

**Athens Stock Exchange (ATHEX)**

**Conformity assessment  
report - Provisioning of  
qualified electronic time  
stamps**

Regulation (EU) No 910/2014

**August 8, 2017**



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<Accreditation pending>

Based on certification examination in conformity with defined requirements in ISO/IEC 17065:2012 and ETSI EN 319 403, and with the EY eIDAS QTSP/QTS certification scheme v1.2, EY CertifyPoint gained reasonable confidence that

Athens Stock Exchange S.A. (ATHEX)  
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Greece  
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VATEL-099755108

The trust service provider and trust services:  
Qualified electronic time stamps services

Based on conformity assessment against the following requirements:

**Requirements applicable to the trust service provider**

Requirements from the eIDAS regulation:  
Article 5.1, 13, 15, 19.1, 19.2, 20.1, 20.2, 20.3, 23, 24.2

Requirements from implementing acts:

- ▶ Commission Implementing Regulation (EU) 2015/1502 of 8 September 2015 on setting out minimum technical specifications and procedures for assurance levels for electronic identification means
- ▶ Commission Implementing Decision (EU) 2015/1984 of 3 November 2015 on defining the circumstances, formats and procedures of notification
- ▶ Commission Implementing Regulation (EU) 2015/806 of 22 May 2015 on the form of the EU Trust Mark for Qualified Trust Services
- ▶ Commission Implementing Decision (EU) 2015/1505 of 8 September 2015 laying down technical specifications and formats relating to trusted lists
- ▶ Commission Implementing Decision (EU) 2015/1506 of 8 September 2015 laying down specifications relating to formats of advanced electronic signatures and advanced seals to be recognized by public sector bodies

**Requirements applicable to qualified electronic time stamps services:**

Requirements from the eIDAS regulation:

Article 24.2e, 24.2h, 24.2i, 42

Requirements from implementing acts:

- ▶ Commission Implementing Decision (EU)2016/650 of 25 April 2016 laying down standards for the security assessment of qualified signature and seal creation devices

Are compliant with the requirements of EY eIDAS QTSP/QTS certification scheme v1.2 related to the regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC (hereafter the eIDAS Regulation)

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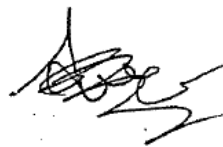
**CONFORMITY ASSESSMENT REPORT**

Client : Athens Stock Exchange (ATHEX)  
Address : Avenue Athinon 101, 104 42 Athens , Greece  
Contact : protocol@athexgroup.gr

Product category : Trust services  
Trust service type(s) : Provisioning of qualified electronic time stamps  
Date report : August 8, 2017  
Report Identification : cp/AV/08.08.2017  
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# 1 Introduction

## 1.1 Objectives

We were requested by

**Athens Stock Exchange**  
Avenue Athinon 101  
104 42 Athens  
Greece  
protocol@athexgroup.gr

To perform a conformity assessment of the trust service provider and the provided trust services based on the requirements defined in the EY eIDAS QTSP/QTS certification scheme v1.2 related to the eIDAS Regulation.

The scope of the conformity assessment been defined as covering “qualified electronic time stamps services” trust service.

## 1.2 Organization

### 1.2.1 Activities

Athens Stock Exchange is a trust service provider that operates trust services from Athens, Greece. The trust service provider activities include

- ▶ Operational management of the TSP
- ▶ Time stamp issuing
- ▶ Validation of subscriber information (both natural and legal persons) for all events related to certificate application and revocation.
- ▶ Certificate issuing activities
- ▶ Hosting of infrastructure and TSP issuing systems

### 1.2.2 Client team

The following table provides an overview of the titles and position of the client team members that have been contacted in the context of this conformity assessment.

Name	Team
Eleftheria Theologou	Digital Certification Services Manager
Stamatis Vamvakaris	PKI Software Administrator
Vassilis Papastogiannidis	PKI Infrastructure - Systems Administrator
Georgios Vasiliou	PKI Infrastructure - Network Administrator
Eirini Manolopoulou	Registration Services
Spyridon Skoularikis	Backup Administrator

### 1.2.3 Trust service hierarchy

The following table provides an overview of the trust service hierarchy related to the qualified trust services:

Root CA Details
CN = ATHEX Root CA G2, O = ATHENS STOCK EXCHANGE, C = GR
Serial Number = 3e cf
Subject Key Identifier = 47 a3 a6 04 9d 2d 96 e5

### Qualified CA Details

CN = Athex Qualified Timestamping Authority, O = Athens Stock Exchange, C = GR

Serial Number = 46 3f

Subject Key Identifier = 4f 15 97 30 95 f8 b9 ac

## 1.3 Scope

### 1.3.1 Sites

The following sites are in scope of the audit:

- ▶ Athens, Greece

### 1.3.2 Trust service

The scope of the conformity assessment been defined as covering “qualified electronic time stamps services” trust service.

The qualified certificates will be provided by the following certificate authorities (see appendix for detailed information of each certificate authority):

### Qualified CA Details

CN = Athex Qualified Timestamping Authority, O = Athens Stock Exchange, C = GR

Serial Number = 46 3f

Subject Key Identifier = 4f 15 97 30 95 f8 b9 ac

The scope of conformity assessment is characterized by the “Service digital identifier” (cfr CID (EU) 2015/1505 and ETSI TS 119 612 v2.1.1) of the inspected trust service and the following candidate information relevant for inclusion in the national trusted list of the competent supervisory body of the territory in which Athens Stock Exchange is established.

Qualified electronic time stamps will be provided by the following certificate authorities:

- ▶ O = Athens Stock Exchange
- ▶ CN = Athex Qualified Timestamping Authority
- ▶ C = GR

Service type identifier = URI: <http://uri.etsi.org/TrstSvc/Svctype/TSA/QTST>

## 1.4 Requirements

The conformity assessment of the trust service provider and the trust services in scope was based on the requirements of the EY eIDAS QTSP/QTS certification scheme v1.2 related to the regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC (hereafter the eIDAS Regulation), as indicated in the following table.

QTSP/QTS type	Normative requirements	Articles
Qualified trust service provider	Regulation (EU) No 910/2014	5.1, 13, 15, 19.1, 19.2, 20.1, 20.2, 20.3, 23, 24.2
Qualified electronic time stamps services	Regulation (EU) No 910/2014	24.2e, 24.2h, 24.2i, 42



The following additional requirements were applicable to the trust service provider:

Requirements from implementing acts:

- ▶ Commission Implementing Decision (EU) 2015/1984 of 3 November 2015 on defining the circumstances, formats and procedures of notification
- ▶ Commission Implementing Regulation (EU) 2015/806 of 22 May 2015 on the form of the EU Trust Mark for Qualified Trust Services
- ▶ Commission Implementing Decision (EU) 2015/1505 of 8 September 2015 laying down technical specifications and formats relating to trusted lists
- ▶ Commission Implementing Decision (EU) 2015/1506 of 8 September 2015 laying down specifications relating to formats of advanced electronic signatures and advanced seals to be recognized by public sector bodies

## 1.5 Approach

We audited the (Q)TSP/(Q)TS regarding its compliance with the relevant requirements of the EY eIDAS QTSP/QTS certification scheme v1.2 related to the eIDAS Regulation in consideration of the requirements of the standards as identified and completed as specified in section 1.4 above.

During such audit, the compliance of the organizational and technical measures of the (Q)TSP/(Q)TS are assessed against the applicable requirements of EY eIDAS QTSP/QTS certification scheme v1.2. Our evaluation was twofold: design of controls and requirements (Stage 1) and evaluating the effectiveness and compliance to the controls to the requirements (Stage 2).

### Stage 1 - Design check

The first stage of the assessment had following main objectives:

- ▶ To assess Athens Stock Exchange's system design documentation for all topics relevant to the assessment
- ▶ To review Athens Stock Exchange status and understanding regarding requirements of the relevant regulations, in particular with respect to the identification of key performance or significant aspects, processes, objectives and operation of the how these requirements are managed
- ▶ Undertake discussions with your core teams to determine the preparedness for the stage 2 assessment
- ▶ To collect necessary information regarding the scope of the trust services, processes and locations of Athens Stock Exchange, and related statutory and regulatory aspects and compliance
- ▶ To evaluate if the design of required controls is appropriate to the related requirements

### Stage 2 - Operational effectiveness check

The purpose of the stage 2 assessment was to evaluate the implementation of required controls around Athens Stock Exchange's trust services in scope. The evaluation included the following:

- ▶ Information and evidence about conformity to all requirements of the applicable regulations
- ▶ Performance monitoring, measuring, reporting and reviewing against key performance objectives and targets (consistent with the expectations as defined in the eIDAS regulation/ETSI standards)
- ▶ Operational control of Athens Stock Exchange to applicable processes
- ▶ Management responsibility for Athens Stock Exchange policies
- ▶ Links between the normative requirements, policy, performance objectives and targets (consistent with the expectations as defined in the standards), any applicable legal requirements, responsibilities, competence of personnel, operations, procedures and performance data.

## 1.6 Documentation

Throughout the conformity assessment, we requested and evaluated the following documents that were provided by the client:

- ▶ General information concerning and describing the trust service and the activities it covers;
- ▶ Description of the organizational structure of the TSP, including the use made and organizational structure of other parties (subcontractors) that provide parts of the trust services being audited;
- ▶ Description of the locations, size and functions (tasks and responsibilities) of roles/people involved in the trust services operational life-cycle processes, facility, management, technical security control processes (including other parties used, e.g. subcontractors) and also evidence of their competence or any analysis done for the same;

- ▶ Trust service policy (e.g. certificate policy) and Trust service practices statement (e.g. certification practices statement) and, where required, the associated documentation like IT network infrastructure plans with all relevant systems, manuals and instructions for the operation of the trust service;
- ▶ The risk assessment related documentation aimed to support demonstration of the requirement of eIDAS Art.19.1, including:
  - ▶ Information security risk analysis with risks and opportunities, and the actions taken to address them, related to all the interested parties;
  - ▶ Description of the risk assessment and treatment methodology;
- ▶ List of all internal documents supporting the declaration of the practices used by the TSP to provide the qualified trust services and the qualified trust service policy(ies)
- ▶ Policy Management Authority - PMA review;
- ▶ Internal/external audit reports or certifications;
- ▶ Independent reviews of information security;
- ▶ Security & personal data breach notification plan aimed to support demonstration of the requirement of eIDAS Art.19.2;
- ▶ Evidence of the detection of and reaction to security incidents, non-conformities identified during external or internal audits, including the corrective action taken for each;
- ▶ Network overview diagrams supporting segmentation and security measures;
- ▶ Detailed verification steps & guidelines documentation;
- ▶ Training materials for vetting staff;
- ▶ Arrangements to cover liability (certificate and evidence of payment);
- ▶ Information security policies and procedures, including but not limited to:
  - ▶ Key management;
  - ▶ Logical security;
  - ▶ Personnel security;
  - ▶ Physical security;
  - ▶ Backup and recovery;
  - ▶ Incident management;
  - ▶ Business continuity and disaster recovery;
  - ▶ Data protection and asset classification;
  - ▶ Change management;
- ▶ Procedures and controls in support of:
  - ▶ Publication and repository responsibilities;
  - ▶ Identification and authentication, when applicable;
  - ▶ Trust service life-cycle operational requirements;
  - ▶ Facility, management and operation controls;
  - ▶ Technical security controls;
- ▶ The termination plan of trust services (eIDAS Art.24.2.(i));
- ▶ Subscriber agreement and related terms and conditions.

## 1.7 Third parties

We noted that Athens Stock Exchange does not outsource the management or control of any of its information systems, networks or desktop environments to any other entity.

## 1.8 Timing

The conformity assessment was performed in two phases. The following table details the man/days on specific activities:

Activity	Stage 1	Stage 2	Total
Preparation	4	2	6
Documentation review	8		8
Assessment of Risk Analysis	6	8	14
On-site time	12	8	20
Audit reporting	4	4	8
Other (if Applicable)			
<b>Total man/days:</b>	<b>34</b>	<b>22</b>	<b>56</b>

An Intermediate surveillance audit during in-between years is required based on findings identified during this audit. The scope of the surveillance audits will be limited to a follow-up of the identified findings and assessment of changes to the trust service environment, if applicable.

The surveillance audit should be completed before 08/08/2018.

## 1.9 Classification of identified findings

The classification of potential findings is based on the guidelines illustrated in **Appendix - Classification of findings**.

## 2 Executive Summary

Based on the work performed during the conformity assessment, and given our experience reviewing private and public trust service provider implementations, during the course of our examination procedures, we did not note any deviation that would lead us to conclude that Athens Stock Exchange’s TSP business practices was not in compliance with the requirements defined in the EY eIDAS QTSP/QTS certification scheme v1.2 related to the relevant eIDAS Regulation.

The assessment however demonstrated several areas of improvement. In total, 10 findings were identified during the current audit. Based on the classification model used, added in the appendix, the observations can be grouped as follows:

- ▶ 0 major non-conformities
- ▶ 6 minor non-conformities
- ▶ 4 opportunities for improvement

Rating	List of findings
Major non-conformity	No major non-conformities identified
Minor non-conformity	1. Incomplete CA key compromise procedure
	2. Incomplete CA termination procedure
	3. CA Root private key is online
	4. Malware detection
	5. Patch management
	6. Vulnerability management
Opportunity for improvement	7. CA public key dissemination
	8. Timestamp token (TST) QCStatement
	9. TSA systems hardening
	10. Website accessibility for persons with disabilities

The above findings, however, do not impact our opinion on the conformity of Athens Stock Exchange’s trust services with the requirements defined in the EY eIDAS QTSP/QTS certification scheme v1.2 related to eIDAS Regulation, as all those findings are either supported by compensating controls or are related to supporting processes or individual controls that does not result in a major finding.

The detailed report contains the approach taken during the conformity assessment and findings identified during the audit. For each of the findings, relevant sections of the compliance requirements were added. The appendix describes the classification scheme used for the identified findings.

## 3 Summary of document review

Based on our audit activities performed in stage 1, we are of the opinion that Athens Stock Exchange has provided us with sufficient insight in the establishment of the trust service.

## 4 Assessment of information security risk analysis

The EY eIDAS QTSP/QTS certification scheme v1.2 and eIDAS Regulation requires that qualified and non-qualified trust service providers shall take appropriate technical and organizational measures to manage the risks posed to the security of the trust services they provide.

We evaluated the risk assessment performed by the TSP. The most recent risk assessment was completed 24<sup>th</sup> of June 2017, was performed at the application/service level and covers the registration, certificate generation, revocation management, revocation status information, dissemination and repository services. Additionally the extended environmental risks to the underlying infrastructure, physical and network security, loss of availability to critical hardware and applications, human resources and governance are addressed by the risk assessment.

Based on our evaluation we note that appropriate technical and organizational measures are present to appropriately manage the risks posed to the security of the in scope trust services provided by Athens Stock Exchange.

# 5 Findings

These findings cover the conformity assessment and are based on either general findings (covering more than one particular requirement) or findings uniquely related to specific eIDAS Regulation requirements.

## 5.1 Major non-conformities

No major non-conformities identified.

## 5.2 Minor non-conformities

### 5.2.1 Incomplete CA key compromise procedure

**Article(s) of the regulation:**

- ▶ Article 19.1

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 7.9 (Incident management)
- ▶ [ETSI EN 319 401] Clause 7.11 (Business continuity management)
- ▶ [ETSI EN 319 421] Clause 7.13a (Business continuity management)

**Finding:**

Detailed actions related to the (i) identification, (ii) confirmation and (iii) response of a root key compromise are not documented or not presented in the appropriate level of the detail (i.e. step-by-step activities with detailed (technical) instructions and workflows).

**Expectation:**

We expect a CA key compromise procedure that details the identification, confirmation and response to a key compromise scenario.

**Conformance rationale:**

We confirmed that although the current procedure/plan can be further enhanced, TSP management are aware of the steps that need to be addressed to adequately identify, confirm and respond to an alleged, suspected or real key compromise event.

### 5.2.2 Incomplete CA termination procedure

**Article(s) of the regulation:**

- ▶ Article 24.2 i

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 6.1h (Trust Service Practice statement)
- ▶ [ETSI EN 319 401] Clause 7.12 (TSP termination and termination plans)
- ▶ [ETSI EN 319 421] Clause 7.14 (TSA termination and termination plans)

**Finding:**

Within the TSP Termination Procedure, the termination and/or transfer of the trust service is not presented in the appropriate level of the detail (i.e. step-by-step activities with detailed (technical) instructions and workflows).

**Expectation:**

We expect a termination plan that details managerial and technical processes for terminating and transferring the TSP.

**Conformance rationale:**

We confirmed that although the current procedure/plan can be further enhanced with managerial and technical processes for terminating and transferring the TSP, TSP management are aware of the responsibilities and steps that need to take place in case of cessation of operations. Moreover, a contract is already in place in case such an event was to take place.

### 5.2.3 CA Root private key is online

**Article(s) of the regulation:**

- ▶ Article 19.1
- ▶ Article 24.2 e

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 7.7 (Operation security)
- ▶ [ETSI EN 319 421] Clause 7.6.3 (TSU private key protection)
- ▶ [ETSI EN 319 421] Clause 7.9 (Operation security)
- ▶ [ETSI EN 319 411-1] Clause 6.4.2 g (Physical security controls)

**Finding:**

The Root CA private key is currently online in the HSM, increasing the exposure of the Root CA and the likelihood of Root CA key compromise.

**Expectation:**

We expect a certificate hierarchy with an intermediate layer of subordinate issuing CAs and an offline Root CA, physically isolated from normal operations. This would reduce the likelihood of Root CA compromise and reduce the impact if issuing CA keys are compromised.

**Conformance rationale:**

We confirmed that only designated trusted personnel have access to the private key for use in signing subordinate CA certificates. Furthermore, the key length is appropriate to protect against compromise via a brute-force attack.

### 5.2.4 Malware detection

**Article(s) of the regulation:**

- ▶ Article 19.1
- ▶ Article 24.2 e

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 7.7c

**Finding:**

There are no specific measures defined/implemented for prevention and detection of virus/malware software on servers supporting the trust service.

**Expectation:**

We expect specific measures to prevent, detect and deal with viruses/malware. For the purpose of uninterrupted operation of the infrastructure, it is typical to adopt solutions approved by the application vendor.

**Conformance rationale:**

We confirmed that there are no connections of the PKI infrastructure with the internal network apart from a secure connection with the backup server and a publishing of a CRL to a servant server and there are no connections to the outside world.

## 5.2.5 Patch Management

### Article(s) of the regulation:

- ▶ Article 19.1
- ▶ Article 24.2 e

### Relevant controls within supporting standards:

- ▶ [ETSI EN 319 401] Clause 7.7g

### Finding:

Servers supporting the trust service are not provisioned nor is there a manual process to ensure security-related patches for the used operating system and software are timely installed.

### Expectation:

We expect a process that ensures timely manual or provisioned installation of security patches.

### Conformance rationale:

We confirmed that there are no connections of the PKI infrastructure with the internal network apart from a secure connection with the backup server and a publishing of a CRL to a servant server and there are no connections to the outside world.

## 5.2.6 Vulnerability Management

### Article(s) of the regulation:

- ▶ Article 19.1
- ▶ Article 24.2 e

### Relevant controls within supporting standards:

- ▶ [ETSI EN 319 401] Clause 7.8 g
- ▶ [ETSI EN 319 401] Clause 7.8 h

### Finding:

No full (external/ internal, black/grey box), manual penetration testing exercise has been performed on the systems supporting the trust service.

### Expectation:

We expect that penetration tests are performed on the systems supporting the trust service.

### Conformance rationale:

We confirmed that automated vulnerability scans are performed and that there are no connections of the PKI infrastructure with the internal network apart from a secure connection with the backup server and a publishing of a CRL to a servant server and there are no connections to the outside world.

## 5.3 Opportunities for improvement

### 5.3.1 CA public key dissemination

**Article(s) of the regulation:**

- ▶ Article 24.2 e

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 421] Clause 7.6.4 (TSU public key certificate)

**Finding:**

CA signature verification (public) keys are disseminated through the HTTP protocol instead of using the more secure HTTPS protocol.

**Expectation:**

We expect that the https protocol is implemented for disseminating CA signature verification (public) keys.

**Conformance rationale**

We confirmed that the trust service certificate details are publicly available to the (HTTPS enabled) corporate website so as to enable the crosschecking of public key data.

### 5.3.2 Timestamp token (TST) QCStatement

**Article(s) of the regulation:**

- ▶ Article 42

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 421] Clause 7.7.1 (Time-stamp issuance)
- ▶ [ETSI EN 319 422] Clause 9.1 (Regulation compliance statement)

**Finding:**

Currently, the timestamp tokens claimed to be qualified electronic time-stamps as per the regulation, do not contain an instance of the relative QCStatement extension in the time-stamp token extension field.

**Expectation:**

We expect that the timestamp tokens are configured to include the relative QCStatement extension in their extension field.

**Conformance rationale:**

We have confirmed that time-stamp responses identify the OID of the qualified electronic timestamp Certificate Policy/Certification Practice Statement.



### 5.3.3 TSA systems hardening

**Article(s) of the regulation:**

- ▶ Article 19.1
- ▶ Article 24.2 e

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 7.7 (Operation security)
- ▶ [ETSI EN 319 401] Clause 7.8 (Network security)
- ▶ [ETSI EN 319 421] Clause 7.9 (Operation security)
- ▶ [ETSI EN 319 421] Clause 7.10 (Network security)

**Finding:**

Currently, there is no formal policy/procedure for the hardening of TSA systems configuration.

**Expectation:**

We expect that a formal policy regarding the hardening of TSA systems is authored, executed and that systems configuration is periodically monitored. We expect the policy to include provisions on removing or disabling all accounts, applications, services, protocols, and ports that are not used in the TSA's operations.

**Conformance rationale:**

We confirmed that although a formal systems hardening policy is not in place, access to TSA systems is granted to appropriate TSP personnel and appropriate authentication schemes are in place.

Furthermore, no inappropriate/irrelevant applications are installed on the servers.

Finally, we confirmed that there are no connections of the PKI infrastructure with the internal network apart from a secure connection with the backup server and a publishing of a CRL to a servant server and there are no connections to the outside world.

### 5.3.4 Website accessibility for persons with disabilities

**Article(s) of the regulation:**

- ▶ Article 15

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 7.13 b

**Finding:**

Accessibility guidelines have been taken into account for physical access to Athens Stock Exchange offices. Accessibility for persons with disabilities has not been evaluated for the organization's website. Persons with disabilities could communicate with Athens Stock Exchange through other electronic means such as e-mail or telephone.

**Expectation:**

We expect the main electronic communication means (i.e. the Athens Stock Exchange website) being accessible for persons with disabilities.

**Conformance rationale:**

We confirmed that Athens Stock Exchange offers alternative electronic communication means such as e-mail and telephone in case of communicating with persons with disabilities.

# 6 Conformity assessment

## 6.1 Requirements applicable to the trust service provider

### 6.1.1 Data processing and protection

#### i) Article 5.1

##### Relevant controls within supporting standards:

- ▶ [ETSI EN 319 401] Clause 7.13 a,c (Compliance)
- ▶ [ETSI EN 319 421] Clause 6.2 (Trust Service Practice Statement)

##### Conformity statement:

We verified the conformity of the trust service provider with this article through document and record review, observation and interviews. We found the trust service provider to be in conformance with the article.

##### Activities performed:

- ▶ We reviewed TSP documentation related to
  - ▶ data privacy, processing and protection of personal data
  - ▶ Information ownership
  - ▶ Information classification

The TSP has formal data privacy policy aligned to the relevant provisions of Greek Law (Law 2472/1997) on the protection of individuals and the protection of personal data as supplemented by the decisions of the Chairman of the Commission for Personal Data Protection, P.A. 207/1998 and 79/2000 and Article 8 of Law 2819/2000 and Law 2774/1999 and European law (Directives 95/46/EP and 97 /66/EP).

- ▶ We reviewed access to personal data on TSP systems and applications as well as to the physical records (the latter being applicable to subscriber agreements).
- ▶ We interviewed the Digital Certifications Services Manager on provisions on data privacy, processing and protection of personal data.

##### Documents reviewed:

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Data Privacy Policy
- ▶ Information Security Policy
- ▶ Data Classification Policy
- ▶ PKI Data Classification

##### Review of records:

- ▶ Employee access to TSA application
- ▶ Employee access to TSA log files
- ▶ Employee access to PKI Certificate Management applications (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)
- ▶ Employee access to PKI Certificate register (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)

Observation:

- ▶ Storage of physical Subscriber Agreements (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)
- ▶ Eirini Manolopoulou (Registration Services)

## 6.1.2 Liability and burden of proof

### i) Article 13.1

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 6.2 (Terms and Conditions)
- ▶ [ETSI EN 319 421] Clause 6.5 (TSA obligations)
- ▶ [ETSI EN 319 421] Clause 6.6 (Information for relying parties)

**Conformity statement:**

We verified the conformity of the trust service provider with this article through document review and interviews. We found the trust service provider to be in conformance with the article.

**Activities performed:**

- ▶ We reviewed TSP documentation regarding liability for damage caused intentionally or negligently to any natural or legal person due to a failure to comply with the obligations under this Regulation.
- ▶ We reviewed insurance coverage (contract) to assess the TSP capacity for liability exposure.
- ▶ We interviewed the Digital Certifications Services Manager on the specific liability provisions.

Documents reviewed:

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Terms and Conditions
- ▶ Subscriber Agreement (template)
- ▶ Insurance Contract

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

### ii) Article 13.2

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 6.2 (Terms and Conditions)
- ▶ [ETSI EN 319 421] Clause 6.5 (TSA obligations)
- ▶ [ETSI EN 319 421] Clause 6.6 (Information for relying parties)

**Conformity statement:**

We verified the conformity of the trust service provider with this article through document review and interviews. We found the trust service provider to be in conformance with the article.

**Activities performed:**

- ▶ We reviewed TSP documentation regarding liability for limitations on the use of the services they provide and provisions that where those limitations are recognisable to third parties, trust service

providers shall not be liable for damages arising from the use of services exceeding the indicated limitations.

- ▶ Moreover, we reviewed insurance coverage to assess the TSP capacity for liability exposure.
- ▶ We interviewed the Digital Certifications Services Manager on the limitations of the provided service.

Documents reviewed:

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Terms and Conditions
- ▶ Subscriber Agreement (template)
- ▶ Insurance Contract

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

### iii) Article 13.3

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 6.2 (Terms and Conditions)
- ▶ [ETSI EN 319 421] Clause 6.5 (TSA obligations)
- ▶ [ETSI EN 319 421] Clause 6.6 (Information for relying parties)

**Conformity statement:**

We verified the conformity of the trust service provider with this article through document review and interviews. We found the trust service provider to be in conformance with the article.

**Activities performed:**

- ▶ We reviewed TSP documentation in respect to articles 13.1 and 13.2 regarding liability according to the national rules.
- ▶ Moreover, we reviewed insurance coverage to assess the TSP capacity for liability exposure.
- ▶ We interviewed the Digital Certifications Services Manager on the limitations of the provided service.

Documents reviewed:

- ▶ Certificate Practice Statement & Policy
- ▶ Terms and Conditions
- ▶ Subscriber Agreement (template)
- ▶ Insurance Contract

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

### 6.1.3 Accessibility for person with disabilities

#### i) Article 15

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 7.13 b (Compliance)

**Finding(s):**

We identified an opportunity for improvement relating to accessibility for persons with disabilities. Refer to section 5 - Findings, Opportunities for improvement "Website accessibility for persons with disabilities".

**Conformity statement:**

We verified the conformity of the trust service provider with this article through observation. Based on the presence of compensating controls for the identified non-conformity and the items under opportunity for improvement, we found the trust service provider to be in conformance with this article.

**Activities performed:**

We have performed an onsite inspection on accessibility for physical access to Athens Stock Exchange offices. Accessibility for persons with disabilities has not been evaluated for the organization's website.

**Observation:**

Physical Access for persons with disabilities to TSP offices

### 6.1.4 Security requirements applicable to trust service providers

#### i) Article 19.1

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 5 ( Risk assessment)
- ▶ [ETSI EN 319 401] Clause 6.3 (Information security policy)
- ▶ [ETSI EN 319 401] Clause 7.1.1 (Organization reliability)
- ▶ [ETSI EN 319 401] Clause 7.2 (Human resources)
- ▶ [ETSI EN 319 401] Clause 7.3 (Asset management)
- ▶ [ETSI EN 319 401] Clause 7.4 (Access control)
- ▶ [ETSI EN 319 401] Clause 7.5 (Cryptographic controls)
- ▶ [ETSI EN 319 401] Clause 7.6 (Physical and environmental security)
- ▶ [ETSI EN 319 401] Clause 7.7 (Operation security)
- ▶ [ETSI EN 319 401] Clause 7.8 (Network security)
- ▶ [ETSI EN 319 401] Clause 7.9 (Incident management)
- ▶ [ETSI EN 319 401] Clause 7.10 (Collection of evidence)
- ▶ [ETSI EN 319 401] Clause 7.11 (Business continuity management)
- ▶ [ETSI EN 319 421] Clause 7.2 (Internal organization)
- ▶ [ETSI EN 319 421] Clause 7.6.2 (TSU key generation)
- ▶ [ETSI EN 319 421] Clause 7.6.3 (TSU private key protection)
- ▶ [ETSI EN 319 421] Clause 7.6.4 (TSU public key certificate)
- ▶ [ETSI EN 319 421] Clause 7.6.5 (Rekeying TSU's key)
- ▶ [ETSI EN 319 421] Clause 7.6.6 (Life cycle management of signing cryptographic hardware)

- ▶ [ETSI EN 319 421] Clause 7.6.7 (End of TSU key life cycle)
- ▶ [ETSI EN 319 421] Clause 7.7 (Time-stamping)
- ▶ [ETSI EN 319 421] Clause 7.9 (Operation security)
- ▶ [ETSI EN 319 421] Clause 7.10 (Network security)
- ▶ [ETSI EN 319 421] Clause 7.14 (TSA termination and termination plans)

**Finding(s):**

- 1) We identified a minor non-conformity relating to the CA key compromise procedure/plan. Refer to section 5 - Findings, Minor non-conformities "Incomplete CA key compromise procedure".
- 2) We identified a minor non-conformity relating to the CA Root private key being online. Refer to section 5 - Findings, Minor non-conformities "CA Root private key is online".
- 3) We identified a minor non-conformity relating to Malware detection. Refer to section 5 - Findings, Minor non-conformities "Malware detection".
- 4) We identified a minor non-conformity relating to patch management. Refer to section 5 - Findings, Minor non-conformities "Patch Management".
- 5) We identified a minor non-conformity relating to vulnerability management. Refer to section 5 - Findings, Minor non-conformities "Vulnerability Management".
- 6) We identified an opportunity for improvement relating to the Timestamp token (TST) QCStatement. Refer to section 5 - Findings, Opportunities for improvement "Timestamp token (TST) QCStatement".
- 7) We identified an opportunity for improvement relating to TSA systems hardening. Refer to section 5 - Findings, Opportunities for improvement "TSA systems hardening".

**Conformity statement:**

We verified the conformity of the trust service provider with this article through document review, record review, observation and interviews. Based on the presence of compensating controls for the identified non-conformities and the item under opportunity for improvement, we found the trust service provider to be in conformance with this article.

**Activities performed:**

We reviewed TSP documentation as to the appropriateness of technical and organisational measures to manage the risks posed to the security of the trust services they provide.

- ▶ We reviewed records of technical measures at the application and network level, physical access which was also reviewed by observation, organisational measures including HR screening processes, identity validation, incident management, IT operations including backup, secure handling & destruction of data and provisions to transfer obligation for information maintenance in case of cessation of operations.
- ▶ We reviewed the TSP procedures, plan in case of cessation of operations as well as the contract with the related party to transfer obligation for information maintenance in case of cessation of operations.
- ▶ We reviewed the TSP CA key compromise procedure/plan.
- ▶ We interviewed TSP personnel as per areas identified above.

**Documents reviewed:**

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Information Security policy
- ▶ Risk assessment

- ▶ Physical security policy
- ▶ Information Security Policy
- ▶ Data Privacy Policy
- ▶ Data Classification Policy
- ▶ PKI Data Classification
- ▶ Terms and conditions
- ▶ Incident Management procedure
- ▶ Network diagram
- ▶ HR screening
- ▶ Athens Stock Exchange cryptography standards
- ▶ Business continuity manual
- ▶ Contract to transfer obligations to a reliable party for maintaining all information necessary to provide evidence of the operation of the TSP
- ▶ Procedure for the destruction of assets & related contract with reliable party

Review of records:

- ▶ Employee access to TSA application
- ▶ Employee access to TSA log files
- ▶ Employee access to PKI Certificate Management applications (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)
- ▶ Employee access to PKI Certificate register (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)
- ▶ Employee Access to PKI spaces and access logs
- ▶ Backup records
- ▶ Incident Management records
- ▶ Complaints and disputes
- ▶ Insurance contracts
- ▶ Firewall ruleset
- ▶ Routers configurations
- ▶ Vulnerability assessment
- ▶ Risk assessment
- ▶ Cryptographic units, algorithms, key sizes, validity periods
- ▶ Qualified Signature Creation devices
- ▶ X.509 Certificates (CA, subCAs, Subscribers) specifications including QCStatements
- ▶ CRLs specifications
- ▶ OCSP service
- ▶ Subscriber Agreements
- ▶ Certificate Management (creations, renewals, suspensions, revocations)
- ▶ Validity of Identity

Observation:

- ▶ Physical Access provisions

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)
- ▶ Stamatis Vamvakeris (PKI Software Administrator)
- ▶ Vassilis Papastogiannidis (PKI Infrastructure - Systems Administrator)
- ▶ Georgios Vasiliou (PKI Infrastructure - Network Administrator)
- ▶ Eirini Manolopoulou (Registration Services)
- ▶ Spyridon Skoularikis (Backup Administrator)

## ii) Article 19.2

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 7.9 e, f (Incident management)

**Conformity statement:**

We verified the conformity of the trust service provider with this article through document review, record review and interviews. We found the trust service provider to be in conformance with the article.

**Activities performed:**

- ▶ We reviewed TSP documentation as to provisions for notification to the supervisory body and other relevant bodies of any breach of security or loss of integrity that has a significant impact on the trust service provided or on the personal data maintained therein.
- ▶ We reviewed the related Incident Management software application.
- ▶ We interviewed the Digital Certifications Services Manager and assessed that commitment as to the above.

Documents reviewed:

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Incident Management procedure
- ▶ Information Security policy
- ▶ Terms and conditions

Review of records:

- ▶ Incident Management records

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)



## 6.1.5 Supervision of qualified trust service providers

### i) Article 20.1

#### Relevant controls within supporting standards:

- ▶ No other relevant controls

#### Conformity statement:

We verified the conformity of the trust service provider with this article through interviews. We found the trust service provider to be in conformance with the article.

#### Activities performed:

We interviewed the Digital Certifications Services Manager and have identified that the TSP has in its plans to be audited as per the regulation every 24 months or if any event requires a new assessment.

#### Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

### ii) Article 20.2

#### Relevant controls within supporting standards:

- ▶ No other relevant controls

#### Conformity statement:

We verified the conformity of the trust service provider with this article through interviews. We found the trust service provider to be in conformance with the article.

#### Activities performed:

We interviewed the Digital Certifications Services Manager and have identified that the TSP recognizes and accepts that requirement to be subject to an audit or an ad-hoc conformity assessment if the supervisory body requests it.

#### Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

### iii) Article 20.3

#### Relevant controls within supporting standards:

- ▶ No other relevant controls

#### Conformity statement:

We verified the conformity of the trust service provider with this article through interviews. We found the trust service provider to be in conformance with the article.

#### Activities performed:

We interviewed the Digital Certifications Services Manager and have identified that the TSP recognizes and accepts the fact that where the supervisory body requires the qualified trust service provider to remedy any failure to fulfil requirements under this Regulation and where that provider does not act accordingly, and if applicable within a time limit set by the supervisory body, the supervisory body, taking into account, in particular, the extent, duration and consequences of that failure, may withdraw the qualified status of that provider or of the affected service it provides and inform the body referred to in Article 22(3) for the purposes of updating the trusted lists referred to in Article 22(1).

#### Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

## 6.1.6 EU trust mark for qualified trust services

### i) Article 23.1

#### Relevant controls within supporting standards:

- ▶ No other relevant controls

#### Conformity statement:

We verified the conformity of the trust service provider with this article through an interview. We found the trust service provider to be in conformance with the article.

#### Activities performed:

We interviewed the Digital Certifications Services Manager and have identified that the TSP recognizes and accepts that they may use has the EU trust mark to indicate in a simple, recognizable and clear manner the qualified trust services they provide, after the supervisory body verifies whether the trust service provider and the trust services provided by it comply with the requirements laid down in this Regulation, and in particular, with the requirements for qualified trust service providers and for the qualified trust services they provide. Moreover, the TSP recognizes the allowed uses and graphical depictions of the EU trust mark.

#### Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

### ii) Article 23.2

#### Relevant controls within supporting standards:

- ▶ No other relevant controls

#### Conformity statement:

We verified the conformity of the trust service provider with this article through interviews. We found the trust service provider to be in conformance with the article.

#### Activities performed:

We interviewed the Digital Certifications Services Manager and have identified that the TSP recognizes and accepts that when using the EU trust mark for the qualified trust services referred to in Article 23.1, the TSP shall ensure that a link to the relevant trusted list is made available on their website. Moreover, the TSP recognizes the allowed uses and graphical depictions of the EU trust mark.

#### Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

### iii) Article 23.3

#### Relevant controls within supporting standards:

- ▶ No other relevant controls

#### Conformity statement:

We verified the conformity of the trust service provider with this article through document review and interviews. We found the trust service provider to be in conformance with the article.

#### Activities performed:

We interviewed the Digital Certifications Services Manager and have identified that the TSP recognizes and accepts that they may use has the EU trust mark to indicate in a simple, recognizable and clear manner the qualified trust services they provide, after the supervisory body verifies whether the trust service provider and the trust services provided by it comply with the requirements laid down in this Regulation, and in particular, with the requirements for qualified trust service providers and for the qualified trust services they provide. Moreover, the TSP recognizes the allowed uses and graphical depictions of the EU trust mark.

We interviewed the Digital Certifications Services Manager and have identified that the TSP recognizes and accepts that when using the EU trust mark for the qualified trust services referred to in Articles 23.1 and 23.2, the TSP recognizes and accepts the requirement to abide to the specifications with regard to the form, and in particular the presentation, composition, size and design of the EU trust mark for qualified trust services as provided in implementing acts by the Commission.

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

## 6.1.7 Requirements for qualified trust service providers

### i) Article 24.2 a

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 7.12 (TSP termination and termination plans)
- ▶ [ETSI EN 319 421] Clause 7.14 (TSA termination and termination plans)

**Findings(s):**

- 1) We identified a minor non-conformity relating to the CA Termination procedure/plan. Refer to section 5 - Findings, Minor non-conformities "Incomplete CA termination procedure".

**Conformity statement:**

We verified the conformity of the trust service provider with this article through document review and interviews. We found the trust service provider to be in conformance with the article.

**Activities performed:**

- ▶ We reviewed TSP documentation relating to communication to the supervisory body of any change in the provision of its qualified trust services and an intention to cease those activities.
- ▶ We reviewed the contracts with other parties for the secure handling & destruction of data and provisions to transfer obligation for information maintenance in case of cessation of operations.
- ▶ We interviewed the Digital Certifications Services Manager on the above.

**Documents reviewed:**

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Procedure for communication with supervisory body
- ▶ Contract to transfer obligations to a reliable party for maintaining all information necessary to provide evidence of the operation of the TSP
- ▶ Procedure for the destruction of assets & related contract with reliable party

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

### ii) Article 24.2 b

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 7.1.2 (Segregation of duties)
- ▶ [ETSI EN 319 401] Clause 7.2 (Human resources)
- ▶ [ETSI EN 319 421] Clause 7.3 (Personnel security)

**Conformity statement:**

We verified the conformity of the trust service provider with this article through document review, record review and interviews. We found the trust service provider to be in conformance with the article.

**Activities performed:**

- ▶ We have reviewed TSP documentation on employee controls on screening and competencies.
- ▶ We have reviewed records of the periodical screening process including resubmission of employee criminal records and employee trainings.
- ▶ We interviewed the Digital Certifications Services Manager on the above.

**Documents reviewed:**

- ▶ HR screening
- ▶ Employee training
- ▶ PKI roles

**Review of records:**

- ▶ Employee training
- ▶ Employee access to PKI Certificate Management applications
- ▶ Access Logs to PKI spaces

**Observation(s):**

- ▶ HR screening

**Interview(s):**

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

**iii) Article 24.2 c****Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 7.1.1 c - maintain sufficient financial resources/ obtain appropriate liability insurance

**Conformity statement:**

We verified the conformity of the trust service provider with this article through document review and interviews. We found the trust service provider to be in conformance with the article.

**Activities performed:**

- ▶ We reviewed TSP documentation with regard to the risk of liability for damages in accordance with Article 13, maintain sufficient financial resources and/or obtain appropriate liability insurance, in accordance with national law.
- ▶ We reviewed insurance coverage (contract) to assess the TSP capacity for liability exposure.
- ▶ Moreover, we reviewed publicly available Financial Statements to assess the current financial state of the TSP.
- ▶ We interviewed the Digital Certifications Services Manager on the specific provisions.

**Documents reviewed:**

- ▶ Terms and conditions
- ▶ Insurance Contract
- ▶ Review of publicly available Financial Statements

**Interview(s):**

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

#### iv) Article 24.2 d

##### Relevant controls within supporting standards:

- ▶ [ETSI EN 319 401] Clause 6.1 (Trust Service Practice (TSP) statement)
- ▶ [ETSI EN 319 401] Clause 6.2 (Terms and Conditions)
- ▶ [ETSI EN 319 421] Clause 6.5 (TSA obligations)
- ▶ [ETSI EN 319 421] Clause 6.6 (Information for relying parties)

##### Conformity statement:

We verified the conformity of the trust service provider with this article through document review and interviews. We found the trust service provider to be in conformance with the article.

##### Activities performed:

- ▶ We reviewed TSP documentation regarding the requirement before entering into a contractual relationship, inform, in a clear and comprehensive manner, any person seeking to use a qualified trust service of the precise terms and conditions regarding the use of that service, including any limitations on its use.
- ▶ We interviewed the Digital Certifications Services Manager on related provisions.

##### Documents reviewed:

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Terms and conditions
- ▶ Subscriber Agreement (template)

##### Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

#### v) Article 24.2 e

##### Relevant controls within supporting standards:

- ▶ [ETSI EN 319 401] Clause 7.7 (Operation security)
- ▶ [ETSI EN 319 421] Clause 7.6.2 (TSU key generation)
- ▶ [ETSI EN 319 421] Clause 7.6.3 (TSU private key protection)
- ▶ [ETSI EN 319 421] Clause 7.6.4 (TSU public key certificate)
- ▶ [ETSI EN 319 421] Clause 7.6.5 (Rekeying TSU's key)
- ▶ [ETSI EN 319 421] Clause 7.6.6 (Life cycle management of signing cryptographic hardware)
- ▶ [ETSI EN 319 421] Clause 7.6.7 (End of TSU key life cycle)
- ▶ [ETSI EN 319 421] Clause 7.7 (Time-stamping)
- ▶ [ETSI EN 319 421] Clause 7.9 (Operation security)
- ▶ [ETSI EN 319 421] Clause 7.10 (Network security)

##### Finding(s):

- 1) We identified a minor non-conformity relating to the CA Root private key being online. Refer to section 5 - Findings, Minor non-conformities "CA Root private key is online".
- 2) We identified a minor non-conformity relating to Malware detection. Refer to section 5 - Findings, Minor non-conformities "Malware detection".

- 3) We identified a minor non-conformity relating to patch management. Refer to section 5 - Findings, Minor non-conformities "Patch Management".
- 4) We identified a minor non-conformity relating to vulnerability management. Refer to section 5 - Findings, Minor non-conformities "Vulnerability Management".
- 5) We identified an opportunity for improvement relating to the CA public key dissemination. Refer to section 5 - Findings, Minor non-conformities "CA public key dissemination".
- 6) We identified an opportunity for improvement relating to TSA systems hardening. Refer to section 5 - Findings, Opportunities for improvement "TSA systems hardening".

**Conformity statement:**

We verified the conformity of the trust service provider with this article through document review, record review, observation and interviews. Based on the presence of compensating controls for the identified non-conformities and the items under opportunity for improvement, we found the trust service provider to be in conformance with this article.

**Activities performed:**

- ▶ We reviewed TSP documentation for the requirement to use trustworthy systems and products that are protected against modification and ensure the technical security and reliability of the processes supported by them.
- ▶ We reviewed records of technical measures at the application and network level, cryptography-specific measures, physical access which was also reviewed by observation, incident management and IT operations including backup.
- ▶ We interviewed TSP personnel as per areas identified above.

**Documents reviewed:**

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Information Security Policy
- ▶ Network diagram
- ▶ Change Management procedure
- ▶ Logical Access procedure
- ▶ Backup procedure

**Review of records:**

- ▶ Firewall ruleset
- ▶ Routers configurations
- ▶ Vulnerability assessment
- ▶ Cryptographic units, algorithms, key sizes, validity periods
- ▶ Qualified Signature Creation devices
- ▶ X.509 Certificates (CA, subCAs, Subscribers) specifications including QCStatements
- ▶ CRLs specifications
- ▶ OCSP service
- ▶ Employee Access to PKI systems and applications
- ▶ Authentication scheme of PKI systems and applications
- ▶ Employee Access to PKI spaces and access logs
- ▶ Backup records

Observation:

- ▶ Physical Access provisions

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)
- ▶ Vassilis Papastogiannidis (PKI Infrastructure - Systems Administrator)
- ▶ Georgios Vasiliou (PKI Infrastructure - Network Administrator)
- ▶ Spyridon Skoularikis (Backup Administrator)

## vi) Article 24.2 f

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 7.4 a, f (Access control)
- ▶ [ETSI EN 319 401] Clause 7.5 (Cryptographic controls)
- ▶ [ETSI EN 319 401] Clause 7.7 (Operation security)
- ▶ [ETSI EN 319 401] Clause 7.8 (Network security)
- ▶ [ETSI EN 319 401] Clause 7.10 (Collection of evidence)

**Conformity statement:**

We verified the conformity of the trust service provider with this article through document review, record review, observation and interviews. We found the trust service provider to be in conformance with the article.

**Activities performed:**

- ▶ We reviewed TSP documentation as to the trustworthiness of systems used to store data provided, in a verifiable form, and the trustworthiness of the related access path to the data.
- ▶ We reviewed access to data including personal data on TSP systems and applications as well as to the physical records. We reviewed technical provisions for the authenticity of data,
- ▶ Moreover, we reviewed physical access documentation and observed related implementations.
- ▶ Finally, we inspected onsite the Storage of physical Subscriber Agreements.
- ▶ We interviewed the Digital Certifications Services Manager on related provisions.

Documents reviewed:

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Information Security Policy
- ▶ Physical security policy
- ▶ Terms and Conditions
- ▶ Network diagram
- ▶ Athens Stock Exchange cryptography standards
- ▶ Subscriber Agreements

Review of records:

- ▶ Employee access to TSA application
- ▶ Employee access to TSA log files
- ▶ Employee access to PKI Certificate Management applications (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)

- ▶ Employee access to PKI Certificate register (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)
- ▶ Employee Access to PKI spaces and access logs
- ▶ Firewall ruleset
- ▶ Routers configurations
- ▶ Vulnerability assessment

Observation:

- ▶ Storage of physical Subscriber Agreements (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)
- ▶ Physical Access provisions

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)
- ▶ Stamatis Vamvakeris (PKI Software Administrator)
- ▶ Vassilis Papastogiannidis (PKI Infrastructure - Systems Administrator)
- ▶ Georgios Vasiliou (PKI Infrastructure - Network Administrator)

## vii) Article 24.2 g

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 7.6 (Physical and environmental security)
- ▶ [ETSI EN 319 401] Clause 7.7 (Operation security)

**Conformity statement:**

We verified the conformity of the trust service provider with this article through document review, record review and interviews. We found the trust service provider to be in conformance with the article.

**Activities performed:**

- ▶ We reviewed TSP documentation as to the appropriateness of measures against forgery and theft of data and the trustworthiness of the related access path to the data.
- ▶ We reviewed access to data including personal data on TSP systems and applications as well as to the physical records. We reviewed technical provisions for the authenticity of data,
- ▶ Moreover, we reviewed physical access documentation and observed related implementations.
- ▶ Finally, we inspected onsite the Storage of physical Subscriber Agreements.
- ▶ We interviewed the Digital Certifications Services Manager on related provisions.

Documents reviewed:

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)Information Security Policy
- ▶ Physical security policy
- ▶ Terms and Conditions
- ▶ Network diagram
- ▶ Athens Stock Exchange cryptography standards
- ▶ Subscriber Agreements

Review of records:

- ▶ Employee access to TSA application



- ▶ Employee access to TSA log files
- ▶ Employee access to PKI Certificate Management applications (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)
- ▶ Employee access to PKI Certificate register (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)
- ▶ Employee Access to PKI spaces and access logs
- ▶ Firewall ruleset
- ▶ Routers configurations
- ▶ Vulnerability assessment

Observation:

- ▶ Storage of physical Subscriber Agreements (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)
- ▶ Physical Access provisions

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)
- ▶ F. Kiriakopoulos (PKI Software Administrator)
- ▶ Vassilis Papastogiannidis (PKI Infrastructure - Systems Administrator)
- ▶ Georgios Vasiliou (PKI Infrastructure - Network Administrator)

viii) Article 24.2 h

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 401] Clause 7.10 (Collection of evidence)

**Conformity statement:**

We verified the conformity of the trust service provider with this article through document review, record review and interviews. We found the trust service provider to be in conformance with the article.

**Activities performed:**

- ▶ We reviewed TSP documentation for the requirement to record and maintain information concerning data issued and received by the qualified trust service provider, even after potentially ceasing of the service.
- ▶ We reviewed platform audit logs and confirmed appropriate logging of events and protection against record modification or deletion.
- ▶ Moreover, we reviewed the contract with the related party to transfer obligation for information maintenance in case of cessation of operations.
- ▶ We interviewed the Digital Certifications Services Manager on the above.

Documents reviewed:

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Contract to transfer obligations to a reliable party for maintaining all information necessary to provide evidence of the operation of the TSP

Records reviewed:

- ▶ Platform audit logs

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

#### ix) Article 24.2 i

##### Relevant controls within supporting standards:

- ▶ [ETSI EN 319 401] Clause 7.12 (TSP termination and termination plans)
- ▶ [ETSI EN 319 421] Clause 7.14 (TSA termination and termination plans)

##### Finding(s):

- 1) We identified a minor non-conformity relating to the CA Termination procedure/plan. Refer to section 5 - Findings, Minor non-conformities "Incomplete CA termination procedure".

##### Conformity statement:

We verified the conformity of the trust service provider with this article through document review and interviews. Based on the presence of compensating controls for the identified minor non-conformity, we found the trust service provider to be in conformance with this article.

##### Activities performed:

- ▶ We reviewed TSP documentation relating to provisions for the Cessation of its Operations including the TSP termination plan.
- ▶ We reviewed the contracts with other parties for the secure handling & destruction of data and provisions to transfer obligation for information maintenance in case of cessation of operations.
- ▶ We interviewed the Digital Certifications Services Manager on the above.

##### Documents reviewed:

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Contract to transfer obligations to a reliable party for maintaining all information necessary to provide evidence of the operation of the TSP
- ▶ Procedure for the destruction of assets & related contract with reliable party

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

#### x) Article 24.2 j

##### Relevant controls within supporting standards:

- ▶ [ETSI EN 319 401] Clause 7.13 a,c (Compliance)
- ▶ [ETSI EN 319 421] Clause 6.2 (Trust Service Practice Statement)

##### Conformity statement:

We verified the conformity of the trust service provider with this article through document and record review, observation and interviews. We found the trust service provider to be in conformance with the article.

##### Activities performed:

- ▶ We reviewed TSP documentation related to
  - ▶ data privacy, processing and protection of personal data
  - ▶ Information ownership
  - ▶ Information classification

The TSP has formal data privacy policy aligned to the relevant provisions of Greek Law (Law 2472/1997) on the protection of individuals and the protection of personal data as supplemented by the decisions of the Chairman of the Commission for Personal Data Protection, P.A. 207/1998 and 79/2000 and Article 8 of Law 2819/2000 and Law 2774/1999 and European law (Directives 95/46/EP and 97 /66/EP).

- ▶ We reviewed access to personal data on TSP systems and applications as well as to the physical records (the latter being applicable to subscriber agreements).
- ▶ We interviewed the Digital Certifications Services Manager on provisions on data privacy, processing and protection of personal data.

Documents reviewed:

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Data Privacy Policy
- ▶ Information Security Policy
- ▶ Data Classification Policy
- ▶ PKI Data Classification

Review of records:

- ▶ Employee access to TSA application
- ▶ Employee access to TSA log files
- ▶ Employee access to PKI Certificate Management applications (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)
- ▶ Employee access to PKI Certificate register (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)

Observation:

- ▶ Storage of physical Subscriber Agreements (applicable to subscriber agreements as the TSA service is offered in conjunction to the qualified certificates provisioning)

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

## 6.2 Requirements applicable to qualified electronic time stamps services

### 6.2.1 Requirements for qualified trust service providers

#### i) Article 24.2 e

##### Relevant controls within supporting standards:

- ▶ [ETSI EN 319 401] Clause 7.5 (Cryptographic controls)
- ▶ [ETSI EN 319 421] Clause 7.6.2 (TSU key generation)
- ▶ [ETSI EN 319 421] Clause 7.6.3 (TSU private key protection)
- ▶ [ETSI EN 319 421] Clause 7.6.4 (TSU public key certificate)
- ▶ [ETSI EN 319 421] Clause 7.6.5 (Rekeying TSU's key)
- ▶ [ETSI EN 319 421] Clause 7.6.6 (Life cycle management of signing cryptographic hardware)
- ▶ [ETSI EN 319 421] Clause 7.6.7 (End of TSU key life cycle)
- ▶ [ETSI EN 319 421] Clause 7.7 (Time-stamping)
- ▶ [ETSI EN 319 421] Clause 7.9 (Operation security)
- ▶ [ETSI EN 319 421] Clause 7.10 (Network security)

##### Conformity statement:

We verified the conformity of the trust service provider with this article through document review and interviews. We found the trust service provider to be in conformance with the article.

##### Activities performed:

- ▶ We reviewed TSP documentation on the use trustworthy systems and products that are protected against modification and ensure the technical security and reliability of the processes supported by them.
- ▶ We reviewed cryptographic device certifications, the ceremonies of CA and subCAs, technical measures of the cryptographic functions, certificate and CRL profiling and the OCSP service.
- ▶ We interviewed the Digital Certifications Services Manager on the above.

##### Documents reviewed:

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Information Security Policy
- ▶ Athens Stock Exchange cryptography standards
- ▶ Ceremony of CA and subCAs

##### Review of records:

- ▶ Cryptographic units, algorithms, key sizes, validity periods
- ▶ X.509 Certificates (CA, subCAs, Subscribers) specifications including QCStatements
- ▶ CRLs specifications
- ▶ OCSP service

##### Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

## ii) Article 24.2 h

### Relevant controls within supporting standards:

- ▶ [ETSI EN 319 401] Clause 7.10 (Collection of evidence)
- ▶ [ETSI EN 319 421] Clause 7.12 (Collection of evidence)

### Conformity statement:

We verified the conformity of the trust service provider with this article through document review and interviews. We found the trust service provider to be in conformance with the article.

### Activities performed:

- ▶ We reviewed TSP documentation for the requirement to record and maintain information concerning data issued and received by the qualified trust service provider, even after potentially ceasing of the service.
- ▶ We reviewed platform audit logs and confirmed appropriate logging of events and protection against record modification or deletion.  
  
We reviewed the contract with the related party to transfer obligation for information maintenance in case of cessation of operations.
- ▶ We interviewed the Digital Certifications Services Manager on the above.

### Documents reviewed:

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)
- ▶ Information Security Policy
- ▶ Contract to transfer obligations to a reliable party for maintaining all information necessary to provide evidence of the operation of the TSP

### Records reviewed:

- ▶ Platform audit logs

### Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

## iii) Article 24.2 i

### Relevant controls within supporting standards:

- ▶ [ETSI EN 319 401] Clause 7.12 (TSP termination and termination plans)
- ▶ [ETSI EN 319 421] Clause 7.14 (TSA termination and termination plans)

### Finding(s):

- 1) We identified a minor non-conformity relating to the CA Termination procedure/plan. Refer to section 5 - Findings, Minor non-conformities "Incomplete CA termination procedure".

### Conformity statement:

We verified the conformity of the trust service provider with this article through document review and interviews. Based on the presence of compensating controls for the identified minor non-conformity, we found the trust service provider to be in conformance with this article.

### Activities performed:

- ▶ We reviewed TSP documentation relating to provisions for the Cessation of its Operations including the TSP termination plan.
- ▶ We reviewed the contracts with other parties for the secure handling & destruction of data and provisions to transfer obligation for information maintenance in case of cessation of operations.

- ▶ We interviewed the Digital Certifications Services Manager on the above.

Documents reviewed:

- ▶ Certificate Practice Statement & Policy
- ▶ Contract to transfer obligations to a reliable party for maintaining all information necessary to provide evidence of the operation of the TSP
- ▶ Procedure for the destruction of assets & related contract with reliable party

Interview(s):

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

## 6.2.2 Requirements for Qualified electronic time stamps

### i) Article 42.1

**Relevant controls within supporting standards:**

- ▶ [ETSI EN 319 421] Clause 7.6.3 (TSU private key protection)
- ▶ [ETSI EN 319 421] Clause 7.7 (Time-stamping)
- ▶ [ETSI EN 319 421] Clause 8.2 (TSA issuing non-qualified and qualified electronic time-stamps)
- ▶ [ETSI EN 319 422] Clause 9.1 (Regulation compliance statement)

**Finding(s):**

We identified an opportunity for improvement relating to the Timestamp token (TST) QCStatement. Refer to section 5 - Findings, Opportunities for improvement "Timestamp token (TST) QCStatement".

**Conformity statement:**

We verified the conformity of the trust service provider with this article through document review, record review and interviews. Based on the presence of compensating controls for the identified item under opportunity for improvement, we found the trust service provider to be in conformance with this article.

**Activities performed:**

- ▶ We reviewed TSP documentation as to the requirements for qualified electronic time stamps as laid down by the regulation.
- ▶ We reviewed the calibration to Coordinated Universal Time. We confirmed that no time stamps are issued if there is a loss of calibration between UTC and the TSU internal clock and that relevant entries are recorded in audit logs. Moreover, (failed) attempts by subscribers for a time stamp during a loss of calibration are recorded in the audit logs.
- ▶ We confirmed that time stamps are signed using an advanced electronic signature.
- ▶ Based on our interview with the Digital Certifications Services Manager, we noted that the TSU will not be issuing non-qualified electronic time-stamps

Documents reviewed:

- ▶ TSA Certificate Practice Statement & Policy
- ▶ Qualified Certificate Practice Statement & Policy (complementary to the TSA CP/CPS)

Review of records

- ▶ TSA configuration
- ▶ Platform audit logs

Interview performed:

- ▶ Eleftheria Theologou (Digital Certifications Services Manager)

# 7 Appendices

## 7.1 Appendix A - Trust service hierarchy

ATHEX Root CA G2

Name of "Service digital identifier" (as in "Service digital identifier" certificate )	Certificate serial number (as in "Service digital identifier" certificate )
ATHENS STOCK EXCHANGE	3e cf
Subject Key Identifier (as in "Service digital identifier" certificate )	
47 a3 a6 04 9d 2d 96 e5	
Base 64 PEM representation	
<pre> -----BEGIN CERTIFICATE----- MIIFPzCCAyegAwIBAgICP8wDQYJKoZIhvcNAQEMBQAwSDELMAkGA1UEBhMCRR1x HjAcBgNVBAoTFUFUFEVUyBTVE9DSyBFWENIQU5HRTEZMBCGA1UEAxMQVRIRVgg Um9vdCBDQSBHMjAeFw0xNjAzMTUxMTEOMzJaFw0xNjAzMTQyMjAwMDBaMEGxCzAJ BgNVBAYTAkdSMR4wHAYDVQQKEjVBEhFTIMgU1RPQ0sgRVhDSEFOROUxGTAXBgNV BAMTEEFUSEVYIFJvb3QgQ0EgRzlwggliMAOGCSqGSIb3DQEBAQUAA4ICDwAwggIK AoICAQCv8F+SyywcsJAt1CaLvyyqZeTbHdlwB76G9cvg0hMwtTdfkr5HLCYO2+tRI M12cmBtew+bgQENIZ20lcKvlqxZgtqsUezqjvUZbyrEdKBZdJT2ntf8Mn8M+a8U UbiPWVrjVdgg6n/XEKPgv8EFJL78LEH1Kh8eXpsRAYrKluW68rt4DJUStKA+w//fBT LO++WqbEAfCcB03g+n1GvxE36w+BrDoZhWed+F5YqP9jvHB1puCrMdGzgoY2aaOx atU2RdWf8IWKCKUOC0GxEZqx7MAmbUuIN1/sFIOF570+ZZ1K0geHbYaDWLpIGcww ldusUvq2zH5uHbmwqFV5U1wNCFZTURfkl4NjarnSH7xqlREiVhzoPRmEzlmGKtEG JxLbRyukp7DD+B68/qw/sp7csCLFT3Bh0/4o4RUZLHg8P8N9mWA2eW5byThmoaXp LYHGUqyezxtteyybZ7dQF7VcmdqQC4zbtKv+NGcY//wUKPX2vANovljLegkorQHj cOi5O1WNEMiUJAduG5pyxAsY+21rZXlv6L2MFaDkoBUU6TvJXfph4nnDCzNKBQ9B UQm8YoB3V+C0uxiSBe2OVChd9YcYHGqosgJqQoxD1R4fZ+HV3QBjj+ALf0GUYQaW fACP0N9TGUe8VDLZGwu+jp89TNyguZyV2FHZp7idkbyDyPHkgQIDAQABozMTAP BgNVHRMBAf8EBTADAQH/MBEGA1UdDgQKBAAH06YEnS2W5TALBgNVHQ8EBAMCAQYw DQYJKoZIhvcNAQEMBQADggIBAIBX9Rko9qewUKpUe8Psm+Bu/nNHusyYUusKmiwnOk RT+tyNaTJ7XKjyygBDiD2ZrP7lcs7LEJE7LOfCQbZ+BEgszipWRLSzVsZ0Jvc7w4 uX7ARMh1/AVxp/udBcLIJdkssXVntDH3uiUMjp3JfGxK/HUFYKTNz7ufjl+dsiBA S2tuHacQH+YA/LN/1MI/pi431dgM2ubMfmp6STGHcfU9Z9qf914yTgT8uiYedm PtS0Ch0MFY46hQbG72xy/dRD0/2MqEOBWTjBhnwgh46oJlpGxAWtbaDVWBBTmZTy rlosVqZSSkw3OVW8wviueay5NoVuYVI+/TTqYWhlgYFM2xT5YI0EdQ8Q30PTJcdA X5vk0DB92gZB901m/jgRcyBZ2YB7FeFC1zqebGVfMXahE2XaJzuwEuisSLaZEqd+ LspikapRYfRnyit50o8hWl8Wcl5UmJ/281kBba61pBJzn4KfF5/a7YOPI/1izjbe A8HRMKbTou+rXXV699ccLPfZ6WY6I5QpUNv8AgNf8jDXUTKcxC+dStkx8TUPfoOq HeK1xIFBa1ctIhmPO6cjuwN1nrV8+SCHzHBfjiBwLzo+Yg1f0uE2nUbWVbKYCi6c wFXS+x56a0p2KSYS9q+kp7ztMqFw0/mNiweBpXOGwI3xNb62YLJvHiOikcr5YI3m 6JPv -----END CERTIFICATE----- </pre>	

Athex Qualified Timestamping Authority

Name of "Service digital identifier" (as in "Service digital identifier" certificate )	Certificate serial number (as in "Service digital identifier" certificate )
ATHENS STOCK EXCHANGE	46 3f
Subject Key Identifier (as in "Service digital identifier" certificate )	
4f 15 97 30 95 f8 b9 ac	
Base 64 PEM representation	
<pre> -----BEGIN CERTIFICATE----- MIIFvTCCA6WgAwIBAgICRj8wDQYJKoZIhvcNAQELBQAwwSDELMAkGA1UEBhMCRR1x HjAcBgNVBAoTFUFUSEVOUyBTVE9DSyBFWENIQU5HRTEZMBCGA1UEAxMQVVRIRVgg Um9vdCBDQSBHMjAeFw0xNzA4MDQwODQzMzFaFw0yNzAxMjcwOTQ3NTZaMG8xCzAJ BgNVBAYTAkdSMR4wHAYDVQQKEgVDbGhbnMgU3RvY2sgRXhjaGFuZ2UxLzAtBgNV BAMTJkF0aGV4IFF1YWxpZmllZCZCUaW1c3RhbXBpbmcgQXV0aG9yaXR5MQ8wDQYD VQQHEwZBdGhbnMwggiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQC8DmLG GNlly5FTeWXYjtIldPjNNQkMoi/abp0MVCit8BnUAL7+V7oFQxFm1PFDDukmE99u FbQlWw/JkvzPEePdGZNfr69UzSYSkNIM+q7qQ+oKZ2pyrnSZLFPD3s099F5FAPVR jGZhKpk2ggNkhBdFlju3QZEIFUwBZyIPHY6e+5dS7IXZG4LkXCq6TI0cNEyfKu5y z8tVrYBwLq792K672U5t+9MnJ+O9pPaMHQtgGplyWPfXUTTO/HttMh59P9UUMfl/ zFbP2+EIPEyITGHkBLyp5WcvyLZgrrHi4N7scfbGhRmjsnKmmjkmAQNpoHZF1c7 gwBSFtJsxWJh1fEIAgMBAAGjggGIMIBhDAWBgNVHSUBAf8EDDAKBggrBgEFBQCd CDAMBgNVHRMBAf8EAJAAMBEGA1UdDgQKBAhPFZcwlfi5rDBdBgNVHSAEVBUMFIG DisGAQQBgeVaAQEEAQEAMEAwPgYIKwYBBQUHAgEWMmh0dHA6Ly93d3cuaGVsZXgu Z3lvd2VlL2d1ZXNOL2RrZ2I0YWwtY2VydGlmYWVhdGVzMBMGA1UdIwQMMMAqACEej pgSdLZbIMIGBBggrBgEFBQCBAQR1MhMwMwYIKwYBBQUHMAGGJ2h0dHA6Ly9vY3Nw LmF0aGV4Z3JvdXAuZ3lvQXR0ZXhSb290Q0FHMjA8BggrBgEFBQcwAoYwaHR0cDov L3d3dy5oZWxleC5nci9wa2kvLS9maWxIL0F0aGV4Um9vdENBRzluY3J0MA4GA1Ud DwEB/wQEAwIGwDBBBgNVHR8EOjA4MDagNKAyhjBodHRwOi8vd3d3LmhlbGV4Lmdy L3BraS8tL2ZpbGUvQXR0ZXhSb290Q0FHMjA8BggrBgEFBQcCADAQgglB ACe7yX7DcQsEEDv5n2qeu+hjt7b6/GOyo8Avr1vIB+k/qJhvkWcXla4wCeHkD5lw phhkEY0T/zZZkxHNfmjdUzIsNVifWthZb+B2k0SxC/pKd6UpyQvhYQIS/5hGfOqz 4Boanfa7TH3/surHsf49HFusm9m6g2GS7i7oH9WjzGq/VA/lauND4WOnQtUyXvQc neyMVQ0d9bpEudqvPzAySwmfdQSzTTn9y8+DjBylrx9DKSjSF8dKhKMDZGtH1o 6T6dB5w5Cp+qMjmKzuDE5ljkMBMroWTglshTQM0soo3y9ANKI0zvjcG+wa38fnR KI0PU7zo/ge4odrcy/xgxXNjbuDoaU4Q+uSjSEgol2QqRahssVTaRFf8F6dK10TY E8Kg4HqUpw9+6HencYxHDHTJbvhaLrNpFTjrK1+nATW0+MI4yEE54OHZJH5LVsZi mZo/vW8bX6u7ahdJeuBMMNRfTSvvjK3za69heRaJe+o7gp+x5I9Xnv48AHHk+v QoOVUCDxgkHki0IJPi41x3IRlgLFKH26PjzHdHiHpw+wy76qtNUuukeRij/ZxUJ j01q4wmEuvCN7NXGLrpxORmbIDcJyXZSoxQK9wUIS/NlJE7BCaC5IkIjj0hdT+FU oTi/5EizD0fmG3ZWui7zCCmAcijl4BC/FqSGJxtNYBen -----END CERTIFICATE----- </pre>	



## 7.2 Appendix B - Classification of identified findings

Guidance for the classification of findings is as follows:

1. Major non conformity - an absence of, or the repeated failure to implement and maintain one or more required mandatory standard element, or a situation which would, on the basis of objective evidence, raise significant doubt as to the capability of the trust service provider to achieve its objectives.
2. Minor non conformity - a single identified gap or a concern in meeting a requirement of the regulation, which would not in itself raise significant doubt as to the capability of the trust service provider to achieve its objectives.
3. Opportunity for improvement - information on situations that management is well advised to consider, whereas although formal compliance to the requirements of the regulation is adequately met, based on conformity assessment experience and knowledge and illustrative controls provided in the regulation-supporting standards, additional effectiveness or robustness might be possible with a modified approach to prevent a potential non-conformity in the future.