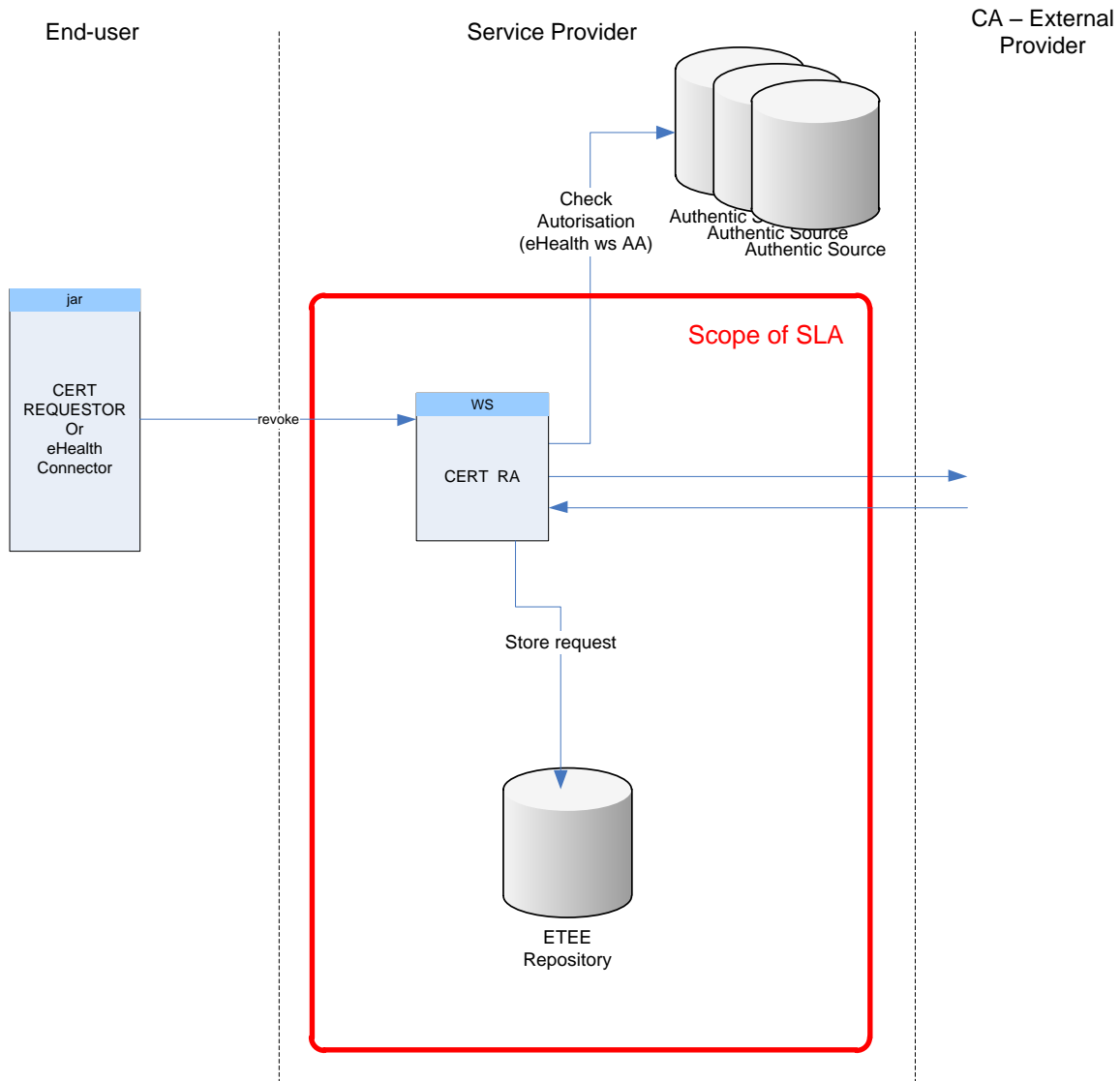


Fig 3

For the Revocation, the CERT RA WS waits for the response of the external provider before sending back its response to the Requestor (synchronous access to external provider’s certificate service).

As several providers can be implied over the time in the creation of the certificates, the revocation of one specific certificate has to be handled by the provider that has created it.

3.1.2. Functionalities

This Service Level Agreement is based upon the availability of other web services calling the certificate service. Those ensure the operational availability of the certificate base service.

3.2. Business criticality

The business criticality of certificate services for *the eHealth authentication certificate* is **Gold** as it supports mandatory business processes that should be processed synchronously and within some legal periods.

3.3. Interdependencies

The certification service depends on the MSA, on the encryption based services, on utilities as the ETEE requestor and on the certification authority service.



4. List of service levels

Service	KPI	SL ID	Condition	Measure based on	Limit	Service Window	Objective Committed	Objective Target
Creation of Certificate	Availability - WS CERT-RA		Test script passes	Fictitious request		Mon – Sun 0:00 – 24:00	99,5%	99,9%
	Availability - WS ETK-RA		Response time ≤ 4 sec	Real transactions		Mon – Sun 0:00 – 24:00	99.5%	99.9%
	Availability – WA Certificate Registration Authority for Foreigner		Response time ≤ 1 sec	Real transactions		Mon – Sun 0:00 – 24:00	99.5%	99.9%
	Performance – WA Certificate Registration Authority for Foreigner		Response time ≤ 4 sec	Fictitious request		Mon – Sun 0:00 – 24:00	98%	N/A
	Performance – CERT-RA		Response time ≤ 4 sec	Real transactions		Mon – Sun 0:00 – 24:00	98%	99.9%
	Performance –ETK-RA		Response time ≤ 1 sec	Real transactions		Mon – Sun 0:00 – 24:00	98%	99.9%

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



5. Detailed service level per service

5.1. Availability of CERT RA and ETK RA

Objectives				
Definition	<p>The CERT RA and the ETK RA services are considered to be available when the following test is correctly executed:</p> <ul style="list-style-type: none"> • getCertificate for CERT RA, accessing the ETEE Repository • startEtkRegistration for ETK RA, accessing the ETEE Repository 			
Measuring method	<p>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".</p> <p>When the script is executed with another result, the test "failed"</p>			
Calculation	$Availability = \frac{\sum Passed\ Tests \times 100}{\sum Total\ Tests} \%$ <p>Total Tests = Total number of tests launched within corrected timeframe Passed Tests = Total number of tests that resulted in a status "OK" within the same timeframe</p> <p>Corrections are applicable on tests that are not taken into account because they were caused :</p> <ul style="list-style-type: none"> • by a Validated Authentic Source or partner application out of scope of this SLA • by a failing monitoring tool 			
Reporting and evaluation period	<p>The availability is calculated and reported monthly. Corrective actions are initiated when appropriate.</p> <p>The formal evaluation however is done on a yearly basis.</p>			
Comment regarding ETK RA	<p>As described, this SLA only covers the download of the Certificate to the end-user. Making the ETK available in the Repository is part of the ETEE SLA.</p>			
Service Level Objectives	Functionality	Service Window	Service Level Objective	
			Committed	Target
	CERT RA	Mon – Sun 0:00 – 24:00	99,5%	99,9%
ETK RA	Mon – Sun 0:00 – 24:00	99,5%	99,9%	

5.2. Availability of Certificate Registration Authority for Foreigner

Objectives				
Definition	The Certificate Registration Authority for Foreigner application is considered to be available when the DB is up and accessible (monitoring page).			
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	$Availability = \frac{\sum Passed\ Tests \times 100}{\sum Total\ Tests} \%$ <ul style="list-style-type: none"> ○ Total Tests = Total number of tests launched within corrected timeframe ○ Passed Tests = Total number of tests that resulted in a status "OK" within the same timeframe ○ Corrections are applicable on tests that are not taken into account because they were caused : <ul style="list-style-type: none"> ▪ 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.			
Service Level Objectives	Functionality	Service Window	Service Level Objective	
			Committed	Target
	Certificate Registration Authority	Mon – Sun 0:00 – 24:00	99,5%	99,9%

5.3. Performance of CERT RA and ETK RA

Objectives			
Definition	<ul style="list-style-type: none"> The performance of the CERT RA and ETK RA refers to its response time. Response time meaning the time needed to execute a request. This request can be <ul style="list-style-type: none"> For CERT RA: <ul style="list-style-type: none"> getActorQualities getGenericOrganizationsTypes getExistingApplicationIds generateCertificate generateCertificateForRenewal getCertificate validateRenew getRevocableCertificates revoke For ETK RA: <ul style="list-style-type: none"> startEtkRegistration completeEtkRegistration ActivateETK Attention: The response time does not include: <ul style="list-style-type: none"> The time needed to deliver the information over the Internet The time needed to process the information at the End Users premises. <p>Note for CERT RA: the validation of the requestor authorization for the request with the authentic sources (IAM AA) takes time (getActorQualities), reason for the difference of expected response time regarding the ETK RA. Additionally, the synchronous call to the external provider for the revocation (revoke) extends the treatment time of the corresponding request in CERT RA.</p>		
Measuring method	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> All response times are calculated: Stop time – Start time for every request. The percentage that meets the target is calculated based on following formula: $Performance = \frac{\sum Tests\ meeting\ the\ target}{\sum Total\ Tests} \times 100\%$ 		
Reporting and evaluation period	<ul style="list-style-type: none"> The performance is calculated and reported monthly. Corrective interventions are initiated when appropriate. The formal evaluation however is done on a yearly basis. 		
Service Level Objectives	Functionality	Target	Service Level Objective
			Committed Target
	Performance CERT RA	< 4 sec	98%
Performance ETK RA	< 1 sec	98%	

5.4. Performance of Certificate Registration Authority for Foreigner WebApp

Objectives				
Definition	<ul style="list-style-type: none"> The performance of the eHealth Certificate Registration Authority for Foreigner web App refers to its response time. Response time meaning the time needed to execute a request. This request can be <ul style="list-style-type: none"> Validate Request Status Attention: The response time does not include: <ul style="list-style-type: none"> The time needed to deliver the information over the Internet The time needed to process the information at the End Users premises. 			
Measuring method	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> All response times are calculated: Stop time – Start time for every request. The percentage that meets the target is calculated based on following formula: $Performance = \frac{\sum Tests\ meeting\ the\ target \times 100}{\sum Total\ Tests} \%$ 			
Reporting and evaluation period	<ul style="list-style-type: none"> The performance is calculated and reported monthly. Corrective interventions are initiated when appropriate. The formal evaluation however is done on a yearly basis. 			
Service Level Objectives	Functionality	Target	Service Level Objective	
			Committed	Target
	Performance Certificate Registration Authority for Foreigner webapp	< 4 sec	N/A	98,0%
Note	As the expected traffic is limited, the SLO is set as target.			