

## Report of Independent Accountant

To the Management of Instituto Nacional de Tecnologia da Informação:

We have examined management's [assertion](#) that Instituto Nacional de Tecnologia da Informação (ITI), in providing its Certification Authority (CA) services at Brazil for the Autoridade Certificadora Raiz (AC Raiz), during the period September 09<sup>th</sup> 2015 through September 08<sup>th</sup> 2016, Instituto Nacional de Tecnologia da Informação (ITI) has:

- disclosed its Business, Key Life Cycle Management, Certificate Life Cycle Management, and CA Environmental Control practices in its [Certification Practice Statement](#) and provided services in accordance with its disclosed practices.
- maintained effective controls to provide reasonable assurance that
  - the integrity of keys and certificates it manages is established and protected throughout their life cycles;
  - subordinate CA certificate requests are accurate, authenticated, and approved
- maintained effective controls to provide reasonable assurance that
  - logical and physical access to CA systems and data is restricted to authorized individuals;
  - the continuity of key and certificate management operations is maintained; and
  - CA systems development, maintenance, and operations are properly authorized and performed to maintain CA systems integrity

For the root level Certification Authority (AC Raiz), based on the AICPA [Trust Service Principles and Criteria for Certification Authorities, Version 2.0](#).

Instituto Nacional de Tecnologia da Informação (ITI) management is responsible for its assertion. Our responsibility is to express an opinion on management's assertion based on our examination.

AC Raiz makes use of external registration authorities for specific subscriber registration activities as disclosed in AC Raiz' business practice disclosures. Our examination did not extend to the controls exercised by the external registration authorities.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants, and accordingly, included (1) obtaining an understanding of AC Raiz' key and certificate life cycle management business practices and its controls over key and certificate integrity, over the continuity of key and certificate life cycle management operations, and over the development, maintenance, and operation of systems integrity; (2) selectively testing transactions executed in accordance with disclosed key and certificate life cycle management business practices; (3) testing and evaluating the operating effectiveness of the controls; and (4) performing such other procedures as we considered necessary in the circumstances. We believe that our examination provides a reasonable basis for our opinion.


The relative effectiveness and significance of specific controls at AC Raiz and their effect on assessments of control risk for subscribers and relying parties are dependent on their interaction with the controls and other factors present at individual subscriber and relying party locations. We have performed no procedures to evaluate the effectiveness of controls at individual subscriber and relying party locations.

Because of the nature and inherent limitations of controls, AC Raiz' ability to meet the aforementioned criteria may be affected. For example, controls may not prevent, or detect and correct, error, fraud, unauthorized access to systems and information, or failure to comply with internal and external policies or requirements. Also, the projection of any conclusions based on our findings to future periods is subject to the risk that changes may alter the validity of such conclusions.

In our opinion, for the period September 09<sup>th</sup> 2015 through September 08<sup>th</sup> 2016, Instituto Nacional de Tecnologia da Informação (ITI) management's assertion, as set forth in the first paragraph, is fairly stated, in all material respects, based on the AICPA [Trust Service Principles and Criteria for Certification Authorities, Version 2.0](#).

The WebTrust seal of assurance for certification authorities on AC Raiz' Web site constitutes a symbolic representation of the contents of this report and it is not intended, nor should it be construed, to update this report or provide any additional assurance.

This report does not include any representation as to the quality of AC Raiz' services beyond those covered by the [Trust Service Principles and Criteria for Certification Authorities, Version 2.0](#), nor the suitability of any of AC Raiz' services for any customer's intended purpose.

  
December 14th, 2016

Ernst & Young Auditores Independentes S.S



**PRESIDÊNCIA DA REPÚBLICA**  
**Casa Civil**  
**Instituto Nacional de Tecnologia da Informação**

**Assertion by Management of Instituto Nacional de Tecnologia da Informação. Regarding  
Its Disclosure of Its Business Practices and Its Controls Over Its  
Certification Authority Operations During the Period September 09<sup>th</sup>, 2015 Through  
September 08<sup>th</sup>, 2016**

December 15<sup>th</sup>, 2016.

Autoridade Certificadora Raiz operates as a Certification Authority (CA) known as AC Raiz. AC Raiz, as root level Certification Authority for Brazilian PKI, provides the following certification authority services:

- Certificate renewal
- Certificate rekey
- Certificate issuance
- Certificate distribution (using an online repository)
- Certificate revocation
- Certificate status information processing (using an online repository)

AC Raiz makes use of external registration authorities for specific subscriber registration activities as disclosed in AC Raiz' business practice disclosures.

Management of Instituto Nacional de Tecnologia (ITI) da Informação is responsible for establishing and maintaining effective controls over its CA operations, including CA business practices disclosure, service integrity (including key and certificate life cycle management controls), and CA environmental controls. These controls contain monitoring mechanisms, and actions are taken to correct deficiencies identified.

Controls have inherent limitations, including the possibility of human error and the circumvention or overriding of controls. Accordingly, even effective controls can provide only reasonable assurance with respect to AC Raiz' operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

Management has assessed the controls over its CA operations. Based on that assessment, in Instituto Nacional de Tecnologia da Informação (ITI) Management's opinion, in providing its Certification Authority (CA) services in Brazil, Instituto Nacional de Tecnologia da Informação (ITI), during the period September 09<sup>th</sup>, 2015 through September 08<sup>th</sup>, 2016, it:

A handwritten signature in blue ink, consisting of a stylized 'R' followed by a vertical line and a small flourish at the top.

- Disclosed its Business, Key Life Cycle Management, Certificate Life Cycle Management, and CA Environmental Control practices in its Certification Practice Statement and provided services in accordance with its disclosed practices.
- Maintained effective controls to provide reasonable assurance that
  - the integrity of keys and certificates it manages is established and protected throughout their life cycles;
  - subordinate CA certificate requests are accurate, authenticated, and approved
- Maintained effective controls to provide reasonable assurance that
  - logical and physical access to CA systems and data is restricted to authorized individuals;
  - the continuity of key and certificate management operations is maintained; and
  - CA systems development, maintenance, and operations are properly authorized and performed to maintain CA systems integrity.

For the root level Certification Authority (AC Raiz), based on the AICPA Trust Service Principles and Criteria for Certification Authorities, Version 2.0.

**CA Business Practices Disclosure**

CA Business Practices Management  
 Certification Practice Statement Management

**Service Integrity**

CA Key Life Cycle Management Controls  
 CA Key Generation  
 CA Key Storage, Backup, and Recovery  
 CA Public Key Distribution  
 CA Key Usage

CA Key Archival and Destruction  
 CA Key Compromise  
 CA Cryptographic Hardware Life Cycle Management

Certificate Life Cycle Management Controls  
 Certificate Renewal  
 Certificate Rekey  
 Certificate Issuance

Certificate Distribution  
 Certificate Revocation  
 Certificate Validation

**CA Environmental Controls**

Security Management  
Asset Classification and Management  
Personnel Security  
Physical and Environmental Security  
Operations Management  
System Access Management  
Systems Development and Maintenance  
Business Continuity Management  
Monitoring and Compliance  
Audit Logging



**MAURÍCIO AUGUSTO COELHO**  
Diretor-Presidente, Substituto

**Instituto Nacional de Tecnologia da Informação**